Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation, Round 22 March 2017 Monitoring Report Lockheed Martin Middle River Complex 2323 Eastern Boulevard Middle River, Maryland

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October 2017

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TABLE OF CONTENTS

Section **Page**

ACRONYMS ..... **v**

1 INTRODUCTION **1-1**

2 ROUND 22 INDOOR-AIR-QUALITY AND VAPOR-INTRUSION INVESTIGATION **2-1**

2.1 INVESTIGATION APPROACH AND GUIDANCE 2-1

2.2 INVESTIGATION PROCEDURES 2-2

3 ROUND 22 RESULTS **3-1**

3.1 ROUND 22 DATA ANALYSIS 3-2

3.2 BACKGROUND AMBIENT-AIR SAMPLES 3-4

4 SUB-SLAB-DEPRESSURIZATION-SYSTEM DATA ANALYSIS **4-1**

4.1 SUB-SLAB-VAPOR MONITORING POINTS 4-1

4.1.1 Building A 4-1

4.1.2 Building C 4-3

4.2 SUB-SLAB-VAPOR EXTRACTION POINTS 4-3

4.3 VACUUM INFLUENCE 4-4

4.4 INFLUENT-VAPOR SAMPLES 4-5

4.5 SYSTEM PERFORMANCE 4-6

5 CONCLUSIONS AND RECOMMENDATIONS **5-1**

5.1 CONCLUSIONS 5-1

5.1.1 Building A 5-2

5.1.2 Building B 5-7

5.1.3 Building C 5-7

5.2 RECOMMENDATIONS 5-9

6 REFERENCES **6-1**

TABLE OF CONTENTS (continued)

APPENDICES

APPENDIX A—MARCH 2017 SAMPLE LOG SHEETS/CHAIN OF CUSTODY

APPENDIX B—METHOD DETECTION LIMITS

APPENDIX C—LABORATORY ANALYTICAL REPORTS

APPENDIX D—DATA-VALIDATION REPORTS

APPENDIX E—*REMEDIAL ACTION PROGRESS REPORT #29: OCTOBER 1, 2016 THROUGH MARCH 31, 2017, SUB-SLAB-DEPRESSURIZATION SYSTEMS, BUILDINGS A AND C, LOCKHEED MARTIN MIDDLE RIVER COMPLEX*

LIST OF FIGURES

Page

Figure 2-1 IAQ Background Sampling Locations, Round 22, March 2017 2-8

Figure 2-2 Indoor Air and Sub-Slab-Vapor Monitoring Locations for Building A, Round 22, March 2017 2-9

Figure 2-3 Indoor Air and Sub-Slab-Vapor Monitoring Locations for Building B, Round 22, March 2017 2-10

Figure 2-4 Indoor Air and Sub-Slab-Vapor Monitoring Locations for Building C, Round 22, March 2017 2-11

Figure 3-1 Round 22 Indoor Air and Sub-Slab-Vapor Sampling Results Greater than Screening Levels, Building A 3-28

Figure 3-2 Round 22 Indoor Air and Sub-Slab-Vapor Sampling Results Greater than Screening Levels, Building B 3-29

Figure 3-3 Round 22 Indoor Air and Sub-Slab-Vapor Sampling Results Greater than Screening Levels, Building C 3-30

Figure 4-1 Sub-Slab-Vapor VOC Concentrations at 015-A, Building A 4-27

Figure 4-2 Sub-Slab-Vapor VOC Concentrations at 018-A, Building A 4-28

Figure 4-3 Sub-Slab-Vapor TCE Concentrations at Monitoring Points near SSD-System, Building C 4-29

Figure 4-4 Sub-Slab-Vapor Vinyl Chloride Concentrations at 126-C, Building C 4-30

Figure 5-1 Trichloroethene Sampling Results, Round 22, Buildings A, B, and C 5-12

Figure 5-2 Concentrations of Trichloroethene Detected at Location 093-A, Indoor Air—Basement 5-13

TABLE OF CONTENTS (continued)

LIST OF FIGURES (continued)

Page

Figure 5-3 Concentrations of Trichloroethene Detected at Location 138-A, Indoor Air—Basement 5-14

Figure 5-4A Concentrations of Select Chemicals from Round 22, Building A—Sub-Slab Vapor 5-15

Figure 5-4B Concentrations of Select Chemicals from Round 22, Building A—Indoor Air (Basement) 5-16

Figure 5-4C Concentrations of Select Chemicals from Round 22, Building A— Indoor Air (First Floor) 5-17

Figure 5-5A Concentrations of Select Chemicals from Round 22, Building C—Sub-Slab Vapor 5-18

Figure 5-5B Concentrations of Select Chemicals from Round 22, Building C—Indoor Air (Basement) 5-19

LIST OF TABLES

Page

Table 3-1 Descriptive Statistics of Indoor-Air-Quality Results, All Buildings, March 2017 3-6

Table 3-2 Descriptive Statistics of Sub-Slab-Vapor Results, All Buildings, March 2017 3-7

Table 3-3 Summary Statistics for Trichloroethene Concentrations in Indoor Air 3-8

Table 3-4 Summary Statistics for Naphthalene Concentrations in Indoor Air 3-9

Table 3-5 Indoor-Air-Quality Sampling Results, Building A, March 2017 3-10

Table 3-6 Sub-Slab-Vapor Sampling Results, Building A, March 2017 3-13

Table 3-7 Indoor-Air-Quality Sampling Results, Building B, March 2017 3-17

Table 3-8 Sub-Slab-Vapor Sampling Results, Building B, March 2017 3-18

Table 3-9 Indoor-Air-Quality Sampling Results, Building C, March 2017 3-19

Table 3-10 Sub-Slab-Vapor Sampling Results, Building C, March 2017 3-23

Table 3-11 Ambient-Air (Background) Sampling Results, March 2017 3-26

Table 3-12 Analyte Concentrations in Background Air Samples Compared to Indoor Air Samples, March 2017 3-27

Table 4-1 Summary of Sub-Slab-Vapor VOC Detections near SSDS, Building A 4-7

TABLE OF CONTENTS (continued)

LIST OF TABLES (continued)

Page

Table 4-2 Summary of Sub-Slab VOC Detections near SSDS, Building C 4-10

Table 4-3 Sub-Slab Monitoring Points Sampled near SSDS, Building A 4-17

Table 4-4 Trichloroethene Concentrations before and during SSDS Operation, Building A..... 4-18

Table 4-5 Sub-Slab Monitoring Points Sampled near SSDS, Building C 4-19

Table 4-6 Trichloroethene Concentrations before and during SSDS Operation, Building C..... 4-20

Table 4-7A Summary of VOC Detections in SSDS Influent, Building A..... 4-21

Table 4-7B Summary of VOC Detections in SSDS Influent, Building C..... 4-24

ACRONYMS

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

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

Section 1
Introduction

Tetra Tech, Inc. (Tetra Tech) has prepared this report on behalf of Lockheed Martin Corporation (Lockheed Martin) to document the first round of indoor-air-quality (IAQ) and sub-slab-vapor (SV) monitoring for calendar year 2017 at Lockheed Martin's Middle River Complex (MRC) in Middle River, Maryland. This report contains the Round 22 (March 2017) monitoring results for Buildings A, B, and C, and background sampling locations. This report also includes a status update of the two sub-slab-depressurization (SSD) vapor-intrusion-mitigation systems originally installed at the Middle River Complex in 2008: one beneath the Building A plating shop, and the other beneath the southern portion of the Building C basement. This monitoring is part of an ongoing investigation to evaluate whether volatile organic compounds (VOCs) in sub-slab vapors (associated with soil and groundwater chemicals of concern [COC] at the site) might be moving into indoor air at Middle River Complex facilities. The first monitoring round for calendar year 2017 continues investigations previously described in the following reports:

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

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

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

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

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

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

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

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

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

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

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

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

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

- *Block I Building A and Building A Basement Vapor-Intrusion Investigation Report, Lockheed Martin Middle River Complex, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland* (Tetra Tech, 2016b)

- *Block I Building A and Building A Basement Supplemental Vapor-Intrusion Investigation Report, Lockheed Martin Middle River Complex, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland* (Tetra Tech, 2016c)

- *Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation August 2016 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland* (Tetra Tech, 2017a)

- *Block I Building A Basement Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland [Draft]* (Tetra Tech, 2017b)

This report is organized as follows:

Section 2—Round 22 Indoor-Air-Quality and Vapor-Intrusion Investigation: Briefly describes the sampling methodology used for the current investigation round.

Section 3—Round 22 Results: Discusses the Round 22 results, including results exceeding screening levels, relevant data trends, and comparison of sampling results to background concentrations.

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

Section 5—Conclusions and Recommendations: Presents conclusions based on the Round 22 sampling results and recommendations for future work at the site related to vapor intrusion.

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

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Section 2
Round 22 Indoor-Air-Quality and Vapor-Intrusion Investigation

2.1 INVESTIGATION APPROACH AND GUIDANCE

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

Although IA results are predominantly less than risk-based screening levels after the first three rounds of sampling (with one trichloroethene [TCE] exceedance in 109 samples [1]), two sub-slab-depressurization (SSD) vapor-intrusion-mitigation systems (one beneath the Building A plating shop, and the other beneath the southern portion of the Building C basement) were originally installed at the MRC in 2008, based on elevated SV concentrations detected beneath the buildings. The Building A SSD system (SSDS) was expanded in 2010, and again in 2016, after additional locations of elevated SV were detected. The Building C SSDS was expanded in 2012

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

A site-specific TCE screening level of 35 µg/m3 for indoor air has been derived for the Building A basement based on limited exposure potential in the basement. The screening level has received approval from the Maryland Department of the Environment (MDE). However, the site-specific screening level for the basement does not represent a final risk-based indoor air cleanup criterion.

and 2013. Subsequent rounds of IA sampling supported that contaminant concentrations in IA on the main floors resulting from vapor intrusion (VI) were controlled by the SSDSs.

However, recent investigations in Building A and the Building A basement have identified elevated TCE concentrations in sub-slab air, water, and, on occasion, in basement IA. Subsequent VI investigations in Building A and the Building A basement from 2014 to 2017 include: (a) portable gas-chromatograph/mass-spectrometer (GC/MS) surveys; (b) installation of additional Vapor Pin™ vapor-monitoring points (VMPs), including seven in the eastern wall of Building A basement, two in the Building A basement floor, and one beneath the main floor of Building A; (c) the collection of air and water samples from select floor features (i.e., sumps, drains) in Building A basement; and (d) a continuous air-monitoring survey of sub-slab and breathing-zone locations in the Building A basement over two months (February 24 to April 21, 2017). Elevated TCE concentrations detected in the Building A basement led to the installation, as an interim measure, of three additional air-purifying filters in the basement in May 2017 to target the floor features that have shown elevated TCE concentrations.

The sampling plan for Round 22 is based on historical detections and information obtained during site reconnaissance and review of historical information and reports. IA and SV samples were collected from Buildings A, B, and C during Round 22 sampling. Relevant guidance from the United States Environmental Protection Agency [USEPA] (USEPA, 1996, 2004, 2012, and 2015) and the Maryland Department of the Environment [MDE] (MDE, 2006) was used to develop the investigation methodology.

2.2 INVESTIGATION PROCEDURES

IAQ and SV sampling within Buildings A, B, and C was done in accordance with the work plan (Tetra Tech, 2015d). Background outdoor air samples were collected from the same sampling locations as had been used for Round 21 (Figure 2-1). Not all existing monitoring points inside the subject buildings were sampled during Round 22. As in previous rounds, samples were collected selectively, in or adjacent to areas where contaminants had been detected previously, or in areas where contaminants are currently suspected of being present.

TCE has been targeted as a primary chemical of concern (COC); it has a history of use at the site, has been detected in groundwater and soil gas, and can be toxic and mobile in the environment.

Historical sampling locations and the sub-slab VMPs sampled in Buildings A, B, and C during this round are shown in Figures 2-2, 2-3, and 2-4, respectively. IAQ sampling locations were co-located with most monitored SV sampling locations to evaluate IA and possible relationships between SV and IAQ.

Round 22 sampling was performed on February 28 and March 1, 3, and 8, 2017. Most samples were collected on February 28 and March 1; only two resamples and nine samples from recently added locations (described below) were collected, on March 3 and/or 8. Seventy-nine eight-hour samples (and seven duplicates) were collected using Summa® canisters and chemically analyzed:

- four background ambient air samples were collected at the same locations used in the previous round
- 41 IAQ samples (and four duplicates) from Buildings A, B, and C:
  - 16 IAQ samples (and two duplicates) from Building A
  - three IAQ samples from Building B
  - 22 IAQ samples (and two duplicates) from Building C
- 38 SV samples (and three duplicates) from Buildings A, B, and C:
  - 22 SV samples (and one duplicate) from Building A
  - two SV samples from Building B
  - 14 SV samples (and two duplicates) from Building C
- The "-A", "-B", and "-C" suffixes in the sampling location designations correspond with Buildings A, B, and C, respectively.

In addition to the samples listed above, one SV sample (SV-DUP04-A-22, a duplicate sample from 136-A) was collected but was not analyzed, due to a faulty regulator and insufficient volume in the canister for analysis. Five IAQ samples from Building C (144-C through 146-C, 150-C, and 152-C) were collected in the machine shop in the Lockheed Martin Rotary and Mission Systems (RMS) (formerly the Lockheed Martin Mission Systems & Training [MST] mechanical prototype laboratory [MPL]). Monitoring continues in this area, because TCE was detected in IA at a concentration greater than its screening level during Round 15 (August 2013). The five sampling locations that provide data for possible worker-exposure areas within the MPL are:

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

Ten additional Vapor Pin™ VMPs were installed in March and April 2016, including seven in the eastern wall of the Building A basement (169-A, 170-A, 171-A, 172-A, 173-A, 176-A, and 177-A), two in the Building A basement floor (174-A and 175-A), and one beneath the main floor of Building A (168-A). These VMPs were strategically located near possible TCE sources, including a former underground storage tank and vapor degreasers associated with former plating shop operations. In Round 22, one IAQ sample (from location 168-A) and 10 SV samples were collected from these locations.

The SSDSs in the Building C basement area and the Building A plating shop were shut down approximately 24 hours before sampling began. The SSDSs were restarted within one hour after sampling had been completed in Buildings A and C; this is consistent with previous monitoring episodes. The following observations were recorded during the February/March 2017 sampling:

- Mean outdoor ambient temperature during the sampling period was 57 degrees Fahrenheit (°F) on February 28 and March 1, 2017. Barometric pressure decreased during the sampling period, from 30.26 inches of mercury (in. Hg) to 29.76 in. Hg. Wind direction on February 28 was from the south–southeast, and average wind speed ranged from three to 12 miles per hour (mph). Wind direction on March 1 was from the south, with wind speeds averaging 7 mph, with gusts up to 33 mph. Skies were mostly cloudy and overcast on February 28 and March 1.

- Approximately 0.06 inches of precipitation (rain) was recorded on February 28, and no precipitation was recorded on March 1.

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

- SV sampling location 095-A could not be found due to recent construction. An alternate IA and SV sample was collected from 168-A in place of 095-A. A vapor degreaser was once located near sampling location 168-A, which has historically exhibited elevated TCE concentrations.

- IA and SV samples from 118-A and 139-A were collected in the bond layup room, where a positive-pressure air-conditioning system was operating.

- Sampling location 015-A is in the former plating shop area. Subsequent to the sampling round in August 2015, this area has undergone construction and redevelopment. A new

floor has been installed in this area, and the area is now an extension of the bond layup room. IA and SV samples from 015-A were collected in this newly expanded bond layup room (former plating shop), where a positive-pressure air-conditioning system was operating.

- Sampling location IA-130-C/SV-130-C in the museum storage area was covered by a large airplane engine, and therefore could not be sampled; an alternate sample was collected at nearby location IA-131-C/SV-131-C, approximately 40 feet farther south within the museum's caged area.

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

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

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

- Sampling location 076-A (for both IA and SV) was approximately 20 feet away from a flammable materials storage cabinet and hazardous waste drum (containing rags).

- Additional SV sampling locations were added to the sampling program during Round 22, due to the ongoing TCE VI investigation in the Building A basement. Samples were collected at nine additional locations in the Building A basement, primarily in the eastern wall (169-A through 173-A, 176-A and 177-A), and in the floor (174-A and 175-A).

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

- An insufficient sample volume was collected in the Summa® canister for sample SV-093-A, due to a faulty regulator, and could not be analyzed by the laboratory; however, another sample was collected on March 8 for laboratory analysis.

- An insufficient sample volume was collected in the Summa® canister for sample SV-001-C, due to a faulty regulator, and could not be analyzed by the laboratory; however, another sample was collected on March 3 for laboratory analysis.

- Building A is a one-story building, except for a basement corridor under an open-air loading dock on its western side. Roof vents approximately 50 feet above the work floor were open in Building A during Round 22 sampling. The large doors at the loading docks on the western side of the building were also open to allow carts, forklifts, personnel, and equipment to pass. Increased ventilation associated with open doors and roof vents might affect sample concentrations on the first floor of Building A. No personnel or other activities were observed in the Building A basement.

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

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

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

- The southern end of the Building C basement is now vacant and has been cleared of stored materials, workstations, and equipment by MRA Systems, Inc. (MRAS).

- The pressure gauges on most Summa® canisters responded instantaneously upon opening the valve by dropping to between ~28 and ~30 in. Hg. The pressure gauge for sample IA-131-C initially dropped to -22 in. Hg, however, sufficient volume was collected for analysis. Of the remaining Summa® canisters, all but three pressure gauges had a remaining pressure of between zero and ~5 in. Hg: sample SV-001-C had a remaining pressure of ~7 in. Hg; sample IA-004-C had a remaining pressure of -6 in. Hg; and sample IA-153-C had a remaining pressure of -10 in. Hg. These three canisters, despite the elevated remaining pressure, did have adequate sample volumes, and were analyzed by the laboratory. Pressure readings for the Summa® canisters are recorded on the chain of custody forms (Appendix A).

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

- benzene
- carbon tetrachloride
- chlorodifluoromethane (Freon 22)
- chloroform
- dichlorodifluoromethane
- 1,1-dichloroethane (1,1-DCA)
- 1,2-dichloroethane (1,2-DCA)
- naphthalene
- tetrachloroethene (PCE)
- toluene
- 1,2,4-trichlorobenzene
- 1,1,1-trichloroethane (1,1,1-TCA)
- 1,2,3-trimethylbenzene (1,2,3-TMB)
- 1,2,4-trimethylbenzene (1,2,4-TMB)

- 1,1-dichloroethene (1,1-DCE)
- *cis*-1,2-dichloroethene (*cis*-1,2-DCE)
- *trans*-1,2-dichloroethene (*trans*-1,2-DCE)
- ethylbenzene
- methyl-tertiary-butyl ether
- methylene chloride
- 1,3,5-trimethylbenzene (1,3,5-TMB)
- trichloroethene (TCE)
- 1,1,2-trichloroethane (1,1,2-TCA)
- vinyl chloride (VC)
- xylenes (total)

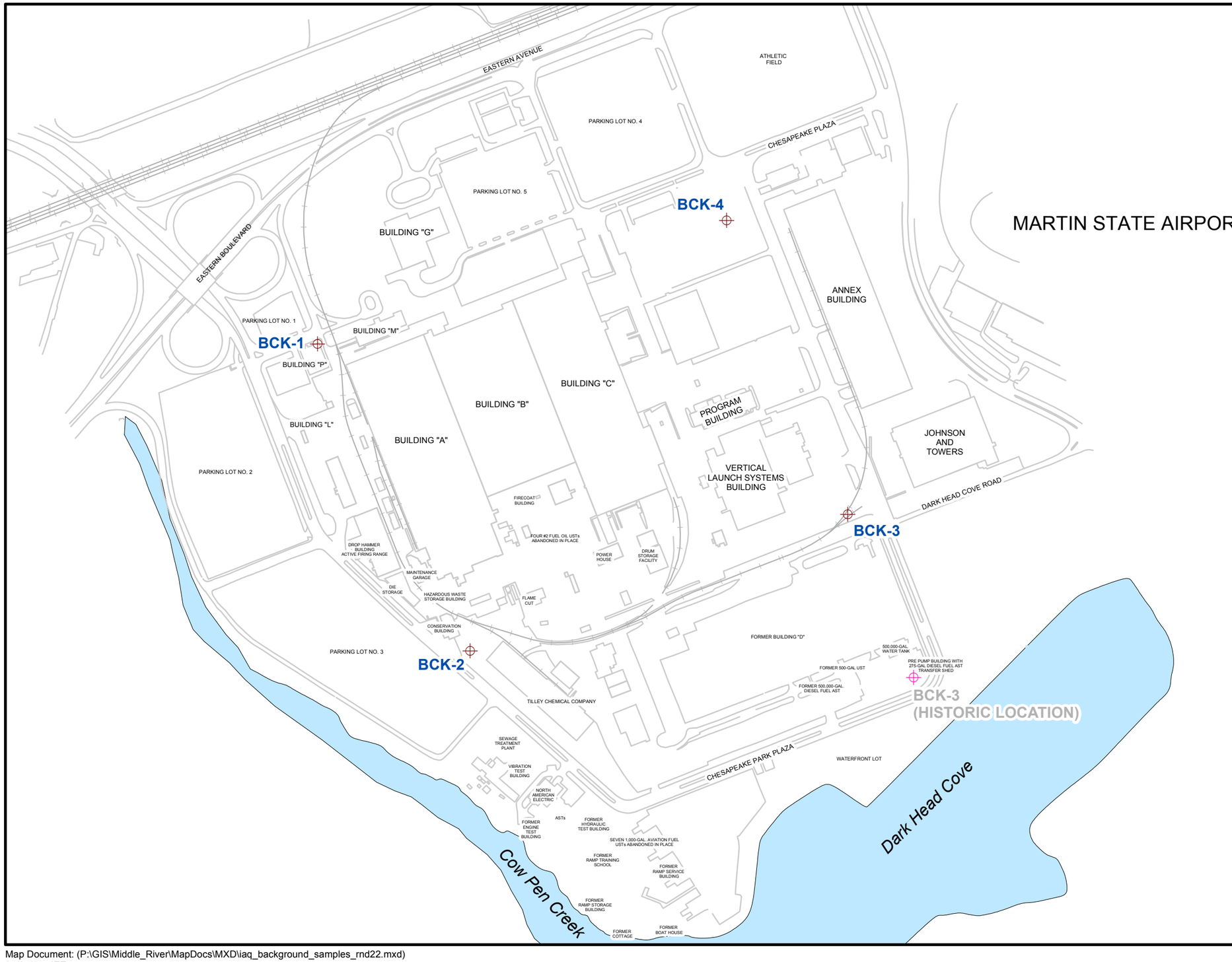
All samples collected during Round 22 were submitted to TestAmerica in Knoxville, Tennessee for analysis via GC/MS using cryogenic concentration (as described in Sections 9 and 10 of USEPA Method [Toxic Organic-15] TO-15 [USEPA, 1999]). This method was used because of its low detection limit (in the parts-per-billion by volume range), and because it can quantify all VOCs of concern. TestAmerica is certified in USEPA Method TO-15 analysis and meets all quality assurance/quality control requirements specified in the TO-15 methodology.

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

Analytical data were qualified in accordance with USEPA *National Functional Guidelines for Organic Superfund Methods Data Review* (USEPA, 2017). Attaching data qualifiers to analytical results signifies a quality-control noncompliance. During Round 22, the following data qualifiers were applied to nonconforming data (i.e., data affected by technical limitations during laboratory analysis) after validation:

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

No results were rejected during data validation.



MARTIN STATE AIRPORT

FIGURE 2-1

IAQ BACKGROUND SAMPLING LOCATIONS
ROUND 22, MARCH 2017

LEGEND

- BACKGROUND SAMPLING LOCATION
- HISTORIC BACKGROUND SAMPLING LOCATION
- WATER

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

Lockheed Martin Middle River Complex
Middle River, Maryland

0 200 400 Feet

N

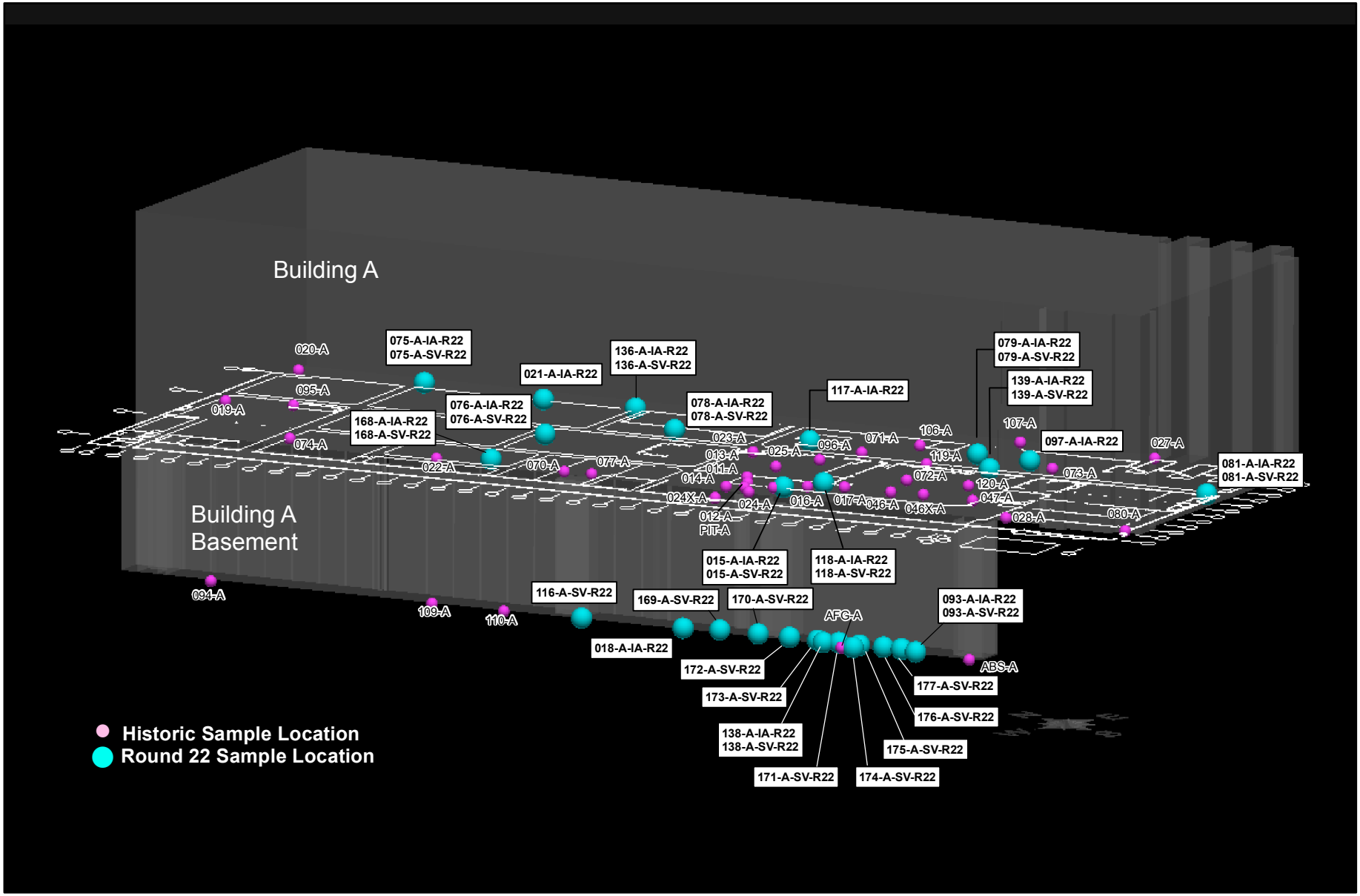
DATE MODIFIED: 05/25/17

CREATED BY: JEE

TETRA TECH

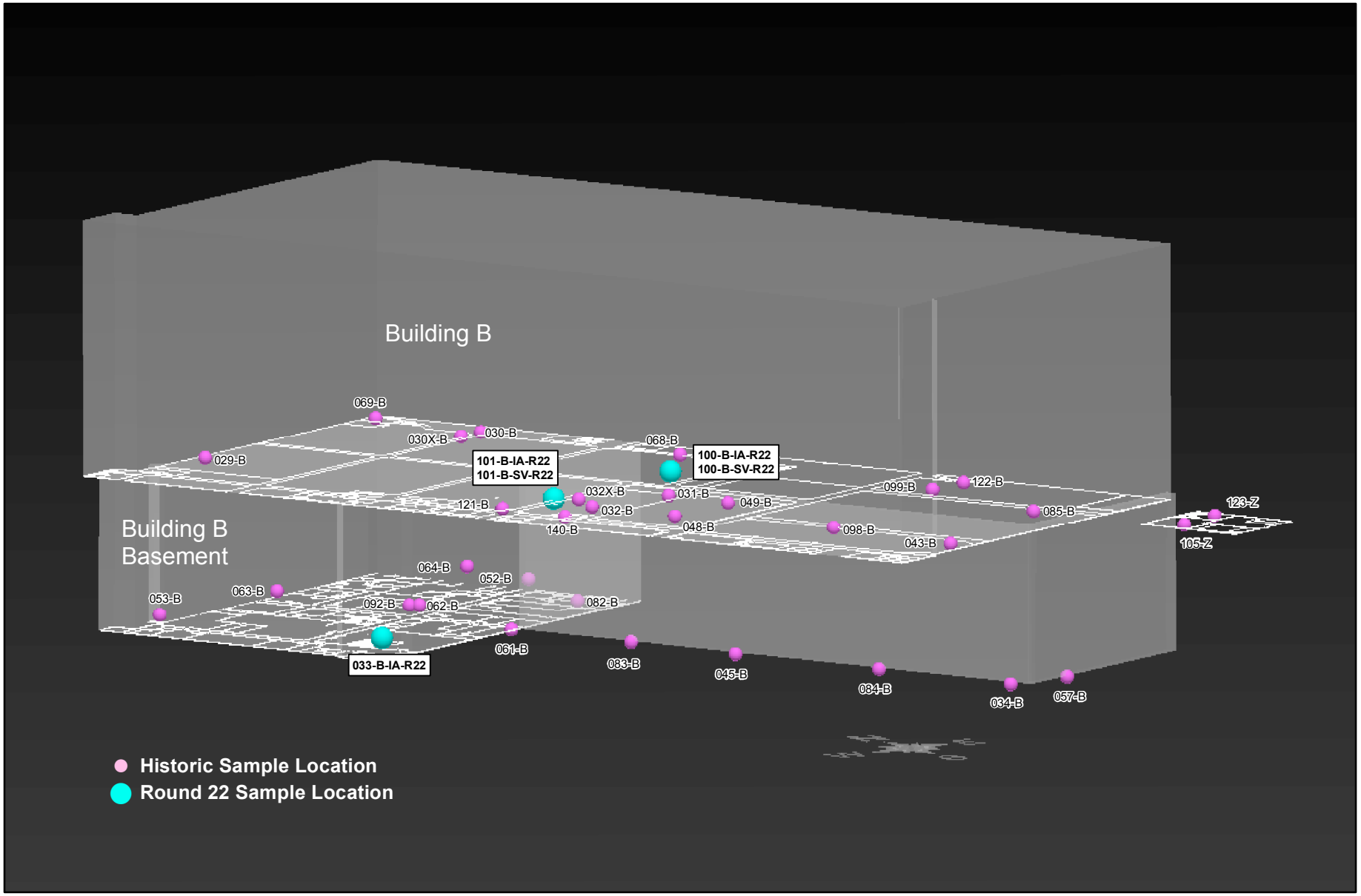
Map Document: (P:\GIS\Middle_River\MapDocs\MXD\iaq_background_samples_rnd22.mxd)
05/25/17 JEE

Figure 2-2
Indoor Air and Sub-Slab Vapor Monitoring Locations
for Building A, Round 22, March 2017



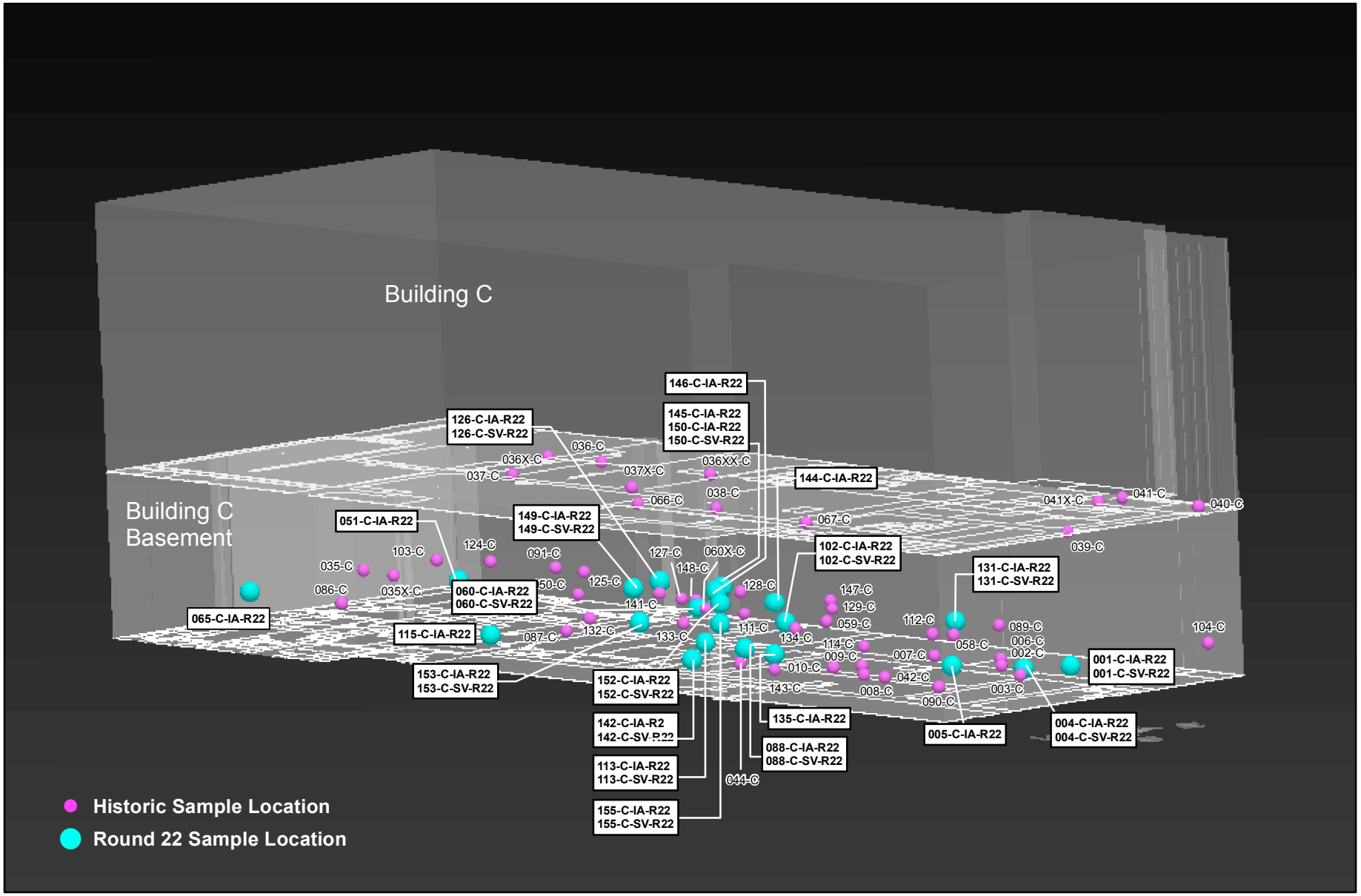
NOR: G:\GIS_files\Lockheed_MRC\GIS\MXD\bldg_a_rnd21_locs_3d.mxd MC

Figure 2-3
Indoor Air and Sub-Slab Vapor Monitoring Locations
for Building B, Round 22, March 2017



NOR: G:\GIS_files\Lockheed_MRC\GIS\MXD\bldg_b_rnd21_locs_3d_rev120716.mxd MC

Figure 2-4
Indoor Air and Sub-Slab Vapor Monitoring Locations
for Building C, Round 22, March 2017



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Section 3
Round 22 Results

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

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

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

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

3.1 ROUND 22 DATA ANALYSIS

The sampling-round designation (R22) is not included when identifying samples or sampling locations in the following text or tables, because all data discussed in this section are from Round 22. For example, an IA sample collected from vapor monitoring point (VMP) 076 (e.g., sample IA-076-A-R22) is referred to as "076-A." If comparisons are made to specific samples from previous sampling rounds, they will be identified as such in the text or by using the round-designation suffix (e.g., R06 for Round 6).

Descriptive statistics for Round 22 IAQ and SV samples are shown in Tables 3-1 and 3-2, respectively. Summary statistics for trichloroethene (TCE) and naphthalene in IA over time are shown in Tables 3-3 and 3-4, respectively. Figures 3-1, 3-2, and 3-3 show Round 22 exceedances in Buildings A, B, and C, respectively. The following chemicals were detected in Round 22 IAQ and/or SV samples at concentrations exceeding their respective MDE industrial risk-management benchmarks:

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

Building A—Tables 3-5 and 3-6 present Building A IAQ and SV results, respectively. Locations with exceedances are shown in Figure 3-1. TCE in IA exceeded its screening level (8.8 micrograms per cubic meter [µg/m^3]) at location 138-A (in the basement) with a concentration of 11 µg/m^3. No other IA concentrations exceeded screening levels during Round 22.

Normally, this exceedance would have triggered resampling at this location. However, at the time of the sampling, Lockheed Martin Corporation (Lockheed Martin) was continuously monitoring IA in the Building A basement. The continuous air sampling began on February 21, 2017, and the data indicate that air concentrations in the basement fluctuate during any 24-hour period, as well as weekly. Sampling location 138-A is between two continuous-sampling breathing-zone locations

(BZD-24 and BZD-26) currently being monitored. Both breathing-zone locations are near sumps and/or drains that might act as preferential pathways for contaminant transport from contaminated groundwater.

As stated earlier, an exceedance (11 µg/m^3) was detected in the Summa® canister sample at 138-A; this sample was collected on March 1, 2017 between approximately 7:45 a.m. to 4:15 p.m. This result correlates well with the average breathing zone concentrations of 11.2 µg/m^3 (BZD-24) and 12.4 µg/m^3 (BZD-26) that were recorded by continuous air sampling during this eight-hour period. Given the high correlation between the Summa®-canister-sample data and the continuous air-monitoring data, and the overlapping periods of the semiannual sampling and the continuous monitoring, Lockheed Martin and MDE agreed that resampling of 138-A was unnecessary.

TCE has periodically been detected in IA in the Building A basement, beginning with Round 15, at concentrations greater than its IA screening level (8.8 µg/m^3). In addition to the IA sample from location 138-A, TCE was also detected at two other Round 22 Building A basement sampling locations (018-A and 093-A), but at concentrations less than its screening level (8 µg/m^3 and 1.8 µg/m^3, respectively). In Round 22, first-floor Building A IA concentrations did not exceed screening levels. Note, however, that TCE was detected in IA in a duplicate sample collected from 015-A at a concentration of 8.7*J* µg/m^3, a concentration slightly lower than its screening level (8.8 µg/m^3). Some uncertainty is associated with the TCE detection at location 015-A, because it was not detected in the corresponding original sample from this location. However, location 015-A will continue to be monitored during the next sampling round.

SV TCE exceeded its screening level (293 µg/m^3) at eight locations (118-A, 136-A, 168-A, 170-A, 171-A, 173-A, 174-A, and 175-A) in the central portion of Building A. TCE SV exceedances were also observed at two of the same locations (118-A and 136-A) during several recent sampling rounds (e.g., Rounds 18 through 21). Round 22 SV concentrations at locations 118-A and 136-A are within an order of magnitude (i.e., a power of 10) of SV concentrations detected at these locations during Round 21. The TCE concentrations (850 µg/m^3 and 300 µg/m^3, respectively) at SV 136-A in Rounds 21 and 22 have decreased by a factor of approximately 100 since the SSDS was expanded to this location in 2016 after a reported TCE-vapor concentration of 35,000 µg/m^3 during Round 20. Sampling locations 168-A, 170-A, 171-A, 173-A, 174-A, and 175-A are newly

added for Round 22; all of them are in the Building A basement, except for 168-A, which is beneath the main floor.

One detection of 1,1-DCE in SV at location 175-A (48,000 µg/m^3) also exceeded its screening level (29,333 µg/m^3) during Round 22. Other SV detections of 1,1-DCE in Building A are at least approximately 10 times less than the concentration detected at 175-A. SV concentrations of 1,1-DCE did not exceed its screening level during Round 21.

Building B—Tables 3-7 and 3-8 present Building B IAQ and SV results, respectively. No IA or SV exceedances were noted in Building B during Round 22.

Building C—Tables 3-9 and 3-10 present Building C IAQ and SV results, respectively. No IA exceedances were detected in Round 22 samples. TCE exceedances in SV were noted for three locations: 102-C (1,000 µg/m^3), 126-C (310 µg/m^3), and 152-C (1,300 µg/m^3). The SV TCE concentration at 126-C also exceeded its screening level during Round 21. SV TCE exceedances were detected at locations 001-C and 113-C during Round 21, but not during Round 22. A VC exceedance (2,600*J* µg/m^3) of its screening level (933 µg/m^3) also occurred at 126-C. VC exceedances were also noted in SV at location 126-C during Round 18 (1,310 µg/m^3), Round 19 (16,000 µg/m^3), Round 20 (3,100 µg/m^3), and Round 21 (5,000 µg/m^3). The locations of TCE SV exceedances in Building C during Round 22 are sporadic, and do not follow an observable spatial pattern. However, VC exceedances in SV have consistently been observed at location 126-C during recent sampling rounds (i.e., in Rounds 12–22).

In addition to the screening level exceedances discussed above, SV exceedances of 1,1-DCA (3,900 µg/m^3) and naphthalene (310 µg/m^3) were also detected at 102-C during Round 22 (screening levels are 2,567 and 120 µg/m^3, respectively). SV concentrations of 1,1-DCA and naphthalene at 102-C did not exceed their screening levels during Round 21; however, Round 20 SV concentrations of 1,1-DCA (4,800 µg/m^3) and naphthalene (150 µg/m^3) did at the same location (i.e., 102-C).

3.2 BACKGROUND AMBIENT-AIR SAMPLES

Outdoor-air-quality (i.e., background) samples provide baseline concentrations for COC that can be compared to interior concentrations. Comparison to background indicates whether chemicals detected in IA are more likely associated with an exterior (i.e., background) or interior source

(e.g., chemicals used in the workplace, past spills of chemicals absorbed to above-slab building materials, or sub-slab sources). Analytical results for Round 22 ambient (background) air samples are shown in Table 3-11. Figure 2-1 shows the background sampling locations used for Round 22; these locations are sufficiently far from site operations to avoid any possible site influence.

Table 3-12 lists chemicals detected in background samples and compares IA concentrations to the maximum detected background concentration. All chemicals detected in background samples were also detected in IA samples. All background concentrations were below their respective screening criteria. Table 3-12 evaluates whether or not chemical concentrations detected in IA are possibly due to interior sources, or if they simply reflect background conditions, using the following logic:

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

In Round 22, only one IA concentration of TCE (at location 138-A) exceeds the MDE risk-management benchmark. TCE was not detected in background samples, and several of its SV concentrations in Building A and C samples are greater than the VI screening level. Round 22 IA concentrations of other COC exceeding their respective screening levels in SV samples (i.e., 1,1-DCA, 1,1-DCE, naphthalene, and VC) were either nondetected, or were less than their screening levels. 1,1-DCA, 1,1-DCE, naphthalene, TCE, and VC were not detected in background samples, indicating that any concentrations of these chemicals detected in IA are not likely attributable to background.

TCE in IA might be due to VI or IA sources. The IA concentrations for all remaining SV contaminants are less than screening levels; their IA concentrations span a range above and below background concentrations. As presented in Table 3-12, chemicals with the most detections below background (benzene, dichlorodifluoromethane, methylene chloride, and tetrachloroethene [PCE]) are likely influenced by ambient background sources. The remaining IA contaminants might be due to IA sources, and/or ambient background conditions; in any case, all remaining IA contaminants are below screening levels in Round 22.

TABLE 3-1

DESCRIPTIVE STATISTICS OF INDOOR AIR QUALITY RESULTS, ALL BUILDINGS, MARCH 2017
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Parameter	Frequency of detection[1]	Minimum detected value[1]	Maximum detected value[1]	Location with maximum detected value	Sample with maximum detected value	Minimum non-detect value[2]	Maximum non-detect value[2]	Average of detected values[1]	Average of all values[1][3]	Standard deviation[1][3]	Average of detected background values	Maximum background value	Number of detects above maximum background value[1][4]	Adjusted USEPA RSL for industrial air[5]	Number of samples above adjusted industrial RSL[1][4]	OSHA PEL[6]	Number of samples above OSHA PEL[1][4]
Volatile Organic Compounds (µg/m^3)																	
BENZENE	40/41	0.41 J	1.5	IA-149-C	IA-149-C-22	0.37	0.37	0.615	0.605	0.216	0.58	**0.79**	2	16 ca	0	31900	0
CARBON TETRACHLORIDE	8/41	0.48 J	0.61 J	IA-138-A	IA-138-A-22	0.47	0.47	0.519	0.290	0.118	0.48	**0.48**	7	20 ca	0	62900	0
CHLORODIFLUOROMETHANE	41/41	1.6	54	IA-051-C	IA-051-C-22	0.27	0.27	8.35	8.35	11.95	1.2	**1.5**	41	220000 nc	0	3,540,000[N]	0
CHLOROFORM	6/41	0.37 J	0.71 J	IA-018-A	IA-018-A-22	0.37	0.37	0.523	0.234	0.128	ND	ND	6	5.3 ca	0	240000	0
DICHLORODIFLUOROMETHANE	41/41	1.6 J	2.6	IA-149-C	IA-149-C-22	-	-	1.96	1.96	0.251	2.0	**2.2**	7	440 nc	0	4950000	0
1,1-DICHLOROETHENE	3/41	0.56 J	0.82 J	IA-018-A	IA-018-A-22	0.28	0.28	0.592	0.173	0.128	ND	ND	3	880 nc	0	--	--
ETHYLBENZENE	19/41	0.61 J	6.8	IA-078-A	IA-078-A-22	0.59	0.59	1.68	0.937	1.21	ND	ND	19	49 ca	0	435000	0
METHYLENE CHLORIDE	22/41	2.3 J	12 J	IA-100-B	IA-100-B-22	2.3	2.3	3.48	2.40	1.99	10.1	25	0	2600 nc	0	87000	0
NAPHTHALENE	2/41	2.1 J	3.3	IA-018-A	IA-018-A-22	1	1	2.30	0.588	0.452	ND	ND	2	3.6 ca	0	50000	0
TETRACHLOROETHENE	9/41	0.56 J	36	IA-149-C	IA-149-C-22	0.54	0.54	8.98	2.18	7.66	3.4	**3.4**	2	180 nc	0	678000	0
TOLUENE	39/41	2.3	2000	IA-126-C	IA-126-C-22	2.3	2.3	86.69	82.52	329.2	3.9	**3.9**	29	22000 nc	0	754000	0
1,1,1-TRICHLOROETHANE	2/41	0.35 J	0.41 J	IA-152-C	IA-152-C-22	0.33	0.33	0.380	0.175	0.047	0.33	**0.33**	2	22000 nc	0	1900000	0
TRICHLOROETHENE	14/41	0.43 J	11	IA-138-A	IA-138-A-22	0.38	0.38	2.28	0.905	2.123	ND	ND	14	8.8 nc	1	537000	0
1,2,4-TRIMETHYLBENZENE	3/41	0.62 J	0.97 J	IA-081-A	IA-081-A-22	0.61	0.61	0.777	0.340	0.131	ND	ND	3	31 nc	0	123,000[N]	0
TOTAL XYLENES	35/41	1.2 J	28	IA-078-A	IA-078-A-22	0.52	0.52	5.44	4.68	5.59	2.1	**2.1**	27	440 nc	0	435000	0

A shaded maximum background value indicates that the maximum detected value from the site data exceeds the maximum background value.
A bolded chemical name indicates that the chemical exceeds background and the industrial air RSL based on an HQ of 0.1 or an ILCR of 1×10^{-6}.
A bolded/shaded chemical name indicates the chemical exceeds background and the industrial air RSL based on an HQ of 1 or an ILCR of 1×10^{-5}

Footnotes:

1 - Sample and duplicate are considered two separate samples when determining the minimum and maximum concentrations but are considered one sample when determining frequency of detection, average, standard deviation, and the number of samples exceeding screening criteria.
2 - Values presented are sample-specific quantitation limits.
3 - One-half the detection limit was used to represent non-detected results in calculating the average of all results and the standard deviation.
4 - Exceedance counts are based on detected results only.
5 - USEPA Regional Screening Levels (RSLs) for Chemical Contaminants at Superfund Sites, May 2016. RSLs for carcinogens were adjusted to be based on a lifetime cancer risk of 1E-05. RSLs for noncarcinogens were not adjusted and represent a hazard quotient (HQ) of 1.
6 - Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL).

Definitions:

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

TABLE 3-2

DESCRIPTIVE STATISTICS OF SUB-SLAB VAPOR RESULTS, ALL BUILDINGS, MARCH 2017
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Parameter	Frequency of detection[1]	Minimum detected value[1]	Maximum detected value[1]	Location with maximum detected value	Sample with maximum detected value	Minimum non-detect value[2]	Maximum non-detect value[2]	Average of detected values[1]	Average of all values[1][3]	Standard deviation[1][3]	Adjusted USEPA RSL for industrial air [value divided by 0.03[4]]	Number of samples above adjusted industrial RSL[1][5]
Volatile Organic Compounds (µg/m^3)												
BENZENE	16/38	0.38 J	110	SV-126-C	SV-126-C-22	0.37	1200	7.82	20.2	98.2	533 ca	0
CARBON TETRACHLORIDE	7/38	0.51 J	2.5	SV-100-B	SV-100-B-22	0.47	1500	1.06	21.5	121	667 ca	0
CHLORODIFLUOROMETHANE	31/38	0.88 J	27	SV-150-C	SV-150-C-22	2.7	860	5.14	16.2	69.2	7333333 nc	0
CHLOROFORM	20/38	0.38 J	120 J	SV-168-A	SV-168-A-22	0.37	1200	11.9	22.6	98.4	177 ca	0
DICHLORODIFLUOROMETHANE	28/38	1.7 J	5.2	SV-101-B	SV-101-B-22	3.3	2200	2.20	32.6	178	14667 nc	0
1,1-DICHLOROETHANE	13/38	0.5 J	3900	SV-102-C	SV-102-C-22	0.2	2	433	148	671	2567 ca	1
1,1-DICHLOROETHENE	18/38	0.3 J	48000	SV-175-A	SV-175-A-22	0.28	2.8	3239	1534	7790	29333 nc	1
CIS-1,2-DICHLOROETHENE	19/38	0.66 J	9400	SV-175-A	SV-175-A-22	0.48	4.8	572	286	1520	NA	0
TRANS-1,2-DICHLOROETHENE	8/38	0.59 J	4300 J	SV-175-A	SV-175-A-22	0.4	34	544	116	697	NA	0
ETHYLBENZENE	14/38	0.86 J	580	SV-102-C	SV-102-C-22	0.59	1900	46.0	43.7	178	1633 ca	0
METHYLENE CHLORIDE	27/38	2.3 J	8.2 J	SV-142-C	SV-142-C-22	4.5	7400	3.25	107	599	86667 nc	0
NAPHTHALENE	10/38	1.2 J	310	SV-102-C	SV-102-C-22	1	3400	43.3	59.5	278	120 ca	1
TETRACHLOROETHENE	11/38	0.58 J	31	SV-101-B	SV-101-B-22	0.54	1800	4.74	26.9	146	6000 nc	0
TOLUENE	14/38	2.3	49	SV-102-C	SV-102-C-22	2.3	7400	8.31	108	599	733333 nc	0
1,1,1-TRICHLOROETHANE	17/38	0.34 J	3100	SV-102-C	SV-102-C-22	0.33	1100	200	104	507	733333 nc	0
TRICHLOROETHENE	35/38	0.5 J	650000	SV-175-A	SV-175-A-22	0.38	3.8	19799	18236	105323	293 nc	11
1,2,3-TRIMETHYLBENZENE	10/38	0.85 J	440	SV-081-A	SV-081-A-22	0.84	2700	56.2	53.0	228	733 nc	0
1,2,4-TRIMETHYLBENZENE	15/38	0.63 J	110	SV-075-A	SV-075-A-22	0.61	2000	14.5	33.9	162	1033 nc	0
1,3,5-TRIMETHYLBENZENE	8/38	1.1 J	64	SV-075-A	SV-075-A-22	0.64	2100	14.9	32.9	170	733 nc[6]	0
VINYL CHLORIDE	2/38	8.1	2600 J	SV-126-C	SV-126-C-22	0.37	1200	1304	85.6	430	933 ca	2
TOTAL XYLENES	23/38	1.2 J	4600	SV-102-C	SV-102-C-22	0.52	1700	225	160	754	14667 nc	0

A bolded chemical name indicates that the chemical exceeds the industrial air RSL divided by 0.03 based on an HQ of 0.1 or an ILCR of 1×10^{-6}.
A bolded/shaded chemical name indicates that the chemical exceeds the industrial air RSL divided by 0.03 based on an HQ of 1 or an ILCR of 1×10^{-5}.

Footnotes:
1 - Sample and duplicate are considered as two separate samples when determining the minimum and maximum concentrations, but are considered one sample when determining frequency of detection, average, standard deviation, and the number of samples exceeding criteria.
2 - Values presented are sample-specific quantitation limits.
3 - One-half the detection limit was used to represent non-detected results in calculating the average of all results and the standard deviation.
4 - Screening values derived in accordance with Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002). Screening values are equal to United States Environmental Protection Agency (USEPA) Industrial Air Screening Values divided by an attenuation factor 0.03, and correspond to a target cancer risk level of 1.0E-05 or a hazard quotient (HQ) of 1.
5 - Exceedance counts are based on detected results only.
6 - The value for 1,2,3-trimethylbenzene is presented for 1,3,5-trimethylbenzene.

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

TABLE 3-3

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

Building level or background	Dataset	Minimum detected value[1]	Maximum detected value[1]	Minimum non-detect value[1][2]	Maximum non-detect value[1][2]	Average of all values[3][4]	Average of detected values[3]	Frequency of detection[1]	Number of detections > 8.8 µg/m^3 [5][6]	95% UCL[3]
Basement	All Buildings 2006-March 2017	0.077 J	36 [7]	0.075	20	1.1	1.9	262/531	14	1.5
	All Buildings March 2017	0.54 J	11	0.38	0.38	0.98	5.3	4/26	1	2.1
	Building A 2006-March 2017	0.15 J	26.2	0.36	0.96	3.8	4.1	73/78	10	4.8
	Building A March 2017	1.8	11	-	-	6.9	6.9	3/3	1	NA[8]
	Building B 2006-March 2017	0.078 J	2.5	0.075	2.7	0.60	0.68	55/79	0	0.70
	Building B March 2017	0.54 J	0.54 J	-	-	-	-	1/1	0	NA[8]
	Building C 2006-March 2017	0.077 J	36 [7]	0.075	20	0.68	1.3	134/374	4	0.96
	Building C March 2017	-	-	0.38	0.38	-	-	0/22	0	NA[9]
First Floor[10]	All Buildings 2006-March 2017	0.081 J	34	0.075	12	1.1	1.7	176/358	5	1.6
	All Buildings March 2017	0.43 J	8.7 J	0.38	0.38	0.77	1.1	10/15	0	2.0
	Building A 2006-March 2017	0.086 J	34	0.075	12	1.2	2.0	131/251	5	2.0
	Building A March 2017	0.43 J	8.7 J	0.38	0.38	0.83	1.1	9/13	0	2.2
	Building B 2006-March 2017	0.081 J	5.1	0.075	11	0.81	0.85	38/85	0	0.63
	Building B March 2017	0.6 J	0.6 J	0.38	0.38	-	-	1/2	0	NA[8]
	Building C 2006-August 2008	0.5 J	7.2	0.21	2.7	1.0	2.3	7/22	0	2.1
Background	2006-March 2017	0.48 J	11.9	0.075	2.7	0.65	3.3	9/78	1	1.0
	March 2017	-	-	0.38	0.38	-	-	0/4	0	NA[8]

All results are in µg/m^3.

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

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

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

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

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

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

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

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

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

(10) There are no trichloroethene results for the Building C first floor from the March 2017 sampling event.

Definitions:

HQ - hazard quotient

ILCR - incremental lifetime cancer risk

J - estimated value

µg/m^3 - micrograms per cubic meter

NA - not applicable/not available

UCL - upper confidence limit

USEPA - United States Environmental Protection Agency

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

TABLE 3-4

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

Building level or background	Dataset	Minimum detected value[1]	Maximum detected value[1]	Minimum non-detect value[1][2]	Maximum non-detect value[1][2]	Average of all values[3][4]	Average of detected values[3]	Frequency of detection[1]	Number of detections > 3.6 µg/m^3 [5][6]	95% UCL[3]
Basement	All Buildings 2006-March 2017	0.2 J	15	0.19	96.7	1.5	2.2	249/466	50	1.7
	All Buildings March 2017	3.3	3.3	1	1	0.61	3.3	1/26	0	NA[7]
	Building A 2006-March 2017	0.47 J	15	0.19	4	2.6	3.7	48/73	19	3.3
	Building A March 2017	3.3	3.3	1	1	1.4	3.3	1/3	0	NA[8]
	Building B 2006-March 2017	0.23 J	5	0.19	5.6	1.1	1.6	32/52	3	1.4
	Building B March 2017	-	-	1	1	-	-	0/1	0	NA[8]
	Building C 2006-March 2017	0.2 J	6.9	0.19	96.7	1.3	1.9	169/341	28	1.4
	Building C March 2017	-	-	1	1	-	-	0/22	0	NA[7]
First Floor[9]	All Buildings 2006-March 2017	0.19 J	6.5 J	0.19	31	1.2	1.5	103/258	7	0.90
	All Buildings March 2017	2.1 J	2.1 J	1	1	0.55	1.3	1/15	0	NA[7]
	Building A 2006-March 2017	0.19 J	4.8	0.19	31	1.0	1.5	77/200	5	0.92
	Building A March 2017	2.1 J	2.1 J	1	1	0.56	1.3	1/13	0	NA[7]
	Building B 2006-March 2017	0.26 J	6.5 J	0.19	24	1.6	1.5	26/58	2	1.3
	Building B March 2017	-	-	1	1	-	-	0/2	0	NA[8]
Background	2006-March 2017	0.2 J	8.1 J	0.19	3.8	0.89	1.5	24/62	1	1.1
	March 2017	-	-	1	1	-	-	0/4	0	NA[8]

All results are in µg/m^3.

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

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

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

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

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

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

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

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

(9) There are no naphthalene results for the Building C first floor from historical or March 2017 sampling events.

Definitions:

HQ - hazard quotient

ILCR - incremental lifetime cancer risk

J - estimated value

µg/m^3 - micrograms per cubic meter

UCL - upper confidence limit

USEPA - United States Environmental Protection Agency

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

TABLE 3-5

INDOOR AIR QUALITY SAMPLING RESULTS, BULIDING A, MARCH 2017
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 1 OF 3

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu g/m^3$)	Industrial Air Screening Level ($\mu g/m^3$)	Key	AIR-015-A IA-015-A-22 20170301	 IA-015-A-22-D 20170301	AIR-018-A IA-018-A-22 20170301	AIR-021-A IA-021-A-22 20170301	AIR-075-A IA-075-A-22 20170301	AIR-076-A IA-076-A-22 20170301
Volatile Organic Compounds ($\mu g/m^3$)									
BENZENE	31,900	16	ca	0.5 J	0.65 J	0.76 J	0.57 J	0.56 J	0.54 J
CARBON TETRACHLORIDE	62,900	20	ca	0.47 U	0.53 J	0.58 J	0.47 U	0.47 U	0.47 U
CHLORODIFLUOROMETHANE	3,540,000 N	220,000	nc	4.9	5.6	9.6	2.4	2	2
CHLOROFORM	240,000	5.3	ca	0.37 J	0.68 J	0.71 J	0.41 J	0.37 U	0.37 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	1.8 J	2.1	2	1.7 J	1.6 J	1.9 J
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.65 J	0.82 J	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	0.59 U	0.59 U	0.59 U	0.99 J	1.8	1.4 J
METHYL TERT-BUTYL ETHER	180,000 A	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	2.3 U	2.3 U	3.2 J	2.3 U	2.5 J	2.3 U
NAPHTHALENE	50,000	3.6	ca	1 U	2.1 J	3.3	1 U	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U
TOLUENE	754,000	22,000	nc	3	2.3 U	5	6.6	15	4.8
1,2,4-TRICHLOROBENZENE	40,000 N	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 UJ	8.7 J	8	0.65 J	0.38 U	1 J
1,2,3-TRIMETHYLBENZENE	123,000 N	22	nc	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000 N	31	nc	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U
1,3,5-TRIMETHYLBENZENE	123,000 N	22	nc(1)	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 UJ	0.37 U	0.37 UJ	0.37 UJ	0.37 UJ	0.37 UJ
TOTAL XYLENES	435,000	440	nc	1.4 J	0.52 U	2.4 J	4.9	7.5	6.8

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

-- = not available

J = estimated value

U = not detected

UJ = non-detected value is estimated

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

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

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

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

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

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

TABLE 3-5

INDOOR AIR QUALITY SAMPLING RESULTS, BULIDING A, MARCH 2017
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 2 OF 3

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu g/m^3$)	Industrial Air Screening Level ($\mu g/m^3$)	Key	AIR-078-A IA-078-A-22 20170301	AIR-079-A IA-079-A-22 20170301	AIR-079-A IA-079-A-22-D 20170301	AIR-081-A IA-081-A-22 20170301	AIR-093-A IA-093-A-22 20170301	AIR-097-A IA-097-A-22 20170301
Volatile Organic Compounds ($\mu g/m^3$)									
BENZENE	31,900	16	ca	0.51 J	0.52 J	0.41 J	0.54 J	0.53 J	0.37 U
CARBON TETRACHLORIDE	62,900	20	ca	0.47 U	0.47 U	0.47 U	0.47 U	0.51 J	0.47 U
CHLORODIFLUOROMETHANE	3,540,000 N	220,000	nc	2.4	2.7	2.1	13	9.8	2.5
CHLOROFORM	240,000	5.3	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	1.6 J	2	2.1	2	2.1	2.3
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	6.8	1.2 J	0.83 J	3.2	0.59 U	0.83 J
METHYL TERT-BUTYL ETHER	180,000 A	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	2.3 U	2.3 U	2.3 U	2.6 J	2.3 U	2.4 J
NAPHTHALENE	50,000	3.6	ca	1 U	1 U	1 UJ	1 U	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U
TOLUENE	754,000	22,000	nc	3.3	7.2	6.3	130	2.3 U	8.2
1,2,4-TRICHLOROBENZENE	40,000 N	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.83 J	0.38 U	0.38 U	0.43 J	1.8	0.38 U
1,2,3-TRIMETHYLBENZENE	123,000 N	22	nc	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000 N	31	nc	0.61 U	0.61 U	0.61 U	0.97 J	0.61 U	0.61 U
1,3,5-TRIMETHYLBENZENE	123,000 N	22	nc(1)	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 UJ	0.37 UJ	0.37 U	0.37 UJ	0.37 UJ	0.37 UJ
TOTAL XYLENES	435,000	440	nc	28	6.1	4.2	19	0.52 U	4.1

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

-- = not available

J = estimated value

U = not detected

UJ = non-detected value is estimated

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

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

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

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

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

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

TABLE 3-5

INDOOR AIR QUALITY SAMPLING RESULTS, BULIDING A, MARCH 2017
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 3 OF 3

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu g/m^3$)	Industrial Air Screening Level ($\mu g/m^3$)	Key	AIR-117-A IA-117-A-22 20170301	AIR-118-A IA-118-A-22 20170301	AIR-136-A IA-136-A-22 20170301	AIR-138-A IA-138-A-22 20170301	AIR-139-A IA-139-A-22 20170301	AIR-168-A IA-168-A-22 20170301
Volatile Organic Compounds ($\mu g/m^3$)									
BENZENE	31,900	16	ca	0.56 J	0.52 J	0.52 J	0.7 J	0.46 J	0.54 J
CARBON TETRACHLORIDE	62,900	20	ca	0.47 U	0.47 U	0.5 J	0.61 J	0.47 U	0.47 U
CHLORODIFLUOROMETHANE	3,540,000 N	220,000	nc	3	4	2.3	9.3	1.6	2.1
CHLOROFORM	240,000	5.3	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	2	1.9 J	1.9 J	1.9 J	2	1.8 J
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U	0.56 J	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	1.9	0.61 J	1.8	0.59 U	0.59 U	1.2 J
METHYL TERT-BUTYL ETHER	180,000 A	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	2.3 J	2.3 U	2.3 U	2.3 U	2.3 U	2.5 J
NAPHTHALENE	50,000	3.6	ca	1 U	1 U	1 U	1 U	1 UJ	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	0.54 U	3.2	1.1 J	0.57 J
TOLUENE	754,000	22,000	nc	3.5	4.1	7.5	2.3 U	4	4.1
1,2,4-TRICHLOROBENZENE	40,000 N	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.61 J	0.59 J	11	0.48 J	0.99 J
1,2,3-TRIMETHYLBENZENE	123,000 N	22	nc	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000 N	31	nc	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U
1,3,5-TRIMETHYLBENZENE	123,000 N	22	nc(1)	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 UJ	0.37 UJ	0.37 UJ	0.37 UJ	0.37 U	0.37 UJ
TOTAL XYLENES	435,000	440	nc	10	3.4 J	9.3	0.52 U	3.3 J	6.1

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

-- = not available

J = estimated value

U = not detected

UJ = non-detected value is estimated

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

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

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

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

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

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

TABLE 3-6

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING A, MARCH 2017
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION	Target Shallow Soil Gas Concentration ($\mu g/m^3$)[1]	Key	AIR-015-A		AIR-075-A	AIR-076-A	AIR-078-A	AIR-079-A	AIR-081-A
SAMPLE ID			SV-015-A-22	SV-015-A-22-D	SV-075-A-22	SV-076-A-22	SV-078-A-22	SV-079-A-22	SV-081-A-22
SAMPLE DATE			20170301	20170301	20170301	20170301	20170301	20170301	20170301
Volatile organic compounds ($\mu g/m^3$)									
BENZENE	533	ca	1.2 J	3.7 U	0.37 U	0.37 U	0.47 J	0.51 J	0.37 U
CARBON TETRACHLORIDE	667	ca	0.47 U	4.7 U	0.47 U	0.47 U	0.47 U	0.47 U	0.68 J
CHLORODIFLUOROMETHANE	7,333,333	nc	6.1	8.7 J	2.6	1.7	2.7	3.4	5.8
CHLOROFORM	177	ca	0.58 J	3.7 U	0.37 U	0.37 U	0.37 U	0.37 U	3.1
DICHLORODIFLUOROMETHANE	14,667	nc	2.1	6.7 U	2	1.7 J	2.5	2.1	2.2
1,1-DICHLOROETHANE	2,567	ca	2	4.1 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	157	nc	0.38 U	3.8 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	29,333	ca	6	13 J	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	--	--	0.73 J	4.8 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	--	--	0.4 U	4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	1,633	ca	0.59 U	5.9 U	0.88 J	1.2 J	0.59 U	0.87 J	0.92 J
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	12 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	3.2 J	23 U	3.1 J	2.4 J	2.8 J	2.5 J	3.1 J
NAPHTHALENE	120	ca	1 UJ	10 U	92 J	4.4 J	1 UJ	1 UJ	7.6 J
TETRACHLOROETHENE	6,000	nc	0.54 U	5.4 U	0.54 U	0.54 U	0.54 U	1.5 J	2.5 J
TOLUENE	733,333	nc	4.2	23 U	2.3 U	2.6	2.8	3.8	15
1,2,4-TRICHLOROBENZENE	293	nc	1.4 U	14 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	733,333	nc	2.1 J	3.9 J	0.33 U	0.97 J	1.3 J	0.83 J	5.1
1,1,2-TRICHLOROETHANE	29	nc	0.57 U	5.7 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	293	nc	2.3	3.8 U	3	5	11	41	0.38 U
1,2,3-TRIMETHYLBENZENE	733	nc	0.84 U	8.4 U	54	9.9	0.84 U	0.84 U	440
1,2,4-TRIMETHYLBENZENE	1,033	nc	0.61 U	6.1 U	110	5.4	0.67 J	0.7 J	42
1,3,5-TRIMETHYLBENZENE	733	nc[2]	0.64 U	6.4 U	64	5.5	0.64 U	0.64 U	23
VINYL CHLORIDE	933	ca	0.37 U	3.7 UJ	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	14,667	nc	2.4 J	5.2 U	13	7.5	2.6 J	3.1 J	8.2

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

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

$\mu g/m^3$ = micrograms per cubic meter
-- = not available
J = estimated value
U = nondetect
UJ = non-detected value is estimated
ca = screening value based on carcinogenic effects
nc = screening value based on noncarcinogenic effects

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

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

TABLE 3-6

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING A, MARCH 2017
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu g/m^3$)[1]	Key	AIR-093-A SV-093-A-22 20170303	AIR-116-A SV-116-A-22 20170301	AIR-118-A SV-118-A-22 20170301	AIR-136-A SV-136-A-22 20170301	AIR-138-A SV-138-A-22 20170301	AIR-139-A SV-139-A-22 20170301	AIR-168-A SV-168-A-22 20170301
Volatile organic compounds ($\mu g/m^3$)									
BENZENE	533	ca	0.58 J	0.43 J	5.6 U	1.4	0.62 J	0.37 U	32 U
CARBON TETRACHLORIDE	667	ca	0.47 U	0.54 J	7.2 U	0.51 J	0.52 J	0.47 U	41 U
CHLORODIFLUOROMETHANE	7,333,333	nc	1.7	18	4 U	2.4	19	2.4	23 U
CHLOROFORM	177	ca	0.37 U	0.65 J	7.8 J	7.8	0.37 U	0.37 U	120 J
DICHLORODIFLUOROMETHANE	14,667	nc	1.9 J	2	10 U	2.2	1.9 J	2.1	57 U
1,1-DICHLOROETHANE	2,567	ca	0.5 J	0.2 U	36	0.2 U	2.3	0.2 U	70 J
1,2-DICHLOROETHANE	157	nc	0.38 U	0.38 U	5.9 U	0.38 U	0.38 U	0.38 U	33 U
1,1-DICHLOROETHENE	29,333	ca	0.3 J	0.42 J	470	0.28 U	9.9	0.28 U	4900
CIS-1,2-DICHLOROETHENE	--	--	0.48 U	0.48 U	120	1.2 J	5.7	0.48 U	270
TRANS-1,2-DICHLOROETHENE	--	--	0.4 U	0.4 U	10 J	0.4 U	0.4 U	0.4 U	34 U
ETHYLBENZENE	1,633	ca	0.59 U	0.59 U	12 J	3.1	0.59 U	4.7	50 U
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	1.2 U	19 U	1.2 U	1.2 U	1.2 U	110 U
METHYLENE CHLORIDE	86,667	nc	2.3 J	2.4 J	34 U	2.5 J	2.6 J	3.5 J	190 U
NAPHTHALENE	120	ca	1 U	1 UJ	16 U	1 UJ	1 UJ	6.5 J	90 U
TETRACHLOROETHENE	6,000	nc	0.54 U	0.54 U	8.3 U	0.54 U	0.62 J	8	47 U
TOLUENE	733,333	nc	2.3 U	2.3 U	34 U	9.7	2.3 U	2.3 U	190 U
1,2,4-TRICHLOROBENZENE	293	nc	1.4 U	1.4 U	22 U	1.4 U	1.4 U	1.4 U	120 U
1,1,1-TRICHLOROETHANE	733,333	nc	0.33 U	0.33 U	18 J	0.33 U	0.34 J	0.76 J	59 J
1,1,2-TRICHLOROETHANE	29	nc	0.57 U	0.57 U	8.7 U	0.57 U	0.57 U	0.57 U	49 U
TRICHLOROETHENE	293	nc	2.2	14	**2000**	**300**	82	2.5	**22000**
1,2,3-TRIMETHYLBENZENE	733	nc	0.84 U	0.84 U	13 U	2.4	0.84 U	13	72 U
1,2,4-TRIMETHYLBENZENE	1,033	nc	0.61 U	0.61 U	13 J	0.79 J	0.61 U	6.2	53 U
1,3,5-TRIMETHYLBENZENE	733	nc[2]	0.64 U	0.64 U	9.7 U	0.64 U	0.64 U	9.2	55 U
VINYL CHLORIDE	933	ca	0.37 UJ	0.37 U	5.6 U	0.37 U	0.37 U	0.37 U	32 U
TOTAL XYLENES	14,667	nc	0.52 U	0.52 U	120	15	0.52 U	42	45 U

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

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

$\mu g/m^3$ = micrograms per cubic meter
-- = not available
J = estimated value
U = nondetect
UJ = non-detected value is estimated
ca = screening value based on carcinogenic effects
nc = screening value based on noncarcinogenic effects

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

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

TABLE 3-6

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING A, MARCH 2017
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu g/m^3$)[1]	Key	AIR-169-A SV-169-A-22 20170308	AIR-170-A SV-170-A-22 20170308	AIR-171-A SV-171-A-22 20170308	AIR-172-A SV-172-A-22 20170308	AIR-173-A SV-173-A-22 20170308	AIR-174-A SV-174-A-22 20170308	AIR-175-A SV-175-A-22 20170308
Volatile organic compounds ($\mu g/m^3$)									
BENZENE	533	ca	0.38 J	5.8 U	11 U	0.47 J	19 U	1.8 U	1200 U
CARBON TETRACHLORIDE	667	ca	0.47 U	7.5 U	14 U	0.47 U	25 U	2.4 U	1500 U
CHLORODIFLUOROMETHANE	7,333,333	nc	1.5	4.2 U	7.9 U	3.1	14 U	1.5 J	860 U
CHLOROFORM	177	ca	0.38 J	7.9 J	11 U	0.37 U	19 U	3.8 J	1200 U
DICHLORODIFLUOROMETHANE	14,667	nc	2.2	11 U	20 U	2.3	35 U	3.3 U	2200 U
1,1-DICHLOROETHANE	2,567	ca	0.2 U	23 J	22 J	0.2 U	51 J	8.4	1500 J
1,2-DICHLOROETHANE	157	nc	0.38 U	6.1 U	12 U	0.38 U	20 U	1.9 U	1300 U
1,1-DICHLOROETHENE	29,333	ca	1.3 J	160	1400	1.1 J	660	72	**48000**
CIS-1,2-DICHLOROETHENE	--	--	0.48 U	280	94	0.66 J	250	29	9400
TRANS-1,2-DICHLOROETHENE	--	--	0.4 U	6.3 U	12 U	0.4 U	21 U	2 U	4300 J
ETHYLBENZENE	1,633	ca	0.59 U	9.3 U	18 U	0.59 U	31 U	2.9 U	1900 U
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	19 U	37 U	1.2 U	64 U	6.1 U	4000 U
METHYLENE CHLORIDE	86,667	nc	2.8 J	36 U	68 U	7.4 J	120 U	11 U	7400 U
NAPHTHALENE	120	ca	1 U	17 U	31 U	1 U	55 U	5.2 U	3400 U
TETRACHLOROETHENE	6,000	nc	0.54 U	8.6 U	16 U	0.54 U	29 U	2.7 U	1800 U
TOLUENE	733,333	nc	2.3 U	36 U	68 U	2.3 U	120 U	11 U	7400 U
1,2,4-TRICHLOROBENZENE	293	nc	1.4 U	23 U	43 U	1.4 U	76 U	7.2 U	4700 U
1,1,1-TRICHLOROETHANE	733,333	nc	0.33 U	14 J	9.8 U	0.33 U	17 U	15	1100 U
1,1,2-TRICHLOROETHANE	29	nc	0.57 U	9.1 U	17 U	0.57 U	30 U	2.9 U	1900 U
TRICHLOROETHENE	293	nc	3.9	**2000**	**4100**	14	**7900**	**920**	**6.5E+05**
1,2,3-TRIMETHYLBENZENE	733	nc	0.84 U	13 U	25 U	0.84 U	44 U	4.2 U	2700 U
1,2,4-TRIMETHYLBENZENE	1,033	nc	0.61 U	9.8 U	18 U	0.61 U	32 U	3.1 U	2000 U
1,3,5-TRIMETHYLBENZENE	733	nc[2]	0.64 U	10 U	19 U	0.64 U	34 U	3.2 U	2100 U
VINYL CHLORIDE	933	ca	0.37 U	5.9 U	11 U	0.37 U	19 U	1.9 U	1200 U
TOTAL XYLENES	14,667	nc	2.3 J	8.3 U	16 U	0.52 U	27 U	2.6 U	1700 U

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

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

$\mu g/m^3$ = micrograms per cubic meter
-- = not available
J = estimated value
U = nondetect
UJ = non-detected value is estimated
ca = screening value based on carcinogenic effects
nc = screening value based on noncarcinogenic effects

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

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

TABLE 3-6

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING A, MARCH 2017
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu g/m^3$)[1]	Key	AIR-176-A SV-176-A-22 20170308	AIR-177-A SV-177-A-22 20170308
Volatile organic compounds ($\mu g/m^3$)				
BENZENE	533	ca	0.63 J	0.37 U
CARBON TETRACHLORIDE	667	ca	0.47 U	0.47 U
CHLORODIFLUOROMETHANE	7,333,333	nc	1.5	1.3 J
CHLOROFORM	177	ca	0.37 U	0.82 J
DICHLORODIFLUOROMETHANE	14,667	nc	2.3	2.2
1,1-DICHLOROETHANE	2,567	ca	0.2 U	0.2 U
1,2-DICHLOROETHANE	157	nc	0.38 U	0.38 U
1,1-DICHLOROETHENE	29,333	ca	0.38 J	0.28 U
CIS-1,2-DICHLOROETHENE	--	--	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	--	--	0.4 U	0.4 U
ETHYLBENZENE	1,633	ca	0.59 U	0.59 U
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	2.8 J	2.8 J
NAPHTHALENE	120	ca	1 U	1 U
TETRACHLOROETHENE	6,000	nc	0.54 U	0.73 J
TOLUENE	733,333	nc	2.3	3.1
1,2,4-TRICHLOROBENZENE	293	nc	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	733,333	nc	0.33 U	0.33 U
1,1,2-TRICHLOROETHANE	29	nc	0.57 U	0.57 U
TRICHLOROETHENE	293	nc	5.4	2.9
1,2,3-TRIMETHYLBENZENE	733	nc	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	1,033	nc	0.61 U	0.61 U
1,3,5-TRIMETHYLBENZENE	733	nc[2]	0.64 U	0.64 U
VINYL CHLORIDE	933	ca	0.37 U	0.37 U
TOTAL XYLENES	14,667	nc	1.3 J	2.2 J

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

TABLE 3-7

INDOOR AIR QUALITY SAMPLING RESULTS, BULIDING B, MARCH 2017
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu g/m^3$)	Industrial Air Screening Level ($\mu g/m^3$)	Key	AIR-033-B IA-033-B-22 20170228	AIR-100-B IA-100-B-22 20170228	AIR-101-B IA-101-B-22 20170228
Volatile Organic Compounds ($\mu g/m^3$)						
BENZENE	31,900	16	ca	0.72 J	0.62 J	0.71 J
CARBON TETRACHLORIDE	62,900	20	ca	0.47 U	0.47 U	0.47 U
CHLORODIFLUOROMETHANE	3,540,000 [N]	220,000	nc	5.8	3.7	2.3
CHLOROFORM	240,000	5.3	ca	0.37 U	0.37 U	0.37 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	1.8 J	1.9 J	1.9 J
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	2.4	2	2.8
METHYL TERT-BUTYL ETHER	180,000 [A]	470	ca	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	5.2 J	12 J	2.7 J
NAPHTHALENE	50,000	3.6	ca	1 U	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	0.54 U
TOLUENE	754,000	22,000	nc	70	57	67
1,2,4-TRICHLOROBENZENE	40,000 [N]	8.8	nc	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.33 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.54 J	0.38 U	0.6 J
1,2,3-TRIMETHYLBENZENE	123,000 [N]	22	nc	0.84 UJ	0.84 UJ	0.84 UJ
1,2,4-TRIMETHYLBENZENE	123,000 [N]	31	nc	0.74 J	0.61 U	0.61 U
1,3,5-TRIMETHYLBENZENE	123,000 [N]	22	nc[(1)]	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	12	9.9	15

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

-- = not available

J = estimated value

U = not detected

UJ = non-detected value is estimated

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

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

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

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

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

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

TABLE 3-8

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING B, MARCH 2017
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu g/m^3$)(1)	Key	AIR-100-B SV-100-B-22 20170228	AIR-101-B SV-101-B-22 20170228
Volatile organic compounds ($\mu g/m^3$)				
BENZENE	533	ca	0.37 U	0.37 U
CARBON TETRACHLORIDE	667	ca	2.5	2.1 J
CHLORODIFLUOROMETHANE	7,333,333	nc	1.2 J	7.4
CHLOROFORM	177	ca	2	0.4 J
DICHLORODIFLUOROMETHANE	14,667	nc	2.1	5.2
1,1-DICHLOROETHANE	2,567	ca	0.2 U	0.2 U
1,2-DICHLOROETHANE	157	nc	0.38 U	0.38 U
1,1-DICHLOROETHENE	29,333	ca	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	--	--	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	--	--	0.4 U	0.4 U
ETHYLBENZENE	1,633	ca	0.59 U	1.6 J
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	2.7 J	3.1 J
NAPHTHALENE	120	ca	1 UJ	1.5
TETRACHLOROETHENE	6,000	nc	1.2 J	31
TOLUENE	733,333	nc	2.3 U	6.4
1,2,4-TRICHLOROBENZENE	293	nc	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	733,333	nc	0.34 J	130
1,1,2-TRICHLOROETHANE	29	nc	0.57 U	0.57 U
TRICHLOROETHENE	293	nc	8.1	59
1,2,3-TRIMETHYLBENZENE	733	nc	0.85 J	1.5 J
1,2,4-TRIMETHYLBENZENE	1,033	nc	0.61 U	2.3
1,3,5-TRIMETHYLBENZENE	733	nc(2)	0.64 U	1.4 J
VINYL CHLORIDE	933	ca	0.37 U	0.37 U
TOTAL XYLENES	14,667	nc	0.52 U	14

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

TABLE 3-9

INDOOR AIR QUALITY SAMPLING RESULTS, BULIDING C, MARCH 2017
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu g/m^3$)	Industrial Air Screening Level ($\mu g/m^3$)	Key	AIR-001-C IA-001-C-22 20170228	AIR-004-C IA-004-C-22 20170228	AIR-005-C IA-005-C-22 20170228	AIR-051-C IA-051-C-22 20170228	AIR-060-C IA-060-C-22 20170228	AIR-065-C IA-065-C-22 20170228
Volatile Organic Compounds ($\mu g/m^3$)									
BENZENE	31,900	16	ca	0.54 J	0.55 J	0.52 J	0.6 J	0.54 J	0.64 J
CARBON TETRACHLORIDE	62,900	20	ca	0.51 J	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U
CHLORODIFLUOROMETHANE	3,540,000 N	220,000	nc	2.7	3.5	3.2	54	3.7	10
CHLOROFORM	240,000	5.3	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	1.8 J	1.9 J	1.7 J	2	1.8 J	1.8 J
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U
METHYL TERT-BUTYL ETHER	180,000 A	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.4 J
NAPHTHALENE	50,000	3.6	ca	1 U	1 U	1 U	1 U	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	0.54 U	1 J	0.54 U	1.9 J
TOLUENE	754,000	22,000	nc	2.3	3.6	3.3	51	4.2	59
1,2,4-TRICHLOROBENZENE	40,000 N	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,2,3-TRIMETHYLBENZENE	123,000 N	22	nc	0.84 UJ	0.84 UJ	0.84 UJ	0.84 UJ	0.84 UJ	0.84 UJ
1,2,4-TRIMETHYLBENZENE	123,000 N	31	nc	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U
1,3,5-TRIMETHYLBENZENE	123,000 N	22	nc(1)	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	0.52 U	1.2 J	0.52 U	1.2 J	3.1 J	1.3 J

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

-- = not available

J = estimated value

U = not detected

UJ = non-detected value is estimated

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

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

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

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

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

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

TABLE 3-9

INDOOR AIR QUALITY SAMPLING RESULTS, BULIDING C, MARCH 2017
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 2 OF 4

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu g/m^3$)	Industrial Air Screening Level ($\mu g/m^3$)	Key	AIR-088-C IA-088-C-22 20170228	AIR-102-C IA-102-C-22 20170228	AIR-113-C IA-113-C-22 20170228	AIR-115-C IA-115-C-22 20170228	AIR-126-C IA-126-C-22 20170228	AIR-131-C IA-131-C-22 20170228
Volatile Organic Compounds ($\mu g/m^3$)									
BENZENE	31,900	16	ca	0.63 J	0.56 J	0.54 J	0.67 J	1.4	0.7 J
CARBON TETRACHLORIDE	62,900	20	ca	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U
CHLORODIFLUOROMETHANE	3,540,000 N	220,000	nc	3.3	3.5	3.5	3.2	1.8	2.8
CHLOROFORM	240,000	5.3	ca	0.37 U	0.58 J	0.37 U	0.37 U	0.37 U	0.37 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	1.9 J	1.6 J	1.7 J	1.6 J	1.7 J	1.9 J
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	0.59 U	0.59 U	0.59 U	0.59 U	0.64 J	0.64 J
METHYL TERT-BUTYL ETHER	180,000 A	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	2.3 U	2.3 J	2.3 U	2.3 U	2.8 J	2.7 J
NAPHTHALENE	50,000	3.6	ca	1 U	1 U	1 U	1 U	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	0.54 U	0.54 U	35	0.54 U
TOLUENE	754,000	22,000	nc	4.8	3.3	4	12	2000	3.7
1,2,4-TRICHLOROBENZENE	40,000 N	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,2,3-TRIMETHYLBENZENE	123,000 N	22	nc	0.84 UJ	0.84 UJ	0.84 UJ	0.84 UJ	0.84 UJ	0.84 UJ
1,2,4-TRIMETHYLBENZENE	123,000 N	31	nc	0.61 U	0.61 U	0.61 U	0.62 J	0.61 U	0.61 U
1,3,5-TRIMETHYLBENZENE	123,000 N	22	nc(1)	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	2.3 J	2.4 J	1.2 J	2.8 J	2.6 J	3.6

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

-- = not available

J = estimated value

U = not detected

UJ = non-detected value is estimated

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

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

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

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

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

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

TABLE 3-9

INDOOR AIR QUALITY SAMPLING RESULTS, BULIDING C, MARCH 2017
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 3 OF 4

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu g/m^3$)	Industrial Air Screening Level ($\mu g/m^3$)	Key	AIR-131-C IA-131-C-22-D 20170228	AIR-135-C IA-135-C-22 20170228	AIR-142-C IA-142-C-22 20170228	AIR-144-C IA-144-C-22 20170228	AIR-145-C IA-145-C-22 20170228	AIR-146-C IA-146-C-22 20170228
Volatile Organic Compounds ($\mu g/m^3$)									
BENZENE	31,900	16	ca	0.48 J	0.5 J	0.49 J	0.63 J	0.55 J	0.65 J
CARBON TETRACHLORIDE	62,900	20	ca	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U
CHLORODIFLUOROMETHANE	3,540,000 N	220,000	nc	2.5	3.6	3.2	17	36	41
CHLOROFORM	240,000	5.3	ca	0.37 U	0.37 U	0.37 U	0.37 J	0.37 U	0.37 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	2.1	2.5	2.4	2.4	2.1	2.4
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	0.59 U	0.59 U	0.59 U	0.7 J	0.64 J	0.59 U
METHYL TERT-BUTYL ETHER	180,000 A	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	2.3 U	2.5 J	2.3 J	4.8 J	6.2 J	2.6 J
NAPHTHALENE	50,000	3.6	ca	1 UJ	1 U	1 U	1 U	1 UJ	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	0.56 J	0.54 U	1.5 J	0.54 U
TOLUENE	754,000	22,000	nc	2.6	4.1	10	5.4	15	12
1,2,4-TRICHLOROBENZENE	40,000 N	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.33 U	0.35 J	0.33 U	0.33 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,2,3-TRIMETHYLBENZENE	123,000 N	22	nc	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000 N	31	nc	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U
1,3,5-TRIMETHYLBENZENE	123,000 N	22	nc(1)	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	3 J	0.52 U	0.52 U	3.5	3.4 J	2.6 J

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

-- = not available

J = estimated value

U = not detected

UJ = non-detected value is estimated

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

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

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

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

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

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

TABLE 3-9

INDOOR AIR QUALITY SAMPLING RESULTS, BULIDING C, MARCH 2017
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 4 OF 4

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu g/m^3$)	Industrial Air Screening Level ($\mu g/m^3$)	Key	AIR-149-C IA-149-C-22 20170228	AIR-150-C IA-150-C-22 20170228	AIR-152-C IA-152-C-22 20170228	AIR-153-C IA-153-C-22 20170228	AIR-153-C IA-153-C-22-D 20170228	AIR-155-C IA-155-C-22 20170228
Volatile Organic Compounds ($\mu g/m^3$)									
BENZENE	31,900	16	ca	1.5	0.44 J	0.63 J	0.54 J	0.49 J	0.52 J
CARBON TETRACHLORIDE	62,900	20	ca	0.58 J	0.48 J	0.47 U	0.47 U	0.47 U	0.47 U
CHLORODIFLUOROMETHANE	3,540,000 N	220,000	nc	1.8	34	20	3.4 J	0.27 UJ	3.6
CHLOROFORM	240,000	5.3	ca	0.54 J	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	2.6	2	2.3	2.2	1.9 J	1.9 J
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	0.59 U	0.59 U	0.75 J	0.59 U	0.59 U	0.59 U
METHYL TERT-BUTYL ETHER	180,000 A	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	4.7 J	2.3 U	3.2 J	2.3 J	2.3 U	3.6 J
NAPHTHALENE	50,000	3.6	ca	1 U	1 UJ	1 U	1 U	1 UJ	1 U
TETRACHLOROETHENE	678,000	180	nc	36	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U
TOLUENE	754,000	22,000	nc	760	12	6.7	3	2.8	3.2
1,2,4-TRICHLOROBENZENE	40,000 N	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.41 J	0.33 U	0.33 U	0.33 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,2,3-TRIMETHYLBENZENE	123,000 N	22	nc	0.84 U	0.84 U	0.84 U	0.84 UJ	0.84 U	0.84 UJ
1,2,4-TRIMETHYLBENZENE	123,000 N	31	nc	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U
1,3,5-TRIMETHYLBENZENE	123,000 N	22	nc(1)	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	1.6 J	2.6 J	3.9	1.9 J	1.3 J	2 J

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

-- = not available

J = estimated value

U = not detected

UJ = non-detected value is estimated

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

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

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

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

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

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

TABLE 3-10

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING C, MARCH 2017
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu g/m^3$)[1]	Key	AIR-001-C SV-001-C-22 20170308	AIR-004-C SV-004-C-22 20170228	AIR-060-C SV-060-C-22 20170228	AIR-088-C SV-088-C-22 20170228	AIR-102-C SV-102-C-22 20170228	AIR-113-C SV-113-C-22 20170228	AIR-126-C SV-126-C-22 20170228
Volatile organic compounds ($\mu g/m^3$)									
BENZENE	533	ca	0.73 U	0.37 U	0.4 J	0.37 U	5.5 J	0.37 U	110
CARBON TETRACHLORIDE	667	ca	0.94 U	0.47 U	0.47 U	0.47 U	3.9 U	0.47 U	4.7 U
CHLORODIFLUOROMETHANE	7,333,333	nc	2.1 J	1.8	3.8	2.2	4.6 J	2.7	2.7 U
CHLOROFORM	177	ca	4.7	4.3	9.1	0.58 J	53	1.3 J	3.7 U
DICHLORODIFLUOROMETHANE	14,667	nc	2.2 J	2.1	2	2	5.6 U	2.1	6.7 U
1,1-DICHLOROETHANE	2,567	ca	0.4 U	0.2 U	7.6	0.2 U	**3900**	0.2 U	2 U
1,2-DICHLOROETHANE	157	nc	0.77 U	0.38 U	0.38 U	0.38 U	3.2 U	0.38 U	3.8 U
1,1-DICHLOROETHENE	29,333	ca	0.56 U	0.37 J	1.2 J	0.28 U	2000	0.28 U	620
CIS-1,2-DICHLOROETHENE	--	--	74	38	4	14	45	17	190
TRANS-1,2-DICHLOROETHENE	--	--	20	2	0.83 J	0.59 J	3.4 J	0.4 U	16
ETHYLBENZENE	1,633	ca	1.2 U	0.59 U	34	0.87 J	580	0.59 U	5.9 U
METHYL TERT-BUTYL ETHER	15,667	ca	2.5 U	1.2 U	1.2 U	1.2 U	10 U	1.2 U	12 U
METHYLENE CHLORIDE	86,667	nc	4.5 U	2.8 J	3 J	3.3 J	19 U	2.3 J	23 U
NAPHTHALENE	120	ca	2.1 U	1 UJ	4.8 J	1.2 J	**310**	1 UJ	10 U
TETRACHLOROETHENE	6,000	nc	4.1 J	0.91 J	1.1 J	0.54 U	4.5 U	0.54 U	5.4 U
TOLUENE	733,333	nc	4.5 U	2.3 U	2.3 U	2.3 U	49	2.3 U	23 U
1,2,4-TRICHLOROBENZENE	293	nc	2.9 U	1.4 U	1.4 U	1.4 U	12 U	1.4 U	14 U
1,1,1-TRICHLOROETHANE	733,333	nc	0.65 U	0.33 U	23	0.33 U	3100	0.33 U	3.3 U
1,1,2-TRICHLOROETHANE	29	nc	1.1 U	0.57 U	0.57 U	0.57 U	4.8 U	0.57 U	5.7 U
TRICHLOROETHENE	293	nc	200	110	270	84	**1000**	180	**310**
1,2,3-TRIMETHYLBENZENE	733	nc	1.7 U	0.84 U	0.84 U	1.1 J	35	0.84 U	8.4 U
1,2,4-TRIMETHYLBENZENE	1,033	nc	1.2 U	0.61 U	1.2 J	0.67 J	31	0.61 U	6.1 U
1,3,5-TRIMETHYLBENZENE	733	nc[2]	1.3 U	0.64 U	1.1 J	0.64 U	13 J	0.64 U	6.4 U
VINYL CHLORIDE	933	ca	0.74 U	0.37 U	0.37 U	0.37 U	8.1	0.37 U	**2600 J**
TOTAL XYLENES	14,667	nc	1 U	0.52 U	310	7.3	4600	2.7 J	5.2 U

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

TABLE 3-10

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING C, MARCH 2017
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 2 OF 3

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu g/m^3$)[1]	Key	AIR-131-C SV-131-C-22 20170228	 SV-131-C-22-D 20170228	AIR-142-C SV-142-C-22 20170228	AIR-149-C SV-149-C-22 20170228	AIR-150-C SV-150-C-22 20170228	AIR-152-C SV-152-C-22 20170228	AIR-153-C SV-153-C-22 20170228
Volatile organic compounds ($\mu g/m^3$)									
BENZENE	533	ca	0.37 U	0.37 U	0.37 U	0.87 J	1.2 J	3.7 U	0.37 U
CARBON TETRACHLORIDE	667	ca	0.47 U	0.47 U	0.57 J	0.47 U	0.47 U	4.7 U	0.47 U
CHLORODIFLUOROMETHANE	7,333,333	nc	1.9	2.3	1.7	0.88 J	27	19	3.8
CHLOROFORM	177	ca	0.37 U	0.37 U	5.2	0.37 U	0.37 U	5.5 J	0.37 U
DICHLORODIFLUOROMETHANE	14,667	nc	1.9 J	2	2	2	2.1	6.7 U	1.9 J
1,1-DICHLOROETHANE	2,567	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	3.3 J	0.2 U
1,2-DICHLOROETHANE	157	nc	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	3.8 U	0.38 U
1,1-DICHLOROETHENE	29,333	ca	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	2.8 U	0.28 U
CIS-1,2-DICHLOROETHENE	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	41	0.48 U
TRANS-1,2-DICHLOROETHENE	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	4 U	0.4 U
ETHYLBENZENE	1,633	ca	1.4 J	1.2 J	0.86 J	0.59 U	1.8	5.9 U	0.59 U
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	12 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	3.3 J	2.5 J	8.2 J	3.2 J	3 J	23 U	2.7 J
NAPHTHALENE	120	ca	4.1 J	2.1 J	2.1	1 UJ	1 UJ	10 U	1 UJ
TETRACHLOROETHENE	6,000	nc	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U	5.4 U	0.54 U
TOLUENE	733,333	nc	2.3 U	2.3 U	2.3 U	5.3	7.3	23 U	2.6
1,2,4-TRICHLOROBENZENE	293	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	14 U	1.4 U
1,1,1-TRICHLOROETHANE	733,333	nc	0.33 U	0.33 U	0.33 U	0.33 U	1.1 J	19 J	0.33 U
1,1,2-TRICHLOROETHANE	29	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	5.7 U	0.57 U
TRICHLOROETHENE	293	nc	0.38 U	0.38 U	8.9	4.4	0.5 J	**1300**	5.7
1,2,3-TRIMETHYLBENZENE	733	nc	4.5	3.1	0.84 U	0.84 U	0.84 U	8.4 U	0.84 U
1,2,4-TRIMETHYLBENZENE	1,033	nc	2.3	1.8 J	0.61 U	0.61 U	0.91 J	6.1 U	0.64 J
1,3,5-TRIMETHYLBENZENE	733	nc[2]	2	1.5 J	0.64 U	0.64 U	0.64 U	6.4 U	0.64 U
VINYL CHLORIDE	933	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	3.7 U	0.37 U
TOTAL XYLENES	14,667	nc	9.2	8.3	4.8	2.6 J	6.4	5.2 U	1.9 J

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

TABLE 3-10

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING C, MARCH 2017
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 3 OF 3

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu g/m^3$)[1]	Key	AIR-153-C SV-153-C-22-D 20170228	AIR-155-C SV-155-C-22 20170228
Volatile organic compounds ($\mu g/m^3$)				
BENZENE	533	ca	0.37 U	0.48 J
CARBON TETRACHLORIDE	667	ca	0.47 U	0.47 U
CHLORODIFLUOROMETHANE	7,333,333	nc	3.9	2.9
CHLOROFORM	177	ca	0.37 U	0.37 U
DICHLORODIFLUOROMETHANE	14,667	nc	2.3	2
1,1-DICHLOROETHANE	2,567	ca	0.2 U	0.2 U
1,2-DICHLOROETHANE	157	nc	0.38 U	0.38 U
1,1-DICHLOROETHENE	29,333	ca	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	--	--	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	--	--	0.4 U	0.4 U
ETHYLBENZENE	1,633	ca	0.59 U	0.59 U
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	3.6 J	3.9 J
NAPHTHALENE	120	ca	1 UJ	1 UJ
TETRACHLOROETHENE	6,000	nc	0.58 J	0.54 U
TOLUENE	733,333	nc	2.3 U	2.9
1,2,4-TRICHLOROBENZENE	293	nc	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	733,333	nc	0.33 U	0.33 U
1,1,2-TRICHLOROETHANE	29	nc	0.57 U	0.57 U
TRICHLOROETHENE	293	nc	5.3	0.38 U
1,2,3-TRIMETHYLBENZENE	733	nc	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	1,033	nc	0.63 J	0.61 U
1,3,5-TRIMETHYLBENZENE	733	nc[2]	0.64 U	0.64 U
VINYL CHLORIDE	933	ca	0.37 U	0.37 U
TOTAL XYLENES	14,667	nc	2.3 J	1.2 J

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

TABLE 3-11

AMBIENT AIR (BACKGROUND) SAMPLING RESULTS, MARCH 2017
LOCKHEED MARTIN MIDDLE RIVER COMPLEX
MIDDLE RIVER, MARYLAND

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu g/m^3$)	Industrial Air Screening Level ($\mu g/m^3$)	Key	BCK-1 BCK-1-22 20170228	BCK-2 BCK-2-22 20170228	BCK-3 BCK-3-22 20170228	BCK-4 BCK-4-22 20170228
Volatile organic compounds ($\mu g/m^3$)							
BENZENE	31,900	16	ca	0.79 J	0.51 J	0.52 J	0.48 J
CARBON TETRACHLORIDE	62,900	20	ca	0.47 U	0.48 J	0.47 U	0.47 U
CHLORODIFLUOROMETHANE	3,540,000	220,000	nc	1.5	1.4 J	1 J	0.92 J
CHLOROFORM	240,000	5.3	ca	0.37 U	0.37 U	0.37 U	0.37 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	2.2	1.8 J	1.9 J	2
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	0.59 U	0.59 U	0.59 U	0.59 U
METHYL TERT-BUTYL ETHER	180,000 [A]	470	ca	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	25 J	2.5 J	2.7 J	2.3 U
NAPHTHALENE	50,000	3.6	ca	1 UJ	1 U	1 U	1 UJ
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	3.4	0.54 U
TOLUENE	754,000	22,000	nc	3.9	2.3 U	2.3 U	2.3 U
1,2,4-TRICHLOROBENZENE	40,000 [N]	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.33 U	0.33 J
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.38 U	0.38 U	0.38 U
1,2,3-TRIMETHYLBENZENE	123,000 [N]	22	nc	0.84 U	0.84 UJ	0.84 UJ	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000 [N]	31	nc	0.61 U	0.61 U	0.61 U	0.61 U
1,3,5-TRIMETHYLBENZENE	123,000 [N]	22	nc[(1)]	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	2.1 J	0.52 U	0.52 U	0.52 U

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

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

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

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

-- = not available

A = American Council of Governmental Industrial Hygienists Theshold Limit Value

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

J = estimated value

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

nc = screening value based on noncarcinogenic hazard quotient = 1

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

U = not detected

UJ = non-detected value is estimated

USEPA = United States Environmental Protection Agency

TABLE 3-12

ANALYTE CONCENTRATIONS IN BACKGROUND AIR SAMPLES COMPARED TO INDOOR AIR SAMPLES - MARCH 2017 LOCKHEED MARTIN CORPORATION MIDDLE RIVER COMPLEX MIDDLE RIVER, MARYLAND

Analyte	Maximum Background Concentration ($\mu g/m^3$)	Maximum Indoor Air Sample Concentration ($\mu g/m^3$)[1]	Number of Indoor Air Samples with Detects[1]	Number of Indoor Air Detects < Background[1][2]	Number of Indoor Air Detects = Background[1][2]	Number of Indoor Air Detects > Background[1][2]
BENZENE	0.79	1.5	40	38	0	2
CARBON TETRACHLORIDE	0.48	0.61	8	0	1	7
CHLORODIFLUOROMETHANE	1.5	54	41	0	0	41
DICHLORODIFLUOROMETHANE	2.2	2.6	41	33	1	7
METHYLENE CHLORIDE	25	12	22	22	0	0
TETRACHLOROETHENE	3.4	36	9	7	0	2
TOLUENE	3.9	2000	39	10	0	29
1,1,1-TRICHLOROETHANE	0.33	0.41	2	0	0	2
TOTAL XYLENES	2.1	28	35	8	0	27

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

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

There are a total of four background samples and 41 indoor air samples for Round 22.

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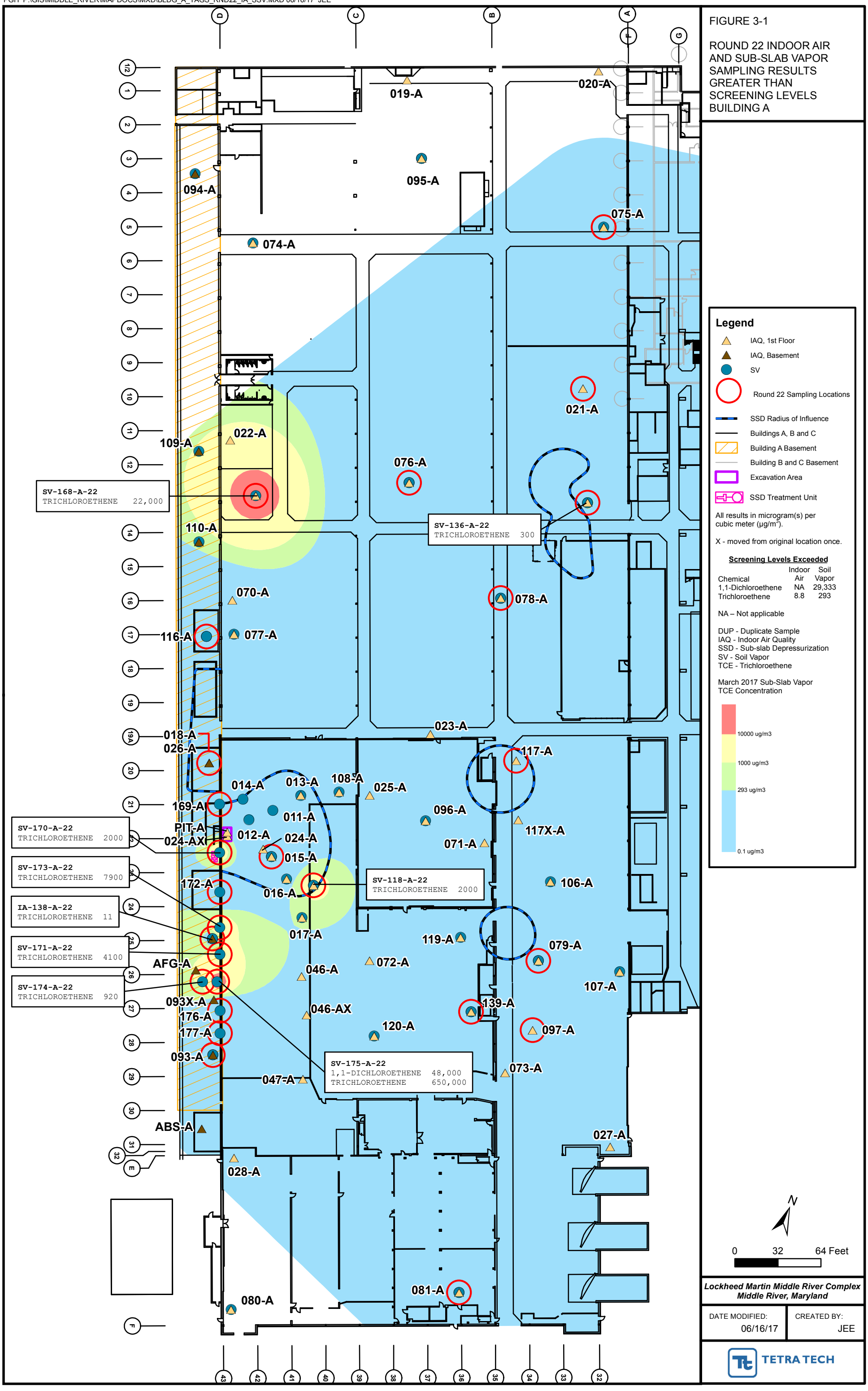
FIGURE 3-1

ROUND 22 INDOOR AIR AND SUB-SLAB VAPOR SAMPLING RESULTS GREATER THAN SCREENING LEVELS BUILDING A



Legend

- IAQ, 1st Floor
- IAQ, Basement
- SV
- Round 22 Sampling Locations
- SSD Radius of Influence
- Buildings A, B and C
- Building A Basement
- Building B and C Basement
- Excavation Area
- SSD Treatment Unit

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

X - moved from original location once.

Screening Levels Exceeded

Chemical	Indoor Air	Soil Vapor
1,1-Dichloroethene	NA	29,333
Trichloroethene	8.8	293

NA – Not applicable

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

March 2017 Sub-Slab Vapor TCE Concentration

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

N

0 32 64 Feet

Lockheed Martin Middle River Complex
Middle River, Maryland

DATE MODIFIED:	CREATED BY:
06/16/17	JEE

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FIGURE 3-2

ROUND 22 INDOOR AIR AND SUB-SLAB VAPOR SAMPLING RESULTS GREATER THAN SCREENING LEVELS BUILDING B

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

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

Legend

- IAQ, 1st Floor
- IAQ, Basement
- SV
- Round 22 Sampling Locations
- Buildings A, B and C
- Building B and C Basement
- Tunnel

X - moved from original location once.

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

March 2017 Sub-Slab Vapor TCE Concentration

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

N

0 32 64 Feet

Lockheed Martin Middle River Complex
Middle River, Maryland

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FIGURE 3-3

ROUND 22 INDOOR AIR AND SUB-SLAB VAPOR SAMPLING RESULTS GREATER THAN SCREENING LEVELS BUILDING C

065-C
035-C
103-C
035-CX
124-C
051-C
086-C
091-C
125-C
SV-126-C-22
TRICHLOROETHENE 310
VINYL CHLORIDE 2600 J
036-CX
050-C
149-C
037-C
036-C
141-C
150-C
145-C
151-C
127-C
146-C
128-C
132-C
148-C
115-C
SV-152-C-22
TRICHLOROETHENE 1300
087-C
060-C
060-CX
036-CXX
037-CX
153-C
144-C
133-C
111-C
147-C
154-C
156-C
066-C
155-C
129-C
SV-102-C-22
1,1-DICHLOROETHANE 3900
NAPHTHALENE 310
TRICHLOROETHENE 1000
113-C
059-C
038-C
134-C
157-C
158-C
130-C
088-C
142-C
131-C
135-C
044-C
112-C
089-C
114-C
159-C
067-C
058-C
143-C
010-C
009-C
007-C
008-C
041-C
041-CX
005-C
006-C
042-C
002-C
004-C
040-C
090-C
003-C
001-C
039-C
104-C

Legend

- IAQ, 1st Floor
- IAQ, Basement
- SV
- Round 22 Sampling Locations
- SSD Radius of Influence
- Buildings A, B and C
- Building B and C Basement
- Tunnel
- SSD Treatment Unit

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

X - moved from original location once.

Screening Levels Exceeded

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

NA – Not applicable

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

March 2017 Sub-Slab Vapor TCE Concentration

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

N

0 32 64 Feet

Lockheed Martin Middle River Complex
Middle River, Maryland

DATE MODIFIED: 06/19/17
CREATED BY: JEE

TETRA TECH

Section 4
Sub-Slab-Depressurization-System Data Analysis

This section summarizes the operation and monitoring of the sub-slab-depressurization systems (SSDSs) in Buildings A and C for the reporting period from October 1, 2016 to March 31, 2017. A detailed account of these activities is in the May 5, 2017 remedial action progress report (Appendix E). The location and layout of the SSDSs and associated sub-slab-vapor (SV) extraction points and vapor monitoring points (VMPs) are shown in Figures 1, 2, and 4 of Appendix E. This section discusses SV sampling results, extraction points, system influent, vacuum influence, and performance of the SSDS.

4.1 SUB-SLAB-VAPOR MONITORING POINTS

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

4.1.1 Building A

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

The highest trichloroethene (TCE) concentrations detected at SV VMPs 015-A, 018-A, 079-A, and 136-A before and after the SSDSs began operation are shown in Table 4-4. The concentrations detected in February 2017 at these VMPs are one to three orders of magnitude (i.e., 10 to 1,000 times) lower than the concentrations detected before the systems began operation.

The February 2017 TCE concentration (2.3 micrograms per cubic meter [µg/m^3]) at location 015-A is the lowest detected to date. While a significant decline has been observed at 015-A, overall TCE concentrations continue to fluctuate over time. For example, TCE was detected at an estimated 112 µg/m^3 in February 2015, but at 1,300 µg/m^3 in August 2015 (Figure 4-1). VOC-impacted groundwater likely provides a continuing VOC source in soil vapor at 015-A. Similar fluctuations have also occurred at 018-A, where SV TCE was detected at the following concentrations between August 2011 and February 2014 (Figure 4-2):

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

Concentrations observed after SSDS startup are generally lower than concentrations detected before the system began operation. VOC reductions at 018-A (in the basement) might be more limited than those observed at main floor VMPs, because the shallow groundwater table (frequently less than one foot below the basement slab) possibly impedes vapor flow. VMPs 136-A and 079-A are near the system extraction points installed as part of the second-phase system expansion completed in April 2016; these locations showed significant VOC concentration decreases in August 2016 as compared to February 2016 (pre-system expansion startup) results. The VOC concentrations at these VMPs show further reduction in the February 2017 sampling round, indicating the decrease is due to SSDS operation.

TCE in VMP 136-A decreased from 35,000 µg/m^3 in February 2016 to 850 µg/m^3 in August 2016, and to 300 µg/m^3 in February 2017. Similarly, in VMP 079-A, TCE decreased from 3,500 µg/m^3 in February 2016 to 120 µg/m^3 in August 2016, to 41 µg/m^3 in February 2017. Figure 2 in

Appendix E shows the February 2016 and February 2017 TCE concentrations at VMPs near the system extraction points.

4.1.2 Building C

SV samples collected to date near the Building C SSDS are listed in Table 4-5. These points are within 100 feet of the Building C SSDS extraction points in the basement; most[2] are within the vacuum influence of SSDS operations. VMPs 001-C, SSD-4-C (in the southern basement area) and 060-C, 088-C, 113-C, 126-C, 149-C, 152-C, 153-C, and 155-C (in the mid-basement area) were sampled in February 2017 (see Figure 4 in Appendix E).

The highest TCE concentrations were observed at VMPs near the SSDS before its operation began. The most recent concentrations (sampled during SSDS operation) are summarized in Table 4-6. The February 2017 TCE concentrations are lower than the concentrations measured before SSDS startup. Compared to the concentrations measured in the previous semiannual sampling (August, 2016), VMPs 001-C, SSD-4-C, 113-C, 126-C, 149-C, 153-C, and 155-C have lower TCE concentrations, but TCE at location 152-C is significantly higher than the concentration detected during the last semiannual event (1,300 µg/m^3 compared to 0.48 µg/m^3, see Table 4-2 and Figure 4-3).

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

4.2 SUB-SLAB-VAPOR EXTRACTION POINTS

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

[2]Building C SSDS extraction points 001-C, SSD-4-C, 060-C, 113-C, 127-C, 133-C, 135-C, 149-C, 152-C, 153-C, 155-C, and 156-C.

SSD-35-A, SSD-36-A, SSD-37-A, and SSD-38-A. Figure 4 in Appendix E shows the Building C extraction points (all vertical): SSD-21-C, SSD-23-C, SSD-26-C, SSD-27-C, SSD-28-C, SSD-29-C, SSD-30-C, SSD-31-C, SSD-32-C, SSD-33-C, and SSD-34-C.

4.3 VACUUM INFLUENCE

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

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

Representative vacuum measurements from the March 8, 2017 monitoring episode are indicated on plan views on Figures 10, 11, 12, and 13 of Appendix E. Vacuum influence associated with SSDS VMPs is checked biweekly. The target vacuum is 0.01 inches of water column or greater. As indicated in the May 2017 progress report (Appendix E), extraction trenches near the Building A lay-up room induce a vacuum equal to or greater than 0.01-inches water column over an approximately 3,800-square-foot area; this area encompasses all SV monitoring points that had high levels of VOCs before system startup.

The trenches in the Building A basement induce a vacuum over an approximately 2,000-square foot area that encompasses two of four VMPs used to measure the SSDS-induced vacuum in the basement. Induced vacuum has been inconsistent at the other basement points, possibly because of high groundwater levels (typically one foot or less below the slab). The extraction wells in the eastern area of Building A induce a vacuum over an approximately 6,100-square-foot-area, and encompass nine of 14 VMPs used to measure the SSDS-induced vacuum in that area.

The Building C basement wells induce vacuum influence over an approximately 3,000-square-foot area in the southern end of the basement, whereas the extraction wells in the mid-basement area induce vacuum influence over an approximately 32,000-square-foot area. In the mid-basement, 13 of 20 monitoring points are within the target area shown to have vacuum influence. Vacuum

influence has not been observed at the northern end of the mid-basement area; possible reasons include high groundwater levels, subsurface preferential pathways, short-circuiting, and/or blockages. However, VOC concentrations at VMP 126-C (outside the area of demonstrated vacuum influence) have decreased by more than 85% since the system was expanded in May 2013.

4.4 INFLUENT-VAPOR SAMPLES

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

Tables 4-7A and 4-7B summarize the influent-vapor concentrations of target VOCs in samples over time (from system startup in March 2008 through March 2017). These results are displayed graphically on Figures 14 and 15 in Appendix E. Tables 4-7A and 4-7B provide average influent concentrations for the current (October 2016 to March 2017) and previous (April to September 2016) reporting periods. The six-month average-influent (total) VOC concentration in Building A during the current reporting period is higher than that observed during the previous semiannual reporting period (3,142 µg/m^3 and 1,913 µg/m^3, respectively). Note that this is biased high, because samples in two months of six (November 2016 and January 2017) were collected shortly after system restarts, and therefore reflect VOC rebound that occurs when the system is started after being off. In Building C, the six-month average-influent (total) VOC concentration during the current reporting period is lower than the previous semiannual period (106 µg/m^3 and 146 µg/m^3, respectively). Overall, influent VOC concentrations for both SSDSs have been relatively stable or slowly decreasing since 2009 (see Figures 14 and 15 in Appendix E).

The goal of the SSDSs is to maintain a negative pressure below the slab (relative to the room space), thus minimizing the migration of VOCs from the sub-slab soil into indoor air (IA). VOC-mass removal occurs while vapor is drawn out to maintain the vacuum. VOC removal rates for SSDS influent mass in Building A range from 0.029 to 0.117 pounds per day (lbs/day); these rates are higher than the removal rates (0.032 to 0.081 lbs/day) observed in the previous semiannual reporting period, most likely due to the second-phase system expansion. The Building A system has removed 11.3 pounds (lbs) of VOCs during this reporting period, 8.3 lbs in the previous reporting period, and 152 lbs since system startup in March 2008.

VOC removal rates in Building C during the current reporting period range between 0.001 and 0.003 pounds per month (lbs/month); these rates are lower than the removal rates (0.060 to 0.096 lbs/month) observed during the previous semiannual reporting period. The Building C SSDS has removed 0.32 lbs of VOCs this reporting period, 0.45 lbs in the previous reporting period, and 11 lbs since system startup in March 2008.

4.5 SYSTEM PERFORMANCE

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

TABLE 4-1

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

Location	VOC (µg/m^3)	Mar-06	Apr-07	Oct-07	Jul-08	Nov-08	Nov-07	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Oct-11	Feb-12	Aug-12	Feb-13	Mar-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16	Feb-17
SSD-11-A	1,1-DICHLOROETHENE	8070	NS	NS	3900	1900	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	BENZENE	257 J	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	CHLOROFORM	10.7 J	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	CIS-1,2-DICHLOROETHENE	163000 J	NS	NS	79000	31000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	ETHYLBENZENE	75.9	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	METHYL TERT-BUTYL ETHER	425 J	NS	NS	-	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	TETRACHLOROETHENE	387	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	TOLUENE	309	NS	NS	500	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	TOTAL XYLENES	227	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	TRANS-1,2-DICHLOROETHENE	1980 J	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	TRICHLOROETHENE	2150 J	NS	NS	2800	850	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	VINYL CHLORIDE	727 J	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	**TOTAL VOCs**	**177,619 J**	NS	NS	**86,200**	**33,750**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Note: SSD-11-A is also referenced as SV-11-A																										
SSD-12-A	1,1-DICHLOROETHENE	26900	NS	NS	1800	9900	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	BENZENE	60.6 J	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	CARBON TETRACHLORIDE	7.9 J	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	CHLOROFORM	54.5 J	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	CIS-1,2-DICHLOROETHENE	18800	NS	NS	1200	2900	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	ETHYLBENZENE	44 J	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	METHYL TERT-BUTYL ETHER	206 J	NS	NS	-	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	TETRACHLOROETHENE	181 J	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	TOLUENE	119 J	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	TOTAL XYLENES	340 J	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	TRANS-1,2-DICHLOROETHENE	240 J	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	TRICHLOROETHENE	81400	NS	NS	3500	6800	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	VINYL CHLORIDE	42 J	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	**TOTAL VOCs**	**128,395 J**	NS	NS	**6,500**	**19,600**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Note: SSD-12-A is also referenced as SV-12-A																										
SSD-13-A	1,1-DICHLOROETHANE	17900	11000	NS	200	-	3400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	BENZENE	61.2 J	-	NS	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	CHLOROFORM	59.1 J	64.5 J	NS	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	CIS-1,2-DICHLOROETHENE	230000 J	292000	NS	3800	47	15463	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	METHYL TERT-BUTYL ETHER	155 J	-	NS	NA	NA	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	TETRACHLOROETHENE	215	166 J	NS	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	TOLUENE	69.5	-	NS	-	170	1093	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	TOTAL XYLENES	82.9 J	-	NS	-	15	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	TRANS-1,2-DICHLOROETHENE	1190 J	4650	NS	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	TRICHLOROETHENE	270000 J	326000	NS	4700	46	806	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	VINYL CHLORIDE	182 J	549	NS	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SV-13-A	**TOTAL VOCs**	**519,915 J**	**634,430 J**	**NS**	**8,700**	**278**	**20,762**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Note: SSD-13-A is also referenced as SV-13-A																										
015-A	1,1,1-TRICHLOROETHANE	-	-	-	9800	2500	-	-	-	-	1200	380	-	1100	840	940	140	460	280	112	NS	45.6 J	1300	41 J	15	3
015-A	1,1-DICHLOROETHANE	-	6010	7690 J	320	480	5666 J	1.2	0.43 J	120	58	12	1.7	51	65 J	92	13	170	45	14.6	NS	4.6 J	56	70 J	19	3.05
015-A	1,1-DICHLOROETHENE	27700 J	-	-	3400	6400	-	3.2	3.4	2800	1200	150	12	1100	780 J	1600	490	3100	1100 J	473	NS	71.4 J	1200	190	50	9.5
015-A	1,2,3-TRIMETHYLBENZENE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.85	1.3	1.1	-	NS	-	13 J	-	-	-
015-A	1,2-DICHLOROETHANE	-	-	-	-	-	-	0.082 J	-	-	-	-	-	0.53	-	-	-	0.66	0.7	-	NS	-	-	-	-	-
015-A	1,3,5-TRIMETHYLBENZENE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.75	1	-	NS	-	12 J	-	-	-
015-A	BENZENE	50.6	-	-	-	-	-	-	-	-	-	0.4	-	-	1.1	-	-	0.32	0.49	0.64	NS	0.64	-	-	4 J	1.2 J
015-A	CARBON TETRACHLORIDE	6.3 J	-	-	-	-	-	0.48 J	-	-	-	-	0.64	0.96	-	-	0.77 J	-	0.83 J	-	NS	-	-	-	-	-
015-A	CHLORODIFLUOROMETHANE	-	-	-	-	-	-		-	-	6.5 J	-	-		4	3.4 J	-	0.93	1.7	5.8 J	NS	3 J	-	-	3.2 J	7.4
015-A	CHLOROFORM	63.4 J	109	-	-	-	-	0.46	-	6.1 J	5.5 J	0.9 J	1.1	5.2	1.4 J	23 J	6.8	26	19	93.6	NS	13.8 J	9.4 J	-	-	0.58 J
015-A	CIS-1,2-DICHLOROETHENE	118000 J	167000	190312 J	7800	20000	134804 J	83	36	4400	1800	200	320	1800	1100 J	2400	1300	7000	2700	1260	NS	195	900	130	7.2 J	0.73 J
015-A	DICHLORODIFLUOROMETHANE	-	-	-	-	-	-	2.2	3.2 J	-	-	2	2.7	2.2	2.3 J	-	2.7	2.4	2.8	2.3 J	NS	2.2	7.2 J	-	-	2.1
015-A	ETHYLBENZENE	794 J	-	-	-	-	-	1.2	4.6	-	-	2	3.6	0.79	19 J	-	2.3 K	4.5	7.5	-	NS	1 J	18	40 J	3.5 J	-
015-A	M+P-XYLENES	-	-	-	-	-	-	3.3	11	-	-	-	20	4.1	-	-	8.8 J	23	47	3.1 J	NS	6.9 J	-	-	-	-
015-A	METHYL TERT-BUTYL ETHER	1050 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NS	-	-	-	-	-
015-A	METHYLENE CHLORIDE	-	-	-	-	-	-	0.94	-	-	-	-	0.92	0.6	-	-	0.74	-	0.99	31.6 J	NS	8.7	-	160 J	-	3.2 J
015-A	NAPHTHALENE	-	-	-	-	-	-	0.65 J	-	-	-	-	4	-	-	-	0.8	-	2.1 J	-	NS	2.1 J	-	-	-	-
015-A	O-XYLENE	-	-	-	-	-	-	1.2	2.9 J	-	-	-	7.9	1.8	-	-	8.5	8.8	10	1.6 J	NS	6.1 J	-	-	-	-
015-A	TETRACHLOROETHENE	346 J	98.5	-	-	-	-	0.26 J	-	-	-	-	-	1.4	-	-	-	1.2	3.9	-	NS	-	-	-	-	-
015-A	TOLUENE	431 J	14.8 J	-	-	480	-	64	210	10 J	14	27	28	15	440 J	11 J	14	160	240 J	7.1	NS	1.3	-	-	-	4.2
015-A	TOTAL XYLENES	5150 J	-	-	-	310	-	-	-	-	-	10	-	-	120 J		-	-	-	-	NS	-	120	210	6.1 J	2.4 J
015-A	TRANS-1,2-DICHLOROETHENE	1370	4660	3212 J	-	-	2101 J	1	-	150	99	13	2.7	46	46 J	84	23	160	79	37.7	NS	7.4 J	110	22 J	-	-
015-A	TRICHLOROETHENE	154000 J	326000	225718 J	17000	12000	155853 J	16	8.1	3200	1300	340	18	3400	2400 J	3000	710	8800	1600	619	NS	112 J	1300	540 J	35	2.3
015-A	VINYL CHLORIDE	100 J	491	-	-	-	-	0.078 J	-	11 J	9.8	0.8	0.26	4	-	13	1.4	12	7.5 J	1.5 J	NS	-	-	-	-	-
015-A	**TOTAL VOCs**	**309,061 J**	**504,383 J**	**426,932 J**	**38,320**	**42,170**	**298,424 J**	**179 J**	**280 J**	**10,697 J**	**4,493 J**	**758 J**	**424**	**6,434**	**4,979 J**	**7,226 J**	**2,584 J**	**19,472**	**5,871 J**	**2,552 J**	NS	**482 J**	**5,046 J**	**1,403 J**	**143 J**	**40 J**

TABLE 4-1

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

Location	VOC (µg/m^3)	Mar-06	Apr-07	Oct-07	Jul-08	Nov-08	Nov-07	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Oct-11	Feb-12	Aug-12	Feb-13	Mar-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16	Feb-17
SSD-16-A	1,1,1-TRICHLOROETHANE	-	NS	NS	67	420	NS	NS	NS	NS	5.7 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	1,1-DICHLOROETHANE	-	NS	NS	180	1400	NS	NS	NS	NS	52	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	1,1-DICHLOROETHENE	42700 J	NS	NS	2100	18000	NS	NS	NS	NS	890	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	BENZENE	46.1 J	NS	NS	-	-	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	CARBON TETRACHLORIDE	10.7 J	NS	NS	-	-	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	CHLORODIFLUOROMETHANE	-	NS	NS	-	-	NS	NS	NS	NS	3.8 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	CHLOROFORM	47.4 J	NS	NS	-	-	NS	NS	NS	NS	2.5 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	CIS-1,2-DICHLOROETHENE	5820	NS	NS	710	3000	NS	NS	NS	NS	110	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	METHYL TERT-BUTYL ETHER	1490 J	NS	NS	-	-	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	TETRACHLOROETHENE	514 J	NS	NS	-	-	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	TOLUENE	7.9 J	NS	NS	-	-	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	TOTAL XYLENES	68.1 J	NS	NS	-	-	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	TRANS-1,2-DICHLOROETHENE	297 J	NS	NS	-	-	NS	NS	NS	NS	11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	TRICHLOROETHENE	6870	NS	NS	1300	3700	NS	NS	NS	NS	160	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	VINYL CHLORIDE	124 J	NS	NS	-	63	NS	NS	NS	NS	7.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	**TOTAL VOCs**	**57,995 J**	**NS**	**NS**	**4,357**	**26,583**	**NS**	**NS**	**NS**	**NS**	**1,242 J**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**
Note: SSD-16-A is also referenced as 016-A																										
017-A	1,1-DICHLOROETHANE	-	-	-	NS	47	-	21	6.7	8.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	1,1-DICHLOROETHENE	5.6	-	-	NS	38	-	17	6	6.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	1,2-DICHLOROETHANE	-	-	-	NS		-	-	0.13 J	0.084 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	BENZENE	0.9 J	-	-	NS	-	-	0.59 J	0.41	0.14 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	CARBON TETRACHLORIDE	0.8 J	-	-	NS	-	-	0.57 J	0.53	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	CHLOROFORM	1.1 J	-	-	NS	78	-	81	27	7.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	CIS-1,2-DICHLOROETHENE	43.8	-	-	NS	8	-	6.2	2.4	1.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	DICHLORODIFLUOROMETHANE	2.8	-	-	NS	-	-	2.6	2.8	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	ETHYLBENZENE	-	-	-	NS	-	-	-	3.3	0.13 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	M+P-XYLENES	-	-	-	NS		-	1.8	9.3	0.37	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	METHYL TERT-BUTYL ETHER	0.7 J	-	-	NS	NA	-	-	0.51 J	0.24 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	METHYLENE CHLORIDE	-	-	-	NS		-	43	2.5	1.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	O-XYLENE	-	-	-	NS		-	0.56 J	2	0.14 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	TETRACHLOROETHENE	0.7 J	-	-	NS	-	-	1.2 J	0.81	0.58	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	TOLUENE	2.3	-	-	NS	-	-	14	58	0.54	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	TOTAL XYLENES	1.7 J	-	-	NS	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	TRANS-1,2-DICHLOROETHENE	0.7 J	-	-	NS	-	-	0.52 J	0.2 J	0.18 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	TRICHLOROETHENE	60.4	-	-	NS	310	-	170	67	56	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	VINYL CHLORIDE	-	-	-	NS	-	-	-	0.1 J	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	**TOTAL VOCs**	**122 J**	**-**	**-**	**NS**	**481**	**-**	**360 J**	**190 J**	**86 J**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**
018-A	1,1,1-TRICHLOROETHANE	-	-	NA	NS	-	-	-	-	-	280 J	-	-	730	300 J	160 J	270	240 J	65 J	-	NS	NS	NS	NS	NS	NS
018-A	1,1-DICHLOROETHANE	-	78600	76901 J	NS	44000	76901 J	1100	-	280	660	3	-	2200	1300	1200	410	1400 J	430 J	3.2	NS	NS	NS	NS	NS	NS
018-A	1,1-DICHLOROETHENE	9550 J	-	-	NS	1500000	-	43000	-	12000	32000	48	2.9	130000	69000	42000	54000	67000 J	24000 J	230	NS	NS	NS	NS	NS	NS
018-A	1,2,4-TRIMETHYLBENZENE	-	-	-	NS	-	-	-	-	-	-	-	-	-	-	-	-	0.85	0.75	1.7 J	NS	NS	NS	NS	NS	NS
018-A	1,2-DICHLOROETHANE	-	-	-	NS	-	-	-	-	-	750	-	-	62	-	-	44	29 J	7.4 J	-	NS	NS	NS	NS	NS	NS
018-A	1,3,5-TRIMETHYLBENZENE	-	-	-	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4 J	NS	NS	NS	NS	NS	NS
018-A	BENZENE	1.5 J	-	-	NS	-	-	-	-	24000 J	-	1	0.58	7.8	-	-	23	10 J	2	0.96	NS	NS	NS	NS	NS	NS
018-A	CARBON TETRACHLORIDE	1.8 J	337	-	NS	-	-	-	-	-	-	-	-	6.7	-	-	7	2.7	3.5 J	-	NS	NS	NS	NS	NS	NS
018-A	CHLORODIFLUOROMETHANE		-	-	NS	-	-	-	-	-	-	-	-	-	-	-	-		2.6	8.9	NS	NS	NS	NS	NS	NS
018-A	CHLOROFORM	5.7	316	-	NS	-	-	-	-	-	-	0.6 J	0.65 J	14	-	-	15 J	8.3 J	2.9	1.7 J	NS	NS	NS	NS	NS	NS
018-A	CIS-1,2-DICHLOROETHENE	2040 J	232000	249784 J	NS	170000	249784 J	4400	-	1400	3200	17	1.3	23000	6700	8200	3800	5200	1700 J	16.3	NS	NS	NS	NS	NS	NS
018-A	DICHLORODIFLUOROMETHANE	-	-	-	NS	-	-	-	-	150 J	-	2	2.5	2.2	-	-	2.8	2.4	3.3	2.2	NS	NS	NS	NS	NS	NS
018-A	ETHYLBENZENE	-	-	-	NS	-	-	-	-	8100 J	-	1	2.6	0.97	-	-		0.79	1.1	-	NS	NS	NS	NS	NS	NS
018-A	M+P-XYLENES	-	-	-	NS	-	-	-	-	28000 J	-	-	11	1.1 J	-	-	0.62 J	3.2 J	4	2 J	NS	NS	NS	NS	NS	NS
018-A	METHYL TERT-BUTYL ETHER	14.4	-	-	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS
018-A	METHYLENE CHLORIDE	-	-	-	NS	-	-	520	-	-	-	-	0.81	-	-	-	-	-	1.7 J	19.8	NS	NS	NS	NS	NS	NS
018-A	NAPHTHALENE	-	-	-	NS	-	-	-	-	-	-	-	11 J	-	-	450 J		2.7 J	7.1	3.1	NS	NS	NS	NS	NS	NS
018-A	O-XYLENE	-	-	-	NS	-	-	-	-	3600 J	-	-	3.9	0.53 J	-	-	-	0.97	1.1	-	NS	NS	NS	NS	NS	NS
018-A	TETRACHLOROETHENE	9.9	4470	-	NS	-	-	-	-	-	-	-	-	120	-	-	110	64 J	17 J	-	NS	NS	NS	NS	NS	NS
018-A	TOLUENE	-	29.6 J	-	NS	-	-	300 J	-	1900 J	-	4	32	19	-	-	4.1	82 J	27 J	2.6	NS	NS	NS	NS	NS	NS
018-A	TOTAL XYLENES	2.5 J	-	-	NS	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS
018-A	TRANS-1,2-DICHLOROETHENE	15.4	4160	-	NS	-	-	-	-	-	-	-	-	71	-		66	56 J	17 J	-	NS	NS	NS	NS	NS	NS
018-A	TRICHLOROETHENE	20900 J	6200000	3869448 J	NS	2700000	3869448 J	63000	-	19000	64000	160	7.2	800000	83000	69000	95000	96000 J	28000 J	174	NS	NS	NS	NS	NS	NS
018-A	VINYL CHLORIDE	7	1850	-	NS	-	-	-	-	-	-	-	-	550	300 J	180 J	170	310 J	40	0.59	NS	NS	NS	NS	NS	NS
018-A	**TOTAL VOCs**	**32,548 J**	**6,521,763 J**	**4,196,133 J**	**NS**	**4,414,000**	**4,196,133 J**	**112,320 J**	**-**	**98,430 J**	**100,890 J**	**242 J**	**76 J**	**956,785 J**	**160,600 J**	**121,190 J**	**153,923 J**	**170,413 J**	**54,333 J**	**468 J**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**

TABLE 4-1

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

Location	VOC (µg/m^3)	Mar-06	Apr-07	Oct-07	Jul-08	Nov-08	Nov-07	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Oct-11	Feb-12	Aug-12	Feb-13	Mar-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16	Feb-17
079-A	1,1,1-TRICHLOROETHANE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	2.2	0.83 J
079-A	1,2,4-TRIMETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	1.0 J	0.70 J
079-A	BENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	0.78 J	0.51 J
079-A	CHLORODIFLUOROMETHANE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	2.6	3.4
079-A	CHLOROFORM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13	0.80 J	-
079-A	CIS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,400	-	-
079-A	DICHLORODIFLUOROMETHANE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	2.7	2.1
079-A	ETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	10	0.87 J
079-A	METHYLENE CHLORIDE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	3.5	2.5 J
079-A	NAPHTHALENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	1.0	-
079-A	TETRACHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9.9 J	7.4	1.5 J
079-A	TOLUENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	8.3	3.8
079-A	TOTAL XYLENES	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	44	3.1 J
079-A	TRANS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	300	-	-
079-A	TRICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3,500	120	41
079-A	**TOTAL VOCs**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**3,810 J**	**204 J**	**60 J**
136-A	1,2,3-TRIMETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.40
136-A	1,1-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	0.48 J	-
136-A	1,2,4-TRIMETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	0.95 J	0.79 J
136-A	BENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	1.8	1.4
136-A	CARBON TETRACHLORIDE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.51 J
136-A	CHLORODIFLUOROMETHANE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	2.0	2.4
136-A	CHLOROFORM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	330	50	7.8
136-A	CIS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	4.5	1.2 J
136-A	DICHLORODIFLUOROMETHANE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	2.5	2.2
136-A	ETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	1.6 J	3.1
136-A	METHYLENE CHLORIDE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	5.9	2.5 J
136-A	TOLUENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	13	9.7
136-A	TOTAL XYLENES	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	7.9	15
136-A	TRANS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	0.56 J	-
136-A	TRICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	35,000	850 DL	300
136-A	**TOTAL VOCs**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**35,330**	**941 J**	**347 J**

Notes:

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

- = not detected (below reporting limit)
µg/m^3 = micrograms per cubic meter
J = estimated value
N/A = compound not reported
N/S = not sampled
J = estimated value
J+ = estimated value, may be biased high
K = value is biased high
NS = not sampled
N/A = sampling data for this location not previously included in this table

TABLE 4-2

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

Location	VOC (µg/m³)	Dec-06	Apr-07	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16	Feb-17
001-C	1,1,1-TRICHLOROETHANE	-	-	-	-	-	-	-	-	2.1	-	2.8	-	-	-	-	NS	NS	NS	2	-	1.5 J	0.43 J	2.2 J	-
001-C	1,1-DICHLOROETHANE	-	-	-	-	-	0.33	-	0.28	-	-	6.7	-	-	-	1.4	NS	NS	NS	5.8	-	-	-	-	-
001-C	1,1-DICHLOROETHENE	-	-	-	24	39	0.9	1	2.7	-	-	2.3	0.59	-	23	-	NS	NS	NS	-	-	-	0.45 J	-	-
001-C	1,2,4-TRIMETHYLBENZENE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NS	NS	NS	1.4	-	-	-	-	-
001-C	BENZENE	62.1	-	-	-	-	-	-	0.26	-	-	0.39	-	-	-	-	NS	NS	NS	-	0.81	-	0.41 J	-	-
001-C	CARBON TETRACHLORIDE	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	NS	NS	NS	-	-	-	-	-	-
001-C	CHLORODIFLUOROMETHANE	-	-	-	-	-	-	-	-	7.5	-	-	-	NA	NA	-	NS	NS	NS	6.3	1.8	7.9	2.1	2.8 J	2.1 J
001-C	CHLOROFORM	-	-	-	-	-	8.5	7.4	6.1	18	5	13	5.2	-	-	8.9	NS	NS	NS	16.3	3.4	14	13	24	4.7
001-C	CIS-1,2-DICHLOROETHENE	481000	1550000	257714	1100	3300	270	230	300	360	120	250	100	110	1900	170	NS	NS	NS	251	64	130	110	230	74
001-C	DICHLORODIFLUOROMETHANE	-	-	-	-	-	2.4	2.2	0.87	-	2	2.6	3	-	-	-	NS	NS	NS	2.6	2.1	2.7 J	2.4	2.9 J	2.2 J
001-C	ETHYLBENZENE	-	-	-	-	-	0.67	-	0.45	-	-	6.6	-	-	-	-	NS	NS	NS	4.3	0.89 J	-	0.79 J	2.4 J	-
001-C	M+P-XYLENES	-	-	-	-	-	1.3	-	1	13	-	14	-	NA	NA	-	NS	NS	NS	4.8	0.98 J	-	-	-	-
001-C	METHYL TERT-BUTYL ETHER	-	-	-	NA	NA	-	-	-	-	1	-	-	-	-	-	NS	NS	NS	-	-	-	-	-	-
001-C	METHYLENE CHLORIDE	-	-	-	-	-	-	4.5	-	7.4	33	1.1	-	-	32	-	NS	NS	NS	-	-	-	2.9 J	-	-
001-C	NAPHTHALENE	-	-	-	-	-	1.6	-	2.9	-	-	3.1	-	-	-	-	NS	NS	NS	18.3	2.2 J	-	1.1	-	-
001-C	O-XYLENE	-	-	-	-	-	-	-	0.41	5.6	-	4	-	NA	NA	-	NS	NS	NS	2.5	-	-	-	-	-
001-C	TETRACHLOROETHENE	158	136	-	-	-	3.3	3	3.6	6.2	2	4.8	1.8	-	-	8.7	NS	NS	NS	7	-	4.2 J	2.6 J	8.8 J	4.1 J
001-C	TOLUENE	-	-	-	-	-	1.8	-	0.49	-	0.6	3.6	1.2	-	-	13	NS	NS	NS	3.2	1.2 J	-	-	-	-
001-C	TOTAL XYLENES	-	-	-	-	-	-	-	-	-	-	-	3.5	-	-	5.1	NS	NS	NS	-	-	-	-	-	-
001-C	TRANS-1,2-DICHLOROETHENE	5200	5930	3529	-	-	65	49	67	88	30	44	19	-	-	33	NS	NS	NS	45.7	13.5	32	24	60	20
001-C	TRICHLOROETHENE	19600	21100	8599	450	850	270	330	230	620	190	550	200	150	700	300	NS	NS	NS	591	158	410	350	900	200
001-C	VINYL CHLORIDE	761	578	-	58	40	-	-	1.4	-	-	-	-	-	14	-	NS	NS	NS	-	-	-	-	-	-
001-C	**TOTAL VOCs**	**506,781**	**1,577,744**	**269,842**	**1,632**	**4,229**	**626**	**627**	**618**	**1,128**	**384**	**909**	**334**	**260**	**2,669**	**540**	**NS**	**NS**	**NS**	**962**	**249 J**	**602**	**510 J**	**1,233 J**	**307 J**
SSD-2-C	BENZENE	NS	NS	NS	-	8.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	CHLOROFORM	NS	NS	NS	-	18	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	22	350	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	ETHYLBENZENE	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	METHYL TERT-BUTYL ETHER	NS	NS	NS	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	TETRACHLOROETHENE	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	TOLUENE	NS	NS	NS	14	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	TOTAL XYLENES	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	TRANS-1,2-DICHLOROETHENE	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	TRICHLOROETHENE	NS	NS	NS	55	770	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	VINYL CHLORIDE	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	**TOTAL VOCs**	**NS**	**NS**	**NS**	**91**	**1,146**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**
Note: SSD-2-C has been referenced as 002-C and SV-002-C																									
SSD-3-C	BENZENE	NS	NS	NS	64	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	CARBON TETRACHLORIDE	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	CHLOROFORM	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	-	8.5	NS	NS	NS	NS	NS	NS	NS	-	11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	ETHYLBENZENE	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	METHYL TERT-BUTYL ETHER	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	TETRACHLOROETHENE	NS	NS	NS	-	14	NS	NS	NS	NS	NS	NS	NS	-	58	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	TOLUENE	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	TOTAL XYLENES	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	8.7	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	TRANS-1,2-DICHLOROETHENE	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	TRICHLOROETHENE	NS	NS	NS	49	60	NS	NS	NS	NS	NS	NS	NS	49	310	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	**TOTAL VOCs**	**NS**	**NS**	**NS**	**113**	**83**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**58**	**379**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**
Note: SSD-3-C has been referenced as 003-C and SV-003-C																									

TABLE 4-2

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

Location	VOC (µg/m³)	Dec-06	Apr-07	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16	Feb-17
SSD-4-C	1,1,1-TRICHLOROETHANE	NA	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	NA	NA	NS	NA	NA	NA	NA	NA	-
SSD-4-C	1,1-DICHLOROETHENE	-	-	-	9.7	9.9	NS	NS	NS	NS	NS	NS	NS	-	-	NS	1.2	1.7	NS	-	1.1 J	0.8 J	-	0.69 J	0.37 J
SSD-4-C	1,2,3-TRIMETHYLBENZENE	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	0.6 J	2	NS	-	-	-	-	-	-
SSD-4-C	1,2,4-TRICHLOROBENZENE	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	-	-	NS	-	-	-	-	-	-
SSD-4-C	1,2,4-TRIMETHYLBENZENE	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	1	4.8	NS	-	-	-	-	-	-
SSD-4-C	1,3,5-TRIMETHYLBENZENE	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	-	1.5	NS	-	-	-	-	-	-
SSD-4-C	BENZENE	50	71.2		-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	0.62	-	NS	-	-	-	-	0.37 J	-
SSD-4-C	CARBON TETRACHLORIDE	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	0.83 J	0.83 J	NS	-	-	-	-	3.4	-
SSD-4-C	CHLORODIFLUOROMETHANE	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	-	2.9	NS	26	1.6	2.1	0.99 J	1.7	1.8
SSD-4-C	CHLOROFORM	7 J	-	-	270	240	NS	NS	NS	NS	NS	NS	NS	33	46	NS	37	88	NS	34.3	15	4.7	5.9	20	4.3
SSD-4-C	CIS-1,2-DICHLOROETHENE	79300	58100	10705	650	520	NS	NS	NS	NS	NS	NS	NS	200	2500	NS	82	71	NS	80.4	57.2	47	39	79	38
SSD-4-C	DICHLORODIFLUOROMETHANE	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	3.4	2.3	NS	-	2.1	2.3	2.3	2.6	2.1
SSD-4-C	ETHYLBENZENE	4.3 J	4 J	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	-	1.5 J	NS	-	-	-	-	-	-
SSD-4-C	M+P-XYLENES	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	1.3 K	3.6	NS	-	-	-	-	-	-
SSD-4-C	METHYL TERT-BUTYL ETHER	-	-	-	-	NA	NS	NS	NS	NS	NS	NS	NS	-	-	NS	-	-	NS	-	-	-	-	-	-
SSD-4-C	METHYLENE CHLORIDE	-	-	-	-	36	NS	NS	NS	NS	NS	NS	NS	-	-	NS	1.5	1.2	NS	145	3.5 J	-	-	5.7	2.8 J
SSD-4-C	NAPHTHALENE	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	12	4.4	NS	-	1.2 J	-	-	1.1	-
SSD-4-C	O-XYLENE	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	0.93	1.1	NS	-	-	-	-	-	-
SSD-4-C	TETRACHLOROETHENE	33.9	33.8 J	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	1.1	2.2 J	NS	-	-	0.79 J	1.3 J	2.4 J	0.91 J
SSD-4-C	TOLUENE	51.2	72.1	215	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	1.3	14	NS	9.6 J	1.1 J	-	-	-	-
SSD-4-C	TOTAL XYLENES	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	-	-	NS	-	-	-	-	-	-
SSD-4-C	TRANS-1,2-DICHLOROETHENE	661	759	139	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	8.5	20	NS	12.4 J	6.2	7.4	2.2	5.1	2
SSD-4-C	TRICHLOROETHENE	28300	16500	2741	430	300	NS	NS	NS	NS	NS	NS	NS	240	2500	NS	180	140	NS	210	121	120	99	250	110
SSD-4-C	VINYL CHLORIDE	381	609	-	16	13	NS	NS	NS	NS	NS	NS	NS	-	-	NS	0.47	0.65	NS	-	-	-	-	-	-
004-C	**TOTAL VOCs**	**108,788 J**	**76,149 J**	**13,800**	**1,376**	**1,119**	NS	NS	NS	NS	NS	NS	NS	**473**	**5,046**	NS	**334 J**	**364 J**	NS	**518 J**	**210 J**	**185**	**151 J**	**372 J**	**162 J**
Note: SSD-4-C has been referenced as 004-C and SV-004-C																									
SSD-5-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	-	-	-	-	4.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	1,1-DICHLOROETHANE	NS	NS	NS	NS	-	-	-	-	0.12 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	1,2-DICHLOROETHANE	NS	NS	NS	NS	-	0.27 J	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	BENZENE	NS	NS	NS	NS	-	0.86	0.36	0.22 J	0.39	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	-	0.4 J	0.44 J	0.29 J	0.61	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	-	-	-	-	6.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	CHLOROFORM	NS	NS	NS	NS	15	15	8.5	5.9	13	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	-	0.25 J	3.7	0.32 J	0.73	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	ETHYLBENZENE	NS	NS	NS	NS	-	1	0.24 J	-	0.41	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	M+P-XYLENES	NS	NS	NS	NS	-	3.3	0.65	0.24 J	1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	METHYL TERT-BUTYL ETHER	NS	NS	NS	NS	NA	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	METHYLENE CHLORIDE	NS	NS	NS	NS	-	0.59 J	-	-	0.58 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	NAPHTHALENE	NS	NS	NS	NS	-	1.4	0.47 J	0.33 J	0.29 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	O-XYLENE	NS	NS	NS	NS	-	1.8	0.43	0.16 J	0.64	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	TETRACHLOROETHENE	NS	NS	NS	NS	64	94	66	48	110	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	TOLUENE	NS	NS	NS	NS	-	4.1	0.53	0.36	0.56	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	TOTAL XYLENES	NS	NS	NS	NS	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	TRICHLOROETHENE	NS	NS	NS	NS	-	1.5	0.94	0.81	2.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	**TOTAL VOCs**	NS	NS	NS	NS	79	**125 J**	**82 J**	**57**	**142 J**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Note: SSD-5-C has been referenced as 005-C and SV-005-C																									
SSD-6-C	BENZENE	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	CHLOROFORM	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	ETHYLBENZENE	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	METHYL TERT-BUTYL ETHER	NS	NS	NS	NS	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	TETRACHLOROETHENE	NS	NS	NS	NS	42	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	TOLUENE	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	TOTAL XYLENES	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	**TOTAL VOCs**	NS	NS	NS	NS	**42**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Note: SSD-6-C has been referenced as 006-C and SV-006-C																									

TABLE 4-2

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

Location	VOC (µg/m^3)	Dec-06	Apr-07	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16	Feb-17
060-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	-	-	-	14 J	4	33	17 J	NS	NS	9.5 J	19	19	-	0.95 J	7.9	0.76 J	51	3.9	23
060-C	1,1-DICHLOROETHANE	NS	NS	NS	NS	NS	8.5	0.29 J	-	87	21	250	120 J	NS	NS	74	43	6.9	2.3	1.8	3.1 J	0.69 J	6.8	3.2	7.6
060-C	1,1-DICHLOROETHENE	NS	NS	NS	NS	NS	-	-	-	3 J	2	17	12 J	NS	NS	4.6 J	22	7.4	0.86 J	-	-	-	0.86 J	-	1.2 J
060-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	-	-	-	-	-	-	-	NS	NS	-	6.8	1.5 J	0.91	1 J	-	-	-	1.2 J	-
060-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	-	-	-	-	-	-	64	NS	NS	-	9.5	5.4 J	3.2	4.3	3.8 J	1.5 J	4	5.2	1.2 J
060-C	1,2-DICHLOROETHANE	NS	NS	NS	NS	NS	-	-	-	-	-	-	-	NS	NS	-	-	0.53 J	-	-	-	-	-	-	-
060-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	-	-	-	-	-	-	19 J	NS	NS	-	14 J	5.8 J	2.2	1.7	2.7 J	0.94 J	3.1	4.2	1.1 J
060-C	BENZENE	NS	NS	NS	NS	NS	2.2 J	0.53	0.64	-	1	6.5	-	NS	NS	-	5.9	0.62	0.85	-	-	-	0.48 J	-	0.4 J
060-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	-	0.5 J	0.38 J	-	-	-	-	NS	NS	-	-	-	-	-	-	-	-	-	-
060-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	-	-	-	190	-	-	-	NS	NS	6 J	-	260	5.8 J	9.4	6.4	62	6.8	17	3.8
060-C	CHLOROFORM	NS	NS	NS	NS	NS	9.1	0.44	0.13 J	67	16	200	94 J	NS	NS	69	57	5	3.1	-	4.5	1.3 J	9.9	3.1	9.1
060-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	45	0.19 J	-	140	31	540	340 J	NS	NS	230	460 J	23	16.5	1.4	-	-	2.1	1.5 J	4
060-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	2.7 J	2.3	1.9	-	3	7.5	-	NS	NS	-	4	3.8	2.8	3	-	3	2.4	2.9	2
060-C	ETHYLBENZENE	NS	NS	NS	NS	NS	490	2.8	22	53	31	270	460 J	NS	NS	160	390 J	150 J	96.5	65	234	66	190	190	34
060-C	M+P-XYLENES	NS	NS	NS	NS	NS	2200	11	95	110	-	580	-	NS	NS	-	2800	650	561	250	1240	-	-	-	-
060-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	-	-	-	12 J	-	10	-	NS	NS	-	5.8	3.4	10.7	70.9	6.7 J	4.4	2.5 J	11	3 J
060-C	NAPHTHALENE	NS	NS	NS	NS	NS	5.8 J	0.44 J	3.2	-	-	3	770 J	NS	NS	360 J	67	4.3 J	4.4	28.6 J	7.5 J	5	10	13	4.8
060-C	O-XYLENE	NS	NS	NS	NS	NS	670	5.8	40	130	-	720	-	NS	NS	-	1300	130	230	171	455	-	-	-	-
060-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	3.4 J	0.26 J	21	25 J	6	88	40 J	NS	NS	26 J	23	1.2 J	2.2	2.9	-	-	1 J	1.2 J	1.1 J
060-C	TOLUENE	NS	NS	NS	NS	NS	50	2.4	7	7.6 J	4	14	29 J	NS	NS	10 J	8	20	13.1	8.2	18.8	14	3.4	4.8	-
060-C	TOTAL XYLENES	NS	NS	NS	NS	NS	-	-	-	-	130	-	3100 J	NS	NS	2600	-	-	-	-	-	550	1000	1200 DL	310
060-C	TRANS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	2.1 J	-	-	17	5	61	38	NS	NS	24	18	3.5	1.1 J	-	-	-	1.1 J	0.96 J	0.83 J
060-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	180	2.6	0.46	2200	440	12000	4900	NS	NS	3700	10000	370	291	58.6	78.5	8.2	220	70	270
060-C	VINYL CHLORIDE	NS	NS	NS	NS	NS	-	-	-	-	-	1.9	-	NS	NS	-	-	-	-	-	-	-	-	-	-
060-C	**TOTAL VOCs**	NS	NS	NS	NS	NS	**3,669 J**	**30 J**	**192 J**	**3,056 J**	**694**	**14,802**	**10,003 J**	NS	NS	**7,273 J**	**15,253 J**	**1,671 J**	**1,249 J**	**679 J**	**2,069 J**	**718**	**1,515 J**	**1,533 J**	**677 J**
088-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	-	-	-	0.54 J	0.6 J	0.89	-	NS	NS	-	-	0.67 J	-	-	-	0.93 J	-	1.3 J	-
088-C	1,1-DICHLOROETHANE	NS	NS	NS	NS	NS	0.2 J	0.32 J	-	-	0.14 J	0.74	-	NS	NS	-	-	-	0.66	1.6 J	-	0.22 J	-	0.23 J	-
088-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	-	-	-	-	-	-	30	NS	NS	-	2.9	3	1.1	1.5 J	-	1.6 J	-	1.5 J	1.1 J
088-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	-	-	-	-	-	-	39	NS	NS	-	5.4	5.4	1.8	2	-	1 J	-	1.8 J	0.67 J
088-C	1,2-DICHLOROETHANE	NS	NS	NS	NS	NS	-	-	-	-	-	-	-	NS	NS	-	-	0.62	-	-	-	-	-	-	-
088-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	-	-	-	-	-	-	11 J	NS	NS	-	1.1	1.7	-	-	-	-	-	0.69 J	-
088-C	BENZENE	NS	NS	NS	NS	NS	2.8	2	0.93	1.3	6	2.6	-	NS	NS	-	1.1	0.97	1.2	-	1.7	0.39 J	0.59 J	0.4 J	-
088-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	0.53 J	0.64 J	0.33 J	0.66 J	-	-	-	NS	NS	-	0.77 J	-	-	-	-	-	-	0.59 J	-
088-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	-	-	-	49	-	-	-	NS	NS	-	-	210	3.2	6.5	3.9	35	1.8	7.1	2.2
088-C	CHLOROFORM	NS	NS	NS	NS	NS	4.4	1.8 J	1.4	2.8	3	11	9.7 J	NS	NS	5.1 J	6.6	2.4	-	-	-	0.96 J	0.44 J	1.4 J	0.58 J
088-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	95	140	73	73	100	620	670	NS	NS	350	470	33	17.6	17.7	8.4	7.7	12	17	14
088-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	2.5	2.2	1.6	2.7	2	3.1	-	NS	NS	-	3.2	6.8	2.6	2.8	1.9 J	2.5	2.5	2.4	2
088-C	ETHYLBENZENE	NS	NS	NS	NS	NS	30	6.7	2.2	2.9	11	7.2	15 J	NS	NS	-	1.1	2.6 J	2.2	1.8	-	0.78 J	-	1.4 J	0.87 J
088-C	M+P-XYLENES	NS	NS	NS	NS	NS	110	30	11	14	-	23	-	NS	NS	-	5.5	11	10	8.7	1.9 J	-	-	-	-
088-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	2.8	-	-	3.3 J	-	1.8	-	NS	NS	-	0.92	1.3	82.5	-	1.3 J	3.2 J	-	3.7	3.3 J
088-C	NAPHTHALENE	NS	NS	NS	NS	NS	17	3.5 J	1.7	3.2 J	0.9 J	3.7	540	NS	NS	290	61	15	22.3	61.7 J	4.4 J	5.4	1.8	4	1.2 J
088-C	O-XYLENE	NS	NS	NS	NS	NS	100	25	8.1	10	-	18	-	NS	NS	-	4.4	7.1	4.7	5.5	-	-	-	-	-
088-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	0.95 J	0.65 J	0.43 J	-	-	1.1	-	NS	NS	-	2.3	0.83 J	-	-	-	-	2.9	-	-
088-C	TOLUENE	NS	NS	NS	NS	NS	32	8	5.7	9.2	10	18	12 J	NS	NS	-	1.4	8.4	-	10.3	114	-	-	3.2	-
088-C	TOTAL XYLENES	NS	NS	NS	NS	NS	-	-	-	-	31	-	150	NS	NS	5 J	-	-	-	-	-	7.3	3.9	16	7.3
088-C	TRANS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	1.7	3	1.2	1.4 J	2	7.5	14 J	NS	NS	6.1 J	5.4	1.9	-	0.87 J	-	-	-	1 J	0.59 J
088-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	260	560	240	270	270	1800	3800	NS	NS	2000	2800	270	70.6	79.8	40	31	46	76	84
088-C	VINYL CHLORIDE	NS	NS	NS	NS	NS	-	-	-	-	-	-	-	NS	NS	-	-	-	0.49	-	-	-	-	-	-
088-C	**TOTAL VOCs**	NS	NS	NS	NS	NS	**660 J**	**784 J**	**348 J**	**444 J**	**437 J**	**2,520**	**5,294 J**	NS	NS	**2,656 J**	**3,374 J**	**583 J**	**221**	**201 J**	**178 J**	**98**	**72 J**	**140 J**	**118 J**

TABLE 4-2

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

Location	VOC (µg/m^3)	Dec-06	Apr-07	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16	Feb-17
111-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.98 J	-	NS	NS	NS
111-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.3 J	0.76 J	NS	NS	NS
111-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.6	30	NS	NS	NS
111-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2	1.5 J	NS	NS	NS
111-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.2 J	-	NS	NS	NS
111-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.6	2.4	NS	NS	NS
111-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.7	2.3	NS	NS	NS
111-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3		NS	NS	NS
111-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	37.4	5.3	NS	NS	NS
111-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.9 J	1.1	NS	NS	NS
111-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.7		NS	NS	NS
111-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.9	4.9	NS	NS	NS
111-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	18.4	9.4	NS	NS	NS
111-C	**TOTAL VOCs**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**84 J**	**58**	**NS**	**NS**	**NS**
113-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	2.6	-	NS	NS	-	1.1 J	1.3 J	-	-	-	0.56 J	1.4 J	1 J	-
113-C	1,1-DICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	4.1	-	NS	NS	-	2.2 J	2.2 J	-	1.4 J	-	-	1.6	-	-
113-C	1,1-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	3.1	-	NS	NS	-	1.7	0.69 J	-	-	-	-	0.66 J	-	-
113-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	NS	NS	-	2.8 J	3 J	-	12.5	27.3	-	-	0.89 J	-
113-C	1,2,4-TRICHLOROBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	NS	NS	-	-	-	-	-	-	-	-	-	-
113-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	NS	NS	-	8.5 J	-	-	-	121	-	-	1.1 J	-
113-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	NS	NS	-	2.2 J	1.9 J	-	5.2	38.9	-	-	-	-
113-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	4.6	-	NS	NS	-	2 J	0.49 J	2.4	-	12.1	-	-	-	-
113-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	0.7	-	NS	NS	-	-	-	1.1	-	-	-	-	0.51 J	-
113-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	NS	NS	12 J	3.2	27	10.7 J	6.7	4.4	18	2.9	5.9	2.7
113-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	25	67	38	NS	NS	59	50 J	3 J	1.8	-	2.5	1.6 J	1.4 J	2.5	1.3 J
113-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	330	490	500	NS	NS	700	850 J	40	31.7 J	17.5	28.6	14	19	36	17
113-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	3.6	-	NS	NS	-	3.2	2.4 J	3.8 J	3.3	2.2	2.4	2.3	3	2.1
113-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	11	4.6	-	NS	NS	-	1.6 J	2.6 J	-	2.3	27.5	0.98 J	-	0.65 J	-
113-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	15	-	NS	NS	-	6.4 J	14 J	2.4 J	7.6	207	-	-	-	-
113-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	1.7	-	NS	NS	-	0.56	0.53 J	557 J	9.4	2.4 J	-	4.8	19	2.3 J
113-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	17 L	1600 J	64 J	NS	NS	30 J	51 J	47	3.7 J	233 J	27	1.4	-	3.1	-
113-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	7.8	-	NS	NS	-	2.5 J	4.5 J	0.83 J	4.7	80.2	-	-	-	-
113-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	9 J	20	14 J	NS	NS	21 J	15 J	0.69 J	-	1.8	1.4	-	-	-	-
113-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	16	8.4	15 J	NS	NS	16 J	3 J	7 J	6.1 J	7.3	51.1	-	-	2.3	-
113-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	79	-	-	NS	NS	-	-	-	-	-	-	5.3	2 J	4	2.7 J
113-C	TRANS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	8.3	-	NS	NS	-	5.2 J	0.6 J	-	-	-	-	-	-	-
113-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	5000	7300	5700	NS	NS	8900	16000 J	290	243 J	222	424	140	150	320	180
113-C	VINYL CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	0.65	-	NS	NS	-	0.86	-	-	-	-	-	-	-	-
113-C	**TOTAL VOCs**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**5,487**	**9,542**	**6,331**	**NS**	**NS**	**9,738 J**	**17,013 J**	**449 J**	**865 J**	**535 J**	**1,058 J**	**184**	**186 J**	**400 J**	**208 J**
126-C	1,1-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	360	NS	NS	1300	680	720	199	80.4	104	330	500	1100	620
126-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	5.5 J	5.8 J	-	1.4	-	-	-	-	-
126-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	29 J	NS	NS	-	-	6.2 J	4.3	1.7	2.1	-	-	-	-
126-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	-	1.1 J	-	-	-	-	-	-
126-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	86	NS	NS	270	250 J	300	88.4	29.3	40.6	120	150	290	110
126-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	22 J	1.2 J	-	-	-	-	-	-	-	-
126-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	20 J	NS	NS	-	-	-	-	5.3	-	6.5 J	-	-	-
126-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	2.3 J	0.84 J	-	-	-	-	-	-
126-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	350	NS	NS	900	560	740	205	74.2	83.1	250	290	530	190
126-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.96 J	0.55 J	1.5 J	3.1	1.3 J	-	-	-	-
126-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	72	NS	NS	220	8.7 J	13 J	3	1.1 J	0.81 J	6.4 J	-	-	-
126-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	18 J	15 J	13.4	3.9	3.6	-	-	-	-
126-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	4.2 J	3.1 J	9.2	-	1.4 J	-	-	-	-
126-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	250	NS	NS	380	200 J	100 J	70.6	152 J	25.7	11	-	28	-
126-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	11 J	14 J	5.7	1.8	1.5 J	-	-	-	-
126-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	-	-	1.2	-	-	-	-	-
126-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	54	NS	NS	110	19 J	45 J	14.7	20	19.6	23	-	-	-
126-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	350	NS	NS	1200	-	-	-	-	-	11 J	-	-	-
126-C	TRANS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	41 J	NS	NS	95	32 J	92	-	8.5	-	31	20 J	43	16
126-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	280	NS	NS	5800 J	920 J	2400	177	26.4	71.3	170	340	890	310
126-C	VINYL CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	82000	NS	NS	110000	37000	28000	11900	4030	1310 J	16000	3100	5000 DL	2600 J
126-C	**TOTAL VOCs**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**83,892 J**	**NS**	**NS**	**120,297 J**	**39,711 J**	**32,457 J**	**12,694 J**	**4,440 J**	**1,665 J**	**16,959**	**4,400 J**	**7,881 J**	**3,846 J**

TABLE 4-2

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

Location	VOC (µg/m^3)	Dec-06	Apr-07	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16	Feb-17
127-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	268	NS	NS	NS	NS	NS
127-C	1,1-DICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	25.1	NS	NS	NS	NS	NS
127-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2200	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS
127-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4000	NS	NS	NS	NS	NS	NS	0.91 J	NS	NS	NS	NS	NS
127-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1000 J	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS
127-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	27.8	NS	NS	NS	NS	NS
127-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	4.1	NS	NS	NS	NS	NS
127-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	1.4 J	NS	NS	NS	NS	NS
127-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	5.2	NS	NS	NS	NS	NS
127-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	2.1 J	NS	NS	NS	NS	NS
127-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4300 J	NS	NS	NS	NS	NS	NS	5.9 J	NS	NS	NS	NS	NS
127-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	2.6	NS	NS	NS	NS	NS
127-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	2.6	NS	NS	NS	NS	NS
127-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	5.9	NS	NS	NS	NS	NS
127-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2900 J	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS
127-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	240000	NS	NS	NS	NS	NS	NS	410	NS	NS	NS	NS	NS
127-C	VINYL CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	1.1	NS	NS	NS	NS	NS
127-C	**TOTAL VOCs**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**254,400 J**	NS	NS	NS	NS	NS	NS	**763 J**	NS	NS	NS	NS	NS
133-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	5.2	-	-	NS	NS	NS	NS	NS
133-C	1,1-DICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	4.6 J	-	-	NS	NS	NS	NS	NS
133-C	1,1-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	1.5 J	-	-	NS	NS	NS	NS	NS
133-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.95	4.1 J	-	-	NS	NS	NS	NS	NS
133-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	2.1	28 J	-	-	NS	NS	NS	NS	NS
133-C	1,2-DICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.7	0.66	0.92	-	NS	NS	NS	NS	NS
133-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.6 J	3.6	-	-	NS	NS	NS	NS	NS
133-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	1.3	0.71	0.87	-	NS	NS	NS	NS	NS
133-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	2.5	0.9 J	-	-	NS	NS	NS	NS	NS
133-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1500	NS	NS	290 J	-	440 J	4.4	12.7	NS	NS	NS	NS	NS
133-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	83 J	NS	NS	-	43	8.3	6.7	-	NS	NS	NS	NS	NS
133-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	33	2.5	8.7	-	NS	NS	NS	NS	NS
133-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	130 J	NS	NS	-	-	2.8 J	3.2	4.3	NS	NS	NS	NS	NS
133-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.93	2.5	-	1.2 J	NS	NS	NS	NS	NS
133-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.93 J	9.6	2 J	4	NS	NS	NS	NS	NS
133-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2700 J	NS	NS	13000 J	-	0.74	20.2 J	-	NS	NS	NS	NS	NS
133-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2200	NS	NS	-	110	42 J	4.7	3.3 J	NS	NS	NS	NS	NS
133-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.57 J	2.3	0.95 J	1.5	NS	NS	NS	NS	NS
133-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2200	NS	NS	740	1500	77	169	3.3 J	NS	NS	NS	NS	NS
133-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	180 J	NS	NS	2400 J	1.3	9.2	5.5 J	5.1	NS	NS	NS	NS	NS
133-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	170 J	NS	NS	-	-	-	-	-	NS	NS	NS	NS	NS
133-C	TRANS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	25 L	3.1	3.6 J+	-	NS	NS	NS	NS	NS
133-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	50000	NS	NS	20000	60000	5600	10700	199 J	NS	NS	NS	NS	NS
133-C	VINYL CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	0.57	-	-	NS	NS	NS	NS	NS
133-C	**TOTAL VOCs**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**59,163 J**	NS	NS	**36,430 J**	**61,723 J**	**6,250 J**	**10,931 J**	**234 J**	NS	NS	NS	NS	NS

TABLE 4-2

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

Location	VOC (µg/m^3)	Dec-06	Apr-07	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16	Feb-17
135-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	0.78 J	-	NS	NS	NS	NS	NS	NS
135-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	-	3.2	NS	NS	NS	NS	NS	NS
135-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	81	NS	NS	-	4.1	2.1	-	NS	NS	NS	NS	NS	NS
135-C	1,2-DICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	0.49 J	-	NS	NS	NS	NS	NS	NS
135-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	27 J	NS	NS	-	1.2 J	1	-	NS	NS	NS	NS	NS	NS
135-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.75	1.1	0.33 J	NS	NS	NS	NS	NS	NS
135-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	52	1.7	-	NS	NS	NS	NS	NS	NS
135-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-		89	2.1	NS	NS	NS	NS	NS	NS
135-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	14 J	NS	NS	-	21	0.84	-	NS	NS	NS	NS	NS	NS
135-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	220	NS	NS	260	130	-	-	NS	NS	NS	NS	NS	NS
135-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	2.7	3.4	2.1	NS	NS	NS	NS	NS	NS
135-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	40 J	NS	NS	-	-	3	4.2	NS	NS	NS	NS	NS	NS
135-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	1.9	9.2	18.1	NS	NS	NS	NS	NS	NS
135-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.49 J	-	2.1 J	NS	NS	NS	NS	NS	NS
135-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	510	NS	NS	580	280	6.7	3.8 J	NS	NS	NS	NS	NS	NS
135-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.66	4.8	4.3	NS	NS	NS	NS	NS	NS
135-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	22 J	NS	NS	-	11	-	-	NS	NS	NS	NS	NS	NS
135-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	49	NS	NS	-	0.61	7.7	-	NS	NS	NS	NS	NS	NS
135-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	210	NS	NS	-	-	-	-	NS	NS	NS	NS	NS	NS
135-C	TRANS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	15 J	NS	NS	-	3.9	-	-	NS	NS	NS	NS	NS	NS
135-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	11000	NS	NS	16000	4500	29	5.6	NS	NS	NS	NS	NS	NS
135-C	**TOTAL VOCs**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**12,188 J**	NS	NS	**16,840**	**5,010 J**	**161 J**	**46 J**	NS	NS	NS	NS	NS	NS
141-C	1,1-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	0.44 J	1.7	-	-	0.69 J	NS	NS	NS
141-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.1 J	-	-	-	-	-	NS	NS	NS
141-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	7.5 J	1.9	-	1.5 J	-	-	NS	NS	NS
141-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.9 J	-	-	-	-	-	NS	NS	NS
141-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.58 J	-	0.88	-	0.96	-	NS	NS	NS
141-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	0.64 J	-	-	-	-	NS	NS	NS
141-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.7 J	3.4	2.6	19.9	2.7	90	NS	NS	NS
141-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		0.73	2.2		-	0.72 J	NS	NS	NS
141-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.7 J	2.3	2.3	2.7	2	2.3	NS	NS	NS
141-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	48	1.9	2.2	2.6	-	1.2 J	NS	NS	NS
141-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	250	10	11.6	10.3	1 J	-	NS	NS	NS
141-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.3 J	1	39.1	1.4 J	1.8 J	7.5	NS	NS	NS
141-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	170	1.7	4.1 J	1.5 J	-	-	NS	NS	NS
141-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	62	2.4 J	3.7	4.6	-	-	NS	NS	NS
141-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	1.5	-	-	NS	NS	NS
141-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.7 J	15	3.7	5.2	2.4	33	NS	NS	NS
141-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	7.4 J	5.7	25.2	3.2	2	3.9	NS	NS	NS
141-C	**TOTAL VOCs**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**560 J**	**47 J**	**99 J**	**54 J**	**13 J**	**139**	NS	NS	NS
149-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-		-	-	0.86 J	-
149-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.3 J	1.2 J	-	4		-
149-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.95 J	1.9	0.45 J	1.1 J	0.6 J	0.87 J
149-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	0.54 J	-
149-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	8	11.7	11	3.5	3.7	0.88 J
149-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	0.84 J	-
149-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.4	4.6	2.3	2.4	2.7	2
149-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2	-	0.7 J	1.5 J	1.8	-
149-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	7.2	2.9 J	-	-	-	-
149-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.1 J	105	6.1	7.2	12	3.2 J
149-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.2 J	-	-	-	-	-
149-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.6	1.1 J	-	-	-	-
149-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.6	-	-	-	0.57 J	-
149-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	21.1	23.5	5.9	13	7.4	5.3
149-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-		-	-	12	2.6 J
149-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.4	1.4	3.5	-	5.3	4.4
149-C	**TOTAL VOCs**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**59 J**	**153 J**	**30**	**33 J**	**48 J**	**19 J**

TABLE 4-2

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

Location	VOC (µg/m^3)	Dec-06	Apr-07	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16	Feb-17
152-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.7	13 J	1.1 J	0.84 J	19 J
152-C	1,1-DICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	3.3 J
152-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.98 J	-	0.97 J	0.79 J	-
152-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3	-	1.5	1.3	-
152-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	6.6	72	18	38	19
152-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	0.40 J	5.5 J
152-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	41
152-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.6	-	2.5	2.8	-
152-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.89 J	-	0.75 J	1.8	-
152-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.1	-	-	-	-
152-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.89 J	-	4.1	12	-
152-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.4 J	-	-	5	-
152-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.1 J	-	-	-	-
152-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.2	-	-	-	-
152-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	15.1	-	4.3	5.5	-
152-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	7.9	-
152-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.8	2100	-	0.48 J	1300
152-C	**TOTAL VOCs**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**46 J**	**2,185**	**33 J**	**77 J**	**1,388 J**
153-C	1,1,1-TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	0.57 J	-
153-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	0.98 J	0.81 J	1 J	0.83 J	0.64 J
153-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	2.3	1.4	0.86 J	0.38 J	-
153-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	0.49 J	-
153-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	10.7	7.6	21	3	6.7	3.8
153-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	0.57 J	-
153-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3	2.3	2.5	2.7	2.6	1.9 J
153-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.8	-	1 J	1 J	1.6 J	-
153-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	6.9	2.3 J	-	-	-	-
153-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.97 J	1.7 J	4.1	-	15	2.7 J
153-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.5 J	1.1 J	-	-	-	-
153-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.6	0.92 J	-	-	-	-
153-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5	-	0.62 J	-	2.9	-
153-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	8.6	56.9 J	3.5	-	4.9	2.6
153-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	11	1.9 J
153-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	18.8 J	13	10	12	5.7
153-C	**TOTAL VOCs**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**42 J**	**95 J**	**48**	**19 J**	**60 J**	**19 J**
155-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	-	-	0.96 J	-
155-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.91 J	NS	-	-	-	-
155-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	-	-	-	0.48 J
155-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	-	-	1.4 J	-
155-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	9.4	NS	22	4.4	5.7	2.9
155-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	-	-	1.7 J	-
155-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.9	NS	2.3	2.2	2.5	2
155-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.4 J	NS	0.65 J	1.3 J	1.2 J	-
155-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4.5	NS	-	-	-	-
155-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.4 J	NS	-	-	3.3 J	3.9 J
155-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.3 J	NS	-	-	2	-
155-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.1	NS	-	-	-	-
155-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	-	-	5.7	-
155-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	11.2	NS	-	-	2.4	2.9
155-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	-	-	8.6	1.2 J
155-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.5 J	NS	0.66 J	0.96 J	1.4	-
155-C	**TOTAL VOCs**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**39 J**	**NS**	**26**	**9 J**	**37 J**	**13 J**
156-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.4	NS	NS	NS	NS
156-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.3	NS	NS	NS	NS
156-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.1	NS	NS	NS	NS
156-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.6 J	NS	NS	NS	NS
156-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	22.5	NS	NS	NS	NS
156-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.3 J	NS	NS	NS	NS
156-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	9.9	NS	NS	NS	NS
156-C	**TOTAL VOCs**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**46 J**	**NS**	**NS**	**NS**	**NS**

Notes:

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

- = not detected (below reporting limit)
µg/m^3 = micrograms per cubic meter
DL = diluted analysis
J = estimated value
J+ = estimated value, may be biased high
K = value is biased high
L = value is biased low
NA = compound not reported
NA = compound not reported
NS = not sampled
SSDS = sub-slab depressurization system
VOC = volatile organic compound

TABLE 4-3

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

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

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

TABLE 4-4

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

Vapor Monitoring Point	*Before SSD-system operation**		*During SSD-system operation (most recent concentration)*	
	Date	*Sub-Slab Vapor Concentration ($\mu g/m^3$)*	*Date*	*Sub-Slab Vapor Concentration ($\mu g/m^3$)*
015-A	April 2007	326,000	February 2017	2.3
018-A	August 2010	64,000	February 2014	174
079-A	February 2016	3,500	February 2017	41
136-A	February 2016	35,300	February 2017	300

Notes:

*SSD-system startup for the main floor of Building A (015A) was in March 2008, for the Building A basement (018A) in October 2010, and April 2016 for the Building A eastern area (079-A and 136-A).
$\mu g/m^3$—microgram(s) per cubic meter air
SSD—sub-slab depressurization

TABLE 4-5

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

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

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

TABLE 4-6

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

Vapor Monitoring Point	*Before SSD-system operation**		*During SSD-system operation (most recent concentration)*	
	Date	*Sub-Slab Vapor Concentration ($\mu g/m^3$)*	*Date*	*Sub-Slab Vapor Concentration ($\mu g/m^3$)*
SOUTHERN BASEMENT AREA*				
001-C	March 2006	19,200	February 2017	200
SSD-4-C	December 2006	28,300	February 2017	110
MID-BASEMENT AREA				
060-C	August 2011	12,000	February 2017	270
088-C	February 2012	3,800	February 2017	84
113-C	February 2013	16,000 J	February 2017	180
126-C	August 2012	5,800 J	February 2017	310
127-C	Not Sampled		September 2014	410
133-C	February 2013	60,000	September 2014	199 J
141-C	Not Sampled		August 2015	3.9
149-C	Not Sampled		February 2017	4.4
152-C	Not Sampled		February 2017	1,300
153-C	Not Sampled		February 2017	5.7
155-C	Not Sampled		February 2017	Not detected (below reporting limit)

Notes:

*SSD-system startup in the south end of the Building C basement was in March 2008.
**SSD-system startup in the mid-basement area of Building C was in May 2013.
$\mu g/m^3$—microgram(s) per cubic meter air
J—estimated value
SSD—sub-slab depressurization

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

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

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

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

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

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

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	cis-1,2-dichloroethene	trans-1,2-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	1,1,1,-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	m-xylene & p-xylene	o-xylene	**Total VOCs**
Feb-15	**1.5**	--	**3.7**	--	--	--	--	**6.5**	**8.5**	--	**1.9 J**	**46.9**	**4.1 J**	--	**13.5**	**17.0**	**22.4**	NS	--	--	--	--	**6.5**	**2.7**	135
Mar-15	**0.54**	**2.9**	**1.4**	**2.4**	**1.6**	**28.3**	--	**141**	**183**	--	**1.1 J**	**1.4 J**	**1.2 J**	--	**1.7**	**1,370**	**2,300**	NS	--	--	--	--	**4.1**	**1.3**	4,042
Apr-15	**0.73**	**0.78 J**	**2.1**	**7.1**	**2.2**	**22.7**	--	**112**	**147**	--	--	**3.5 J**	**2.7 J**	**0.87 J**	**2.7**	**617**	**1,090**	NS	--	**1.3 J**	--	--	**2.7 J**	**0.99 J**	2,016
May-15	--	--	--	--	--	**23 J**	--	**121**	**161**	--	--	--	--	--	--	**573**	**1,170**	NS	--	--	--	--	--	--	2,048
Jun-15	--	--	--	--	--	**19.4 J**	**33.4**	**105**	**143**	--	**133**	--	--	--	--	**536**	**1,110**	NS	--	--	--	--	**582**	**142**	2,804
Jul-15	--	--	--	--	--	**14**	--	**78**	**91**	--	--	--	--	--	--	**390**	**470**	NS	--	--	--	--	N/A	N/A	1,043
Aug-15	**12**	--	**1.3 J**	**2.4 J**	**2.8 J**	**16**	--	**63**	**82**	**1.4**	--	--	--	--	**12**	**400**	**590**	NS	--	--	--	--	N/A	N/A	1,183
Sep-15	**72**	--	**2.7 J**	**1.8 J**	--	**24**	--	**86**	**130**	**1.9 J**	--	--	--	--	--	**510**	**1,000**	NS	--	--	--	--	N/A	N/A	1,828
Oct-15	**78**	--	**1.5 J**	--	--	**24**	--	**91**	**130**	**2.0 J**	--	--	--	--	--	**560**	**900**	NS	--	--	--	--	N/A	N/A	1,787
Nov-15	**43**	--	**3.2 J**	**1.9 J**	**3.6**	**25**	--	**110**	**140**	**2.5 J**	--	--	--	--	--	**570**	**900**	NS	--	--	--	--	N/A	N/A	1,799
Dec-15	**34**	--	**3.2 J**	**1.4 J**	**3.2**	**23**	--	**83**	**120**	**1.8 J**	--	--	--	--	--	**490**	**830**	NS	--	--	--	--	N/A	N/A	1,590
Jan-16	**9.2**	--	**1.1 J**	**2.0**	**2.1**	**16**	--	**80**	**84**	**1.5 J**	--	**3 J**	--	--	**2.7**	**320**	**480**	NS	--	--	--	--	N/A	N/A	1,002
Feb-16	**2.6**	--	**1.0 J**	**1 J**	**2.4**	**20**	**0.60**	**82**	**100**	**1.6**	--	--	--	--	--	**550 EB**	**840**	NS	--	--	--	--	N/A	N/A	1,601
Mar-16	**36**	**0.49 J**	**7.9**	**1.5 J**	**2.4**	**25**	**0.70**	**98**	**130**	**2.0**	--	**2.8 J**	--	**0.64 J**	**5.3**	**680 E**	**1,300**	NS	--	--	--	**0.42**	N/A	N/A	2,293
Apr-16	**28**	--	--	--	--	**42**	--	**180**	**230**	--	--	--	--	--	--	**940**	**1,700**	NS	--	--	--	--	N/A	N/A	3,120
Apr-16	--	--	--	--	--	**18**	--	**68**	**90**	--	--	--	--	--	--	**490**	**950**	NS	--	--	--	--	N/A	N/A	1,616
May-16	--	--	**19.0**	**2 J**	**3.5 J**	**18**	--	**120**	**110**	--	--	**9**	--	--	**6.5**	**600 B**	**910**	NS	--	--	--	--	N/A	N/A	1,798
Jun-16	**31**	--	**63.0**	--	--	**26**	--	**140**	**150**	**3.6 J**	--	--	--	--	--	**670**	**1,100**	NS	--	--	--	--	N/A	N/A	2,184
Jul-16	**65**	--	--	--	--	**17**	--	**75**	**100**	--	--	**36**	--	--	**15**	**510**	**940**	NS	--	--	--	--	N/A	N/A	1,758
Aug-16	**20**	--	--	--	--	**17**	--	**68**	**92**	--	--	--	--	--	--	**460**	**860**	NS	--	**8.2 J**	--	--	N/A	N/A	1,525
Sep-16	**38**	--	**1.5 J**	**1.2 J**	**2.3 J**	**14**	--	**66**	**88**	**1.8 J**	--	**15**	--	--	--	**400**	**760**	NS	--	--	--	--	N/A	N/A	1,388
Oct-16	--	--	**1.7**	--	--	**14**	--	**68**	**81**	--	--		--	--	--	**410**	**630**	NS	--	--	--	--	N/A	N/A	1,205
Nov-16	--	--	--	--	--	**68**	--	**260**	**350**	--	--	**49 J**	--	--	--	**2,000**	**2,800**	NS	--	--	--	--	N/A	N/A	5,527
Dec-16	**11**	--	**2 J**	--	**3.1 J**	**17**	--	**120**	**95**	**2.5 J**	--	--	--	--	--	**600**	**710**	NS	--	--	--	--	N/A	N/A	1,561
Jan-17	**17**	--	--	**8.4 J**	--	**81**	--	**370**	**440**	**9.3 J**	--	**130**	--	--	--	**2,000**	**3,600**	NS	--	--	--	--	N/A	N/A	6,656
Feb-17	**33**	--	--	**6**	**3.7 J**	**19**	--	**100**	**110**	**2.1 J**	--	--	--	--	--	**660**	**1,100**	NS	--	--	--	--	**5.9 J***	N/A	2,040
Mar-17	**21**	--	--	**2 J**	**3.3 J**	**21**	--	**110**	**100**	**2.2 J**	--	--	--	**8.5 J**	--	**590**	**1,000**	NS	--	--	--	--	**6.9 J***	N/A	1,865
6-Month Average Oct 2016-Mar 2017	**20.5**	**--**	**1.9 J**	**5.5 J**	**3.4 J**	**36.7**	**--**	**171**	**196**	**4.0 J**	**--**	**89.5**	**--**	**8.5 J**	**--**	**1,043**	**1,640**	**--**	**--**	**--**	**--**	**--**	**6.4 J***	**--**	**3,142**
Previous 6-Month Average Apr-Sep 2016	**36.4**	**0.49 J**	**27.8 J**	**1.6 J**	**2.9 J**	**21.7**	**0.65**	**102**	**123**	**2.7 J**	**--**	**20.0 J**	**--**	**--**	**--**	**581**	**1,031**	**--**	**--**	**8.2 J**	**--**	**--**	**--**	**--**	**1,913**

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

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

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

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

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

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

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	chloromethane	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	cis-1,2-dichloroethene	trans-1,2-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	1,1,1,-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	m-xylene & p-xylene	o-xylene	Total VOCs
Apr-12	--	--	N/A	--	--	--	--	--	--	**64**	--	--	--	--	**16**	--	--	**56**	--	N/A	--	--	--	--	--	**136**
May-12	--	--	N/A	--	--	--	--	--	--	**72**	--	--	--	--	**20**	**9.8**	--	**65**	--	N/A	--	--	--	--	--	**167**
Jun-12	--	--	N/A	--	--	--	--	--	--	**71**	--	--	--	--	**17**	--	--	**50**	--	N/A	--	--	--	--	--	**138**
Aug-12	--	--	N/A	--	--	--	--	--	--	**39**	--	--	--	--	--	--	--	**19**	--	N/A	--	--	--	--	--	**58**
Sep-12	--	--	N/A	--	--	--	--	--	--	**41**	--	--	--	--	--	**23**	--	**22**	--	N/A	--	--	--	--	--	**86**
Oct-12	--	--	N/A	--	--	--	--	--	--	**95**	--	--	--	--	--	--	--	**45**	--	N/A	--	--	--	--	--	**140**
Nov-12	--	--	N/A	--	--	--	--	--	--	**18**	--	--	--	--	--	--	--	**270**	--	N/A	--	--	--	**31**	**16**	**335**
Dec-12	--	--	N/A	--	--	--	--	--	--	**70**	--	--	--	--	**22**	--	--	**91**	--	N/A	--	--	**5.3**	--	--	**188**
Jan-13	--	--	N/A	--	--	--	--	--	--	**66**	--	--	--	--	**42**	--	--	**110**	--	N/A	--	--	--	--	--	**218**
Feb-13	--	--	N/A	--	--	--	--	--	--	**49**	--	--	--	--	**29**	--	--	**91**	--	N/A	--	--	--	--	--	**169**
Mar-13	--	--	N/A	--	--	--	--	--	--	**60**	--	--	--	--	**45**	--	--	**100**	--	N/A	--	--	--	--	--	**205**
Apr-13	--	--	N/A	--	--	--	--	--	--	**44**	--	--	--	--	**21**	--	--	**52**	--	N/A	--	--	--	--	--	**117**
May-13	--	--	N/A	--	--	--	--	--	--	**120**	--	--	--	--	--	--	--	**2,900**	--	N/A	--	--	--	**80**	--	**3,100**
Jun-13	--	--	N/A	--	--	--	--	--	--	**10**	--	--	--	--	--	--	--	**460**	**50**	N/A	--	--	--	**31**	**15**	**566**
Jul-13	**12**	--	N/A	--	**12**	--	--	--	--	--	--	**9.4**	--	--	--	--	--	**290**	**16**	N/A	**11**	--	--	**43**	**23**	**416**
Aug-13	--	--	N/A	--	--	--	--	--	--	--	--	--	**20**	--	--	--	--	**210**	**18**	N/A	--	--	--	**20**	**11**	**279**
Sep-13	--	--	N/A	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**150**	--	N/A	--	--	--	--	--	**150**
Oct-13	**14**	--	N/A	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**200**	**16**	N/A	--	--	--	**20**	**10**	**260**
Nov-13	**13**	--	N/A	--	--	--	--	--	--	**18**	--	**9.8**	--	--	--	--	--	**280**	--	N/A	--	--	--	**45**	**24**	**390**
Dec-13	**6.3**	--	--	--	N/A	**6.6**	--	--	--	**13**	--	**7.3**	**4.1**	**33.9**	**5.4**	**4.0**	--	**228**	N/A	--	**4.8**	**2.4**	--	**30.4**	**16.1**	**362**
Jan-14	**13.7**	--	**4.7**	--	N/A	--	--	--	--	**5.7**	--	**10.3**	**3.4**	**22.6**	**5.6**	**49.6**	--	**298**	N/A	**5.5**	**17.8**	--	--	**49.1**	**19.3**	**505**
Feb-14	**1.8**	--	**4.5**	--	N/A	**2.2**	--	--	--	**2.3**	--	**2.1**	--	**5.3**	**2.2**	**2.7**	--	**157**	N/A	--	**2.8**	--	--	**8.9**	**4.7**	**197**
Mar-14	**9.1**	--	**3.0**	**3.2**	N/A	**2.2**	--	--	--	**4.9**	--	**5.9**	--	**11.5**	**3.3**	**6.0**	--	**261**	N/A	**1.6**	**6.0**	**3.0**	--	**25.3**	**12.3**	**358**
Apr-14	**10.0**	--	**7.1**	--	N/A	--	--	--	--	**7.0**	--	**67**	--	**12.1**	**5.1**	**50.7**	**6.6**	**266**	N/A	--	**6.9**	--	--	**218**	**67.4**	**724**
May-14	**11.8**	**1.2**	**5.8**	**1.5 J**	N/A	**2.9**	--	--	--	**7.6**	--	**4.7**	**1.2 J**	**12.7**	**3.6**	**30.6**	--	**236**	N/A	**2.1**	**6.8**	**3.5**	--	**20.9**	**11.3**	**364**
Jun-14	**12.8**	--	--	**2.7**	N/A	**2.1**	--	--	--	**2.7**	--	**4.1**	**24.5**	**13.1**	**23.1**	**11.6**	--	**154**	N/A	**6.1**	**18**	**6.1**	--	**27.0**	**12.1**	**320**
Jul-14	**14.4**	**0.77 J**	**11.2**	**5.6**	N/A	**1.4 J**	--	--	**0.88 J**	**4.1**	**0.81 J**	**6.3**	**147**	**16.9**	**7.1**	**5.7**	--	**183**	N/A	**2.8**	**7.3**	**4.7**	--	**19.4**	**9.8**	**449**
Aug-14	**10.8**	**1.7**	N/A	**66.2**	**1.5**	--	**7.6**	--	**4.8**	**4.7**	--	**7.5**	--	**20.6**	**7.0**	**5.0**	**33.6**	**289**	N/A	N/A	**7.8**	**3.9**	--	**30.2**	**16.0**	**518**
Sep-14	**8.0**	**1.1**	**5.6**	--	N/A	**2.9**	**7.0**	--	--	**5.3**	--	**2.9**	**0.76 J**	**31.2**	**2.1**	**3.4**	**37.9**	**124**	N/A	**2.1**	**5.4**	**2.1**	--	**17.2**	**10.8**	**270**
Oct-14	**6.6**	**1.2**	**10.1**	**0.98**	N/A	**2.0**	**6.1**	**2.7**	**3.0**	**6.6**	**0.71 J**	**3.2**	**2.1 J**	**13.3**	**2.7**	**5.1**	**38.6**	**137**	N/A	**2.6**	**4.7**	**2.0**	--	**15.8**	**9.5**	**277**
Nov-14	**5.2**	--	**7.5**	--	N/A	**2.3**	**3.5**	--	--	**5.7**	--	**3.2 J**	**6.0**	**10.5**	**5.4**	**4.3**	**22.6**	**111**	N/A	**3.5 J**	**5.4**	**3.2 J**	--	**11.0 J**	**6.4**	**217**
Dec-14	**5.3**	--	**8.1**	**1.3**	N/A	**2.8**	**1.9**	--	--	**7.0**	**1.6 J**	**3.2 J**	**3.3 J**	**8.7**	**7.8**	**5.0**	**9.1**	**106**	N/A	**3.6 J**	**4.7**	**3.7 J**	--	**8.6**	**5.8**	**198**
Jan-15	**6.2**	--	**8.3**	**1.7**	N/A	**3.1**	--	--	--	**5.9**	--	**1.2 J**	**2.5 J**	**3.1 J**	**2.8**	**3.1**	**3.0**	**87.5**	N/A	**1.2**	**5.5**	**2.0**	--	**4.8**	**2.9**	**145**
Feb-15	**5.6**	--	**3.8**	**0.94**	N/A	--	--	--	--	**4.6**	--	**1.3 J**	**0.61 J**	**2.3 J**	**1.7**	**3.7**		**75.3**	N/A	--	**3.8**	**1.7**	--	**5.3**	**3.2**	**114**
Mar-15	**5.3**	**2.8**	**4.0**	**0.82**	N/A	**1.5 J**	--	--	--	**3.7**	--	**1.3 J**	**0.62 J**	**3.0 J**	**2.1**	**2.5**	**0.94 J**	**80.5**	N/A	**0.97 J**	**4.0**	**1.7**	--	**4.4**	**2.9**	**123**
Apr-15	**6.5**	**1.1**	**4.6**	**1.20**	N/A	**1.8**	**2.0**	--	**1.1 J**	**3.6**	--	**2.0**	--	**6.1**	**2.3**	**2.3**	**14.6**	**107**	N/A	**1.5 J**	**5.8**	**2.4**	--	**8.0**	**4.3**	**178**
May-15	**6.1**	--	**10.4**	--	N/A	**2.3 J**	**1.7 J**	--	--	**2.6**	--	**5.3 J**	**4.0 J**	**7.8 J**	**2.1 J**	**5.2**	**14**	**128**	N/A	**5.1 J**	**10**	**5.3 J**	--	**13.3 J**	**6.5 J**	**230**
Jun-15	**7.4**	**1.2**	**8.3**	**1.00**	N/A	--	**4.9**	--	--	**4.0**	--	**2.5**	**6.3**	**14.4**	**3.2**	**4.3**	**32.1**	**132**	N/A	**3.7**	**11.1**	**4.9**	--	**11.4**	**7.1**	**260**
Jul-15	**3.2**	--	**6.6**	**4.90**	N/A	--	**3.2**	--	--	--	--	--	--	--	--	**2.5**	**22**	**20**	N/A	--	--	--	--	N/A	N/A	**62**
Aug-15	**5.1**	**2.1 J**	**15**	**0.74 J**	N/A	**2.4**	**5.9**	--	**2.0**	**2.7**	--	**1.3 J**	--	--	**1.1 J**	**15**	**45**	**41**	N/A	--	**2.0**	**0.8 J**	--	N/A	N/A	**142**
Sep-15	**8.0**	**1.3 J**	**12**	**1.10 J**	N/A	**2.3**	**7.7**	--	**2.8**	**2.4**	--	**2.0**	**8.7**	--	**1.2 J**	**6.2**	**58**	**73**	N/A	**1.1 J**	**3.5**	**1.3 J**	--	N/A	N/A	**193**
Oct-15	**5.5**	--	**3.3**	--	N/A	**2.1**	**2.0**	--	**1.0**	**0.7**	--	**0.6 J**	**3.4 J**	--	--	**8.7**	**18**	**14**	N/A	--	**1.2**	--	--	N/A	N/A	**60**
Nov-15	**5.1**	**0.7 J**	**8.6**	**0.93 J**	N/A	**3.2**	**3.7**	--	**1.4 J**	**2.3**	--	**1.2 J**	**3.4 J**	--	**3.5**	**3.0**	**32**	**50**	N/A	--	**2.1**	**0.9 J**	--	N/A	N/A	**122**
Dec-15	**4.5**	**0.6 J**	**14**	**0.51 J**	N/A	**2.4**	**1.5 J**	--	**0.5 J**	**2.1**	--	**0.6 J**	**2.4 J**	--	**0.9 J**	**3.9**	**14**	**43**	N/A	--	**1.9**	--	--	N/A	N/A	**93**
Jan-16	**4.4**	--	**4.8**	**0.43 J**	N/A	**2.0**	**0.3 J**	--	--	**0.8**	--	--	**2.4 J**	--	**1.0 J**	**5.0**	**2**	**30**	N/A	--	**1.3**	--	--	N/A	N/A	**55**
Mar-16	**6.4**	**0.6 J**	**12**	**0.88 J**	N/A	**2.3**	**0.7 J**	--	**0.3 J**	**1.9**	--	**0.8 J**	**3.3 J**	--	**0.9 J**	**10**	**11**	**41**	N/A	--	**2.6**	**0.9 J**	--	N/A	N/A	**96**
May-16	**2.9**	**0.5 J**	**6.6**	**1.00 J**	N/A	**2.9**	**0.4 J**	--	**0.5 J**	**1.6**	--	**1.1 J**	**2.8 J**	--	**0.7 J**	**73**	**5.4 B**	**31**	N/A	--	**1.6 J**	--	--	N/A	N/A	**132**
Jul-16	**8.0**	**1.2 J**	**13**	**2.40**	N/A	**2.7**	**11**	--	**5.5**	**2.5**	--	**1.3 J**	**4.2**	--	**1.1 J**	**6.2**	**76 B**	**46**	N/A	**1.20 J**	**4.4**	**1.5 J**	--	N/A	N/A	**188**
Sep-16	**8.6**	**0.5 J**	**4**	**2.50**	N/A	**2.4**	**4.2**	--	**1.9**	**2.5**	--	**1.4 J**	**5.3**	--	**1.0 J**	**3.2**	**29**	**45**	N/A	**0.93 J**	**3.5**	**1.5 J**	--	N/A	N/A	**117**
Nov-16	**9.8**	**0.8 J**	**22**	**2.70**	N/A	**3.0**	**1.7**	--	**0.8 J**	**2.8**	--	**1.9**	**13**	--	**1.6 J**	**14**	**13**	**47**	N/A	**1.20 J**	**4.3**	**1.4 J**	--	**9.1 ***	N/A	**150**
Jan-17	**2.0**	--	**6.3**	**0.80 J**	N/A	**1.9 J**	--	--	--	**1.9**	--	**0.9 J**	**6.2**	--	**0.9 J**	**20**	**1 J**	**33**	N/A	--	**2.0**	**0.9 J**	--	**4.5 ***	N/A	**82**
Mar-17	**3.1**	**0.6 J**	**4.8**	**0.80 J**	N/A	**2.7**	**0.31 J**	--	--	**3.5**	--	**2.2**	**3.3 J**	--	**3.1**	**6.2**	**1 J**	**40**	N/A	--	**1.8 J**	--	--	**12 ***	N/A	**85**

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

Building C - Influent Volatiles (µg/m^3)																								
Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	chloromethane	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	cis-1,2-dichloroethene	trans-1,2-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	1,1,1,-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	m-xylene & p-xylene	o-xylene	Total VOCs
6-Month Average Oct 2016-Mar 2017	**6.5**	**2.2 J**	**7.9**	**1.4 J**	NA	**2.5 J**	**1.0 J**	**--**	**0.8 J**	**2.7**	**--**	**1.7 J**	**7.5 J**	**--**	**1.9 J**	**13.4**	**5.0 J**	**40**	NA	**1.2 J**	**2.7 J**	**1.2 J**	**--**	**8.5 ***	NA	**106**
Previous 6-Month Average Apr-Sep 2016	**5.2**	**0.7 J**	**8.5**	**2.0 J**	NA	**2.7**	**5.2 J**	**--**	**2.6 J**	**2.2**	**--**	**1.3 J**	**4.1 J**	**--**	**0.9 J**	**27.5**	**36.8**	**41**	NA	**1.1 J**	**3.2 J**	**1.5 J**	**--**	**--**	NA	**146**

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

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

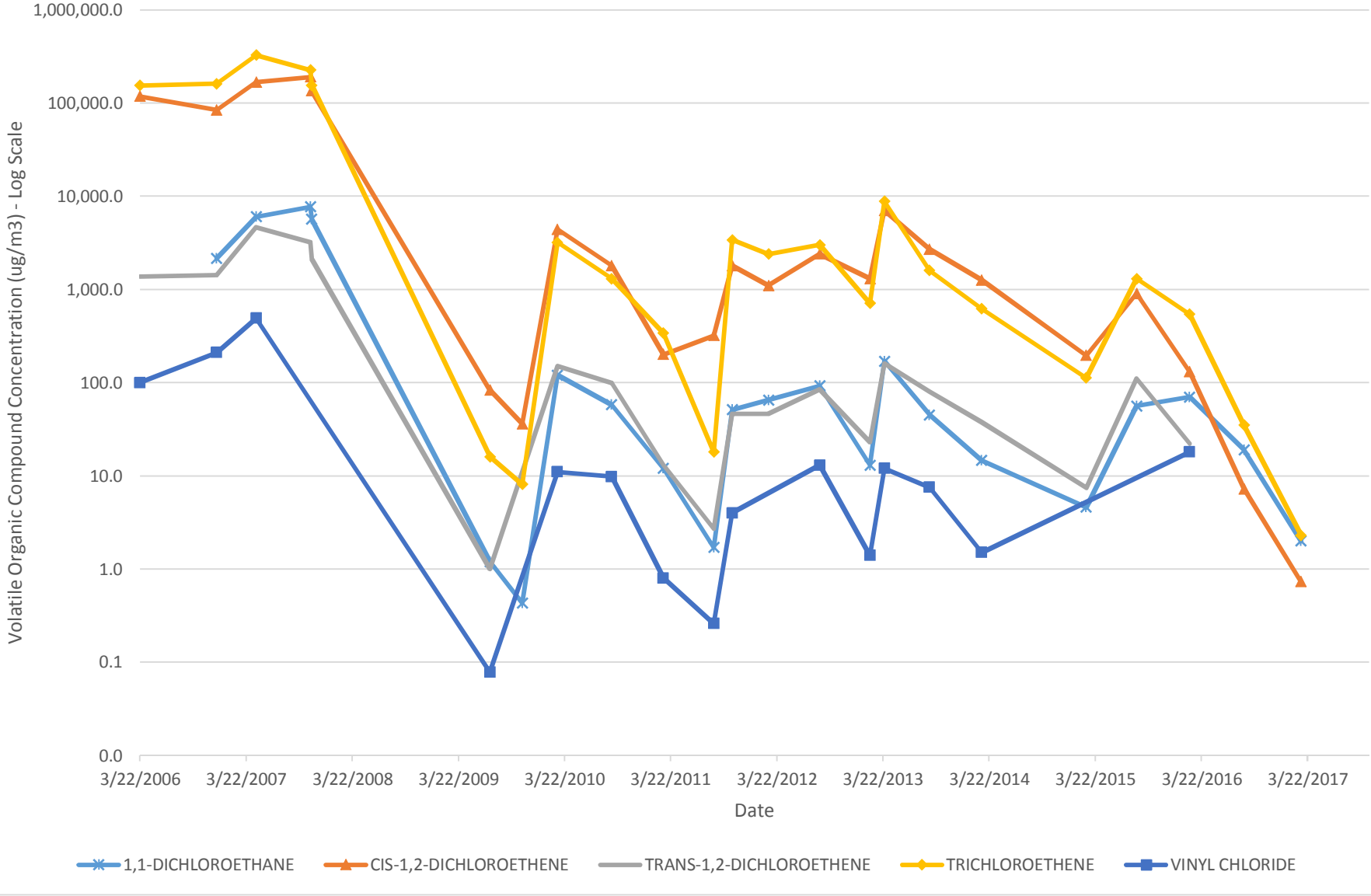


Figure 4-2
Sub-Slab Vapor VOC Concentrations at 018-A, Building A
Lockheed Martin Corporation, Middle River Complex
Middle River, Maryland

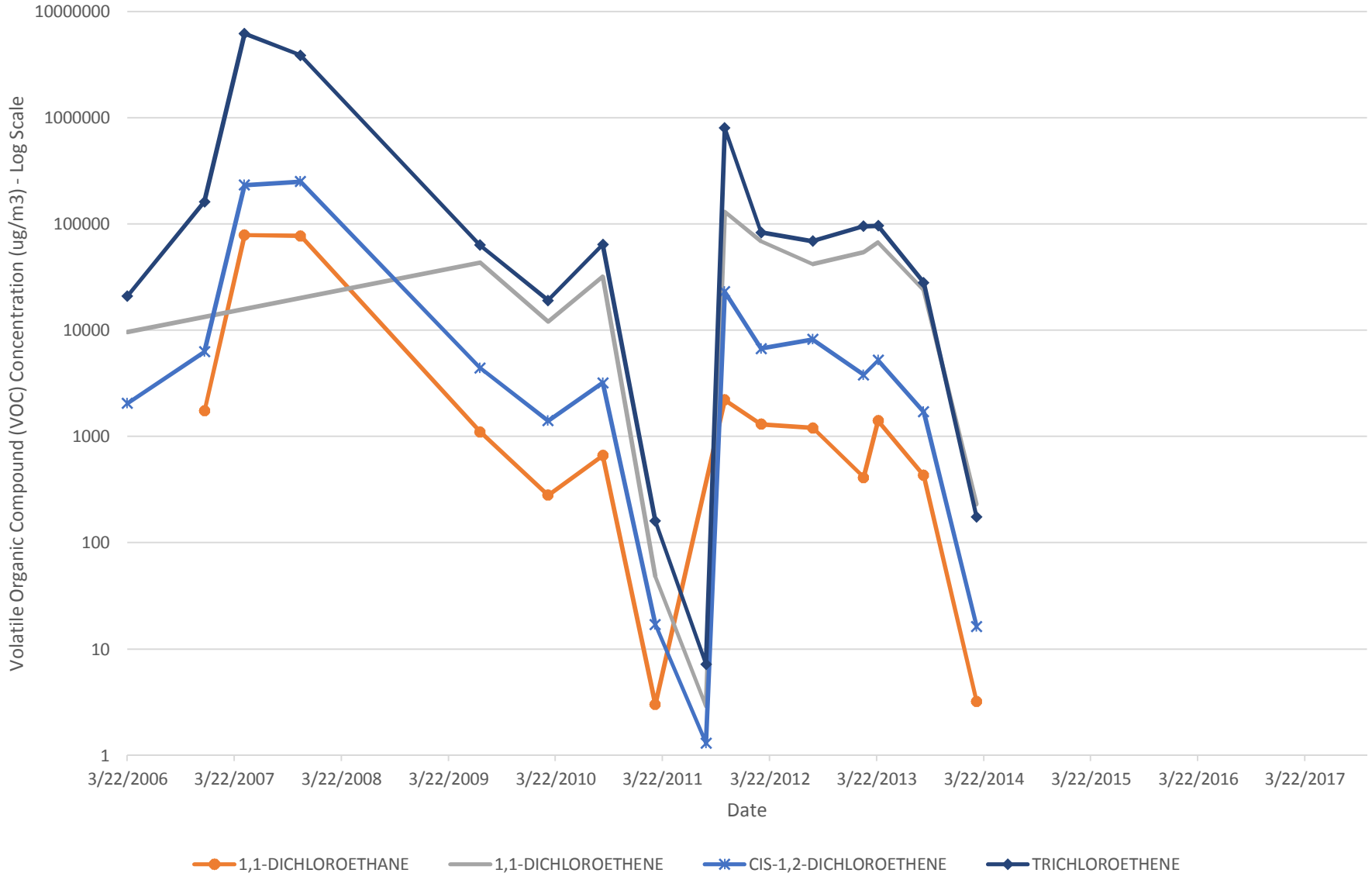


Figure 4-3
Sub-Slab Vapor TCE Concentrations at Monitoring Points Near SSD-System, Building C
Lockheed Martin Corporation, Middle River Complex
Middle River, Maryland

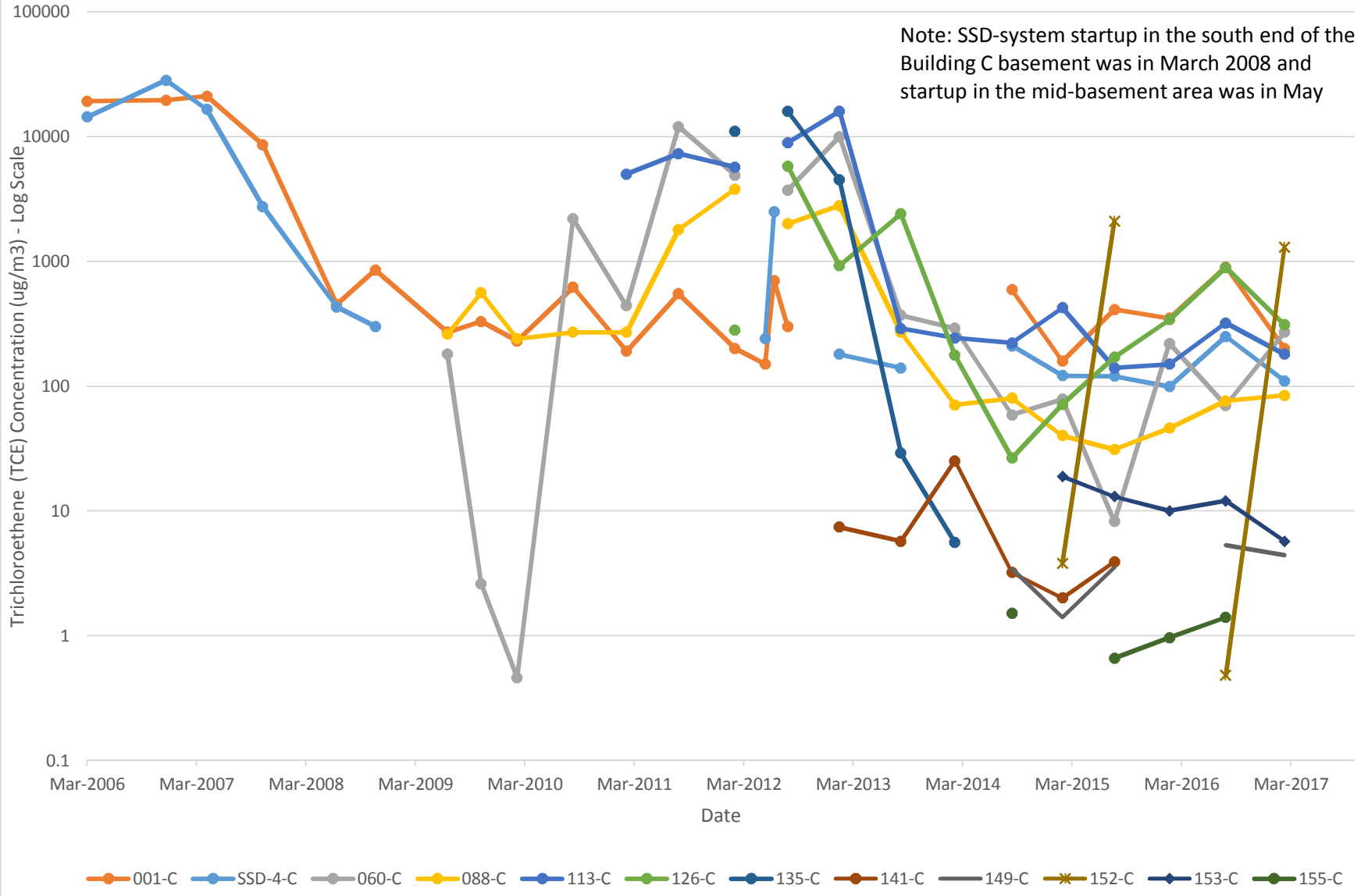
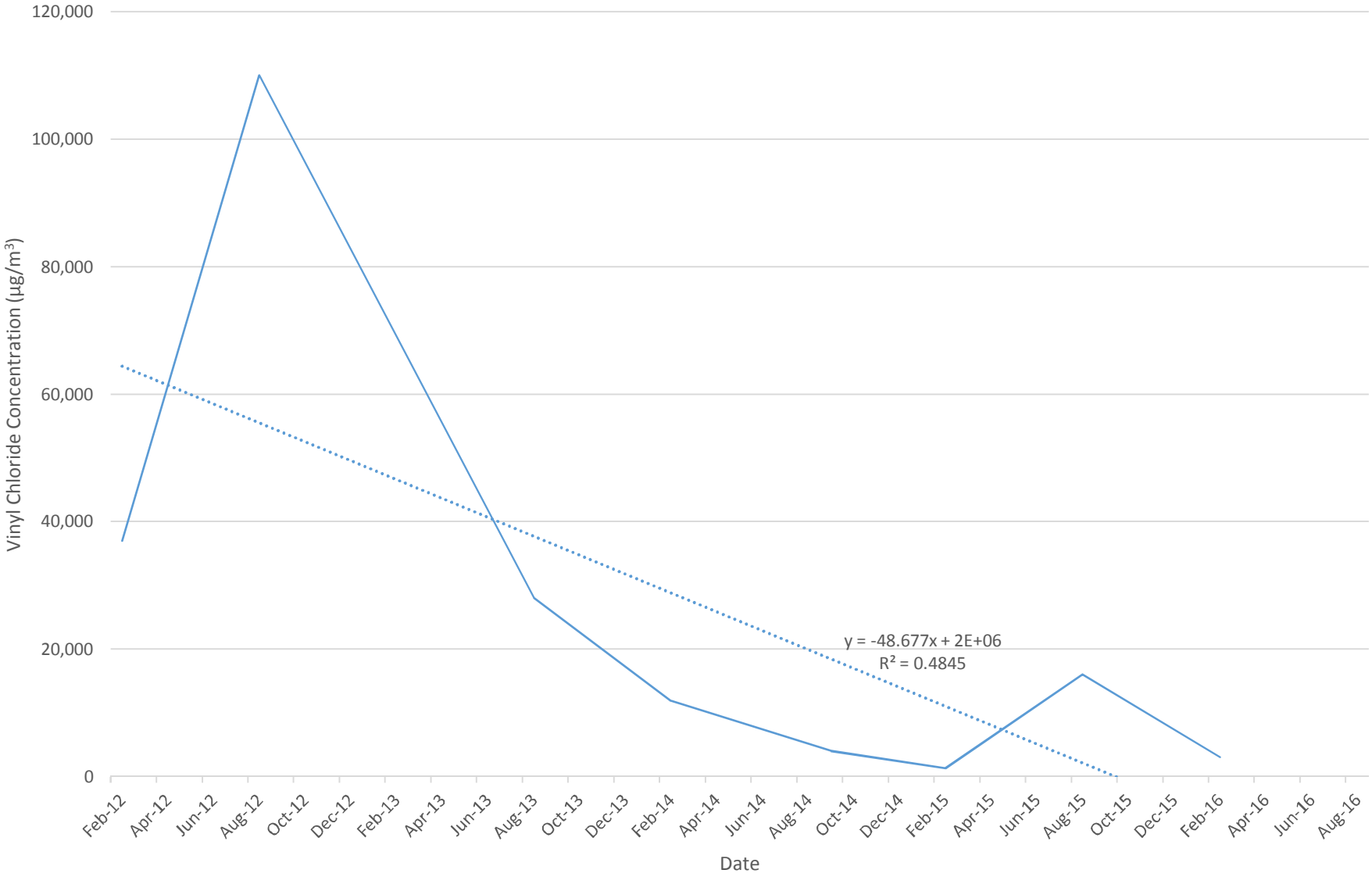


Figure 4-4
Sub-Slab Vapor Vinyl Chloride Concentrations at 126-C, Building C
Lockheed Martin Corporation, Middle River Complex
Middle River, Maryland



Section 5
Conclusions and Recommendations

5.1 CONCLUSIONS

Tetra Tech, Inc. (Tetra Tech) has completed Round 22 of vapor-intrusion (VI) monitoring (the first of two scheduled for 2017) in Buildings A, B, and C at the Middle River Complex (MRC) (owned by LMC Properties, Inc.) in Middle River, Maryland. This ongoing investigation seeks to evaluate whether volatile organic compounds (VOCs) in sub-slab vapor (associated with soil and groundwater chemicals of concern [COC] at the site) might be moving into indoor air (IA) at the Middle River Complex facilities. The data set is composed of indoor-air and sub-slab-vapor (SV) samples collected in February/March 2017. Ambient air samples were also collected at four outdoor background locations around the perimeter of the Middle River Complex. All data were validated to ensure compliance with analytical method requirements.

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

Historically, trichloroethene (TCE) and naphthalene have been the prevalent contaminants of concern in indoor air at this site; however, only one trichloroethene indoor-air exceedance was

detected in the Building A basement during Round 22. Trichloroethene was detected below its screening level in indoor air in Building B and was not detected in indoor air in Building C (see plan view in Figure 5-1). In total, trichloroethene was detected in 14 of 41 indoor air samples collected during Round 22. Naphthalene was detected in indoor air at concentrations less than its screening level in Building A, and was not detected in indoor air in Buildings B and C. Naphthalene was detected in only two of 41 indoor air samples collected during Round 22.

5.1.1 BUILDING A

Historically, trichloroethene in indoor air has exceeded its screening level at location 093-A in the Building A basement. Trichloroethene was detected in indoor air at location 093-A (1.8 micrograms per cubic meter [µg/m^3]) during Round 22, but at a concentration less than its screening level (8.8 µg/m^3). Indoor air exceedances of trichloroethene at location 093-A occurred between August 2013 and September 2014.

During Round 16 (February 2014), a trichloroethene concentration of 87 µg/m^3 was measured above a nearby floor grate in Building A basement using the hand-held hazardous air pollutants on-*site* (HAPSITE) field instrument. (For comparison, trichloroethene laboratory-analyzed concentrations of 5.9 µg/m^3 and 8.4 µg/m^3 were observed at locations 093-A [approximately 50 feet from grate] and 093X-A [approximately 15 feet from grate], respectively, during conventional sampling in Round 16. Trichloroethene exceedances were observed in all samples collected from location 093-A during Round 17 (in supplemental sampling in August, in September sampling, and in October/November 2014 resampling), with little variability. These results indicate that the floor grate might serve as a preferential vapor-intrusion pathway to this part of Building A basement.

Additional information about the underground network in the Building A basement was obtained during a recent interview with EMCOR, the on-site maintenance contractor. Many of the floor sumps and drains were historically used to manage groundwater infiltration. Sumps collected infiltrated groundwater and pumped it out of the basement. Several large sumps were used to prevent water intrusion into large air handlers that once sat directly on top of the sumps.

The air handlers pumped air through large-diameter heat tunnels and corridors in the Building A basement's eastern wall; these tunnels extend back under the main floor of Building A. These

sumps might also connect to pipes that carry the air to other parts of the building. Anecdotal information indicates that the ductwork extending from the sumps might have been disconnected; however, this has not been confirmed. This network might provide a preferential pathway to transfer contaminants in indoor air.

Existing infrastructure suggests that groundwater in the basement sumps might be pumped back to Lift Station #5 (located farther north in the Building A basement) and possibly discharged to the sanitary system. Several floor drains in this area also drain groundwater from the basement floor; they are connected to the storm-drain system that might provide a direct pathway to Cow Pen Creek. To date, we cannot confirm whether these additional exposure pathways are complete; however, additional investigations focused on the sumps and infrastructure are scheduled for the summer of 2017.

The consistent presence of trichloroethene in the Building A basement at concentrations that fluctuated above and below its indoor-air screening level led to the installation of three indoor-air purifying filter-units in January 2015. Each unit filters 300 cubic feet of indoor air per minute. Trichloroethene concentrations in this area during the last four sampling rounds have been less than the indoor air screening level, but have generally been increasing. Indoor air concentrations of trichloroethene detected at 093-A during additional sampling in January 2015 (before the filters were installed) were 3.6–8.3 µg/m^3; the highest concentration in that range is just below the screening level (8.8 µg/m^3). After filter installation, the trichloroethene concentrations at 093-A during Round 18 in February 2015 (1.5 µg/m^3), Round 19 in August 2015 (3.3 µg/m^3), Round 20 in February 2016 (6.4 µg/m^3), Round 21 in August 2016 (6 µg/m^3), and Round 22 in March 2017 (1.8 µg/m^3) did not exceed the screening level.

Figure 5-2 shows trichloroethene concentrations at location 093-A for regular sampling rounds (i.e., excluding additional January 2015 samples) over time, beginning when it was first sampled in August 2010. This graph suggests that trichloroethene concentrations in this area are increasing over time. However, the reduction in trichloroethene concentrations to below their indoor-air screening level during Rounds 18 through 22 might be due to the use of indoor-air filtration units that were in operation during sampling. The ongoing study of groundwater, sub-slab vapor, indoor air, and the network of sumps and pipes might improve our understanding of how trichloroethene migrates into the building.

In the current round (Round 22), the maximum detected indoor air concentration of trichloroethene (11 µg/m^3) was at location 138-A, which is near location 093-A in the Building A basement; this detection at 138-A is the only indoor air exceedance detected during Round 22. This concentration was confirmed with concurrent continuous air monitoring. A trichloroethene exceedance at location 138-A was also noted in Building A indoor air samples during Round 20. However, when the same location was resampled one month later, the trichloroethene concentration was less than its screening level.

During Round 21, indoor air trichloroethene at location 138-A was 2.7 µg/m^3, a concentration below its screening level. Note that trichloroethene has not historically exceeded its screening level in indoor air at location 138-A (Figure 5-3). However, the initial exceedance at this location during Round 20, and the exceedance detected again during Round 22, indicate that a source continues to contribute trichloroethene to indoor air, despite the air-filtration units in the basement. An additional investigation to determine possible sources and pathways of vapor intrusion was undertaken, because, even with the addition of the portable air-filtration units, indoor air concentrations of trichloroethene continued to exceed its screening level. These additional activities were done in conjunction with the Round 20 indoor-air-quality and sub-slab-vapor sampling in Building A, B, and C in February and March 2016.

Ten additional Vapor Pin™ vapor monitoring points were installed, including seven in the eastern wall of the Building A basement (169-A, 170-A, 171-A, 172-A, 173-A, 176-A, and 177-A), two in the Building A basement floor (174-A and 175-A), and one beneath the main floor of Building A (168-A). Vapor monitoring points were strategically located near possible trichloroethene sources, including a former underground storage tank and vapor degreasers associated with former plating shop operations. In 2016 (Tetra Tech, 2016b) and 2017, sampling location SV-175-A on the Building A basement floor had the highest trichloroethene concentrations (460,000 and 650,000 µg/m^3, respectively).

In 2016 (Tetra Tech, 2016b), sub-slab-vapor trichloroethene exceedances were detected in both the original and the duplicate samples collected from location SV-174-A (580 and 840 µg/m^3), and in a sample collected from the Building A basement floor (460,000 µg/m^3), near the floor grate that exhibited elevated trichloroethene concentrations during a previous indoor air survey using gas chromatography/mass spectrometry. A sub-slab-vapor trichloroethene exceedance also occurred at

location SV-168-A (42,000 µg/m^3) on the main floor of Building A, near the former location of a trichloroethene-vapor degreaser. Sub-slab-vapor trichloroethene exceedances (2,500 and 5,100 µg/m^3) also occurred at two locations (SV-171-A and SV-173-A, respectively) on the eastern wall of the Building A basement. Similar results were seen at the same locations in 2017 at SV-174-A (920 µg/m^3), SV-168-A (22,000 µg/m^3), SV-171-A (4,100 µg/m^3), and SV-173-A (7,300 µg/m^3). A sub-slab-vapor trichloroethene exceedance was also detected at SV-170-A (2,000 µg/m^3).

Trichloroethene in sub-slab-vapor also exceeded its screening level at locations 118-A and 136-A. Sub-slab-vapor concentrations of trichloroethene in samples collected from location 136-A have been consistently greater than its screening level, and sub-slab-vapor concentrations of trichloroethene in samples collected from location 118-A have also been greater than the screening level during some recent sampling rounds (e.g., Rounds 17 through 22). The Round 22 trichloroethene sub-slab-vapor concentration detected at 136-A (300 µg/m^3) only slightly exceeds the screening level (293 µg/m^3), is less than the concentrations detected at this location during Round 21 (850 µg/m^3), and is two orders of magnitude (i.e., 10 to 100 times) less than the concentrations detected at that location during Round 20 (37,000 µg/m^3 in the original sample, and 33,000 µg/m^3 in the duplicate sample) before the sub-slab depressurization system was expanded to this location in February 2016.

Historical sub-slab-vapor exceedances of trichloroethene have been consistently detected at location 079-A, but during Round 22, the trichloroethene concentration (41 µg/m^3) did not exceed its screening level. Locations 079-A and 136-A are in the eastern portion of Building A, in the central and southern areas of the building, respectively. These locations have been within the second-phase expansion's zone of influence since its installation in February 2016.

Historical trichloroethene concentrations in sub-slab vapor have also exceeded screening levels at location 118-A, which is in the southwestern portion of Building A, and some historical exceedances have also been detected at nearby location 015-A. These two locations are within the zone of influence from the original system that was installed in 2008. Figures 5-4A, 5-4B, and 5-4C display the Round 22 sub-slab-vapor and indoor-air exceedances from the basement and first-floor sampling locations in Building A.

Chloroform was detected (at location 136-A) in sub-slab vapor at concentrations greater than its screening level during Round 20, but concentrations of chloroform detected in indoor air and sub-slab vapor during Rounds 21 and 22 did not exceed screening levels. Naphthalene (at location 075-A) exceeded its sub-slab-vapor screening level during Round 19, but naphthalene at the same location during Round 20 (100 µg/m^3), Round 21 (110*J* µg/m^3), and Round 22 (92*J* µg/m^3) did not exceed the screening level. Indoor-air naphthalene concentrations did not exceed its screening level (3.6 µg/m^3) during Round 22.

One sub-slab-vapor detection of 1,1-dichloroethene (1,1-DCE) at new sampling location 175-A (48,000 µg/m^3) exceeded its screening level (29,333 µg/m^3) during Round 22; the maximum detected sub-slab-vapor concentration of trichloroethene (650,000 µg/m^3) was also detected at location 175-A. Concentrations of 1,1-dichloroethene detected in other Round 22 sub-slab-vapor samples are at least approximately one order of magnitude (approximately 10 times) less than the concentration detected at 175-A.

In summary, trichloroethene in indoor air has historically exceeded its screening level at locations in the Building A basement beginning in 2013, and previous investigation results indicate that the nearby floor grate, sumps, or other features might serve as preferential vapor-intrusion pathways. The consistent presence of trichloroethene at concentrations that fluctuate above and below its indoor-air screening level in the Building A basement led to the installation of three indoor-air filter units in January 2015. After filter installation, indoor-air trichloroethene concentrations at 093-A during the following four sampling rounds did not exceed the screening level, possibly due to the use of indoor-air filtration units that were in operation during sampling. However, exceedances of the trichloroethene indoor-air screening level at a nearby location during Rounds 20 and 22 indicate that a source continues to contribute trichloroethene to indoor air, despite the operation of the air-filtration units in the basement. Continuous air-sampling conducted between February 24 and April 21 indicates that indoor air trichloroethene concentrations fluctuated above and below the screening level, even during operation of the air-filtration units in the basement. Monitoring indicates that the sumps and drains in the Building A basement are the sources of the trichloroethene, as increased concentrations in indoor air occurred during rain events.

Trichloroethene was detected in Building A sub-slab vapor at concentrations exceeding its screening level during Round 21 at two previous sampling locations and at six new sampling locations. Only one indoor air concentration of trichloroethene exceeded its screening level. One sub-slab-vapor detection of 1,1-dichloroethene from one location exceeded its screening level during Round 22; however, indoor air concentrations of 1,1-dichloroethene did not exceed the screening level.

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

5.1.2 BUILDING B

No exceedances were noted in Building B indoor air or sub-slab-vapor samples during Rounds 22, 21, 20, or 19. During Round 18, only one slight exceedance of naphthalene was noted in Building B indoor air, and this concentration only marginally exceeded its screening level. No exceedances were noted in Building B indoor air or sub-slab-vapor samples during Round 17.

5.1.3 BUILDING C

1,1-Dichloroethane (1,1-DCA), naphthalene, trichloroethene, and vinyl chloride (VC) were detected in Building C sub-slab vapor at concentrations greater than screening levels during Round 22, but no exceedances were detected in Building C indoor air. Comparison of the two graphs in Figures 5-5A and 5-5B shows sub-slab vapor and indoor-air concentrations of 1,1-dichororethane, naphthalene, trichloroethene, and vinyl chloride in Building C. 1,1-Dichoroethane, naphthalene, trichloroethene, and vinyl chloride were not detected in any of the 22 indoor air samples collected from Building C during Round 22 (Figure 5-5B).

Although trichloroethene has been routinely detected in indoor air in Building C, its concentrations have not typically exceeded its screening level. The only exception (a concentration of 20 $\mu g/m^3$)

occurred during Round 15 at sampling location 144-C; this location is in the machine shop of the Rotary and Mission Systems (RMS) mechanical-prototype lab (MPL). The Round 15 exceedance possibly resulted from an indoor source, because the room was air-conditioned and under positive pressure, making it extremely unlikely that sub-slab vapor had migrated into the room. A trace concentration (0.43 µg/m^3) of trichloroethene was detected nearby at location 128-C during Round 18. No indoor air exceedances of trichloroethene were detected in the machine shop or elsewhere in Building C during Rounds 19, 20, 21, or 22.

During Round 18, an indoor-air exceedance of tetrachloroethene (PCE) was detected (870 µg/m^3, as compared to its IA screening level 180 µg/m^3) in a resample, but not in the original sample collected at location 149-C during Round 18. Before Round 18, tetrachloroethene exceedances had never been detected in indoor air or sub-slab vapor in Building C. Additionally, indoor air and sub-slab-vapor concentrations of tetrachloroethene detected in Rounds 19, 20, 21, and 22 did not exceed screening levels. In most sub-slab-vapor samples collected over the course of these investigations from locations at and near location 149-C, concentrations of tetrachloroethene are typically below detection limits. The preponderance of evidence suggests that the elevated tetrachloroethene concentration at location 149-C during Round 18 is anomalous, and possibly attributable to some indoor air source rather than vapor intrusion.

Concentrations of vinyl chloride detected in sub-slab vapor at 126-C have decreased since the system expansion, but have varied over time. The vinyl chloride concentration detected at location 126-C during Round 22 (2,600*J* µg/m^3) is greater than that detected during Round 18 (1,310*J* µg/m^3), but is less than the concentrations detected during Round 15 (28,000 µg/m^3), Round 16 (11,900 µg/m^3), Round 17 (4,030 µg/m^3), Round 19 (16,000 µg/m^3), Round 20 (3,100 µg/m^3), and Round 21 (5,000 µg/m^3). Vinyl chloride's sub-slab screening level is 933 µg/m^3. Although trichloroethene concentrations up to 1,500 micrograms per liter (µg/L) have been detected in groundwater near 126-C, vinyl chloride has not been detected in groundwater. The 126-C area might be affected by groundwater fluctuation (depth to groundwater is between four and five feet), but its correlation to vinyl chloride concentrations is difficult to determine.

Sub-slab-vapor concentrations of 1,1-dichloroethane (3,900 µg/m^3) and naphthalene (310 µg/m^3) also exceeded their screening levels (2,567 and 120 µg/m^3, respectively) at location 102-C during Round 22. Sub-slab vapor concentrations of 1,1-dichloroethane and naphthalene exceeded their

screening levels at location 102-C during other recent sampling rounds (e.g., Rounds 17, 18, and 20). In general, sub-slab-vapor concentrations of volatile organic compounds have decreased in the southern basement area (SSD-4-C) of Building C since system startup in March 2008. Vapor monitoring points (060-C, 088-C, 113-C, 126-C, 133-C, and 135-C) in the mid-basement area also show lower concentrations, as compared to results before system expansion in May 2013.

5.2 RECOMMENDATIONS

Results of the March 2017 Round 22 vapor-intrusion investigation at Buildings A, B, and C lead us to the following recommendations:

- Continue operation of the sub-slab-depressurization systems in Buildings A and C.
- Continue semiannual indoor-air-quality/sub-slab-vapor monitoring to evaluate possible vapor intrusion and assess the performance/effectiveness of the existing mitigation systems. Monitoring results will be used to evaluate the control and reduction (if occurring) of known sources, to identify new sources (if present), and help determine if additional mitigation or sub-slab-depressurization-system modifications are needed. Locations within the Building C sub-slab-depressurization-system areas of influence should continue to be monitored to evaluate whether the recent system expansion affects contaminant concentrations.
- Continue routine semiannual monitoring of indoor air and sub-slab soil-vapor to evaluate concentrations of PCE in the Building C museum area near sampling location 149-C. The absence of indoor-air and sub-slab-vapor PCE concentrations greater than its screening levels near this location suggests that the Round 18 exceedance is most likely an anomaly.
- Expand the Building A sub-slab-depressurization system to address elevated sub-slab-vapor concentrations of trichloroethene at 168-A, near the former location of a degreaser.
- Install three additional air-purifying units in the Building A basement as a precaution, near targeted floor features that have exhibited the highest levels of trichloroethene. These units will supplement the existing air-purifying units.

Additional investigations to assess trichloroethene-related exposure pathways inside and outside the Building A basement are in progress, and more investigation is planned for later in 2017. Results from these additional investigations (to date) are summarized below.

Camera survey of air-duct network and sumps—Historical documents relating to Building A and the Building A basement were reviewed to identify building infrastructure, elevations, and utilities; possible sources of contamination; and connections to nearby buildings. Historical drawings also

show as-built details of the air-duct network that runs under the main floor of Building A. This ductwork connects to the large sumps beneath the Building A basement floor that were once part of the Building A heating system (Tetra Tech, 2017c). Information relevant to this investigation is summarized below:

- Several existing and former heater rooms are in the Building A basement. Twelve heating rooms originally existed, but the heaters and several walls were removed when heat was added to the main floor. Building A is 600-feet-long, so each of the 12 heater rooms supplied air to approximately two structural column widths (an approximately 50-foot span) of Building A. Each heater room included a large air handler that forced hot air through an underground tunnel network beneath the main floor of Building A. The air handlers are no longer in operation, but the sumps remain in each location, and might still connect to ducts, tunnels, and pipes that carry air to other parts of the building.

- Some of the historical air-duct network was filled in with concrete in association with new foundation and construction work in the past. In addition, the southern portion of Building A was filled with concrete during recent installation of a freezer unit by MRA Systems, Inc. Other ducts have been filled with wood and other debris. However, we found no existing documentation that verifies which areas have been filled with concrete or other materials. Furthermore, no documentation regarding the integrity of the plugs or their effectiveness in sealing the ducts is available.

- Currently, five heater rooms are fully intact (i.e., surrounded by walls). Each heater room contains a large air-handler that is no longer in operation, with a sump underneath. During their operation, the sumps likely controlled groundwater infiltration into the basement, thus preventing fouling of the air handlers.

- Two other former heater rooms are no longer walled-in, and no longer have an air handler; however, the rectangular sump associated with each remains in the basement floor.

- The sumps contain intersecting duct networks (associated with the previous air handler operation) with piping that extends up to the main floor of Building A. The ducts connect to vents adjacent to certain columns. These ducts are thought to be associated with the air-return system for the historical air handlers.

Ancillary information from site operations personnel, obtained during previous construction projects, indicates that a large “chamber” (approximate dimensions of eight-by-nine-square feet) is connected to sumps behind the eastern wall of the basement (e.g., under the main slab-on-grade floor of Building A). This chamber is behind the basement sidewall and connects to a four-by-four-foot air duct that runs easterly under the main floor of Building A. From this main duct, offshoot ducts run in a north/south direction along the columns. Air vents associated with these air ducts are present at the foot of many columns, and were used historically to provide heat to the main floor of Building A. Tetra Tech will attempt to verify this information during a camera

survey conducted later this year. Floor features in Building A and Building A basement, including the air-duct network that runs behind the eastern basement wall, the associated air vents on the main floor, the storm drain line that runs north/south under the basement floor, and the smaller floor drains, will be surveyed to determine their condition, identify possible breaches, and to better understand their design.

Frog 4000™ survey—Tetra Tech will conduct a Frog 4000™ survey to assess whether trichloroethene-contaminated air is emanating out of the air vents on the main floor. This will help determine whether trichloroethene detected in the sumps in the basement is venting up to the main floor.

Pilot test to assess connection of sumps to Building A sub-slab-depressurization system—A pilot test will be conducted in Building A basement to determine the feasibility of connecting some of the larger sumps in the basement to the current sub-slab-depressurization system to remove and treat trichloroethene-contaminated air.

Building A groundwater investigation—Operation of the continuous air-monitoring system indicates variable concentrations of trichloroethene in indoor air at the breathing zone, and also above some drains and sumps. Trichloroethene was also detected in water in select floor features at concentrations up to 5,100 micrograms per liter (µg/L). Groundwater recovery in the basement sumps might affect groundwater movement outside and west of Building A. Under a separate program, additional groundwater monitoring wells will be installed west of Building A to target the two trichloroethene plumes apparently emanating from Building A and the Building A basement, to fill in data gaps between the plumes and Building A, and to investigate deeper groundwater zones that might migrate toward Cow Pen Creek.

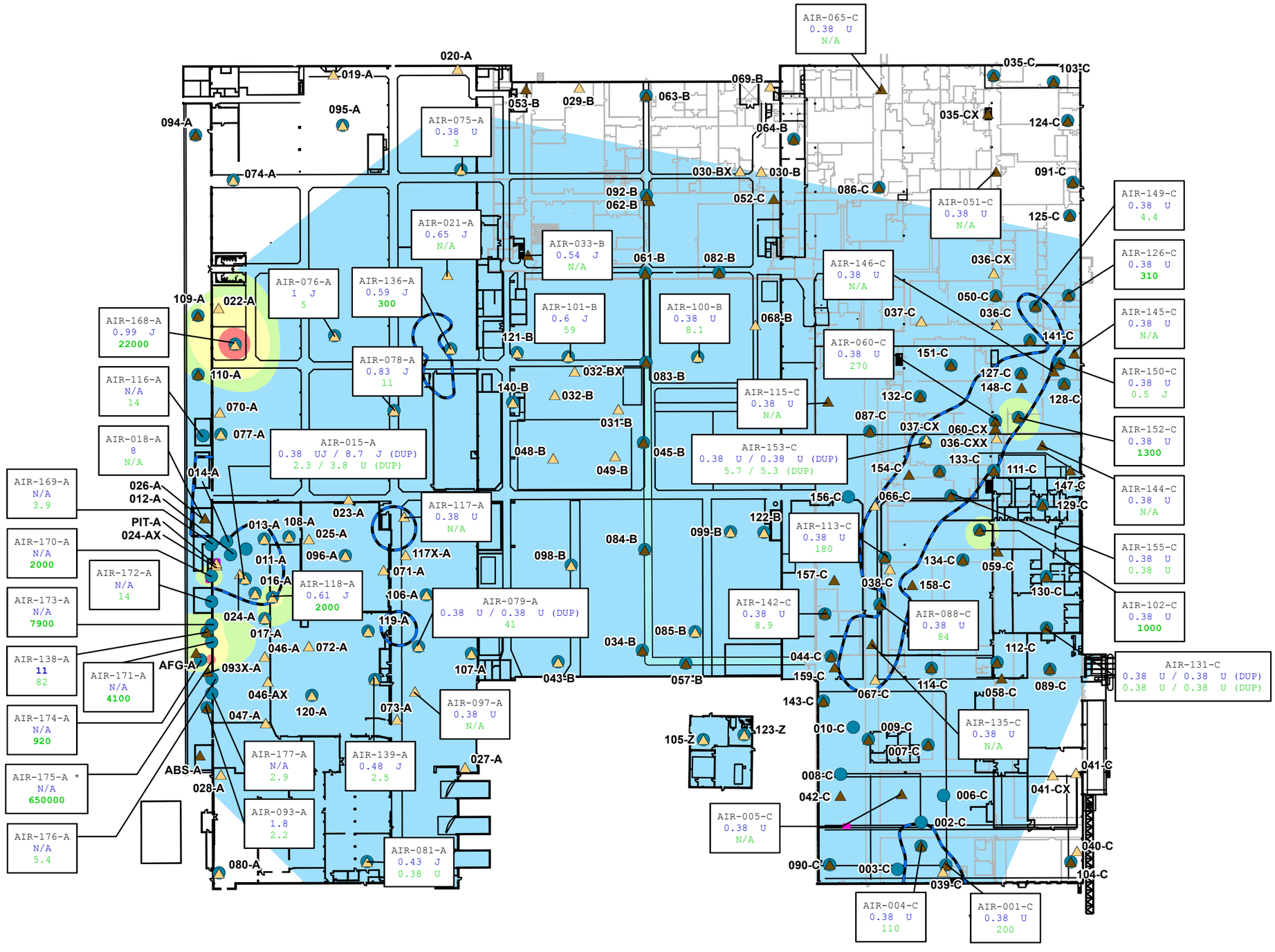


FIGURE 5-1

TRICHLOROETHENE SAMPLING RESULTS
ROUND 22
BUILDINGS A, B AND C

Legend

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

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

*** SV symbol for location AIR-175-A is hidden on this map for illustrative purposes.**

All units in µg/m^3.

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

Screening Levels

Indoor Air	Soil Vapor
8.8	293

March 2017 Sub-Slab Vapor TCE Concentration

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

Lockheed Martin Middle River Complex
Middle River, Maryland

0 60 120 Feet

DATE MODIFIED: 06/19/17

CREATED BY: JEE

TETRA TECH

Map Document: (P:\GIS\Middle_River\MapDocs\MXD\bldg_abc_tce_tags_rnd22_1117.mxd)
06/19/17 -- JEE

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

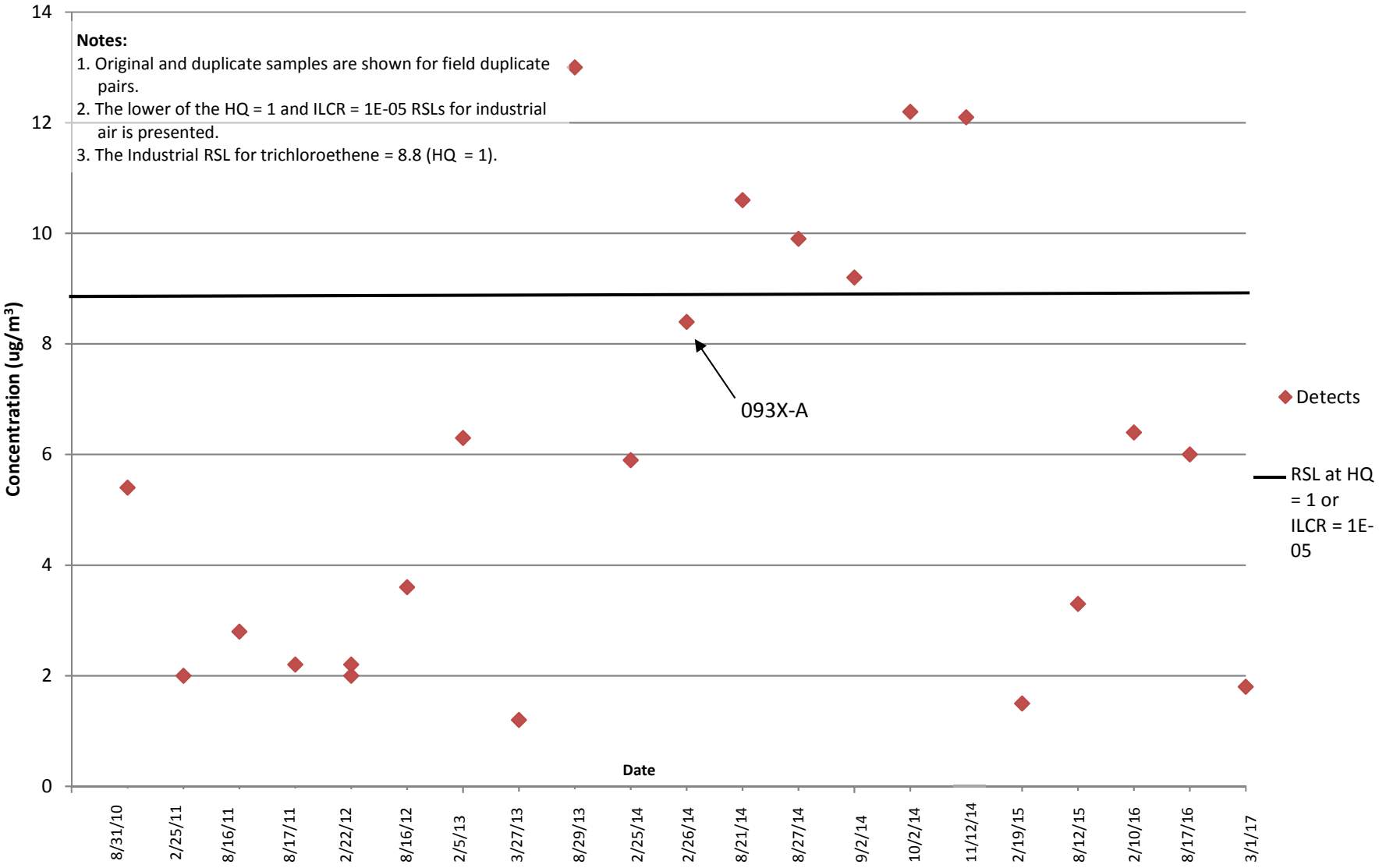


Figure 5-3
Concentrations of Trichloroethene Detected at Location 138-A
Indoor Air - Basement

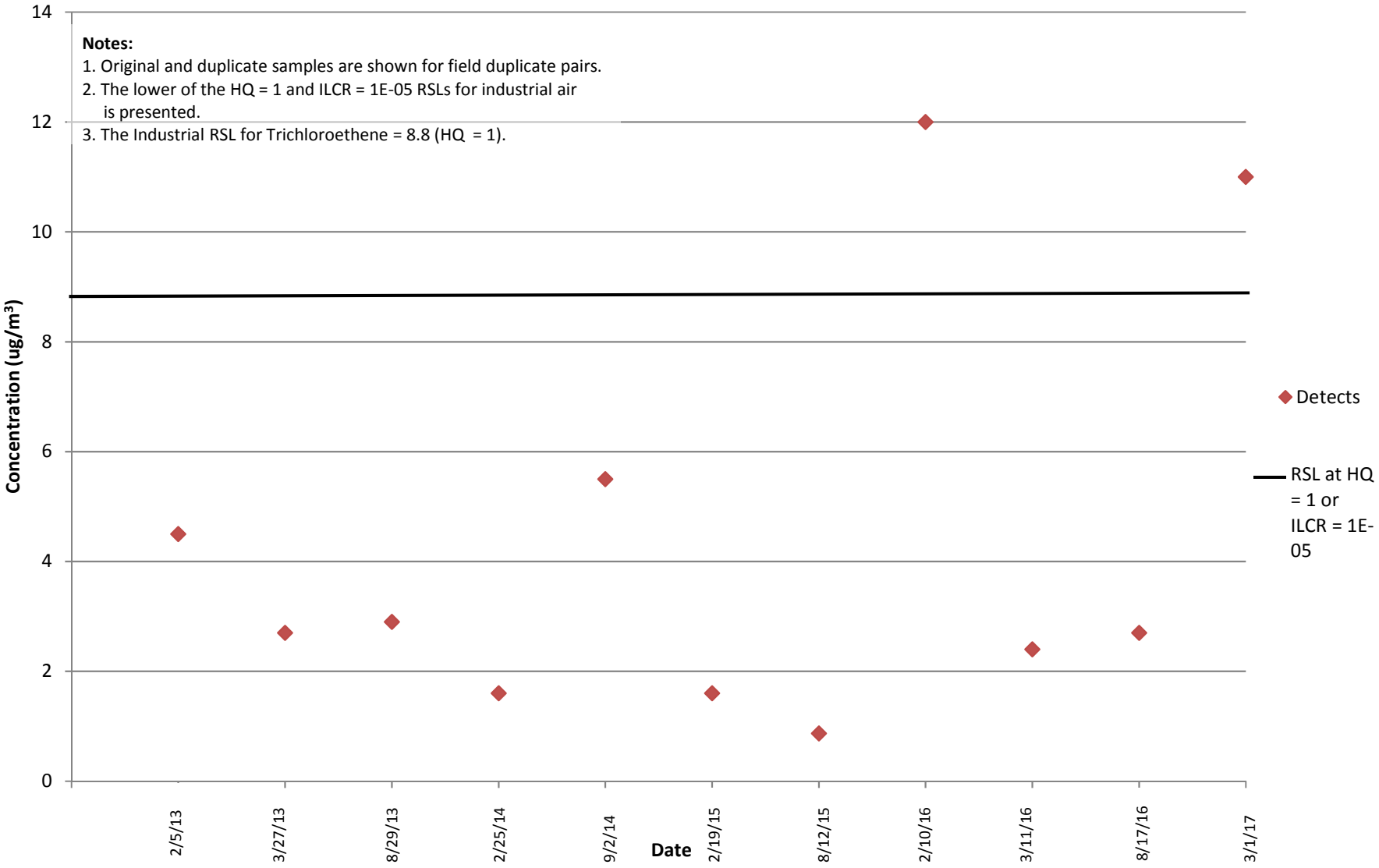


Figure 5-4A
Concentrations of Select Chemicals from Round 22 - Building A - Sub-Slab Vapor

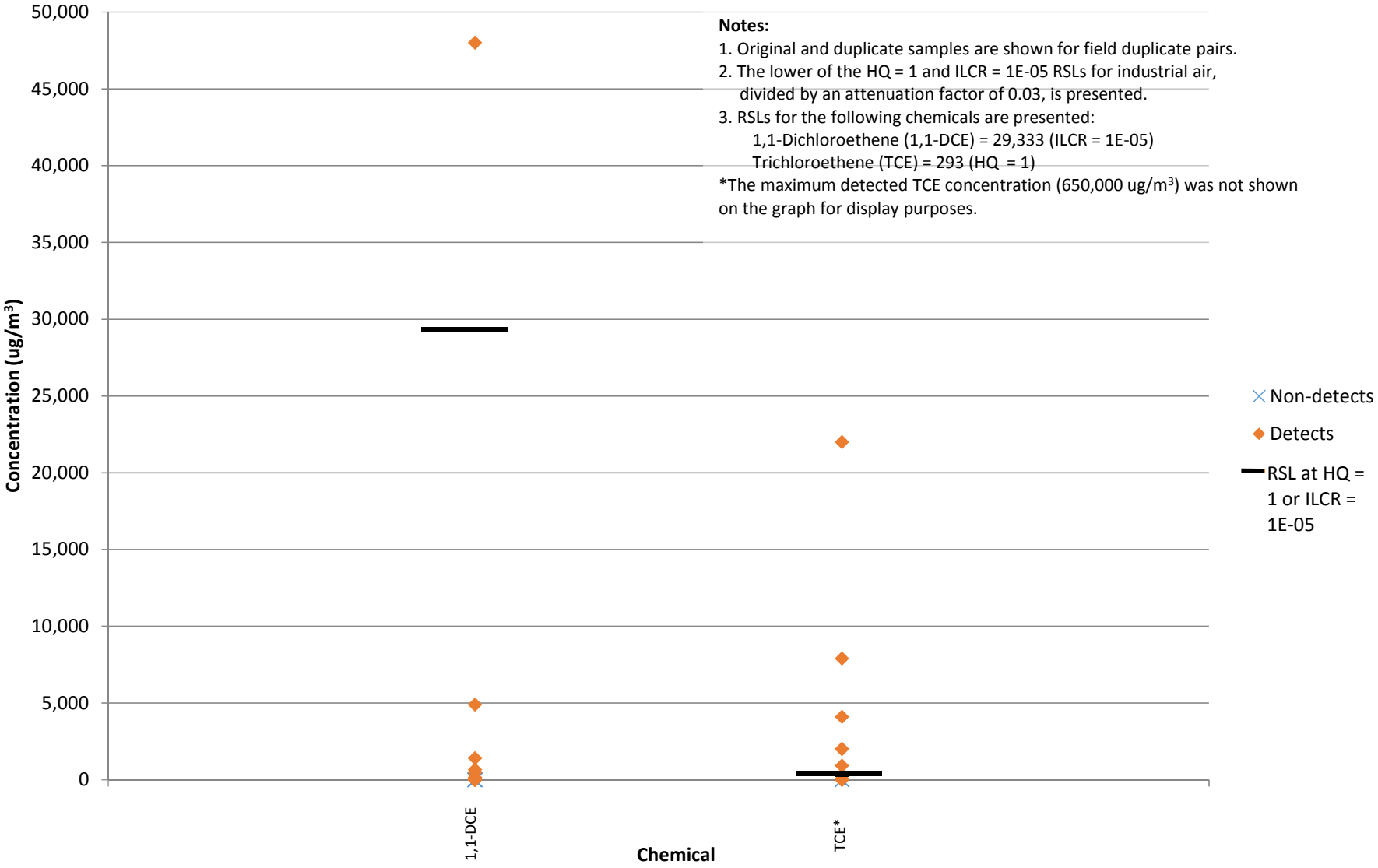


Figure 5-4B
Concentrations of Select Chemicals from Round 22 - Building A - Indoor Air - Basement

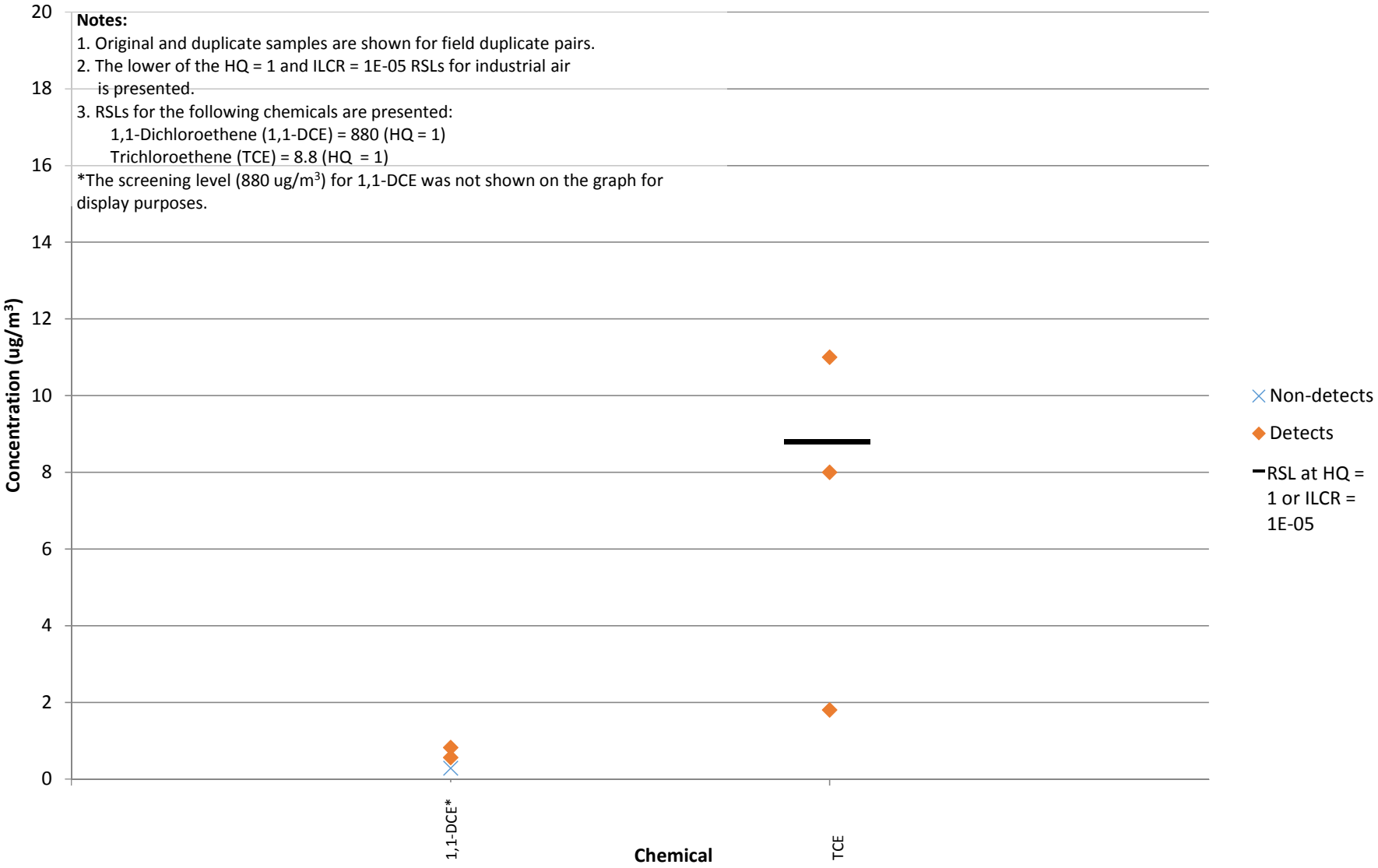


Figure 5-4C
Concentrations of Select Chemicals from Round 22 - Building A - Indoor Air - First Floor

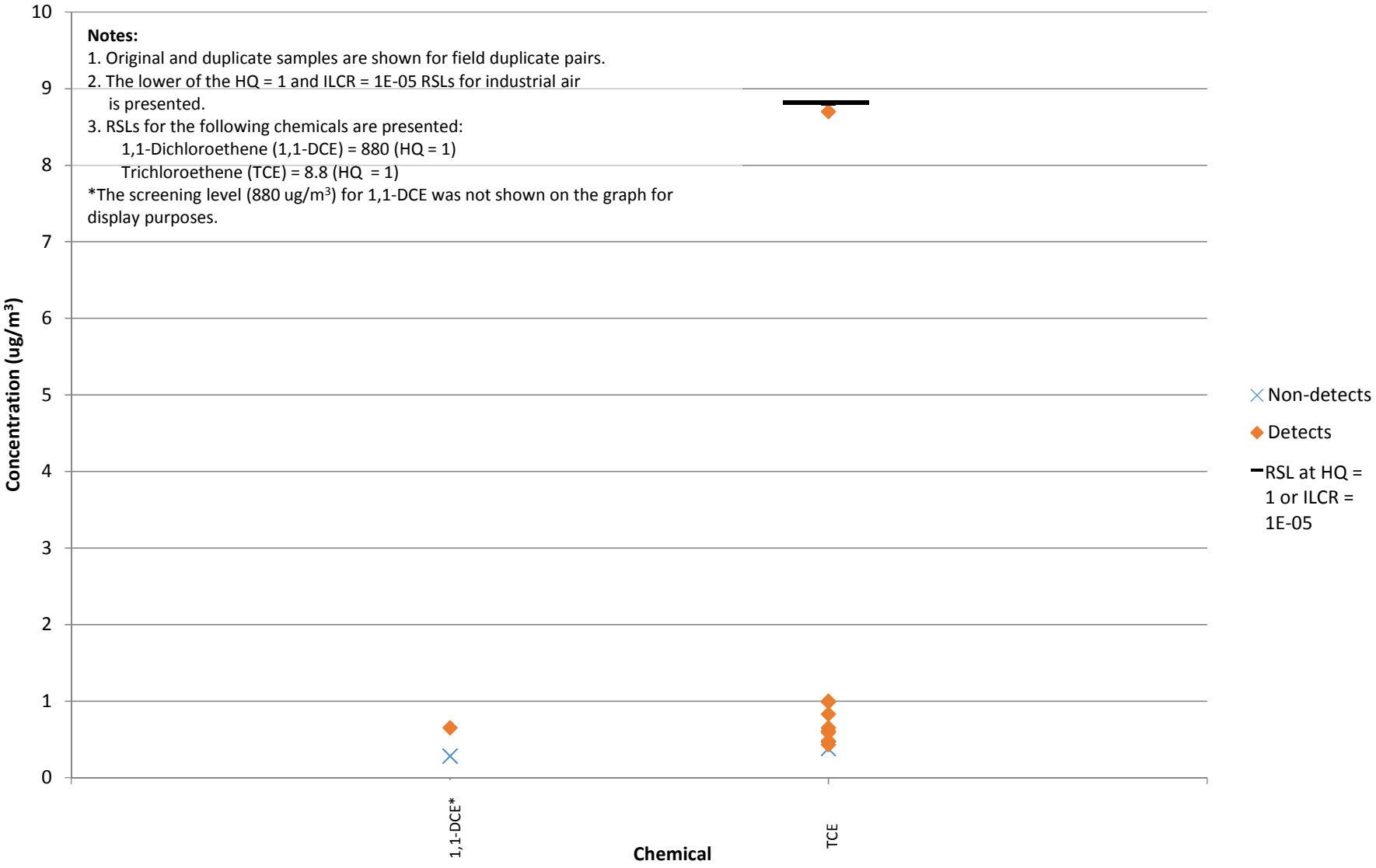


Figure 5-5A
Concentrations of Select Chemicals from Round 22 - Building C - Sub-Slab Vapor

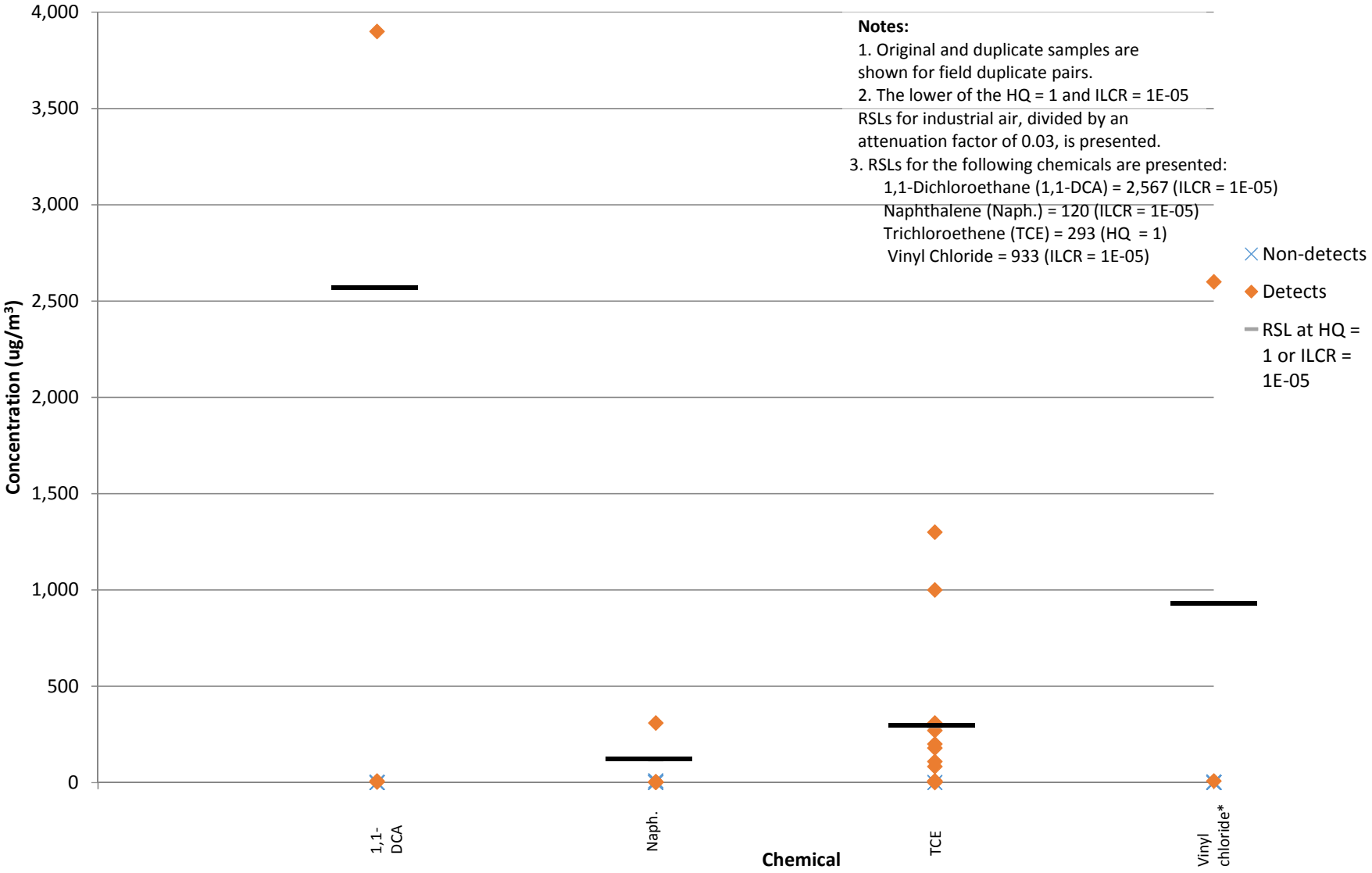
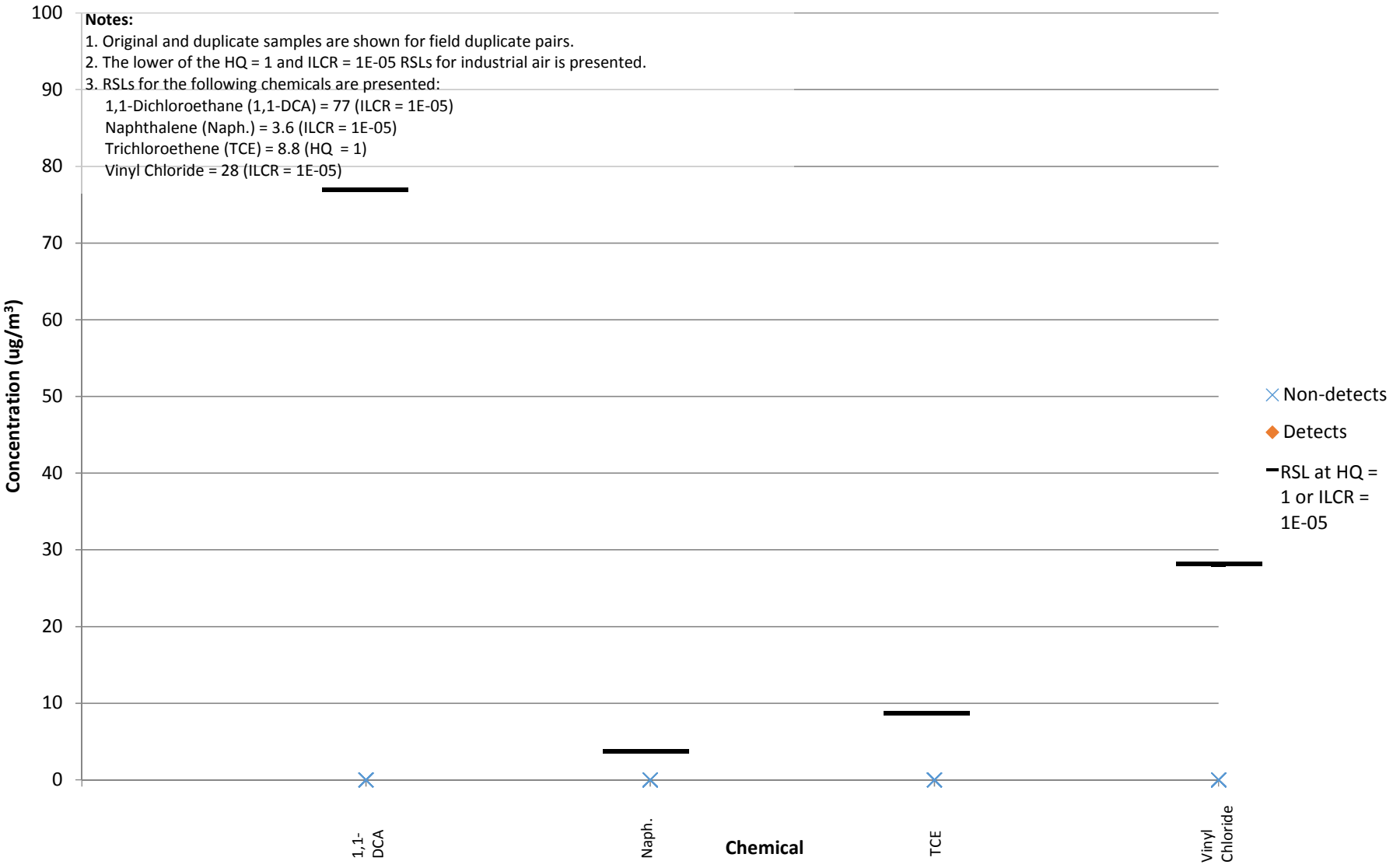


Figure 5-5B
Concentrations of Select Chemicals from Round 22 - Building C - Indoor Air - Basement



Section 6
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APPENDIX A—MARCH 2017
SAMPLE LOG SHEETS/CHAIN OF CUSTODY

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	3/1/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-015-A-22	IAQ Sample ID:	IA-015-A-22
SV Canister #:	10922	IAQ Canister #:	10339
SV Regulator #:	9900	IAQ Regulator #:	8609
SV Start Time:	912	IAQ Start Time:	745
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	1015	IAQ Stop Time:	1626
SV Stop Pressure:	0	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:		IAQ Sample ID:	IA-018-A-22
SV Canister #:		IAQ Canister #:	11254
SV Regulator #:		IAQ Regulator #:	8624
SV Start Time:		IAQ Start Time:	739
SV Start Pressure:		IAQ Start Pressure:	-30
SV Stop Time:		IAQ Stop Time:	1623
SV Stop Pressure:		IAQ Stop Pressure:	-3

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:		IAQ Sample ID:	IA-021-A-22
SV Canister #:		IAQ Canister #:	10346
SV Regulator #:		IAQ Regulator #:	8461
SV Start Time:		IAQ Start Time:	823
SV Start Pressure:		IAQ Start Pressure:	-30
SV Stop Time:		IAQ Stop Time:	1647
SV Stop Pressure:		IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-075-A-22	IAQ Sample ID:	IA-075-A-22
SV Canister #:	9637	IAQ Canister #:	9810
SV Regulator #:	11311	IAQ Regulator #:	11261
SV Start Time:	954	IAQ Start Time:	830
SV Start Pressure:	-29	IAQ Start Pressure:	-30
SV Stop Time:	1101	IAQ Stop Time:	1643
SV Stop Pressure:	0	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-076-A-22	IAQ Sample ID:	IA-076-A-22
SV Canister #:	9668	IAQ Canister #:	10832
SV Regulator #:	10583	IAQ Regulator #:	8620
SV Start Time:	948	IAQ Start Time:	828
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	1055	IAQ Stop Time:	1641
SV Stop Pressure:	-1	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-078-A-22	IAQ Sample ID:	IA-078-A-22
SV Canister #:	9744	IAQ Canister #:	10745
SV Regulator #:	10304	IAQ Regulator #:	7402
SV Start Time:	952	IAQ Start Time:	819
SV Start Pressure:	-28	IAQ Start Pressure:	-29
SV Stop Time:	1058	IAQ Stop Time:	1649
SV Stop Pressure:	0	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-079-A-22	IAQ Sample ID:	IA-079-A-22
SV Canister #:	10782	IAQ Canister #:	10523
SV Regulator #:	9949	IAQ Regulator #:	10360
SV Start Time:	937	IAQ Start Time:	806
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	1037	IAQ Stop Time:	1628
SV Stop Pressure:	-2	IAQ Stop Pressure:	-1

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-081-A-22	IAQ Sample ID:	IA-081-A-22
SV Canister #:	10748	IAQ Canister #:	9577
SV Regulator #:	10859	IAQ Regulator #:	9656
SV Start Time:	929	IAQ Start Time:	750
SV Start Pressure:	-29	IAQ Start Pressure:	-30
SV Stop Time:	1032	IAQ Stop Time:	1631
SV Stop Pressure:	-2	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	3/1/2017-3/3/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-093-A-22	IAQ Sample ID:	IA-093-A-22
SV Canister #:	10917	IAQ Canister #:	11126
SV Regulator #:	9704	IAQ Regulator #:	9650
SV Start Time:	952	IAQ Start Time:	743
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	1112	IAQ Stop Time:	1621
SV Stop Pressure:	0	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A

OBSERVATIONS / NOTES:

SV-093-A-22 recollected on 3/3/2017 due to faulty regulator/insufficient volume in canister for analysis during firsat sample on 3/1/2017

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:		IAQ Sample ID:	IA-097-A-22
SV Canister #:		IAQ Canister #:	10340
SV Regulator #:		IAQ Regulator #:	9652
SV Start Time:		IAQ Start Time:	810
SV Start Pressure:		IAQ Start Pressure:	-30
SV Stop Time:		IAQ Stop Time:	1630
SV Stop Pressure:		IAQ Stop Pressure:	-1

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-116-A-22	IAQ Sample ID:	
SV Canister #:	11288	IAQ Canister #:	
SV Regulator #:	10196	IAQ Regulator #:	
SV Start Time:	857	IAQ Start Time:	
SV Start Pressure:	-30	IAQ Start Pressure:	
SV Stop Time:	1004	IAQ Stop Time:	
SV Stop Pressure:	0	IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:		IAQ Sample ID:	IA-117-A-22
SV Canister #:		IAQ Canister #:	11122
SV Regulator #:		IAQ Regulator #:	9702
SV Start Time:		IAQ Start Time:	816
SV Start Pressure:		IAQ Start Pressure:	-29
SV Stop Time:		IAQ Stop Time:	1638
SV Stop Pressure:		IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-118-A-22	IAQ Sample ID:	IA-118-A-22
SV Canister #:	10834	IAQ Canister #:	9664
SV Regulator #:	11500	IAQ Regulator #:	7283
SV Start Time:	915	IAQ Start Time:	802
SV Start Pressure:	-28	IAQ Start Pressure:	-30
SV Stop Time:	1016	IAQ Stop Time:	1625
SV Stop Pressure:	-2	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-136-A-22	IAQ Sample ID:	IA-136-A-22
SV Canister #:	11492	IAQ Canister #:	10960
SV Regulator #:	10349	IAQ Regulator #:	7602
SV Start Time:	943	IAQ Start Time:	825
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	1052	IAQ Stop Time:	1640
SV Stop Pressure:	-3	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-138-A-22	IAQ Sample ID:	IA-138-A-22
SV Canister #:	11257	IAQ Canister #:	9797
SV Regulator #:	11477	IAQ Regulator #:	7029
SV Start Time:	900	IAQ Start Time:	741
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	1006	IAQ Stop Time:	1622
SV Stop Pressure:	0	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-139-A-22	IAQ Sample ID:	IA-139-A-22
SV Canister #:	11257	IAQ Canister #:	10921
SV Regulator #:	11477	IAQ Regulator #:	11467
SV Start Time:	939	IAQ Start Time:	759
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	1048	IAQ Stop Time:	1637
SV Stop Pressure:	0	IAQ Stop Pressure:	-1

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-168-A-22	IAQ Sample ID:	IA-168-A-22
SV Canister #:	10500	IAQ Canister #:	10919
SV Regulator #:	10359	IAQ Regulator #:	9648
SV Start Time:	957	IAQ Start Time:	840
SV Start Pressure:	-29	IAQ Start Pressure:	-29
SV Stop Time:	1104	IAQ Stop Time:	1645
SV Stop Pressure:	0	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	3/8/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-169-A	IAQ Sample ID:	
SV Canister #:	11577	IAQ Canister #:	
SV Regulator #:	10845	IAQ Regulator #:	
SV Start Time:	1009	IAQ Start Time:	
SV Start Pressure:	-30	IAQ Start Pressure:	
SV Stop Time:	1118	IAQ Stop Time:	
SV Stop Pressure:	-2	IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A Basement

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	3/8/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-170-A	IAQ Sample ID:	
SV Canister #:	9787	IAQ Canister #:	
SV Regulator #:	10242	IAQ Regulator #:	
SV Start Time:	937	IAQ Start Time:	
SV Start Pressure:	-29	IAQ Start Pressure:	
SV Stop Time:	1050	IAQ Stop Time:	
SV Stop Pressure:	0	IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A Basement

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	3/8/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-171-A	IAQ Sample ID:	
SV Canister #:	11220	IAQ Canister #:	
SV Regulator #:	11513	IAQ Regulator #:	
SV Start Time:	933	IAQ Start Time:	
SV Start Pressure:	-30	IAQ Start Pressure:	
SV Stop Time:	1039	IAQ Stop Time:	
SV Stop Pressure:	-2	IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A Basement

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	3/8/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-172-A	IAQ Sample ID:	
SV Canister #:	10795	IAQ Canister #:	
SV Regulator #:	10196	IAQ Regulator #:	
SV Start Time:	936	IAQ Start Time:	
SV Start Pressure:	-30	IAQ Start Pressure:	
SV Stop Time:	1051	IAQ Stop Time:	
SV Stop Pressure:	0	IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A Basement

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	3/8/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-173-A	IAQ Sample ID:	
SV Canister #:	11570	IAQ Canister #:	
SV Regulator #:	9658	IAQ Regulator #:	
SV Start Time:	934	IAQ Start Time:	
SV Start Pressure:	-30	IAQ Start Pressure:	
SV Stop Time:	1042	IAQ Stop Time:	
SV Stop Pressure:	-2	IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A Basement

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	3/8/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-174-A	IAQ Sample ID:	
SV Canister #:	9743	IAQ Canister #:	
SV Regulator #:	11308	IAQ Regulator #:	
SV Start Time:	932	IAQ Start Time:	
SV Start Pressure:	-30	IAQ Start Pressure:	
SV Stop Time:	1036	IAQ Stop Time:	
SV Stop Pressure:	0	IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A Basement

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	3/8/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-175-A	IAQ Sample ID:	
SV Canister #:	11574	IAQ Canister #:	
SV Regulator #:	10668	IAQ Regulator #:	
SV Start Time:	931	IAQ Start Time:	
SV Start Pressure:	-30	IAQ Start Pressure:	
SV Stop Time:	1043	IAQ Stop Time:	
SV Stop Pressure:	-1	IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A Basement

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	3/8/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-176-A	IAQ Sample ID:	
SV Canister #:	11162	IAQ Canister #:	
SV Regulator #:	10658	IAQ Regulator #:	
SV Start Time:	930	IAQ Start Time:	
SV Start Pressure:	-28	IAQ Start Pressure:	
SV Stop Time:	1034	IAQ Stop Time:	
SV Stop Pressure:	0	IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A Basement

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	3/8/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-177-A	IAQ Sample ID:	
SV Canister #:	11578	IAQ Canister #:	
SV Regulator #:	10658	IAQ Regulator #:	
SV Start Time:	929	IAQ Start Time:	
SV Start Pressure:	-30	IAQ Start Pressure:	
SV Stop Time:	1046	IAQ Stop Time:	
SV Stop Pressure:	0	IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A Basement

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-DUP03-A-22	IAQ Sample ID:	IA-DUP03-A-22
SV Canister #:	11255	IAQ Canister #:	10970
SV Regulator #:	10049	IAQ Regulator #:	8570
SV Start Time:	912	IAQ Start Time:	745
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	1015	IAQ Stop Time:	1626
SV Stop Pressure:	-2	IAQ Stop Pressure:	-5

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A

OBSERVATIONS / NOTES:

Duplicates for IA-015-A-22 and SV-015-A-22

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-DUP04-A-22	IAQ Sample ID:	IA-DUP04-A-22
SV Canister #:	10740	IAQ Canister #:	9833
SV Regulator #:	11243	IAQ Regulator #:	8599
SV Start Time:	943	IAQ Start Time:	806
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	1052	IAQ Stop Time:	1628
SV Stop Pressure:	0	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building A

OBSERVATIONS / NOTES:

Duplicate for SV-136-A-22 and IA-079-A-22

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:		IAQ Sample ID:	IA-033-B-22
SV Canister #:		IAQ Canister #:	9588
SV Regulator #:		IAQ Regulator #:	7358
SV Start Time:		IAQ Start Time:	802
SV Start Pressure:		IAQ Start Pressure:	-30
SV Stop Time:		IAQ Stop Time:	1617
SV Stop Pressure:		IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building B

OBSERVATIONS / NOTES:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-100-B-22	IAQ Sample ID:	IAQ-100-B-22
SV Canister #:	9660	IAQ Canister #:	9831
SV Regulator #:	10193	IAQ Regulator #:	7107
SV Start Time:	1007	IAQ Start Time:	805
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	1113	IAQ Stop Time:	1619
SV Stop Pressure:	-2	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building B

OBSERVATIONS / NOTES:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-101-B-22	IAQ Sample ID:	IAQ-101-B-22
SV Canister #:	9803	IAQ Canister #:	9799
SV Regulator #:	11250	IAQ Regulator #:	8465
SV Start Time:	1004	IAQ Start Time:	804
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	1111	IAQ Stop Time:	1618
SV Stop Pressure:	-2	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building B

OBSERVATIONS / NOTES:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017 and 3/8/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-001-C-22	IAQ Sample ID:	IAQ-001-C-22
SV Canister #:	9750	IAQ Canister #:	9584
SV Regulator #:	10296	IAQ Regulator #:	11266
SV Start Time:	1028	IAQ Start Time:	853
SV Start Pressure:	-30	IAQ Start Pressure:	-29
SV Stop Time:	1128	IAQ Stop Time:	1637
SV Stop Pressure:	-7	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building C

OBSERVATIONS / NOTES:

SV-001-C-22 recollected on 3/8/2017 due to open valve/faulty regulator issue during first sample collection on 2/28/2017

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-004-C-22	IAQ Sample ID:	IAQ-004-C-22
SV Canister #:	9829	IAQ Canister #:	11244
SV Regulator #:	10784	IAQ Regulator #:	7197
SV Start Time:	1030	IAQ Start Time:	855
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	1130	IAQ Stop Time:	1638
SV Stop Pressure:	-5	IAQ Stop Pressure:	-6

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building C

OBSERVATIONS / NOTES:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:		IAQ Sample ID:	IAQ-005-C-22
SV Canister #:		IAQ Canister #:	9809
SV Regulator #:		IAQ Regulator #:	7120
SV Start Time:		IAQ Start Time:	856
SV Start Pressure:		IAQ Start Pressure:	-30
SV Stop Time:		IAQ Stop Time:	1639
SV Stop Pressure:		IAQ Stop Pressure:	-3

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building C

OBSERVATIONS / NOTES:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:		IAQ Sample ID:	IAQ-051-C-22
SV Canister #:		IAQ Canister #:	11281
SV Regulator #:		IAQ Regulator #:	7416
SV Start Time:		IAQ Start Time:	812
SV Start Pressure:		IAQ Start Pressure:	-30
SV Stop Time:		IAQ Stop Time:	1623
SV Stop Pressure:		IAQ Stop Pressure:	-1

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building C

OBSERVATIONS / NOTES:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-060-C-22	IAQ Sample ID:	IAQ-060-C-22
SV Canister #:	9636	IAQ Canister #:	9647
SV Regulator #:	11051	IAQ Regulator #:	7076
SV Start Time:	1014	IAQ Start Time:	825
SV Start Pressure:	-29	IAQ Start Pressure:	-30
SV Stop Time:	1119	IAQ Stop Time:	1627
SV Stop Pressure:	0	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building C

OBSERVATIONS / NOTES:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:		IAQ Sample ID:	IAQ-065-C-22
SV Canister #:		IAQ Canister #:	10747
SV Regulator #:		IAQ Regulator #:	7060
SV Start Time:		IAQ Start Time:	810
SV Start Pressure:		IAQ Start Pressure:	-30
SV Stop Time:		IAQ Stop Time:	1622
SV Stop Pressure:		IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

OBSERVATIONS / NOTES:

Building C

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-088-C-22	IAQ Sample ID:	IAQ-088-C-22
SV Canister #:	9807	IAQ Canister #:	11546
SV Regulator #:	10155	IAQ Regulator #:	7632
SV Start Time:	953	IAQ Start Time:	944
SV Start Pressure:	-30	IAQ Start Pressure:	-29
SV Stop Time:	1054	IAQ Stop Time:	1713
SV Stop Pressure:	-3	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building C

OBSERVATIONS / NOTES:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-102-C-22	IAQ Sample ID:	IAQ-102-C-22
SV Canister #:	11520	IAQ Canister #:	9739
SV Regulator #:	10586	IAQ Regulator #:	9560
SV Start Time:	1026	IAQ Start Time:	847
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	1126	IAQ Stop Time:	1635
SV Stop Pressure:	-3	IAQ Stop Pressure:	-5

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building C

OBSERVATIONS / NOTES:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-113-C-22	IAQ Sample ID:	IAQ-113-C-22
SV Canister #:	10754	IAQ Canister #:	9646
SV Regulator #:	11511	IAQ Regulator #:	7615
SV Start Time:	957	IAQ Start Time:	945
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	1105	IAQ Stop Time:	1715
SV Stop Pressure:	-5	IAQ Stop Pressure:	-2

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building C

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:		IAQ Sample ID:	IAQ-115-C-22
SV Canister #:		IAQ Canister #:	10963
SV Regulator #:		IAQ Regulator #:	8661
SV Start Time:		IAQ Start Time:	946
SV Start Pressure:		IAQ Start Pressure:	-30
SV Stop Time:		IAQ Stop Time:	1716
SV Stop Pressure:		IAQ Stop Pressure:	-4

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building C

OBSERVATIONS / NOTES:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-126-C-22	IAQ Sample ID:	IAQ-126-C-22
SV Canister #:	11539	IAQ Canister #:	9792
SV Regulator #:	11527	IAQ Regulator #:	7617
SV Start Time:	925	IAQ Start Time:	823
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	1041	IAQ Stop Time:	1625
SV Stop Pressure:	0	IAQ Stop Pressure:	-1

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building C

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-131-C-22	IAQ Sample ID:	IA-131-C-22
SV Canister #:	10344	IAQ Canister #:	10492
SV Regulator #:	11056	IAQ Regulator #:	7461
SV Start Time:	918	IAQ Start Time:	750
SV Start Pressure:	-30	IAQ Start Pressure:	-22
SV Stop Time:	1035	IAQ Stop Time:	1613
SV Stop Pressure:	0	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building C

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:		IAQ Sample ID:	IAQ-135-C-22
SV Canister #:		IAQ Canister #:	11493
SV Regulator #:		IAQ Regulator #:	7032
SV Start Time:		IAQ Start Time:	942
SV Start Pressure:		IAQ Start Pressure:	-30
SV Stop Time:		IAQ Stop Time:	1710
SV Stop Pressure:		IAQ Stop Pressure:	-5

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building C

OBSERVATIONS / NOTES:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-142-C-22	IAQ Sample ID:	IAQ-142-C-22
SV Canister #:	11267	IAQ Canister #:	10974
SV Regulator #:	11502	IAQ Regulator #:	7589
SV Start Time:	950	IAQ Start Time:	943
SV Start Pressure:	-29	IAQ Start Pressure:	-30
SV Stop Time:	1052	IAQ Stop Time:	1712
SV Stop Pressure:	-1	IAQ Stop Pressure:	-4

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building C

OBSERVATIONS / NOTES:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:		IAQ Sample ID:	IAQ-144-C-22
SV Canister #:		IAQ Canister #:	10971
SV Regulator #:		IAQ Regulator #:	10201
SV Start Time:		IAQ Start Time:	839
SV Start Pressure:		IAQ Start Pressure:	-29
SV Stop Time:		IAQ Stop Time:	1632
SV Stop Pressure:		IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building C

OBSERVATIONS / NOTES:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:		IAQ Sample ID:	IAQ-145-C-22
SV Canister #:		IAQ Canister #:	9633
SV Regulator #:		IAQ Regulator #:	7058
SV Start Time:		IAQ Start Time:	835
SV Start Pressure:		IAQ Start Pressure:	-29
SV Stop Time:		IAQ Stop Time:	1628
SV Stop Pressure:		IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building C

OBSERVATIONS / NOTES:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:		IAQ Sample ID:	IAQ-146-C-22
SV Canister #:		IAQ Canister #:	10760
SV Regulator #:		IAQ Regulator #:	7273
SV Start Time:		IAQ Start Time:	837
SV Start Pressure:		IAQ Start Pressure:	-30
SV Stop Time:		IAQ Stop Time:	1630
SV Stop Pressure:		IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building C

OBSERVATIONS / NOTES:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-149-C-22	IAQ Sample ID:	IAQ-149-C-22
SV Canister #:	9736	IAQ Canister #:	9736
SV Regulator #:	8464	IAQ Regulator #:	8464
SV Start Time:	926	IAQ Start Time:	822
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	1043	IAQ Stop Time:	1624
SV Stop Pressure:	0	IAQ Stop Pressure:	-5

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building C

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-150-C-22	IAQ Sample ID:	IAQ-150-C-22
SV Canister #:	9823	IAQ Canister #:	10345
SV Regulator #:	10589	IAQ Regulator #:	8565
SV Start Time:	934	IAQ Start Time:	836
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	1045	IAQ Stop Time:	1629
SV Stop Pressure:	0	IAQ Stop Pressure:	-2

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building C

OBSERVATIONS / NOTES:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-152-C-22	IAQ Sample ID:	IAQ-152-C-22
SV Canister #:	10783	IAQ Canister #:	11494
SV Regulator #:	1513	IAQ Regulator #:	10584
SV Start Time:	936	IAQ Start Time:	838
SV Start Pressure:	-28	IAQ Start Pressure:	-30
SV Stop Time:	1046	IAQ Stop Time:	1631
SV Stop Pressure:	0	IAQ Stop Pressure:	-2

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building C

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-153-C-22	IAQ Sample ID:	IAQ-153-C-22
SV Canister #:	10518	IAQ Canister #:	10334
SV Regulator #:	10437	IAQ Regulator #:	7064
SV Start Time:	1019	IAQ Start Time:	848
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	1120	IAQ Stop Time:	1633
SV Stop Pressure:	0	IAQ Stop Pressure:	-10

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building C

OBSERVATIONS / NOTES:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-155-C-22	IAQ Sample ID:	IAQ-155-C-22
SV Canister #:	10923	IAQ Canister #:	11285
SV Regulator #:	9906	IAQ Regulator #:	8549
SV Start Time:	1020	IAQ Start Time:	843
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	1123	IAQ Stop Time:	1634
SV Stop Pressure:	-3	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building C

OBSERVATIONS / NOTES:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-DUP01-C-22	IAQ Sample ID:	IA-DUP01-C-22
SV Canister #:	10835	IAQ Canister #:	11541
SV Regulator #:	10647	IAQ Regulator #:	8605
SV Start Time:	918	IAQ Start Time:	750
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	1035	IAQ Stop Time:	1614
SV Stop Pressure:	0	IAQ Stop Pressure:	-2

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building C

OBSERVATIONS / NOTES:

Duplicates for IA-131-C-22 and SV-131-C-22

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-DUP02-C-22	IAQ Sample ID:	IAQ-DUP02-C-22
SV Canister #:	11108	IAQ Canister #:	9589
SV Regulator #:	9712	IAQ Regulator #:	8547
SV Start Time:	1019	IAQ Start Time:	848
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	1121	IAQ Stop Time:	1633
SV Stop Pressure:	-2	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Building C

OBSERVATIONS / NOTES:

Duplicates for IA-153-C-22 and SV-153-C-22

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:		IAQ Sample ID:	BCK-1-22
SV Canister #:		IAQ Canister #:	11540
SV Regulator #:		IAQ Regulator #:	11506
SV Start Time:		IAQ Start Time:	740
SV Start Pressure:		IAQ Start Pressure:	-30
SV Stop Time:		IAQ Stop Time:	1537
SV Stop Pressure:		IAQ Stop Pressure:	-3

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Northwest corner of property up on pole near electric gate

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:		IAQ Sample ID:	BCK-2-22
SV Canister #:		IAQ Canister #:	9579
SV Regulator #:		IAQ Regulator #:	11568
SV Start Time:		IAQ Start Time:	737
SV Start Pressure:		IAQ Start Pressure:	-30
SV Stop Time:		IAQ Stop Time:	1534
SV Stop Pressure:		IAQ Stop Pressure:	-3

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Southwestern corner of property in grass on top of metal meter stand

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:		IAQ Sample ID:	BCK-3-22
SV Canister #:		IAQ Canister #:	10839
SV Regulator #:		IAQ Regulator #:	11263
SV Start Time:		IAQ Start Time:	731
SV Start Pressure:		IAQ Start Pressure:	-30
SV Stop Time:		IAQ Stop Time:	1521
SV Stop Pressure:		IAQ Stop Pressure:	-2

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Southeastern corner of Block I in VLS lot near gate to Block E/Lot D

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Project Site Name:	Middle River Complex	Date:	2/28/2017
Project Number - Task:	112IC07671	Sampled By:	S. Cameron / W. Pryor

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:		IAQ Sample ID:	BCK-4-22
SV Canister #:		IAQ Canister #:	9635
SV Regulator #:		IAQ Regulator #:	9550
SV Start Time:		IAQ Start Time:	733
SV Start Pressure:		IAQ Start Pressure:	-30
SV Stop Time:		IAQ Stop Time:	1528
SV Stop Pressure:		IAQ Stop Pressure:	-2

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter Canister	Yes

LOCATION:

Northeastern corner of property in grass field on top of fire line stub-up meter

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):



Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

180325

BALTIMORE

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Tony Apanavage	Site Contact: Tony Apanavage	Date: 3/1/17	COC No:
Tetra Tech	Tel/Fax: 301-233-8230	Lab Contact:	Carrier: Fedex	_____ of _____ COCs
20251 Century Blvd, Suite 200				Job No.
Germantown, MD 20874				
301-233-8230 Phone				SDG No.
301-528-3000 FAX				
Project Name: Feb 2017 MRC IA-SV				
Site: Middle River, MD				Sampler:
P O #				

Analysis Turnaround Time
Calendar (C) or Work Days (W) STANDARD
TAT if different from Below _____
☐ 2 weeks
☐ 1 week
☐ 2 days
☐ 1 day

140-7292 Chain of Custody

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	Sample Specific Notes:
SV-001-C-22	2/28/2017	1028	1128	-30	-7	10296	9750	x	Received @ ambient, 5 boxes Fedex Tr.# 7785 4899 2927
SV-004-C-22	2/28/2017	1030	1130	-30	-5	10784	9829	x	Fedex Sp. No. custody seal
SV-060-C-22	2/28/2017	1014	1119	-29	0	11051	9636	x	" " 2950
SV-088-C-22	2/28/2017	0953	1054	-30	-3	10155	9807	x	" " 3360
SV-102-C-22	2/28/2017	1026	1126	-30	-3	10586	11520	x	" " 3202
SV-113-C-22	2/28/2017	0957	1105	-30	-5	11511	10754	x	" " 3853, KW 2/17
SV-126-C-22 131	2/28/2017	0925	1041	-30	0	11527	11539	x	SV-131-C-22
SV-142-C-22	2/28/2017	0918	1035	-30	0	11056	10344	x	
SV-149-C-22	2/28/2017	0950	1052	-29	-1	11502	11267	x	
SV-150-C-22	2/28/2017	0926	1043	-30	0	~~T.A.~~	~~T.A.~~	x	10494 CAN ID 11314 FLOW ID
SV-152-C-22	2/28/2017	0934	1045	-30	0	10589	09823	x	
SV-153-C-22	2/28/2017	0936	1046	-28	0	1573	10783	x	
SV-155-C-22	2/28/2017	1019	1120	-30	0	10437	10578	x	
	2/28/2017	1020	1123	-30	-3	9906	10923	x	

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

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Tetra Tech	3/1/17 1450		TA	3/1/17 1450
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TestAmerica	3-1-2017/1550		TA	3/2/17 0950
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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

58 cans, 64 flows

03/13/2017

Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

18032

BALTIMORE

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Tony Apanavage	Site Contact: Tony Apanavage	Date: 3/1/17	COC No:
Tetra Tech	Tel/Fax: 301-233-8230	Lab Contact:	Carrier: Fedex	____ of ____ COCs
20251 Century Blvd, Suite 200				Job No.
Germantown, MD 20874				
301-233-8230 Phone				SDG No.
301-528-3000 FAX				
Project Name: Feb 2017 MRC IA-SV				Sampler:
Site: Middle River, MD				
P O #				Sample Specific Notes:

Analysis Turnaround Time
Calendar (C) or Work Days (W) STANDARD
TAT if different from Below ____
☐ 2 weeks
☐ 1 week
☐ 2 days
☐ 1 day

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Ston)	Flow Controller ID	Canister ID	TO-15
SV-015-A-22	3/1/2017	0912	1015	-30	0	09900	10922	x
SV-018-A-22 (116)	3/1/2017	0857	1004	-30	0	10196	11298	x
SV-075-A-22	3/1/2017	0954	1101	-29	0	11311	09637	x
SV-076-A-22	3/1/2017	0948	1055	-30	-1	10583	09668	x
SV-078-A-22	3/1/2017	0952	1058	-28	0	10304	09744	x
SV-079-A-22	3/1/2017	0937	1037	-30	-2	09949	10782	x
SV-081-A-22	3/1/2017	0929	1032	-29	-2	10859	10748	x
SV-093-A-22	3/1/2017	0904	1007	-30	0	10194	10502	x
SV-[illegible]-A-22 (168)	3/1/2017	0957	1104	-29	0	10359	10500	x
SV-118-A-22	3/1/2017	0915	1016	-28	-2	11500	10834	x
SV-136-A-22	3/1/2017	0943	1052	-30	-3	10349	11492	x
SV-138-A-22	3/1/2017	0900	1006	-30	0	11482	09888	x
SV-139-A-22	3/1/2017	0939	1048	-30	0	11477	11257	x
SV-100-B-22	2/28/2017	1007	1113	-30	-2	10193	9660	x
SV-101-B-22	2/28/2017	1004	1111	-30	-2	11250	9803	x

SV-168-A-22

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

Relinquished by:	Company: TETRA TECH	Date/Time: 3/1/17 1450	Received by:	Company: TA	Date/Time: 3/1/17 1451
Relinquished by:	Company: TA	Date/Time:	Received by:	Company: TA	Date/Time: 3/2/17 0950
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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

03/13/2017

Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

180325

BALTIMORE

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Tony Apanavage	Site Contact: Tony Apanavage	Date: 3/1/17	COC No:
Tetra Tech	Tel/Fax: 301-233-8230	Lab Contact:	Carrier: Fedex	____ of ____ COCs
20251 Century Blvd, Suite 200	Analysis Turnaround Time			Job No.
Germantown, MD 20874	Calendar (C) or Work Days (W) STANDARD			
301-233-8230 Phone	TAT if different from Below ____			
301-528-3000 FAX	☐ 2 weeks			SDG No.
Project Name: Feb 2017 MRC IA-SV	☐ 1 week			
Site: Middle River, MD	☐ 2 days			
P O #	☐ 1 day			Sampler:

140-7294 Chain of Custody

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	Sample Specific Notes:
[redacted] T.A.	T.A.							x	
IA-033-B-22	2/28/2017	0802	1617	-30	0	7358	9588	x	Received @ ambient, 5 boxes FedEx SO, No custody seal trk# 7785 4899 2927
IA-100-B-22	2/28/2017	0805	1619	-30	0	7107	9831	x	
IA-101-B-22	2/28/2017	0804	1618	-30	0	8465	9799	x	
IA-001-C-22	2/28/2017	0853	1637	-29	0	11266	9584	x	" " 2950
IA-004-C-22	2/28/2017	0855	1638	-30	-6	7197	11244	x	" " 3260
IA-005-C-22	2/28/2017	0856	1639	-30	-3	7120	9809	x	" " 3292
IA-051-C-22	2/28/2017	0812	1623	-30	-1	7416	11281	x	" " 3853
IA-060-C-22	2/28/2017	0825	1627	-30	0	7076	9647	x	KL 3/2/17
IA-065-C-22	2/28/2017	0810	1622	-30	0	7060	10747	x	
IA-088-C-22	2/28/2017	0944	1713	-29	0	7632	11546	x	
IA-102-C-22	2/28/2017	0847	1635	-30	-5	9560	9739	x	
IA-113-C-22	2/28/2017	0945	1715	-30	-2	7615	9646	x	
IA-115-C-22	2/28/2017	0946	1716	-30	-4	8661	10963	x	
IA-126-C-22	2/28/2017	0823	1625	-30	-1	7617	9792	x	

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

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	TETRA TECH	3/1/17 1450	[signature]	TA	3/1/17 1457
Relinquished by: [signature]	Company: TestAmerica	Date/Time: 3-1-2017/1530	Received by: [signature]	Company: TA	Date/Time: 3/2/17 0950
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

18032

BALTIMORE

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Tony Apanavage	Site Contact: Tony Apanavage	Date: 3/1/17	COC No:
Tetra Tech	Tel/Fax: 301-233-8230	Lab Contact:	Carrier: Fedex	____ of ____ COCs
20251 Century Blvd, Suite 200	**Analysis Turnaround Time**			Job No.
Germantown, MD 20874	Calendar (C) or Work Days (W) STANDARD			
301-233-8230 Phone	TAT if different from Below ____			
301-528-3000 FAX	☐ 2 weeks			SDG No.
Project Name: Feb 2017 MRC IA-SV	☐ 1 week			
Site: Middle River, MD	☐ 2 days			Sampler:
P O #	☐ 1 day			

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	Sample Specific Notes:
IA-131-C-22	2/28/2017	0750	1613	-22	0	7461	10492	x	IA-131-C-22
IA-135-C-22	2/28/2017	0942	1710	-30	-5	7032	11493	x	
IA-142-C-22	2/28/2017	0943	1712	-30	-4	7589	10974	x	
IA-144-C-22	2/28/2017	0839	1632	-29	0	10201	10971	x	
IA-145-C-22	2/28/2017	0835	1628	-29	0	7058	9633	x	
IA-146-C-22	2/28/2017	0837	1630	-30	0	7273	10760	x	
IA-149-C-22	2/28/2017	0822	1624	-30	-5	8464	9736	x	
IA-150-C-22	2/28/2017	0836	1629	-30	-2	8565	10345	x	
IA-152-C-22	2/28/2017	0838	1631	-30	-2	10584	11494	x	
IA-153-C-22	2/28/2017	0848	1633	-30	-10	7064	10334	x	
IA-155-C-22	2/28/2017	0843	1634	-30	0	8549	11295	x	
BCK-1-22	2/28/2017	0740	1537	-30	-3	11506	11540	x	
BCK-2-22	2/28/2017	0737	1534	-30	-3	11568	09579	x	
BCK-3-22	2/28/2017	0731	1521	-30	-2	11263	10839	x	
BCK-4-22	2/28/2017	0733	1528	-30	-2	09550	09635	x	

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

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TETRA TECH	3/1/17 1450			3/1/17 1450
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TestAmerica	3-1-2017/1550		TA	3/2/17 0950
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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

Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Tony Apanavage	Site Contact: Tony Apanavage	Date:	COC No:
Tetra Tech	Tel/Fax: 301-233-8230	Lab Contact:	Carrier: Fedex	1 of 2 COCs
20251 Century Blvd, Suite 200				Job No.
Germantown, MD 20874				
301-233-8230 Phone				SDG No.
301-528-3000 FAX				
Project Name: Feb 2017 MRC IA-SV				Sampler:
Site: Middle River, MD				
P O #				

Analysis Turnaround Time
Calendar (C) or Work Days (W) _____
TAT if different from Below _____
☐ 2 weeks
☐ 1 week
☐ 2 days
☐ 1 day

140-7324 Chain of Custody

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	Sample Specific Notes:
IA-015-A-22	3/1/2017	0745	1626	-30	0	8609	10339	x	
IA-018-A-22	3/1/2017	0739	1623	-30	-3	8624	11254	x	
IA-021-A-22	3/1/2017	0833	1647	-30	0	8461	10346	x	
IA-075-A-22	3/1/2017	0830	1643	-30	0	11261	09810	x	
IA-076-A-22	3/1/2017	0828	1641	-30	0	8620	10837	x	
IA-078-A-22	3/1/2017	0819	1649	-29	0	7402	10745	x	
IA-079-A-22	3/1/2017	0806	1628	-30	-1	10360	10523	x	
IA-081-A-22	3/1/2017	0750	1631	-30	0	09656	09577	x	
IA-093-A-22	3/1/2017	0743	1621	-30	0	09650	11126	x	
IA-168-A-22	3/1/2017	0840	1645	-29	0	09648	10919	x	IA-168-A-22
IA-097-A-22	3/1/2017	0810	1630	-30	-1	09652	10340	x	Received @ ambient, 3 boxes
IA-117-A-22	3/1/2017	0816	1638	-29	0	09702	11122	x	trk# 7785 7914 6555
IA-118-A-22	3/1/2017	0802	1625	-30	0	7283	09664	x	FedEx PO: " " 5099
IA-136-A-22	3/1/2017	0825	1640	-30	0	7602	10960	x	" " 5386
IA-138-A-22	3/1/2017	0741	1622	-30	0	7029	09797	x	No Custody seal KL 3/4/17

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

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Tetra Tech	3/3/17			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TA	3/3/17 1547			
Relinquished by: Callico/Cates	Company: Fedex	Date/Time: 3/3/17 1855	Received by:	Company: TA	Date/Time: 3/4/17 0915

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

21 flows 27 cans

180325

Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Tony Apanavage	Site Contact: Tony Apanavage	Date:	COC No:
Tetra Tech	Tel/Fax: 301-233-8230	Lab Contact:	Carrier: Fedex	2 of 2 COCs
20251 Century Blvd, Suite 200	Analysis Turnaround Time			Job No.
Germantown, MD 20874	Calendar (C) or Work Days (W) _____			
301-233-8230 Phone	TAT if different from Below _____			SDG No.
301-528-3000 FAX	☐ 2 weeks			
Project Name: Feb 2017 MRC IA-SV	☐ 1 week			Sampler:
Site: Middle River, MD	☐ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	Sample Specific Notes:
IA-DUP01-C-22	2/28/2017	0000	0000	-30	-2	9665	11541	X	
IA-DUP02-C-22	2/28/2017	0000	0000	-30	0	8547	9589	X	
IA-DUP03-A-22	3/1/2017	0000	0000	-30	-5	8570	10970	X	
IA-DUP04-A-22	3/1/2017	0000	0000	-30	0	8599	09833	X	
SV-DUP01-C-22	2/28/2017	0000	0000	-30	0	10647	10835	X	
SV-DUP02-C-22	2/28/2017	0000	0000	-30	-2	9712	11108	X	
SV-DUP03-A-22	3/1/2017	0000	0000	-30	-2	10049	11255	X	
TA/W.P [redacted]									
IA-139-A-22	3/1/2017	0759	1637	-30	-1	10921	10921	X	
SV-Dup04-A-22	3/1/17	0000	0000	-30	0	11243	10740	X	
SV-093-A-22	3/3/17	0952	1112	-30	0	09704	10917	X	

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

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Tetra Tech	3/3/17			
Relinquished by: [signature]	Company: TA	Date/Time: 3/3/17 1557	Received by:	Company:	Date/Time:
Relinquished by: [signature]	Company: TA	Date/Time: 3/3/17 1658	Received by:	Company:	Date/Time:

03/15/2017

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

Canister Samples Chain of Custody Record

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Manager: T. APANAVAGE	Sampled By: T. APANAVAGE	1 of 2 COCs
Company: TETRA TECH	Phone: 3012338230		
Address: 20251 Century Blvd Ste 205	Site Contact:		
City/State/Zip Germantown, MD 20874	TAL Contact:		
Phone: 3012338230			
FAX:			
Project Name: MRC SV/IAQ	Analysis Turnaround Time		
Site/location:	Standard (Specify)		
PO # 112IE07671	Rush (Specify)		

140-7360 Chain of Custody

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SV-169-A-22	3/8/17	1009	1118	-30	-2	10845	11577	✓											
SV-170-A-22		0937	1050	-29	0	10242	09787	✓											
SV-171-A-22		0933	1039	-30	-2	11513	11220	✓											
SV-172-A-22		0936	1051	-30	0	10196	10795	✓											
SV-173-A-22		0934	1042	-30	-2	09658	11570	✓											
SV-174-A-22	↓	0932	1036	-30	0	11308	09743	✓											

Sampled by : T. APANAVAGE

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Received @ ambient, 1 box
FedEx Po, trk# 7858 4931 9122
No custody seal, KW 3/9/17

Special Instructions/QC Requirements & Comments:

CONTRACTED ANALYTE LIST

Canisters Shipped by:	Date/Time: 3/8/17 1525	Canisters Received by:	3/9/17 1000
Samples Relinquished by:	Date/Time:	Received by:	
Relinquished by:	Date/Time:	Received by:	

10 cans
10 flows

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

Canister Samples Chain of Custody Record

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	**Project Manager:** T. APANAVAGE	**Sampled By:**	2 of 2 COCs
Company: TERRATECH	**Phone:** 3012338230		
Address:	**Site Contact:**		
City/State/Zip	**TAL Contact:**		
Phone:			
FAX:			
Project Name: MRC SV/IAQ	**Analysis Turnaround Time**		
Site/location:	Standard (Specify)		
PO # 112IC07671	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SV-175-A-22	3/8/17	0931	1043	-30	-1	10668	11574	✓											
SV-176-A-22	↓	0930	1034	-28	0	11243	11162	✓											
SV-177-A-22	↓	0929	1046	-30	0	10658	11578	✓											
SV-001-C-22	3/8/17	1129	1236	-30	-2	09952	11576	✓											

Sampled by :

Temperature (Fahrenheit)			
	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)			
	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

CONTRACTED ANALYTE LIST

Canisters Shipped by:	Date/Time: 3/8/17 1525	Canisters Received by:	3/9/17 1000
Samples Relinquished by:	Date/Time:	Received by:	
Relinquished by:	Date/Time:	Received by:	

APPENDIX B—METHOD DETECTION LIMITS

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

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

APPENDIX C—LABORATORY ANALYTICAL REPORTS

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

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-004-C-22 Lab Sample ID: 140-7292-2

Matrix: Air Lab File ID: JC03P101.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 11:30

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 16:43

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9072 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.50		0.40	0.075
67-66-3	Chloroform	119.38	0.87		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	9.5		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.42		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.093	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.81	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.13	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.51		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	20		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	76		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-004-C-22 | Lab Sample ID: 140-7292-2

Matrix: Air | Lab File ID: JC03P101.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:30

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 16:43

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	4.3		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	38		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.37	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.91	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	2.0		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	110		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	76		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-015-A-22 | Lab Sample ID: 140-7292-15

Matrix: Air | Lab File ID: JC03P110.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:15

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 23:23

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.36	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.7		0.40	0.075
67-66-3	Chloroform	119.38	0.12	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.18	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.42		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.49		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	1.5		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.93	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.39	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.42		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.55	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	70		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-015-A-22 | Lab Sample ID: 140-7292-15

Matrix: Air | Lab File ID: JC03P110.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:15

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 23:23

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.2	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	6.1		1.4	0.27
67-66-3	Chloroform	119.38	0.58	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.73	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	2.0		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	6.0		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	2.1	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.4	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	70		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-060-C-22 | Lab Sample ID: 140-7292-3

Matrix: Air | Lab File ID: JC03P102.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:19

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 17:27

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.1		0.40	0.075
67-66-3	Chloroform	119.38	1.9		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	1.0		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	1.9		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.30	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	7.8		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.86	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.91		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.17	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.21	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	4.2		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	50		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.25	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.21	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	72		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	79		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-060-C-22 Lab Sample ID: 140-7292-3

Matrix: Air Lab File ID: JC03P102.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 11:19

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 17:27

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9072 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.40	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.8		1.4	0.27
67-66-3	Chloroform	119.38	9.1		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	4.0		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	7.6		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.2	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	34		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	4.8		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.1	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.83	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	23		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	270		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.2	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.1	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	310		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	79		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-075-A-22 | Lab Sample ID: 140-7292-17

Matrix: Air | Lab File ID: JC03P112.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 11:01

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 00:53

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.75		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.88	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	17		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.55		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	11		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	23		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	13		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	84		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-075-A-22 | Lab Sample ID: 140-7292-17

Matrix: Air | Lab File ID: JC03P112.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 11:01

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 00:53

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.6		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.88	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	92		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	3.0		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	54		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	110		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	64		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	13		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	84		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-076-A-22 | Lab Sample ID: 140-7292-18

Matrix: Air | Lab File ID: JC03P113.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:55

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 01:37

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.48		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.35	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.27	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.69	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.83		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.70		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.18	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.93		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	2.0		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	1.1		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	1.1		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	78		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-076-A-22 | Lab Sample ID: 140-7292-18

Matrix: Air | Lab File ID: JC03P113.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:55

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 01:37

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.7	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.2	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	4.4		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.6		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.97	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	5.0		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	9.9		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	5.4		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	5.5		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	78		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-078-A-22 | Lab Sample ID: 140-7292-19

Matrix: Air | Lab File ID: JC03P114.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:58

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 02:22

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.77		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.81	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.75		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.25	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	2.0		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.61	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-078-A-22 | Lab Sample ID: 140-7292-19

Matrix: Air | Lab File ID: JC03P114.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:58

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 02:22

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.47	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.3	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	11		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.67	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.6	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-079-A-22 | Lab Sample ID: 140-7292-20

Matrix: Air | Lab File ID: JC03P115.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:37

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 03:06

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.95		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.43		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.72	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.22	J	0.40	0.080
108-88-3	Toluene	92.14	1.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.15	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	7.7		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.72	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	83		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-079-A-22 Lab Sample ID: 140-7292-20

Matrix: Air Lab File ID: JC03P115.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 10:37

Sample wt/vol: 100(mL) Date Analyzed: 03/04/2017 03:06

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9072 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.51	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.4		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.87	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.5	J	2.7	0.54
108-88-3	Toluene	92.14	3.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.83	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	41		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.70	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.1	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	83		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-081-A-22 Lab Sample ID: 140-7292-21

Matrix: Air Lab File ID: JC03P116.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 10:32

Sample wt/vol: 100(mL) Date Analyzed: 03/04/2017 04:35

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9072 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.11	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.6		0.40	0.075
67-66-3	Chloroform	119.38	0.63		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.21	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.90	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	1.4		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.37	J	0.40	0.080
108-88-3	Toluene	92.14	4.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.94		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	*1,2,3-Trimethylbenzene*	*120.19*	*100*	*E*	*0.40*	*0.17*
95-63-6	1,2,4-Trimethylbenzene	120.20	8.6		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	4.7		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.9		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	76		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-081-A-22 | Lab Sample ID: 140-7292-21

Matrix: Air | Lab File ID: JC03P116.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:32

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 04:35

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.68	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.8		1.4	0.27
67-66-3	Chloroform	119.38	3.1		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.92	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	7.6		1.0	1.0
127-18-4	Tetrachloroethene	165.83	2.5	J	2.7	0.54
108-88-3	Toluene	92.14	15		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	5.1		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	*1,2,3-Trimethylbenzene*	*120.19*	*490*	*E*	*2.0*	*0.84*
95-63-6	1,2,4-Trimethylbenzene	120.20	42		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	23		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	76		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-081-A-22 DL Lab Sample ID: 140-7292-21 DL

Matrix: Air Lab File ID: JC04p204.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 10:32

Sample wt/vol: 50(mL) Date Analyzed: 03/04/2017 21:48

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9073 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
526-73-8	1,2,3-Trimethylbenzene	120.19	89		0.80	0.34

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	76		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-081-A-22 DL Lab Sample ID: 140-7292-21 DL

Matrix: Air Lab File ID: JC04p204.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 10:32

Sample wt/vol: 50(mL) Date Analyzed: 03/04/2017 21:48

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9073 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
526-73-8	1,2,3-Trimethylbenzene	120.19	440		3.9	1.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	76		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-088-C-22 | Lab Sample ID: 140-7292-4

Matrix: Air | Lab File ID: JC03P103.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 10:54

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 18:12

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.62		0.40	0.075
67-66-3	Chloroform	119.38	0.12	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	3.6		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.95	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.23		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.15	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	16		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.22	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	84		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-088-C-22 | Lab Sample ID: 140-7292-4

Matrix: Air | Lab File ID: JC03P103.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 10:54

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 18:12

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.2		1.4	0.27
67-66-3	Chloroform	119.38	0.58	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	14		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.87	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.2		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.59	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	84		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	1.1	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.67	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.3		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	84		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-100-B-22 | Lab Sample ID: 140-7292-28

Matrix: Air | Lab File ID: JC03P204.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:13

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 07:34

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.40		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	0.42		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.43		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.77	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.17	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.063	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.5		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.17	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-100-B-22 | Lab Sample ID: 140-7292-28

Matrix: Air | Lab File ID: JC03P204.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:13

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 07:34

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	2.5		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	2.0		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.2	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.34	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	8.1		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	0.85	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-101-B-22 | Lab Sample ID: 140-7292-29

Matrix: Air | Lab File ID: EC03P116.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:11

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 04:37

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9031 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.34	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.1		0.40	0.075
67-66-3	Chloroform	119.38	0.083	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	1.1		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.37	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.90	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.28		0.20	0.20
127-18-4	Tetrachloroethene	165.83	4.6		0.40	0.080
108-88-3	Toluene	92.14	1.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	24		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	11		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.31	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.48		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.29	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-101-B-22 | Lab Sample ID: 140-7292-29

Matrix: Air | Lab File ID: EC03P116.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:11

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 04:37

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9031 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	2.1	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	7.4		1.4	0.27
67-66-3	Chloroform	119.38	0.40	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	5.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.6	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.5		1.0	1.0
127-18-4	Tetrachloroethene	165.83	31		2.7	0.54
108-88-3	Toluene	92.14	6.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	130		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	59		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	1.5	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.3		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.4	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	14		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-102-C-22 | Lab Sample ID: 140-7292-5

Matrix: Air | Lab File ID: EC03P110.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:26

Sample wt/vol: 12(mL) | Date Analyzed: 03/04/2017 00:18

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9031 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.7	J	3.3	0.96
56-23-5	Carbon tetrachloride	153.81	ND		3.3	0.63
75-45-6	Chlorodifluoromethane	86.47	1.3	J	3.3	0.63
67-66-3	Chloroform	119.38	11		3.3	0.63
156-59-2	cis-1,2-Dichloroethene	96.94	11		3.3	1.0
75-71-8	Dichlorodifluoromethane	120.91	ND		3.3	1.1
75-34-3	*1,1-Dichloroethane*	*98.96*	*870*	*E*	*3.3*	*0.42*
107-06-2	1,2-Dichloroethane	98.96	ND		3.3	0.79
75-35-4	1,1-Dichloroethene	96.94	510		3.3	0.58
100-41-4	Ethylbenzene	106.17	130		3.3	1.1
75-09-2	Methylene Chloride	84.93	ND		8.3	5.4
1634-04-4	Methyl tert-butyl ether	88.15	ND		17	2.8
91-20-3	Naphthalene	128.17	58		1.7	1.7
127-18-4	Tetrachloroethene	165.83	ND		3.3	0.67
108-88-3	Toluene	92.14	13		5.0	5.0
156-60-5	trans-1,2-Dichloroethene	96.94	0.85	J	3.3	0.83
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.3	1.6
71-55-6	1,1,1-Trichloroethane	133.41	570		3.3	0.50
79-00-5	1,1,2-Trichloroethane	133.41	ND		3.3	0.88
79-01-6	Trichloroethene	131.39	190		1.7	0.58
526-73-8	1,2,3-Trimethylbenzene	120.19	7.0		3.3	1.4
95-63-6	1,2,4-Trimethylbenzene	120.20	6.3		3.3	1.0
108-67-8	1,3,5-Trimethylbenzene	120.20	2.6	J	3.3	1.1
75-01-4	Vinyl chloride	62.50	3.2		1.7	1.2
1330-20-7	Xylenes, Total	106.17	1100		6.7	1.0

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-102-C-22 | Lab Sample ID: 140-7292-5

Matrix: Air | Lab File ID: EC03P110.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:26

Sample wt/vol: 12(mL) | Date Analyzed: 03/04/2017 00:18

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9031 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	5.5	J	11	3.1
56-23-5	Carbon tetrachloride	153.81	ND		21	3.9
75-45-6	Chlorodifluoromethane	86.47	4.6	J	12	2.2
67-66-3	Chloroform	119.38	53		16	3.1
156-59-2	cis-1,2-Dichloroethene	96.94	45		13	4.0
75-71-8	Dichlorodifluoromethane	120.91	ND		16	5.6
75-34-3	*1,1-Dichloroethane*	*98.96*	*3500*	*E*	*13*	*1.7*
107-06-2	1,2-Dichloroethane	98.96	ND		13	3.2
75-35-4	1,1-Dichloroethene	96.94	2000		13	2.3
100-41-4	Ethylbenzene	106.17	580		14	4.9
75-09-2	Methylene Chloride	84.93	ND		29	19
1634-04-4	Methyl tert-butyl ether	88.15	ND		60	10
91-20-3	Naphthalene	128.17	310		8.7	8.7
127-18-4	Tetrachloroethene	165.83	ND		23	4.5
108-88-3	Toluene	92.14	49		19	19
156-60-5	trans-1,2-Dichloroethene	96.94	3.4	J	13	3.3
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		25	12
71-55-6	1,1,1-Trichloroethane	133.41	3100		18	2.7
79-00-5	1,1,2-Trichloroethane	133.41	ND		18	4.8
79-01-6	Trichloroethene	131.39	1000		9.0	3.1
526-73-8	1,2,3-Trimethylbenzene	120.19	35		16	7.0
95-63-6	1,2,4-Trimethylbenzene	120.20	31		16	5.1
108-67-8	1,3,5-Trimethylbenzene	120.20	13	J	16	5.3
75-01-4	Vinyl chloride	62.50	8.1		4.3	3.1
1330-20-7	Xylenes, Total	106.17	4600		29	4.3

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-102-C-22 DL Lab Sample ID: 140-7292-5 DL

Matrix: Air Lab File ID: JC04p201.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 11:26

Sample wt/vol: 11(mL) Date Analyzed: 03/04/2017 18:50

Soil Aliquot Vol: Dilution Factor: 4.15

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9073 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	950		15	1.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	74		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-102-C-22 DL Lab Sample ID: 140-7292-5 DL

Matrix: Air Lab File ID: JC04p201.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 11:26

Sample wt/vol: 11(mL) Date Analyzed: 03/04/2017 18:50

Soil Aliquot Vol: Dilution Factor: 4.15

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9073 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	3900		61	7.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	74		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-113-C-22 | Lab Sample ID: 140-7292-6

Matrix: Air | Lab File ID: JC03P104.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:05

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 18:56

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.77		0.40	0.075
67-66-3	Chloroform	119.38	0.27	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	4.2		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.43		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.65	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	33		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.62	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	76		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-113-C-22 | Lab Sample ID: 140-7292-6

Matrix: Air | Lab File ID: JC03P104.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:05

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 18:56

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.7		1.4	0.27
67-66-3	Chloroform	119.38	1.3	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	17		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	180		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.7	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	76		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-116-A-22 | Lab Sample ID: 140-7292-16

Matrix: Air | Lab File ID: JC03P111.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:04

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 00:08

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.086	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	5.1		0.40	0.075
67-66-3	Chloroform	119.38	0.13	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.11	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.69	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	2.6		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-116-A-22 Lab Sample ID: 140-7292-16

Matrix: Air Lab File ID: JC03P111.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 10:04

Sample wt/vol: 100(mL) Date Analyzed: 03/04/2017 00:08

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9072 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.43	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.54	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	18		1.4	0.27
67-66-3	Chloroform	119.38	0.65	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.42	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	14		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-118-A-22 | Lab Sample ID: 140-7292-24

Matrix: Air | Lab File ID: EC03P115.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:16

Sample wt/vol: 25(mL) | Date Analyzed: 03/04/2017 03:54

Soil Aliquot Vol: | Dilution Factor: 3.81

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

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

Analysis Batch No.: 9031 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		6.1	1.8
56-23-5	Carbon tetrachloride	153.81	ND		6.1	1.1
75-45-6	Chlorodifluoromethane	86.47	ND		6.1	1.1
67-66-3	Chloroform	119.38	1.6	J	6.1	1.1
156-59-2	cis-1,2-Dichloroethene	96.94	30		6.1	1.8
75-71-8	Dichlorodifluoromethane	120.91	ND		6.1	2.1
75-34-3	1,1-Dichloroethane	98.96	8.9		6.1	0.76
107-06-2	1,2-Dichloroethane	98.96	ND		6.1	1.4
75-35-4	1,1-Dichloroethene	96.94	120		6.1	1.1
100-41-4	Ethylbenzene	106.17	2.9	J	6.1	2.1
75-09-2	Methylene Chloride	84.93	ND		15	9.9
1634-04-4	Methyl tert-butyl ether	88.15	ND		30	5.2
91-20-3	Naphthalene	128.17	ND		3.0	3.0
127-18-4	Tetrachloroethene	165.83	ND		6.1	1.2
108-88-3	Toluene	92.14	ND		9.1	9.1
156-60-5	trans-1,2-Dichloroethene	96.94	2.6	J	6.1	1.5
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		6.1	3.0
71-55-6	1,1,1-Trichloroethane	133.41	3.4	J	6.1	0.91
79-00-5	1,1,2-Trichloroethane	133.41	ND		6.1	1.6
79-01-6	Trichloroethene	131.39	370		3.0	1.1
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		6.1	2.6
95-63-6	1,2,4-Trimethylbenzene	120.20	2.6	J	6.1	1.9
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		6.1	2.0
75-01-4	Vinyl chloride	62.50	ND		3.0	2.2
1330-20-7	Xylenes, Total	106.17	28		12	1.8

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-118-A-22 | Lab Sample ID: 140-7292-24

Matrix: Air | Lab File ID: EC03P115.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:16

Sample wt/vol: 25(mL) | Date Analyzed: 03/04/2017 03:54

Soil Aliquot Vol: | Dilution Factor: 3.81

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

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

Analysis Batch No.: 9031 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		19	5.6
56-23-5	Carbon tetrachloride	153.81	ND		38	7.2
75-45-6	Chlorodifluoromethane	86.47	ND		22	4.0
67-66-3	Chloroform	119.38	7.8	J	30	5.6
156-59-2	cis-1,2-Dichloroethene	96.94	120		24	7.3
75-71-8	Dichlorodifluoromethane	120.91	ND		30	10
75-34-3	1,1-Dichloroethane	98.96	36		25	3.1
107-06-2	1,2-Dichloroethane	98.96	ND		25	5.9
75-35-4	1,1-Dichloroethene	96.94	470		24	4.2
100-41-4	Ethylbenzene	106.17	12	J	26	8.9
75-09-2	Methylene Chloride	84.93	ND		53	34
1634-04-4	Methyl tert-butyl ether	88.15	ND		110	19
91-20-3	Naphthalene	128.17	ND		16	16
127-18-4	Tetrachloroethene	165.83	ND		41	8.3
108-88-3	Toluene	92.14	ND		34	34
156-60-5	trans-1,2-Dichloroethene	96.94	10	J	24	6.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		45	22
71-55-6	1,1,1-Trichloroethane	133.41	18	J	33	5.0
79-00-5	1,1,2-Trichloroethane	133.41	ND		33	8.7
79-01-6	Trichloroethene	131.39	2000		16	5.7
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		30	13
95-63-6	1,2,4-Trimethylbenzene	120.20	13	J	30	9.4
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		30	9.7
75-01-4	Vinyl chloride	62.50	ND		7.8	5.6
1330-20-7	Xylenes, Total	106.17	120		53	7.9

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-126-C-22 Lab Sample ID: 140-7292-7

Matrix: Air Lab File ID: EC03P111.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 10:41

Sample wt/vol: 10(mL) Date Analyzed: 03/04/2017 01:01

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9031 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	34		4.0	1.2
56-23-5	Carbon tetrachloride	153.81	ND		4.0	0.75
75-45-6	Chlorodifluoromethane	86.47	ND		4.0	0.75
67-66-3	Chloroform	119.38	ND		4.0	0.75
156-59-2	cis-1,2-Dichloroethene	96.94	47		4.0	1.2
75-71-8	Dichlorodifluoromethane	120.91	ND		4.0	1.4
75-34-3	1,1-Dichloroethane	98.96	ND		4.0	0.50
107-06-2	1,2-Dichloroethane	98.96	ND		4.0	0.95
75-35-4	1,1-Dichloroethene	96.94	160		4.0	0.70
100-41-4	Ethylbenzene	106.17	ND		4.0	1.4
75-09-2	Methylene Chloride	84.93	ND		10	6.5
1634-04-4	Methyl tert-butyl ether	88.15	ND		20	3.4
91-20-3	Naphthalene	128.17	ND		2.0	2.0
127-18-4	Tetrachloroethene	165.83	ND		4.0	0.80
108-88-3	Toluene	92.14	ND		6.0	6.0
156-60-5	trans-1,2-Dichloroethene	96.94	4.0		4.0	1.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		4.0	2.0
71-55-6	1,1,1-Trichloroethane	133.41	ND		4.0	0.60
79-00-5	1,1,2-Trichloroethane	133.41	ND		4.0	1.1
79-01-6	Trichloroethene	131.39	58		2.0	0.70
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		4.0	1.7
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		4.0	1.3
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		4.0	1.3
75-01-4	*Vinyl chloride*	*62.50*	*1000*	*E*	*2.0*	*1.5*
1330-20-7	Xylenes, Total	106.17	ND		8.0	1.2

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-126-C-22 Lab Sample ID: 140-7292-7

Matrix: Air Lab File ID: EC03P111.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 10:41

Sample wt/vol: 10(mL) Date Analyzed: 03/04/2017 01:01

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9031 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	110		13	3.7
56-23-5	Carbon tetrachloride	153.81	ND		25	4.7
75-45-6	Chlorodifluoromethane	86.47	ND		14	2.7
67-66-3	Chloroform	119.38	ND		20	3.7
156-59-2	cis-1,2-Dichloroethene	96.94	190		16	4.8
75-71-8	Dichlorodifluoromethane	120.91	ND		20	6.7
75-34-3	1,1-Dichloroethane	98.96	ND		16	2.0
107-06-2	1,2-Dichloroethane	98.96	ND		16	3.8
75-35-4	1,1-Dichloroethene	96.94	620		16	2.8
100-41-4	Ethylbenzene	106.17	ND		17	5.9
75-09-2	Methylene Chloride	84.93	ND		35	23
1634-04-4	Methyl tert-butyl ether	88.15	ND		72	12
91-20-3	Naphthalene	128.17	ND		10	10
127-18-4	Tetrachloroethene	165.83	ND		27	5.4
108-88-3	Toluene	92.14	ND		23	23
156-60-5	trans-1,2-Dichloroethene	96.94	16		16	4.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		30	14
71-55-6	1,1,1-Trichloroethane	133.41	ND		22	3.3
79-00-5	1,1,2-Trichloroethane	133.41	ND		22	5.7
79-01-6	Trichloroethene	131.39	310		11	3.8
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		20	8.4
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		20	6.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		20	6.4
75-01-4	*Vinyl chloride*	*62.50*	*2600*	*E*	*5.1*	*3.7*
1330-20-7	Xylenes, Total	106.17	ND		35	5.2

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-126-C-22 DL Lab Sample ID: 140-7292-7 DL

Matrix: Air Lab File ID: JC04p202.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 10:41

Sample wt/vol: 10(mL) Date Analyzed: 03/04/2017 19:34

Soil Aliquot Vol: Dilution Factor: 3.66

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9073 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	62.50	710		7.3	5.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	71		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-126-C-22 DL Lab Sample ID: 140-7292-7 DL

Matrix: Air Lab File ID: JC04p202.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 10:41

Sample wt/vol: 10(mL) Date Analyzed: 03/04/2017 19:34

Soil Aliquot Vol: Dilution Factor: 3.66

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9073 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	62.50	1800		19	14

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	71		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-131-C-22 | Lab Sample ID: 140-7292-8

Matrix: Air | Lab File ID: JC03P105.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 10:35

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 19:40

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.54		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.31	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.94	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.79		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.92		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.48		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.40		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	81		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-131-C-22 | Lab Sample ID: 140-7292-8

Matrix: Air | Lab File ID: JC03P105.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 10:35

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 19:40

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.4	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	4.1		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	4.5		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.3		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	2.0		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	9.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	81		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-136-A-22 | Lab Sample ID: 140-7292-25

Matrix: Air | Lab File ID: JC03P201.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:52

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 05:20

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.45		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.67		0.40	0.075
67-66-3	Chloroform	119.38	1.6		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.29	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.70		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.72	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	55		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.49		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.16	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.5		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	77		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-136-A-22 Lab Sample ID: 140-7292-25

Matrix: Air Lab File ID: JC03P201.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 10:52

Sample wt/vol: 100(mL) Date Analyzed: 03/04/2017 05:20

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9072 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.4		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.4		1.4	0.27
67-66-3	Chloroform	119.38	7.8		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	1.2	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.1		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	9.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	300		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	2.4		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.79	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	15		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	77		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-138-A-22 | Lab Sample ID: 140-7292-26

Matrix: Air | Lab File ID: JC03P202.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:06

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 06:05

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.082	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	5.5		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	1.4		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.56		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	2.5		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.74	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.091	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.062	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	15		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	79		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-138-A-22 | Lab Sample ID: 140-7292-26

Matrix: Air | Lab File ID: JC03P202.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:06

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 06:05

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.62	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.52	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	19		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	5.7		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	2.3		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	9.9		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.6	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.62	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.34	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	82		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	79		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-139-A-22 Lab Sample ID: 140-7292-27

Matrix: Air Lab File ID: JC03P203.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 10:48

Sample wt/vol: 100(mL) Date Analyzed: 03/04/2017 06:50

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9072 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.67		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.42		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.1		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	1.2		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.2		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.14	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.46		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	2.7		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	1.3		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	1.9		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	9.6		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	78		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-139-A-22 | Lab Sample ID: 140-7292-27

Matrix: Air | Lab File ID: JC03P203.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:48

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 06:50

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.4		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	4.7		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	6.5		1.0	1.0
127-18-4	Tetrachloroethene	165.83	8.0		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.76	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	13		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	6.2		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	9.2		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	42		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	78		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-142-C-22 Lab Sample ID: 140-7292-9

Matrix: Air Lab File ID: JC04p203.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 10:52

Sample wt/vol: 100(mL) Date Analyzed: 03/04/2017 21:03

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9073 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.090	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.49		0.40	0.075
67-66-3	Chloroform	119.38	1.1		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.41	B	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.7		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	81		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-142-C-22 | Lab Sample ID: 140-7292-9

Matrix: Air | Lab File ID: JC04p203.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 10:52

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 21:03

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9073 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.57	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	5.2		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.86	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	8.2		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	2.1	B	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	8.9		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.8		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	81		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-149-C-22 | Lab Sample ID: 140-7292-10

Matrix: Air | Lab File ID: JC03P106.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 10:43

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 20:24

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.27	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.25	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.93	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.82		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.61	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-149-C-22 | Lab Sample ID: 140-7292-10

Matrix: Air | Lab File ID: JC03P106.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 10:43

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 20:24

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.87	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	0.88	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	4.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.6	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-150-C-22 Lab Sample ID: 140-7292-11

Matrix: Air Lab File ID: JC03P107.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 10:45

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 21:10

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9072 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.37	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	7.6		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.43		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.41		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.87	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.9		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.21	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.093	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.18	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.5		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	68		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-150-C-22 Lab Sample ID: 140-7292-11

Matrix: Air Lab File ID: JC03P107.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 10:45

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 21:10

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9072 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.2	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	27		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	7.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.1	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.50	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.91	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	68		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-152-C-22 | Lab Sample ID: 140-7292-12

Matrix: Air | Lab File ID: EC03P113.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 10:46

Sample wt/vol: 10(mL) | Date Analyzed: 03/04/2017 02:28

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9031 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		4.0	1.2
56-23-5	Carbon tetrachloride	153.81	ND		4.0	0.75
75-45-6	Chlorodifluoromethane	86.47	5.3		4.0	0.75
67-66-3	Chloroform	119.38	1.1	J	4.0	0.75
156-59-2	cis-1,2-Dichloroethene	96.94	10		4.0	1.2
75-71-8	Dichlorodifluoromethane	120.91	ND		4.0	1.4
75-34-3	1,1-Dichloroethane	98.96	0.81	J	4.0	0.50
107-06-2	1,2-Dichloroethane	98.96	ND		4.0	0.95
75-35-4	1,1-Dichloroethene	96.94	ND		4.0	0.70
100-41-4	Ethylbenzene	106.17	ND		4.0	1.4
75-09-2	Methylene Chloride	84.93	ND		10	6.5
1634-04-4	Methyl tert-butyl ether	88.15	ND		20	3.4
91-20-3	Naphthalene	128.17	ND		2.0	2.0
127-18-4	Tetrachloroethene	165.83	ND		4.0	0.80
108-88-3	Toluene	92.14	ND		6.0	6.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		4.0	1.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		4.0	2.0
71-55-6	1,1,1-Trichloroethane	133.41	3.6	J	4.0	0.60
79-00-5	1,1,2-Trichloroethane	133.41	ND		4.0	1.1
79-01-6	Trichloroethene	131.39	250		2.0	0.70
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		4.0	1.7
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		4.0	1.3
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		4.0	1.3
75-01-4	Vinyl chloride	62.50	ND		2.0	1.5
1330-20-7	Xylenes, Total	106.17	ND		8.0	1.2

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-152-C-22 | Lab Sample ID: 140-7292-12

Matrix: Air | Lab File ID: EC03P113.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 10:46

Sample wt/vol: 10(mL) | Date Analyzed: 03/04/2017 02:28

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9031 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		13	3.7
56-23-5	Carbon tetrachloride	153.81	ND		25	4.7
75-45-6	Chlorodifluoromethane	86.47	19		14	2.7
67-66-3	Chloroform	119.38	5.5	J	20	3.7
156-59-2	cis-1,2-Dichloroethene	96.94	41		16	4.8
75-71-8	Dichlorodifluoromethane	120.91	ND		20	6.7
75-34-3	1,1-Dichloroethane	98.96	3.3	J	16	2.0
107-06-2	1,2-Dichloroethane	98.96	ND		16	3.8
75-35-4	1,1-Dichloroethene	96.94	ND		16	2.8
100-41-4	Ethylbenzene	106.17	ND		17	5.9
75-09-2	Methylene Chloride	84.93	ND		35	23
1634-04-4	Methyl tert-butyl ether	88.15	ND		72	12
91-20-3	Naphthalene	128.17	ND		10	10
127-18-4	Tetrachloroethene	165.83	ND		27	5.4
108-88-3	Toluene	92.14	ND		23	23
156-60-5	trans-1,2-Dichloroethene	96.94	ND		16	4.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		30	14
71-55-6	1,1,1-Trichloroethane	133.41	19	J	22	3.3
79-00-5	1,1,2-Trichloroethane	133.41	ND		22	5.7
79-01-6	Trichloroethene	131.39	1300		11	3.8
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		20	8.4
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		20	6.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		20	6.4
75-01-4	Vinyl chloride	62.50	ND		5.1	3.7
1330-20-7	Xylenes, Total	106.17	ND		35	5.2

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-153-C-22 | Lab Sample ID: 140-7292-13

Matrix: Air | Lab File ID: JC03P108.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:20

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 21:54

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.1		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.79	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.70		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.1		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.44	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	80		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-153-C-22 Lab Sample ID: 140-7292-13

Matrix: Air Lab File ID: JC03P108.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 11:20

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 21:54

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9072 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.6		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	5.7		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.64	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.9	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	80		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-155-C-22 | Lab Sample ID: 140-7292-14

Matrix: Air | Lab File ID: JC03P109.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:23

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 22:39

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.83		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.78		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.28	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	75		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-155-C-22 | Lab Sample ID: 140-7292-14

Matrix: Air | Lab File ID: JC03P109.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:23

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 22:39

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.48	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	75		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-168-A-22 | Lab Sample ID: 140-7292-23

Matrix: Air | Lab File ID: EC03P114.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 11:04

Sample wt/vol: 13(mL) | Date Analyzed: 03/04/2017 03:11

Soil Aliquot Vol: | Dilution Factor: 11.16

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

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

Analysis Batch No.: 9031 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		34	9.9
56-23-5	Carbon tetrachloride	153.81	ND		34	6.4
75-45-6	Chlorodifluoromethane	86.47	ND		34	6.4
67-66-3	Chloroform	119.38	25	J	34	6.4
156-59-2	cis-1,2-Dichloroethene	96.94	67		34	10
75-71-8	Dichlorodifluoromethane	120.91	ND		34	12
75-34-3	1,1-Dichloroethane	98.96	17	J	34	4.3
107-06-2	1,2-Dichloroethane	98.96	ND		34	8.2
75-35-4	1,1-Dichloroethene	96.94	1200		34	6.0
100-41-4	Ethylbenzene	106.17	ND		34	12
75-09-2	Methylene Chloride	84.93	ND		86	56
1634-04-4	Methyl tert-butyl ether	88.15	ND		170	29
91-20-3	Naphthalene	128.17	ND		17	17
127-18-4	Tetrachloroethene	165.83	ND		34	6.9
108-88-3	Toluene	92.14	ND		52	52
156-60-5	trans-1,2-Dichloroethene	96.94	ND		34	8.6
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		34	17
71-55-6	1,1,1-Trichloroethane	133.41	11	J	34	5.2
79-00-5	1,1,2-Trichloroethane	133.41	ND		34	9.0
79-01-6	Trichloroethene	131.39	4100		17	6.0
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		34	15
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		34	11
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		34	11
75-01-4	Vinyl chloride	62.50	ND		17	12
1330-20-7	Xylenes, Total	106.17	ND		69	10

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-168-A-22 Lab Sample ID: 140-7292-23

Matrix: Air Lab File ID: EC03P114.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 11:04

Sample wt/vol: 13(mL) Date Analyzed: 03/04/2017 03:11

Soil Aliquot Vol: Dilution Factor: 11.16

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9031 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		110	32
56-23-5	Carbon tetrachloride	153.81	ND		220	41
75-45-6	Chlorodifluoromethane	86.47	ND		120	23
67-66-3	Chloroform	119.38	120	J	170	31
156-59-2	cis-1,2-Dichloroethene	96.94	270		140	41
75-71-8	Dichlorodifluoromethane	120.91	ND		170	57
75-34-3	1,1-Dichloroethane	98.96	70	J	140	17
107-06-2	1,2-Dichloroethane	98.96	ND		140	33
75-35-4	1,1-Dichloroethene	96.94	4900		140	24
100-41-4	Ethylbenzene	106.17	ND		150	50
75-09-2	Methylene Chloride	84.93	ND		300	190
1634-04-4	Methyl tert-butyl ether	88.15	ND		620	110
91-20-3	Naphthalene	128.17	ND		90	90
127-18-4	Tetrachloroethene	165.83	ND		230	47
108-88-3	Toluene	92.14	ND		190	190
156-60-5	trans-1,2-Dichloroethene	96.94	ND		140	34
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		250	120
71-55-6	1,1,1-Trichloroethane	133.41	59	J	190	28
79-00-5	1,1,2-Trichloroethane	133.41	ND		190	49
79-01-6	Trichloroethene	131.39	22000		92	32
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		170	72
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		170	53
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		170	55
75-01-4	Vinyl chloride	62.50	ND		44	32
1330-20-7	Xylenes, Total	106.17	ND		300	45

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: BCK-1-22 | Lab Sample ID: 140-7294-26

Matrix: Air | Lab File ID: JC06P112.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 15:37

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 00:18

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9074 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.25	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.42		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.44		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	7.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.48	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	74		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: BCK-1-22 | Lab Sample ID: 140-7294-26

Matrix: Air | Lab File ID: JC06P112.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 15:37

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 00:18

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9074 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.79	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	25		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.1	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	74		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: BCK-2-22 | Lab Sample ID: 140-7294-27

Matrix: Air | Lab File ID: RC03P203.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 15:34

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 05:18

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8988 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.39	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.37	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.72	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: BCK-2-22 | Lab Sample ID: 140-7294-27

Matrix: Air | Lab File ID: RC03P203.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 15:34

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 05:18

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8988 | Units: ug/m3

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

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: BCK-3-22 Lab Sample ID: 140-7294-28

Matrix: Air Lab File ID: RC03P204.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 15:21

Sample wt/vol: 100(mL) Date Analyzed: 03/04/2017 06:05

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.29	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.78	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.50		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: BCK-3-22 Lab Sample ID: 140-7294-28

Matrix: Air Lab File ID: RC03P204.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 15:21

Sample wt/vol: 100(mL) Date Analyzed: 03/04/2017 06:05

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.52	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.0	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	3.4		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: BCK-4-22 Lab Sample ID: 140-7294-29

Matrix: Air Lab File ID: JC06P113.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 15:28

Sample wt/vol: 100(mL) Date Analyzed: 03/07/2017 01:04

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9074 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.26	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.061	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	78		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: BCK-4-22 | Lab Sample ID: 140-7294-29

Matrix: Air | Lab File ID: JC06P113.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 15:28

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 01:04

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9074 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.48	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	0.92	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.33	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	78		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-001-C-22 | Lab Sample ID: 140-7294-4

Matrix: Air | Lab File ID: RC03P104.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:37

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 16:42

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8988 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.78		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.37	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.61		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-001-C-22 | Lab Sample ID: 140-7294-4

Matrix: Air | Lab File ID: RC03P104.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:37

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 16:42

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8988 | Units: ug/m3

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

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-004-C-22 | Lab Sample ID: 140-7294-5

Matrix: Air | Lab File ID: RC03P105.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:38

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 17:29

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8988 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.98		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.95		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.28	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-004-C-22 Lab Sample ID: 140-7294-5

Matrix: Air Lab File ID: RC03P105.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:38

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 17:29

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.55	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.6		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-005-C-22 | Lab Sample ID: 140-7294-6

Matrix: Air | Lab File ID: RC03P106.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:39

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 18:17

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8988 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.90		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.35	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.88		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-005-C-22 | Lab Sample ID: 140-7294-6

Matrix: Air | Lab File ID: RC03P106.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:39

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 18:17

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8988 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.52	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.2		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.7	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-033-B-22 Lab Sample ID: 140-7294-1

Matrix: Air Lab File ID: RC03P101.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:17

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 14:20

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.22	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.7		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.36	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.56		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	19		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.10	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.15	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.7		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-033-B-22 Lab Sample ID: 140-7294-1

Matrix: Air Lab File ID: RC03P101.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:17

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 14:20

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.72	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.8	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.4		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.2		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	70		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.54	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.74	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	12		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-051-C-22 Lab Sample ID: 140-7294-7

Matrix: Air Lab File ID: RC03P107.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:23

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 19:04

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	15		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.15	J	0.40	0.080
108-88-3	Toluene	92.14	14		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.27	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-051-C-22 | Lab Sample ID: 140-7294-7

Matrix: Air | Lab File ID: RC03P107.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:23

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 19:04

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8988 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.60	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	54		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.0	J	2.7	0.54
108-88-3	Toluene	92.14	51		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-060-C-22 Lab Sample ID: 140-7294-8

Matrix: Air Lab File ID: RC03P108.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:27

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 19:51

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.0		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.37	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.71	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-060-C-22 Lab Sample ID: 140-7294-8

Matrix: Air Lab File ID: RC03P108.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:27

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 19:51

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.8	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.1	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-065-C-22 | Lab Sample ID: 140-7294-9

Matrix: Air | Lab File ID: RC03P109.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:22

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 20:38

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8988 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.8		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.37	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.69	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.29	J	0.40	0.080
108-88-3	Toluene	92.14	16		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.30	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-065-C-22 Lab Sample ID: 140-7294-9

Matrix: Air Lab File ID: RC03P109.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:22

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 20:38

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.64	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	10		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.8	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.9	J	2.7	0.54
108-88-3	Toluene	92.14	59		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.3	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-088-C-22 | Lab Sample ID: 140-7294-10

Matrix: Air | Lab File ID: RC03P110.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 17:13

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 21:25

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8988 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.93		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.53	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-088-C-22 Lab Sample ID: 140-7294-10

Matrix: Air Lab File ID: RC03P110.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 17:13

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 21:25

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.63	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.3		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.3	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-100-B-22 | Lab Sample ID: 140-7294-2

Matrix: Air | Lab File ID: RC03P102.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:19

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 15:07

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8988 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.1		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.46		0.40	0.14
75-09-2	Methylene Chloride	84.93	3.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	15		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.3		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-100-B-22 Lab Sample ID: 140-7294-2

Matrix: Air Lab File ID: RC03P102.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:19

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 15:07

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.62	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.0		1.7	0.59
75-09-2	Methylene Chloride	84.93	12		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	57		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	9.9		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-101-B-22 Lab Sample ID: 140-7294-3

Matrix: Air Lab File ID: RC03P103.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:18

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 15:54

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.22	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.65		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.65		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.78	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	18		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.11	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.3		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-101-B-22 | Lab Sample ID: 140-7294-3

Matrix: Air | Lab File ID: RC03P103.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:18

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 15:54

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8988 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.71	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.3		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	67		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.60	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	15		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-102-C-22 | Lab Sample ID: 140-7294-11

Matrix: Air | Lab File ID: RC03P111.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:35

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 22:13

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8988 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.0		0.40	0.075
67-66-3	Chloroform	119.38	0.12	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.33	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.67	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.88		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.55	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-102-C-22 | Lab Sample ID: 140-7294-11

Matrix: Air | Lab File ID: RC03P111.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:35

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 22:13

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8988 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.56	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.5		1.4	0.27
67-66-3	Chloroform	119.38	0.58	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.6	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.4	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-113-C-22 | Lab Sample ID: 140-7294-12

Matrix: Air | Lab File ID: RC03P112.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 17:15

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 23:00

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8988 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.0		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.35	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.28	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-113-C-22 Lab Sample ID: 140-7294-12

Matrix: Air Lab File ID: RC03P112.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 17:15

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 23:00

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ug/m3

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

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-115-C-22 Lab Sample ID: 140-7294-13

Matrix: Air Lab File ID: RC03P113.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 17:16

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 23:48

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.21	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.92		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.32	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	3.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.65	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-115-C-22 Lab Sample ID: 140-7294-13

Matrix: Air Lab File ID: RC03P113.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 17:16

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 23:48

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.67	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.2		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.6	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	12		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.62	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.8	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-126-C-22 Lab Sample ID: 140-7294-14

Matrix: Air Lab File ID: RC03P114.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:25

Sample wt/vol: 100(mL) Date Analyzed: 03/04/2017 00:35

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.45		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.50		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.34	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.81	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	5.1		0.40	0.080
108-88-3	*Toluene*	*92.14*	*230*	*E*	*0.60*	*0.60*
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.60	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-126-C-22 Lab Sample ID: 140-7294-14

Matrix: Air Lab File ID: RC03P114.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:25

Sample wt/vol: 100(mL) Date Analyzed: 03/04/2017 00:35

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.4		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.7	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.64	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	35		2.7	0.54
108-88-3	*Toluene*	*92.14*	*880*	*E*	*2.3*	*2.3*
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.6	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-126-C-22 DL Lab Sample ID: 140-7294-14 DL

Matrix: Air Lab File ID: JC06P108.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:25

Sample wt/vol: 11(mL) Date Analyzed: 03/06/2017 21:19

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9074 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
108-88-3	Toluene	92.14	530		5.5	5.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	70		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-126-C-22 DL Lab Sample ID: 140-7294-14 DL

Matrix: Air Lab File ID: JC06P108.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:25

Sample wt/vol: 11(mL) Date Analyzed: 03/06/2017 21:19

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9074 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
108-88-3	Toluene	92.14	2000		21	21

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	70		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-131-C-22 | Lab Sample ID: 140-7294-15

Matrix: Air | Lab File ID: RC03P115.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:13

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 01:22

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8988 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.22	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.78		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.78	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.97		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.82		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-131-C-22 | Lab Sample ID: 140-7294-15

Matrix: Air | Lab File ID: RC03P115.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:13

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 01:22

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8988 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.70	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.64	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.6		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-135-C-22 | Lab Sample ID: 140-7294-16

Matrix: Air | Lab File ID: GC03P114.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 17:10

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 23:57

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9098 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.0		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.72	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-135-C-22 | Lab Sample ID: 140-7294-16

Matrix: Air | Lab File ID: GC03P114.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 17:10

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 23:57

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9098 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.50	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.6		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-142-C-22 | Lab Sample ID: 140-7294-17

Matrix: Air | Lab File ID: GC03P115.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 17:12

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 00:38

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9098 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.91		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.65	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.083	J	0.40	0.080
108-88-3	Toluene	92.14	2.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-142-C-22 | Lab Sample ID: 140-7294-17

Matrix: Air | Lab File ID: GC03P115.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 17:12

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 00:38

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9098 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.49	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.2		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.56	J	2.7	0.54
108-88-3	Toluene	92.14	10		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-144-C-22 | Lab Sample ID: 140-7294-18

Matrix: Air | Lab File ID: GC03P116.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:32

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 01:19

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9098 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	4.9		0.40	0.075
67-66-3	Chloroform	119.38	0.076	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.064	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.81		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-144-C-22 | Lab Sample ID: 140-7294-18

Matrix: Air | Lab File ID: GC03P116.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:32

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 01:19

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9098 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.63	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	17		1.4	0.27
67-66-3	Chloroform	119.38	0.37	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.70	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.8		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.35	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.5		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-145-C-22 | Lab Sample ID: 140-7294-19

Matrix: Air | Lab File ID: JC06P109.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:28

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 22:04

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9074 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	10		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.43		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.8		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.22	J	0.40	0.080
108-88-3	Toluene	92.14	4.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.78	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	83		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-145-C-22 | Lab Sample ID: 140-7294-19

Matrix: Air | Lab File ID: JC06P109.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:28

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 22:04

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9074 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.55	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	36		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.64	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	6.2		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.5	J	2.7	0.54
108-88-3	Toluene	92.14	15		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.4	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	83		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-146-C-22 | Lab Sample ID: 140-7294-20

Matrix: Air | Lab File ID: GC03P201.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:30

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 01:59

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9098 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	12		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.74	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	3.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.61	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-146-C-22 | Lab Sample ID: 140-7294-20

Matrix: Air | Lab File ID: GC03P201.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:30

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 01:59

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9098 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.65	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	41		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.6	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	12		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.6	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-149-C-22 | Lab Sample ID: 140-7294-21

Matrix: Air | Lab File ID: GC03P202.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:24

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 02:40

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9098 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.47		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.093	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.51		0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.53		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	5.4		0.40	0.080
108-88-3	*Toluene*	*92.14*	*370*	*E*	*0.60*	*0.60*
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.37	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-149-C-22 | Lab Sample ID: 140-7294-21

Matrix: Air | Lab File ID: GC03P202.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:24

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 02:40

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9098 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.5		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.58	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	0.54	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.7		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	36		2.7	0.54
108-88-3	*Toluene*	*92.14*	*1400*	*E*	*2.3*	*2.3*
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.6	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-149-C-22 DL Lab Sample ID: 140-7294-21 DL

Matrix: Air Lab File ID: JC06P110.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:24

Sample wt/vol: 11(mL) Date Analyzed: 03/06/2017 22:49

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9074 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
108-88-3	Toluene	92.14	200		5.5	5.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	69		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-149-C-22 DL Lab Sample ID: 140-7294-21 DL

Matrix: Air Lab File ID: JC06P110.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:24

Sample wt/vol: 11(mL) Date Analyzed: 03/06/2017 22:49

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9074 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
108-88-3	Toluene	92.14	760		21	21

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	69		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-150-C-22 | Lab Sample ID: 140-7294-22

Matrix: Air | Lab File ID: JC06P111.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:29

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 23:34

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9074 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.077	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	9.7		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	3.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.59	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-150-C-22 | Lab Sample ID: 140-7294-22

Matrix: Air | Lab File ID: JC06P111.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:29

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 23:34

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9074 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.44	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	34		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	12		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.6	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-152-C-22 | Lab Sample ID: 140-7294-23

Matrix: Air | Lab File ID: GC03P204.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:31

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 04:02

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9098 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	5.6		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.17	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.93	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.8		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.074	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.89		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-152-C-22 | Lab Sample ID: 140-7294-23

Matrix: Air | Lab File ID: GC03P204.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:31

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 04:02

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9098 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.63	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	20		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.75	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.41	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.9		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-153-C-22 Lab Sample ID: 140-7294-24

Matrix: Air Lab File ID: RC03P116.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:33

Sample wt/vol: 100(mL) Date Analyzed: 03/04/2017 02:57

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.96		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.66	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.80		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.43	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-153-C-22 | Lab Sample ID: 140-7294-24

Matrix: Air | Lab File ID: RC03P116.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:33

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 02:57

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8988 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.4		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.9	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-155-C-22 | Lab Sample ID: 140-7294-25

Matrix: Air | Lab File ID: RC03P201.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:34

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 03:44

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8988 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.0		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.85		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.47	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-155-C-22 | Lab Sample ID: 140-7294-25

Matrix: Air | Lab File ID: RC03P201.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:34

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 03:44

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 8988 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.52	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.6		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.6		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.0	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-015-A-22 | Lab Sample ID: 140-7324-1

Matrix: Air | Lab File ID: RC06P101.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:26

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 16:40

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.4		0.40	0.075
67-66-3	Chloroform	119.38	0.077	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.36	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.81		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.32	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-015-A-22 | Lab Sample ID: 140-7324-1

Matrix: Air | Lab File ID: RC06P101.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:26

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 16:40

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.50	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.9		1.4	0.27
67-66-3	Chloroform	119.38	0.37	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.8	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.4	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-018-A-22 | Lab Sample ID: 140-7324-2

Matrix: Air | Lab File ID: RC06P102.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:23

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 17:27

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.24	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.092	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.7		0.40	0.075
67-66-3	Chloroform	119.38	0.15	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.21	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.92	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.64		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.5		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.56	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-018-A-22 | Lab Sample ID: 140-7324-2

Matrix: Air | Lab File ID: RC06P102.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:23

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 17:27

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.76	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.58	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	9.6		1.4	0.27
67-66-3	Chloroform	119.38	0.71	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.82	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	3.3		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	8.0		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.4	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-021-A-22 | Lab Sample ID: 140-7324-3

Matrix: Air | Lab File ID: RC06P103.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:47

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 18:15

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.68		0.40	0.075
67-66-3	Chloroform	119.38	0.084	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.34	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.23	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.12	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-021-A-22 | Lab Sample ID: 140-7324-3

Matrix: Air | Lab File ID: RC06P103.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:47

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 18:15

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.57	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.4		1.4	0.27
67-66-3	Chloroform	119.38	0.41	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.7	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.99	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.6		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.65	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.9		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-075-A-22 | Lab Sample ID: 140-7324-4

Matrix: Air | Lab File ID: RC06P104.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:43

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 19:03

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.58		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.33	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.41		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.72	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	4.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-075-A-22 | Lab Sample ID: 140-7324-4

Matrix: Air | Lab File ID: RC06P104.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:43

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 19:03

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.56	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.0		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.6	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	15		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-076-A-22 | Lab Sample ID: 140-7324-5

Matrix: Air | Lab File ID: RC06P105.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:41

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 19:50

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.57		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.32	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.19	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.6		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-076-A-22 | Lab Sample ID: 140-7324-5

Matrix: Air | Lab File ID: RC06P105.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:41

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 19:50

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.0		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.4	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.0	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.8		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-078-A-22 | Lab Sample ID: 140-7324-6

Matrix: Air | Lab File ID: RC06P106.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:49

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 20:37

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.68		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.33	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.6		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.86		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.15	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	6.4		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-078-A-22 Lab Sample ID: 140-7324-6

Matrix: Air Lab File ID: RC06P106.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 16:49

Sample wt/vol: 100(mL) Date Analyzed: 03/06/2017 20:37

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9101 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.51	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.4		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.6	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	6.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.83	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	28		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-079-A-22 Lab Sample ID: 140-7324-7

Matrix: Air Lab File ID: RC06P107.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 16:28

Sample wt/vol: 100(mL) Date Analyzed: 03/06/2017 21:24

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9101 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.77		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.27	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.9		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.4		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-079-A-22 | Lab Sample ID: 140-7324-7

Matrix: Air | Lab File ID: RC06P107.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:28

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 21:24

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ug/m3

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

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-081-A-22 | Lab Sample ID: 140-7324-8

Matrix: Air | Lab File ID: RC06P108.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:31

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 22:11

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	3.6		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.74		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.75	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	35		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.080	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.20	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	4.3		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-081-A-22 | Lab Sample ID: 140-7324-8

Matrix: Air | Lab File ID: RC06P108.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:31

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 22:11

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	13		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.2		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.6	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	130		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.43	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.97	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	19		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-093-A-22 | Lab Sample ID: 140-7324-9

Matrix: Air | Lab File ID: RC06P109.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:21

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 22:58

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.8		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.42		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.33		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-093-A-22 | Lab Sample ID: 140-7324-9

Matrix: Air | Lab File ID: RC06P109.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:21

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 22:58

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.53	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	9.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.8		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-097-A-22 | Lab Sample ID: 140-7324-11

Matrix: Air | Lab File ID: RC06P111.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:30

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 00:33

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.69		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.19	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.70	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.94		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-097-A-22 Lab Sample ID: 140-7324-11

Matrix: Air Lab File ID: RC06P111.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 16:30

Sample wt/vol: 100(mL) Date Analyzed: 03/07/2017 00:33

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9101 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.83	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	8.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.1		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-117-A-22 | Lab Sample ID: 140-7324-12

Matrix: Air | Lab File ID: RC06P112.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:38

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 01:20

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.84		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.43		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.65	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.92		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.3		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-117-A-22 | Lab Sample ID: 140-7324-12

Matrix: Air | Lab File ID: RC06P112.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:38

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 01:20

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.56	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.0		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.9		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	10		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-118-A-22 | Lab Sample ID: 140-7324-13

Matrix: Air | Lab File ID: RC06P113.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:25

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 02:08

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.1		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.14	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.11	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.79	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-118-A-22 | Lab Sample ID: 140-7324-13

Matrix: Air | Lab File ID: RC06P113.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:25

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 02:08

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.52	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.0		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.61	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.61	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.4	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-136-A-22 | Lab Sample ID: 140-7324-14

Matrix: Air | Lab File ID: RC06P114.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:40

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 02:55

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.079	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.66		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.42		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.11	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.2		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-136-A-22 | Lab Sample ID: 140-7324-14

Matrix: Air | Lab File ID: RC06P114.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:40

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 02:55

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.52	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.50	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.3		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	7.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.59	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	9.3		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-138-A-22 | Lab Sample ID: 140-7324-15

Matrix: Air | Lab File ID: RC06P115.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:22

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 03:42

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.22	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.097	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.6		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.14	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.48		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	2.1		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-138-A-22 | Lab Sample ID: 140-7324-15

Matrix: Air | Lab File ID: RC06P115.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:22

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 03:42

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.70	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.61	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	9.3		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.56	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	3.2		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	11		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-139-A-22 | Lab Sample ID: 140-7324-23

Matrix: Air | Lab File ID: JC06P107.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:37

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 20:34

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9074 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.46		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.16	J	0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.090	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.76	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	83		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-139-A-22 | Lab Sample ID: 140-7324-23

Matrix: Air | Lab File ID: JC06P107.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:37

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 20:34

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9074 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.46	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.1	J	2.7	0.54
108-88-3	Toluene	92.14	4.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.48	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	83		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-168-A-22 | Lab Sample ID: 140-7324-10

Matrix: Air | Lab File ID: RC06P110.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:45

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 23:46

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.60		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.36	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.27	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.72	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.084	J	0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.18	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.4		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-168-A-22 | Lab Sample ID: 140-7324-10

Matrix: Air | Lab File ID: RC06P110.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:45

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 23:46

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.1		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.8	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.2	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.57	J	2.7	0.54
108-88-3	Toluene	92.14	4.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.99	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.1		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-DUP01-C-22 | Lab Sample ID: 140-7324-16

Matrix: Air | Lab File ID: JC06P101.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 16:03

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9074 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.70		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.42		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.70		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.69	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	79		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-DUP01-C-22 | Lab Sample ID: 140-7324-16

Matrix: Air | Lab File ID: JC06P101.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 16:03

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9074 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.48	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.6		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.0	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	79		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-DUP02-C-22 Lab Sample ID: 140-7324-17

Matrix: Air Lab File ID: JC06P102.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 00:00

Sample wt/vol: 153(mL) Date Analyzed: 03/06/2017 16:48

Soil Aliquot Vol: Dilution Factor: 1.53

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9074 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	ND		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.75		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.29	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	84		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-DUP02-C-22 | Lab Sample ID: 140-7324-17

Matrix: Air | Lab File ID: JC06P102.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 00:00

Sample wt/vol: 153(mL) | Date Analyzed: 03/06/2017 16:48

Soil Aliquot Vol: | Dilution Factor: 1.53

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

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

Analysis Batch No.: 9074 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.49	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	ND		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	84		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-DUP03-A-22 | Lab Sample ID: 140-7324-18

Matrix: Air | Lab File ID: JC06P103.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 17:33

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9074 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.084	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.6		0.40	0.075
67-66-3	Chloroform	119.38	0.14	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.43		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.16	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.40		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.6		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-DUP03-A-22 | Lab Sample ID: 140-7324-18

Matrix: Air | Lab File ID: JC06P103.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 17:33

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9074 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.65	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.53	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.6		1.4	0.27
67-66-3	Chloroform	119.38	0.68	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.65	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	2.1		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	8.7		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-DUP04-A-22 | Lab Sample ID: 140-7324-19

Matrix: Air | Lab File ID: JC06P104.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 18:18

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9074 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.59		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.43		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.19	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.97		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-DUP04-A-22 Lab Sample ID: 140-7324-19

Matrix: Air Lab File ID: JC06P104.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 00:00

Sample wt/vol: 100(mL) Date Analyzed: 03/06/2017 18:18

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9074 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.41	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.1		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.83	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: SV-093-A-22 | Lab Sample ID: 140-7324-25

Matrix: Air | Lab File ID: RC06P201.D

Analysis Method: TO 15 LL | Date Collected: 03/03/2017 11:12

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 06:04

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.47		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.12	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.076	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.67	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.41		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: SV-093-A-22 | Lab Sample ID: 140-7324-25

Matrix: Air | Lab File ID: RC06P201.D

Analysis Method: TO 15 LL | Date Collected: 03/03/2017 11:12

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 06:04

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.58	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.50	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.30	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.2		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Client Sample ID: SV-DUP01-C-22 Lab Sample ID: 140-7324-20

Matrix: Air Lab File ID: JC06P105.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 00:00

Sample wt/vol: 100(mL) Date Analyzed: 03/06/2017 19:04

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9074 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.64		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.29	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.71	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.41		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.63		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.36	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.31	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.9		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: SV-DUP01-C-22 | Lab Sample ID: 140-7324-20

Matrix: Air | Lab File ID: JC06P105.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 19:04

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9074 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.3		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.2	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	2.1		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	3.1		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.8	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.5	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.3		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: SV-DUP02-C-22 | Lab Sample ID: 140-7324-21

Matrix: Air | Lab File ID: JC06P106R.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 09:37

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9074 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.1		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.085	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.98		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.53	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	86		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Client Sample ID: SV-DUP02-C-22 Lab Sample ID: 140-7324-21

Matrix: Air Lab File ID: JC06P106R.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 00:00

Sample wt/vol: 100(mL) Date Analyzed: 03/07/2017 09:37

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9074 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.6		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.58	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	5.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.63	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	86		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Client Sample ID: SV-DUP03-A-22 Lab Sample ID: 140-7324-22

Matrix: Air Lab File ID: RC06P116.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 00:00

Sample wt/vol: 10(mL) Date Analyzed: 03/07/2017 05:16

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9101 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		4.0	1.2
56-23-5	Carbon tetrachloride	153.81	ND		4.0	0.75
75-45-6	Chlorodifluoromethane	86.47	2.5	J	4.0	0.75
67-66-3	Chloroform	119.38	ND		4.0	0.75
156-59-2	cis-1,2-Dichloroethene	96.94	ND		4.0	1.2
75-71-8	Dichlorodifluoromethane	120.91	ND		4.0	1.4
75-34-3	1,1-Dichloroethane	98.96	1.0	J	4.0	0.50
107-06-2	1,2-Dichloroethane	98.96	ND		4.0	0.95
75-35-4	1,1-Dichloroethene	96.94	3.4	J	4.0	0.70
100-41-4	Ethylbenzene	106.17	ND		4.0	1.4
75-09-2	Methylene Chloride	84.93	ND		10	6.5
1634-04-4	Methyl tert-butyl ether	88.15	ND		20	3.4
91-20-3	Naphthalene	128.17	ND		2.0	2.0
127-18-4	Tetrachloroethene	165.83	ND		4.0	0.80
108-88-3	Toluene	92.14	ND		6.0	6.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		4.0	1.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		4.0	2.0
71-55-6	1,1,1-Trichloroethane	133.41	0.72	J	4.0	0.60
79-00-5	1,1,2-Trichloroethane	133.41	ND		4.0	1.1
79-01-6	Trichloroethene	131.39	ND		2.0	0.70
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		4.0	1.7
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		4.0	1.3
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		4.0	1.3
75-01-4	Vinyl chloride	62.50	ND	*	2.0	1.5
1330-20-7	Xylenes, Total	106.17	ND		8.0	1.2

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: SV-DUP03-A-22 | Lab Sample ID: 140-7324-22

Matrix: Air | Lab File ID: RC06P116.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 00:00

Sample wt/vol: 10(mL) | Date Analyzed: 03/07/2017 05:16

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		13	3.7
56-23-5	Carbon tetrachloride	153.81	ND		25	4.7
75-45-6	Chlorodifluoromethane	86.47	8.7	J	14	2.7
67-66-3	Chloroform	119.38	ND		20	3.7
156-59-2	cis-1,2-Dichloroethene	96.94	ND		16	4.8
75-71-8	Dichlorodifluoromethane	120.91	ND		20	6.7
75-34-3	1,1-Dichloroethane	98.96	4.1	J	16	2.0
107-06-2	1,2-Dichloroethane	98.96	ND		16	3.8
75-35-4	1,1-Dichloroethene	96.94	13	J	16	2.8
100-41-4	Ethylbenzene	106.17	ND		17	5.9
75-09-2	Methylene Chloride	84.93	ND		35	23
1634-04-4	Methyl tert-butyl ether	88.15	ND		72	12
91-20-3	Naphthalene	128.17	ND		10	10
127-18-4	Tetrachloroethene	165.83	ND		27	5.4
108-88-3	Toluene	92.14	ND		23	23
156-60-5	trans-1,2-Dichloroethene	96.94	ND		16	4.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		30	14
71-55-6	1,1,1-Trichloroethane	133.41	3.9	J	22	3.3
79-00-5	1,1,2-Trichloroethane	133.41	ND		22	5.7
79-01-6	Trichloroethene	131.39	ND		11	3.8
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		20	8.4
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		20	6.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		20	6.4
75-01-4	Vinyl chloride	62.50	ND	*	5.1	3.7
1330-20-7	Xylenes, Total	106.17	ND		35	5.2

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-001-C-22 | Lab Sample ID: 140-7360-10

Matrix: Air | Lab File ID: GC16P204.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 12:36

Sample wt/vol: 50(mL) | Date Analyzed: 03/17/2017 02:12

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9483 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.80	0.23
56-23-5	Carbon tetrachloride	153.81	ND		0.80	0.15
75-45-6	Chlorodifluoromethane	86.47	0.58	J	0.80	0.15
67-66-3	Chloroform	119.38	0.96		0.80	0.15
156-59-2	cis-1,2-Dichloroethene	96.94	19		0.80	0.24
75-71-8	Dichlorodifluoromethane	120.91	0.44	J	0.80	0.27
75-34-3	1,1-Dichloroethane	98.96	ND		0.80	0.10
107-06-2	1,2-Dichloroethane	98.96	ND		0.80	0.19
75-35-4	1,1-Dichloroethene	96.94	ND		0.80	0.14
100-41-4	Ethylbenzene	106.17	ND		0.80	0.27
75-09-2	Methylene Chloride	84.93	ND		2.0	1.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		4.0	0.68
91-20-3	Naphthalene	128.17	ND		0.40	0.40
127-18-4	Tetrachloroethene	165.83	0.60	J	0.80	0.16
108-88-3	Toluene	92.14	ND		1.2	1.2
156-60-5	trans-1,2-Dichloroethene	96.94	4.9		0.80	0.20
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.80	0.39
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.80	0.12
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.80	0.21
79-01-6	Trichloroethene	131.39	37		0.40	0.14
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.80	0.34
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.80	0.25
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.80	0.26
75-01-4	Vinyl chloride	62.50	ND		0.40	0.29
1330-20-7	Xylenes, Total	106.17	ND		1.6	0.24

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-001-C-22 | Lab Sample ID: 140-7360-10

Matrix: Air | Lab File ID: GC16P204.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 12:36

Sample wt/vol: 50(mL) | Date Analyzed: 03/17/2017 02:12

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9483 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		2.6	0.73
56-23-5	Carbon tetrachloride	153.81	ND		5.0	0.94
75-45-6	Chlorodifluoromethane	86.47	2.1	J	2.8	0.53
67-66-3	Chloroform	119.38	4.7		3.9	0.73
156-59-2	cis-1,2-Dichloroethene	96.94	74		3.2	0.95
75-71-8	Dichlorodifluoromethane	120.91	2.2	J	4.0	1.3
75-34-3	1,1-Dichloroethane	98.96	ND		3.2	0.40
107-06-2	1,2-Dichloroethane	98.96	ND		3.2	0.77
75-35-4	1,1-Dichloroethene	96.94	ND		3.2	0.56
100-41-4	Ethylbenzene	106.17	ND		3.5	1.2
75-09-2	Methylene Chloride	84.93	ND		6.9	4.5
1634-04-4	Methyl tert-butyl ether	88.15	ND		14	2.5
91-20-3	Naphthalene	128.17	ND		2.1	2.1
127-18-4	Tetrachloroethene	165.83	4.1	J	5.4	1.1
108-88-3	Toluene	92.14	ND		4.5	4.5
156-60-5	trans-1,2-Dichloroethene	96.94	20		3.2	0.79
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		5.9	2.9
71-55-6	1,1,1-Trichloroethane	133.41	ND		4.4	0.65
79-00-5	1,1,2-Trichloroethane	133.41	ND		4.4	1.1
79-01-6	Trichloroethene	131.39	200		2.1	0.75
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		3.9	1.7
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		3.9	1.2
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		3.9	1.3
75-01-4	Vinyl chloride	62.50	ND		1.0	0.74
1330-20-7	Xylenes, Total	106.17	ND		6.9	1.0

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-169-A-22 Lab Sample ID: 140-7360-1

Matrix: Air Lab File ID: GC16P110.D

Analysis Method: TO 15 LL Date Collected: 03/08/2017 11:18

Sample wt/vol: 100(mL) Date Analyzed: 03/16/2017 19:13

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9483 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.42		0.40	0.075
67-66-3	Chloroform	119.38	0.078	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.44		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.33	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.80	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.73		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.52	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-169-A-22 Lab Sample ID: 140-7360-1

Matrix: Air Lab File ID: GC16P110.D

Analysis Method: TO 15 LL Date Collected: 03/08/2017 11:18

Sample wt/vol: 100(mL) Date Analyzed: 03/16/2017 19:13

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9483 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.38	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	0.38	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.3	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	3.9		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.3	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-170-A-22 | Lab Sample ID: 140-7360-2

Matrix: Air | Lab File ID: GC16P111.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 10:50

Sample wt/vol: 20(mL) | Date Analyzed: 03/16/2017 19:56

Soil Aliquot Vol: | Dilution Factor: 3.18

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

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

Analysis Batch No.: 9483 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		6.4	1.2
75-45-6	Chlorodifluoromethane	86.47	ND		6.4	1.2
67-66-3	Chloroform	119.38	1.6	J	6.4	1.2
156-59-2	cis-1,2-Dichloroethene	96.94	71		6.4	1.9
75-71-8	Dichlorodifluoromethane	120.91	ND		6.4	2.1
75-34-3	1,1-Dichloroethane	98.96	5.6	J	6.4	0.80
107-06-2	1,2-Dichloroethane	98.96	ND		6.4	1.5
75-35-4	1,1-Dichloroethene	96.94	40		6.4	1.1
100-41-4	Ethylbenzene	106.17	ND		6.4	2.1
75-09-2	Methylene Chloride	84.93	ND		16	10
1634-04-4	Methyl tert-butyl ether	88.15	ND		32	5.4
91-20-3	Naphthalene	128.17	ND		3.2	3.2
127-18-4	Tetrachloroethene	165.83	ND		6.4	1.3
108-88-3	Toluene	92.14	ND		9.5	9.5
156-60-5	trans-1,2-Dichloroethene	96.94	ND		6.4	1.6
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		6.4	3.1
71-55-6	1,1,1-Trichloroethane	133.41	2.6	J B	6.4	0.95
79-00-5	1,1,2-Trichloroethane	133.41	ND		6.4	1.7
79-01-6	Trichloroethene	131.39	380		3.2	1.1
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		6.4	2.7
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		6.4	2.0
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		6.4	2.1
75-01-4	Vinyl chloride	62.50	ND		3.2	2.3
1330-20-7	Xylenes, Total	106.17	ND		13	1.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-170-A-22 | Lab Sample ID: 140-7360-2

Matrix: Air | Lab File ID: GC16P111.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 10:50

Sample wt/vol: 20(mL) | Date Analyzed: 03/16/2017 19:56

Soil Aliquot Vol: | Dilution Factor: 3.18

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

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

Analysis Batch No.: 9483 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		20	5.8
56-23-5	Carbon tetrachloride	153.81	ND		40	7.5
75-45-6	Chlorodifluoromethane	86.47	ND		22	4.2
67-66-3	Chloroform	119.38	7.9	J	31	5.8
156-59-2	cis-1,2-Dichloroethene	96.94	280		25	7.6
75-71-8	Dichlorodifluoromethane	120.91	ND		31	11
75-34-3	1,1-Dichloroethane	98.96	23	J	26	3.2
107-06-2	1,2-Dichloroethane	98.96	ND		26	6.1
75-35-4	1,1-Dichloroethene	96.94	160		25	4.4
100-41-4	Ethylbenzene	106.17	ND		28	9.3
75-09-2	Methylene Chloride	84.93	ND		55	36
1634-04-4	Methyl tert-butyl ether	88.15	ND		110	19
91-20-3	Naphthalene	128.17	ND		17	17
127-18-4	Tetrachloroethene	165.83	ND		43	8.6
108-88-3	Toluene	92.14	ND		36	36
156-60-5	trans-1,2-Dichloroethene	96.94	ND		25	6.3
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		47	23
71-55-6	1,1,1-Trichloroethane	133.41	14	J B	35	5.2
79-00-5	1,1,2-Trichloroethane	133.41	ND		35	9.1
79-01-6	Trichloroethene	131.39	2000		17	6.0
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		31	13
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		31	9.8
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		31	10
75-01-4	Vinyl chloride	62.50	ND		8.1	5.9
1330-20-7	Xylenes, Total	106.17	ND		55	8.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-171-A-22 Lab Sample ID: 140-7360-3

Matrix: Air Lab File ID: GC16P112.D

Analysis Method: TO 15 LL Date Collected: 03/08/2017 10:39

Sample wt/vol: 11(mL) Date Analyzed: 03/16/2017 20:38

Soil Aliquot Vol: Dilution Factor: 3.29

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9483 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		12	3.4
56-23-5	Carbon tetrachloride	153.81	ND		12	2.2
75-45-6	Chlorodifluoromethane	86.47	ND		12	2.2
67-66-3	Chloroform	119.38	ND		12	2.2
156-59-2	cis-1,2-Dichloroethene	96.94	24		12	3.6
75-71-8	Dichlorodifluoromethane	120.91	ND		12	4.0
75-34-3	1,1-Dichloroethane	98.96	5.5	J	12	1.5
107-06-2	1,2-Dichloroethane	98.96	ND		12	2.8
75-35-4	1,1-Dichloroethene	96.94	350		12	2.1
100-41-4	Ethylbenzene	106.17	ND		12	4.0
75-09-2	Methylene Chloride	84.93	ND		30	19
1634-04-4	Methyl tert-butyl ether	88.15	ND		60	10
91-20-3	Naphthalene	128.17	ND		6.0	6.0
127-18-4	Tetrachloroethene	165.83	ND		12	2.4
108-88-3	Toluene	92.14	ND		18	18
156-60-5	trans-1,2-Dichloroethene	96.94	ND		12	3.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		12	5.8
71-55-6	1,1,1-Trichloroethane	133.41	ND		12	1.8
79-00-5	1,1,2-Trichloroethane	133.41	ND		12	3.1
79-01-6	Trichloroethene	131.39	760		6.0	2.1
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		12	5.1
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		12	3.7
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		12	3.9
75-01-4	Vinyl chloride	62.50	ND		6.0	4.3
1330-20-7	Xylenes, Total	106.17	ND		24	3.6

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-171-A-22 Lab Sample ID: 140-7360-3

Matrix: Air Lab File ID: GC16P112.D

Analysis Method: TO 15 LL Date Collected: 03/08/2017 10:39

Sample wt/vol: 11(mL) Date Analyzed: 03/16/2017 20:38

Soil Aliquot Vol: Dilution Factor: 3.29

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9483 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		38	11
56-23-5	Carbon tetrachloride	153.81	ND		75	14
75-45-6	Chlorodifluoromethane	86.47	ND		42	7.9
67-66-3	Chloroform	119.38	ND		58	11
156-59-2	cis-1,2-Dichloroethene	96.94	94		47	14
75-71-8	Dichlorodifluoromethane	120.91	ND		59	20
75-34-3	1,1-Dichloroethane	98.96	22	J	48	6.1
107-06-2	1,2-Dichloroethane	98.96	ND		48	12
75-35-4	1,1-Dichloroethene	96.94	1400		47	8.3
100-41-4	Ethylbenzene	106.17	ND		52	18
75-09-2	Methylene Chloride	84.93	ND		100	68
1634-04-4	Methyl tert-butyl ether	88.15	ND		220	37
91-20-3	Naphthalene	128.17	ND		31	31
127-18-4	Tetrachloroethene	165.83	ND		81	16
108-88-3	Toluene	92.14	ND		68	68
156-60-5	trans-1,2-Dichloroethene	96.94	ND		47	12
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		89	43
71-55-6	1,1,1-Trichloroethane	133.41	ND		65	9.8
79-00-5	1,1,2-Trichloroethane	133.41	ND		65	17
79-01-6	Trichloroethene	131.39	4100		32	11
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		59	25
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		59	18
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		59	19
75-01-4	Vinyl chloride	62.50	ND		15	11
1330-20-7	Xylenes, Total	106.17	ND		100	16

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-172-A-22 | Lab Sample ID: 140-7360-4

Matrix: Air | Lab File ID: GC16P113.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 10:51

Sample wt/vol: 100(mL) | Date Analyzed: 03/16/2017 21:20

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 9483 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.88		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.17	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.27	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	2.6		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-172-A-22 Lab Sample ID: 140-7360-4

Matrix: Air Lab File ID: GC16P113.D

Analysis Method: TO 15 LL Date Collected: 03/08/2017 10:51

Sample wt/vol: 100(mL) Date Analyzed: 03/16/2017 21:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9483 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.47	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.1		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.66	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.1	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	7.4		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	14		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-173-A-22 | Lab Sample ID: 140-7360-5

Matrix: Air | Lab File ID: GC16P114.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 10:42

Sample wt/vol: 20(mL) | Date Analyzed: 03/16/2017 22:02

Soil Aliquot Vol: | Dilution Factor: 10.52

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9483 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		21	6.0
56-23-5	Carbon tetrachloride	153.81	ND		21	3.9
75-45-6	Chlorodifluoromethane	86.47	ND		21	3.9
67-66-3	Chloroform	119.38	ND		21	3.9
156-59-2	cis-1,2-Dichloroethene	96.94	62		21	6.3
75-71-8	Dichlorodifluoromethane	120.91	ND		21	7.1
75-34-3	1,1-Dichloroethane	98.96	13	J	21	2.6
107-06-2	1,2-Dichloroethane	98.96	ND		21	5.0
75-35-4	1,1-Dichloroethene	96.94	170		21	3.7
100-41-4	Ethylbenzene	106.17	ND		21	7.1
75-09-2	Methylene Chloride	84.93	ND		53	34
1634-04-4	Methyl tert-butyl ether	88.15	ND		110	18
91-20-3	Naphthalene	128.17	ND		11	11
127-18-4	Tetrachloroethene	165.83	ND		21	4.2
108-88-3	Toluene	92.14	ND		32	32
156-60-5	trans-1,2-Dichloroethene	96.94	ND		21	5.3
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		21	10
71-55-6	1,1,1-Trichloroethane	133.41	ND		21	3.2
79-00-5	1,1,2-Trichloroethane	133.41	ND		21	5.5
79-01-6	Trichloroethene	131.39	1500		11	3.7
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		21	8.9
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		21	6.6
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		21	6.8
75-01-4	Vinyl chloride	62.50	ND		11	7.6
1330-20-7	Xylenes, Total	106.17	ND		42	6.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-173-A-22 | Lab Sample ID: 140-7360-5

Matrix: Air | Lab File ID: GC16P114.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 10:42

Sample wt/vol: 20(mL) | Date Analyzed: 03/16/2017 22:02

Soil Aliquot Vol: | Dilution Factor: 10.52

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9483 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		67	19
56-23-5	Carbon tetrachloride	153.81	ND		130	25
75-45-6	Chlorodifluoromethane	86.47	ND		74	14
67-66-3	Chloroform	119.38	ND		100	19
156-59-2	cis-1,2-Dichloroethene	96.94	250		83	25
75-71-8	Dichlorodifluoromethane	120.91	ND		100	35
75-34-3	1,1-Dichloroethane	98.96	51	J	85	11
107-06-2	1,2-Dichloroethane	98.96	ND		85	20
75-35-4	1,1-Dichloroethene	96.94	660		83	15
100-41-4	Ethylbenzene	106.17	ND		91	31
75-09-2	Methylene Chloride	84.93	ND		180	120
1634-04-4	Methyl tert-butyl ether	88.15	ND		380	64
91-20-3	Naphthalene	128.17	ND		55	55
127-18-4	Tetrachloroethene	165.83	ND		140	29
108-88-3	Toluene	92.14	ND		120	120
156-60-5	trans-1,2-Dichloroethene	96.94	ND		83	21
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		160	76
71-55-6	1,1,1-Trichloroethane	133.41	ND		110	17
79-00-5	1,1,2-Trichloroethane	133.41	ND		110	30
79-01-6	Trichloroethene	131.39	7900		57	20
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		100	44
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		100	32
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		100	34
75-01-4	Vinyl chloride	62.50	ND		27	19
1330-20-7	Xylenes, Total	106.17	ND		180	27

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-174-A-22 | Lab Sample ID: 140-7360-6

Matrix: Air | Lab File ID: GC16P115.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 10:36

Sample wt/vol: 20(mL) | Date Analyzed: 03/16/2017 22:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9483 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		2.0	0.58
56-23-5	Carbon tetrachloride	153.81	ND		2.0	0.38
75-45-6	Chlorodifluoromethane	86.47	0.42	J	2.0	0.38
67-66-3	Chloroform	119.38	0.79	J	2.0	0.38
156-59-2	cis-1,2-Dichloroethene	96.94	7.4		2.0	0.60
75-71-8	Dichlorodifluoromethane	120.91	ND		2.0	0.68
75-34-3	1,1-Dichloroethane	98.96	2.1		2.0	0.25
107-06-2	1,2-Dichloroethane	98.96	ND		2.0	0.48
75-35-4	1,1-Dichloroethene	96.94	18		2.0	0.35
100-41-4	Ethylbenzene	106.17	ND		2.0	0.68
75-09-2	Methylene Chloride	84.93	ND		5.0	3.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		10	1.7
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.0	0.40
108-88-3	Toluene	92.14	ND		3.0	3.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		2.0	0.50
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		2.0	0.98
71-55-6	1,1,1-Trichloroethane	133.41	2.7	B	2.0	0.30
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.0	0.53
79-01-6	Trichloroethene	131.39	170		1.0	0.35
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.85
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.63
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.65
75-01-4	Vinyl chloride	62.50	ND		1.0	0.73
1330-20-7	Xylenes, Total	106.17	ND		4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-174-A-22 | Lab Sample ID: 140-7360-6

Matrix: Air | Lab File ID: GC16P115.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 10:36

Sample wt/vol: 20(mL) | Date Analyzed: 03/16/2017 22:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9483 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		13	2.4
75-45-6	Chlorodifluoromethane	86.47	1.5	J	7.1	1.3
67-66-3	Chloroform	119.38	3.8	J	9.8	1.8
156-59-2	cis-1,2-Dichloroethene	96.94	29		7.9	2.4
75-71-8	Dichlorodifluoromethane	120.91	ND		9.9	3.3
75-34-3	1,1-Dichloroethane	98.96	8.4		8.1	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.1	1.9
75-35-4	1,1-Dichloroethene	96.94	72		7.9	1.4
100-41-4	Ethylbenzene	106.17	ND		8.7	2.9
75-09-2	Methylene Chloride	84.93	ND		17	11
1634-04-4	Methyl tert-butyl ether	88.15	ND		36	6.1
91-20-3	Naphthalene	128.17	ND		5.2	5.2
127-18-4	Tetrachloroethene	165.83	ND		14	2.7
108-88-3	Toluene	92.14	ND		11	11
156-60-5	trans-1,2-Dichloroethene	96.94	ND		7.9	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		15	7.2
71-55-6	1,1,1-Trichloroethane	133.41	15	B	11	1.6
79-00-5	1,1,2-Trichloroethane	133.41	ND		11	2.9
79-01-6	Trichloroethene	131.39	920		5.4	1.9
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		9.8	4.2
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		9.8	3.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		9.8	3.2
75-01-4	Vinyl chloride	62.50	ND		2.6	1.9
1330-20-7	Xylenes, Total	106.17	ND		17	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-175-A-22 | Lab Sample ID: 140-7360-7

Matrix: Air | Lab File ID: GC16P116.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 10:43

Sample wt/vol: 11(mL) | Date Analyzed: 03/16/2017 23:25

Soil Aliquot Vol: | Dilution Factor: 358.2

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9483 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1300	370
56-23-5	Carbon tetrachloride	153.81	ND		1300	240
75-45-6	Chlorodifluoromethane	86.47	ND		1300	240
67-66-3	Chloroform	119.38	ND		1300	240
156-59-2	cis-1,2-Dichloroethene	96.94	2400		1300	390
75-71-8	Dichlorodifluoromethane	120.91	ND		1300	440
75-34-3	1,1-Dichloroethane	98.96	380	J	1300	160
107-06-2	1,2-Dichloroethane	98.96	ND		1300	310
75-35-4	1,1-Dichloroethene	96.94	12000		1300	230
100-41-4	Ethylbenzene	106.17	ND		1300	440
75-09-2	Methylene Chloride	84.93	ND		3300	2100
1634-04-4	Methyl tert-butyl ether	88.15	ND		6500	1100
91-20-3	Naphthalene	128.17	ND		650	650
127-18-4	Tetrachloroethene	165.83	ND		1300	260
108-88-3	Toluene	92.14	ND		2000	2000
156-60-5	trans-1,2-Dichloroethene	96.94	1100	J	1300	330
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		1300	630
71-55-6	1,1,1-Trichloroethane	133.41	ND		1300	200
79-00-5	1,1,2-Trichloroethane	133.41	ND		1300	340
79-01-6	Trichloroethene	131.39	120000		650	230
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		1300	550
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		1300	410
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		1300	420
75-01-4	Vinyl chloride	62.50	ND		650	470
1330-20-7	Xylenes, Total	106.17	ND		2600	390

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-175-A-22 | Lab Sample ID: 140-7360-7

Matrix: Air | Lab File ID: GC16P116.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 10:43

Sample wt/vol: 11(mL) | Date Analyzed: 03/16/2017 23:25

Soil Aliquot Vol: | Dilution Factor: 358.2

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9483 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		4200	1200
56-23-5	Carbon tetrachloride	153.81	ND		8200	1500
75-45-6	Chlorodifluoromethane	86.47	ND		4600	860
67-66-3	Chloroform	119.38	ND		6400	1200
156-59-2	cis-1,2-Dichloroethene	96.94	9400		5200	1500
75-71-8	Dichlorodifluoromethane	120.91	ND		6400	2200
75-34-3	1,1-Dichloroethane	98.96	1500	J	5300	660
107-06-2	1,2-Dichloroethane	98.96	ND		5300	1300
75-35-4	1,1-Dichloroethene	96.94	48000		5200	900
100-41-4	Ethylbenzene	106.17	ND		5700	1900
75-09-2	Methylene Chloride	84.93	ND		11000	7400
1634-04-4	Methyl tert-butyl ether	88.15	ND		23000	4000
91-20-3	Naphthalene	128.17	ND		3400	3400
127-18-4	Tetrachloroethene	165.83	ND		8800	1800
108-88-3	Toluene	92.14	ND		7400	7400
156-60-5	trans-1,2-Dichloroethene	96.94	4300	J	5200	1300
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		9700	4700
71-55-6	1,1,1-Trichloroethane	133.41	ND		7100	1100
79-00-5	1,1,2-Trichloroethane	133.41	ND		7100	1900
79-01-6	Trichloroethene	131.39	650000		3500	1200
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		6400	2700
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		6400	2000
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		6400	2100
75-01-4	Vinyl chloride	62.50	ND		1700	1200
1330-20-7	Xylenes, Total	106.17	ND		11000	1700

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-176-A-22 | Lab Sample ID: 140-7360-8

Matrix: Air | Lab File ID: GC17p113.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 10:34

Sample wt/vol: 100(mL) | Date Analyzed: 03/18/2017 01:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9484 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.41		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.097	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.82	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.61		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.0		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.29	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-176-A-22 Lab Sample ID: 140-7360-8

Matrix: Air Lab File ID: GC17p113.D

Analysis Method: TO 15 LL Date Collected: 03/08/2017 10:34

Sample wt/vol: 100(mL) Date Analyzed: 03/18/2017 01:12

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9484 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.63	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.38	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	5.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-177-A-22 | Lab Sample ID: 140-7360-9

Matrix: Air | Lab File ID: GC16P202.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 10:46

Sample wt/vol: 100(mL) | Date Analyzed: 03/17/2017 00:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9483 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.36	J	0.40	0.075
67-66-3	Chloroform	119.38	0.17	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.80	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.11	J	0.40	0.080
108-88-3	Toluene	92.14	0.81		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.53		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.51	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-177-A-22 | Lab Sample ID: 140-7360-9

Matrix: Air | Lab File ID: GC16P202.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 10:46

Sample wt/vol: 100(mL) | Date Analyzed: 03/17/2017 00:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9483 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	0.82	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.73	J	2.7	0.54
108-88-3	Toluene	92.14	3.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.9		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

APPENDIX D—DATA-VALIDATION REPORTS

TETRA TECH

INTERNAL CORRESPONDENCE

TO: **S. BRENNER** **DATE:** **APRIL 04, 2017**

FROM: **LEIGH A. CIOFANI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
LOCKHEED MARTIN CORPORATION (LMC) – MIDDLE RIVER COMPLEX (MRC)
SAMPLE DELIVERY GROUP (SDG) 140-7292-1

SAMPLES: 27 / Air / VOC

SV-004-C-22	SV-015-A-22	SV-060-C-22
SV-075-A-22	SV-076-A-22	SV-078-A-22
SV-079-A-22	SV-081-A-22	SV-088-C-22
SV-100-B-22	SV-101-B-22	SV-102-C-22
SV-113-C-22	SV-116-A-22	SV-118-A-22
SV-126-C-22	SV-131-C-22	SV-136-A-22
SV-138-A-22	SV-139-A-22	SV-142-C-22
SV-149-C-22	SV-150-C-22	SV-152-C-22
SV-153-C-22	SV-155-C-22	SV-168-A-22

OVERVIEW

The sample set for LMC – MRC, SDG 140-7292-1, consists of twenty-seven (27) soil vapor environmental samples. All samples were analyzed for select volatile organic compounds (VOC). Original samples from three (3) field duplicate sample pairs are included in this SDG:

- SV-131-C-22 (original) / SV-DUP01-C-22 (duplicate – not in this SDG),
- SV-153-C-22 (original) / SV-DUP02-C-22 (duplicate – not in this SDG),
- SV-015-A-22 (original) / SV-DUP03-A-22 (duplicate – not in this SDG).

The samples were collected by Tetra Tech, Inc. on February 28 and March 1, 2017 and analyzed by TestAmerica, Inc. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank results, surrogate spike recoveries, laboratory control sample results, internal standard areas, chromatographic resolution, compound identification, compound quantitation, field duplicate precision, and detection limits. Areas of concern are listed below.

MAJOR PROBLEMS

- None.

MINOR PROBLEMS

- The initial calibration performed on 11/25/16 on instrument MJ had a percent relative standard deviation (%RSD) for naphthalene that was greater than the 30% quality control limit. Samples SV-004-C-22, SV-060-C-22, SV-088-C-22, SV-113-C-22, SV-131-C-22, SV-149-C-22, SV-150-C-22, SV-153-C-22, SV-155-C-22, SV-015-A-22, SV-116-A-22, SV-075-A-22, SV-076-A-22, SV-078-A-22, SV-079-A-22, SV-081-A-22, SV-136-A-22, SV-138-A-22, SV-139-A-22, and SV-100-B-22 were associated with this calibration. Detected and non-detected naphthalene results were qualified as estimated (J and UJ, respectively) in the associated samples.

- The result for vinyl chloride in sample SV-126-C-22 exceeded the instrument calibration range. The sample was not reanalyzed at a dilution. The detected result for vinyl chloride in sample SB-126-C-22 was qualified as estimated (J) on this basis.

- The field duplicate pair samples SV-131-C-22 / SV-DUP01-C-22 had a relative percent difference (RPD) for naphthalene that was greater than the quality control limit of 50%. The detected results for naphthalene were qualified as estimated (J) in samples SV-131-C-22 and SV-DUP01-C-22.

- Detected results reported below the RL limit but above the method detection limit (MDL) were qualified as estimated (J).

NOTES

Sample SV-001-C-22 was listed on the chain of custody, but this sample was not included in the laboratory data package or the database for this SDG. The laboratory case narrative indicates that this sample was received with the canister valve in the open position at ambient pressure (approximately 0 psi). The laboratory cancelled the analysis for this sample as per instruction from the client.

Sample SV-093-A-22 was listed on the chain of custody, but this sample was not included in the laboratory data package or the database for this SDG. The laboratory case narrative indicates that this sample was received with a pressure of -26 or lower inches of mercury. The laboratory then pressurized the canister due to insufficient sample volume. Upon receipt by the laboratory, the flow controller was found to be faulty due to the present of water. The laboratory cancelled the analysis of this sample as per instruction from the client.

Twenty-five VOC target compounds were reported for the TO-15 analysis of the samples.

Non-detected results were reported to the MDL.

Sample SV-118-A-22 was analyzed at a dilution factor of 3.81.

1,1-Dichloroethane in sample SV-102-C-22 was analyzed at a dilution factor of 4.15.

Sample SV-168-A-22 was analyzed at a dilution factor of 11.16.

The following analyte was detected in the method blanks at the following maximum concentration:

Analyte	Maximum Concentration
Naphthalene	0.238 ug/m^3 (1)

1 – Maximum concentration detected in method blank associated with preparation batch 140-9073 affecting sample SV-142-C-22.

An action level of the maximum concentration was used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were considered in evaluating for blank contamination. No action was necessary, as the detected result for naphthalene in the affected sample was greater than the action level.

EXECUTIVE SUMMARY

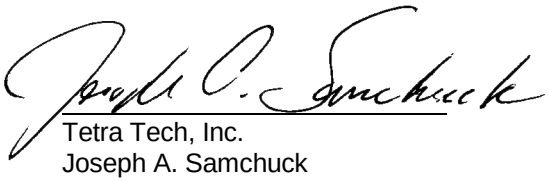
Laboratory Performance: Some detected and non-detected results were qualified due to calibration noncompliance.

Other Factors Affecting Data Quality: Some detected results were qualified for field duplicate imprecision. Results above the MDL but below the RL were qualified as estimated.

The data for these analyses were reviewed with reference to the USEPA "National Functional Guidelines for Organic Superfund Methods Data Review" (January 2017) and USEPA Method TO-15 analytical and reporting protocols. The text of this report has been formulated to address only those areas affecting data quality.



Tetra Tech, Inc.
Leigh A. Ciofani
Environmental Scientist/Data Validator



Tetra Tech, Inc.
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted method detection limit for sample and method.
J	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 07671	NSAMPLE	SV-004-C-22			SV-015-A-22			SV-060-C-22			SV-075-A-22		
SDG: 140-7292-1	LAB_ID	140-7292-2			140-7292-15			140-7292-3			140-7292-17		
FRACTION: OV-M3	SAMP_DATE	2/28/2017			3/1/2017			2/28/2017			3/1/2017		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		2.1	J	P	23			0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		2			7.6			0.2	U	
1,1-DICHLOROETHENE		0.37	J	P	6			1.2	J	P	0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		54		
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		0.61	U		1.2	J	P	110		
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		1.1	J	P	64		
BENZENE		0.37	U		1.2	J	P	0.4	J	P	0.37	U	
CARBON TETRACHLORIDE		0.47	U		0.47	U		0.47	U		0.47	U	
CHLORODIFLUOROMETHANE		1.8			6.1			3.8			2.6		
CHLOROFORM		4.3			0.58	J	P	9.1			0.37	U	
CIS-1,2-DICHLOROETHENE		38			0.73	J	P	4			0.48	U	
DICHLORODIFLUOROMETHANE		2.1			2.1			2			2		
ETHYLBENZENE		0.59	U		0.59	U		34			0.88	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		2.8	J	P	3.2	J	P	3	J	P	3.1	J	P
NAPHTHALENE		1	UJ	C	1	UJ	C	4.8	J	C	92	J	C
TETRACHLOROETHENE		0.91	J	P	0.54	U		1.1	J	P	0.54	U	
TOLUENE		2.3	U		4.2			2.3	U		2.3	U	
TOTAL XYLENES		0.52	U		2.4	J	P	310			13		
TRANS-1,2-DICHLOROETHENE		2			0.4	U		0.83	J	P	0.4	U	
TRICHLOROETHENE		110			2.3			270			3		
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	SV-076-A-22			SV-078-A-22			SV-079-A-22			SV-081-A-22		
SDG: 140-7292-1	LAB_ID	140-7292-18			140-7292-19			140-7292-20			140-7292-21		
FRACTION: OV-M3	SAMP_DATE	3/1/2017			3/1/2017			3/1/2017			3/1/2017		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.97	J	P	1.3	J	P	0.83	J	P	5.1		
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		9.9			0.84	U		0.84	U		440		
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		5.4			0.67	J	P	0.7	J	P	42		
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		5.5			0.64	U		0.64	U		23		
BENZENE		0.37	U		0.47	J	P	0.51	J	P	0.37	U	
CARBON TETRACHLORIDE		0.47	U		0.47	U		0.47	U		0.68	J	P
CHLORODIFLUOROMETHANE		1.7			2.7			3.4			5.8		
CHLOROFORM		0.37	U		0.37	U		0.37	U		3.1		
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		1.7	J	P	2.5			2.1			2.2		
ETHYLBENZENE		1.2	J	P	0.59	U		0.87	J	P	0.92	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		2.4	J	P	2.8	J	P	2.5	J	P	3.1	J	P
NAPHTHALENE		4.4	J	C	1	UJ	C	1	UJ	C	7.6	J	C
TETRACHLOROETHENE		0.54	U		0.54	U		1.5	J	P	2.5	J	P
TOLUENE		2.6			2.8			3.8			15		
TOTAL XYLENES		7.5			2.6	J	P	3.1	J	P	8.2		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		5			11			41			0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	SV-088-C-22			SV-100-B-22			SV-101-B-22			SV-102-C-22		
SDG: 140-7292-1	LAB_ID	140-7292-4			140-7292-28			140-7292-29			140-7292-5		
FRACTION: OV-M3	SAMP_DATE	2/28/2017			2/28/2017			2/28/2017			2/28/2017		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.34	J	P	130			3100		
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		4.8	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		3900		
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		2000		
1,2,3-TRIMETHYLBENZENE		1.1	J	P	0.85	J	P	1.5	J	P	35		
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		12	U	
1,2,4-TRIMETHYLBENZENE		0.67	J	P	0.61	U		2.3			31		
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		3.2	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		1.4	J	P	13	J	P
BENZENE		0.37	U		0.37	U		0.37	U		5.5	J	P
CARBON TETRACHLORIDE		0.47	U		2.5			2.1	J	P	3.9	U	
CHLORODIFLUOROMETHANE		2.2			1.2	J	P	7.4			4.6	J	P
CHLOROFORM		0.58	J	P	2			0.4	J	P	53		
CIS-1,2-DICHLOROETHENE		14			0.48	U		0.48	U		45		
DICHLORODIFLUOROMETHANE		2			2.1			5.2			5.6	U	
ETHYLBENZENE		0.87	J	P	0.59	U		1.6	J	P	580		
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		10	U	
METHYLENE CHLORIDE		3.3	J	P	2.7	J	P	3.1	J	P	19	U	
NAPHTHALENE		1.2	J	C	1	UJ	C	1.5			310		
TETRACHLOROETHENE		0.54	U		1.2	J	P	31			4.5	U	
TOLUENE		2.3	U		2.3	U		6.4			49		
TOTAL XYLENES		7.3			0.52	U		14			4600		
TRANS-1,2-DICHLOROETHENE		0.59	J	P	0.4	U		0.4	U		3.4	J	P
TRICHLOROETHENE		84			8.1			59			1000		
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		8.1		

PROJ_NO: 07671	NSAMPLE	SV-113-C-22			SV-116-A-22			SV-118-A-22			SV-126-C-22		
SDG: 140-7292-1	LAB_ID	140-7292-6			140-7292-16			140-7292-24			140-7292-7		
FRACTION: OV-M3	SAMP_DATE	2/28/2017			3/1/2017			3/1/2017			2/28/2017		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		18	J	P	3.3	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		8.7	U		5.7	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		36			2	U	
1,1-DICHLOROETHENE		0.28	U		0.42	J	P	470			620		
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		13	U		8.4	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		22	U		14	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		0.61	U		13	J	P	6.1	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U		5.9	U		3.8	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		9.7	U		6.4	U	
BENZENE		0.37	U		0.43	J	P	5.6	U		110		
CARBON TETRACHLORIDE		0.47	U		0.54	J	P	7.2	U		4.7	U	
CHLORODIFLUOROMETHANE		2.7			18			4	U		2.7	U	
CHLOROFORM		1.3	J	P	0.65	J	P	7.8	J	P	3.7	U	
CIS-1,2-DICHLOROETHENE		17			0.48	U		120			190		
DICHLORODIFLUOROMETHANE		2.1			2			10	U		6.7	U	
ETHYLBENZENE		0.59	U		0.59	U		12	J	P	5.9	U	
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		19	U		12	U	
METHYLENE CHLORIDE		2.3	J	P	2.4	J	P	34	U		23	U	
NAPHTHALENE		1	UJ	C	1	UJ	C	16	U		10	U	
TETRACHLOROETHENE		0.54	U		0.54	U		8.3	U		5.4	U	
TOLUENE		2.3	U		2.3	U		34	U		23	U	
TOTAL XYLENES		2.7	J	P	0.52	U		120			5.2	U	
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		10	J	P	16		
TRICHLOROETHENE		180			14			2000			310		
VINYL CHLORIDE		0.37	U		0.37	U		5.6	U		2600	J	L

PROJ_NO: 07671	NSAMPLE	SV-131-C-22			SV-136-A-22			SV-138-A-22			SV-139-A-22		
SDG: 140-7292-1	LAB_ID	140-7292-8			140-7292-25			140-7292-26			140-7292-27		
FRACTION: OV-M3	SAMP_DATE	2/28/2017			3/1/2017			3/1/2017			3/1/2017		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		0.34	J	P	0.76	J	P
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		2.3			0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		9.9			0.28	U	
1,2,3-TRIMETHYLBENZENE		4.5			2.4			0.84	U		13		
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		2.3			0.79	J	P	0.61	U		6.2		
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		2			0.64	U		0.64	U		9.2		
BENZENE		0.37	U		1.4			0.62	J	P	0.37	U	
CARBON TETRACHLORIDE		0.47	U		0.51	J	P	0.52	J	P	0.47	U	
CHLORODIFLUOROMETHANE		1.9			2.4			19			2.4		
CHLOROFORM		0.37	U		7.8			0.37	U		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		1.2	J	P	5.7			0.48	U	
DICHLORODIFLUOROMETHANE		1.9	J	P	2.2			1.9	J	P	2.1		
ETHYLBENZENE		1.4	J	P	3.1			0.59	U		4.7		
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		3.3	J	P	2.5	J	P	2.6	J	P	3.5		
NAPHTHALENE		4.1	J	CG	1	UJ	C	1	UJ	C	6.5	J	C
TETRACHLOROETHENE		0.54	U		0.54	U		0.62	J	P	8		
TOLUENE		2.3	U		9.7			2.3	U		2.3	U	
TOTAL XYLENES		9.2			15			0.52	U		42		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		300			82			2.5		
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	SV-142-C-22			SV-149-C-22			SV-150-C-22			SV-152-C-22		
SDG: 140-7292-1	LAB_ID	140-7292-9			140-7292-10			140-7292-11			140-7292-12		
FRACTION: OV-M3	SAMP_DATE	2/28/2017			2/28/2017			2/28/2017			2/28/2017		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		1.1	J	P	19	J	P
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		5.7	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		3.3	J	P
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		2.8	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		8.4	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		14	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		0.61	U		0.91	J	P	6.1	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		3.8	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		6.4	U	
BENZENE		0.37	U		0.87	J	P	1.2	J	P	3.7	U	
CARBON TETRACHLORIDE		0.57	J	P	0.47	U		0.47	U		4.7	U	
CHLORODIFLUOROMETHANE		1.7			0.88	J	P	27			19		
CHLOROFORM		5.2			0.37	U		0.37	U		5.5	J	P
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		41		
DICHLORODIFLUOROMETHANE		2			2			2.1			6.7	U	
ETHYLBENZENE		0.86	J	P	0.59	U		1.8			5.9	U	
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		12	U	
METHYLENE CHLORIDE		8.2			3.2	J	P	3	J	P	23	U	
NAPHTHALENE		2.1			1	UJ	C	1	UJ	C	10	U	
TETRACHLOROETHENE		0.54	U		0.54	U		0.54	U		5.4	U	
TOLUENE		2.3	U		5.3			7.3			23	U	
TOTAL XYLENES		4.8			2.6	J	P	6.4			5.2	U	
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		4	U	
TRICHLOROETHENE		8.9			4.4			0.5	J	P	1300		
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		3.7	U	

PROJ_NO: 07671	NSAMPLE	SV-153-C-22			SV-155-C-22			SV-168-A-22		
SDG: 140-7292-1	LAB_ID	140-7292-13			140-7292-14			140-7292-23		
FRACTION: OV-M3	SAMP_DATE	2/28/2017			2/28/2017			3/1/2017		
MEDIA: AIR	QC_TYPE	NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS									
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		59	J	P
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		49	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		70	J	P
1,1-DICHLOROETHENE		0.28	U		0.28	U		4900		
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		72	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		120	U	
1,2,4-TRIMETHYLBENZENE		0.64	J	P	0.61	U		53	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U		33	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		55	U	
BENZENE		0.37	U		0.48	J	P	32	U	
CARBON TETRACHLORIDE		0.47	U		0.47	U		41	U	
CHLORODIFLUOROMETHANE		3.8			2.9			23	U	
CHLOROFORM		0.37	U		0.37	U		120	J	P
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		270		
DICHLORODIFLUOROMETHANE		1.9	J	P	2			57	U	
ETHYLBENZENE		0.59	U		0.59	U		50	U	
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		110	U	
METHYLENE CHLORIDE		2.7	J	P	3.9			190	U	
NAPHTHALENE		1	UJ	C	1	UJ	C	90	U	
TETRACHLOROETHENE		0.54	U		0.54	U		47	U	
TOLUENE		2.6			2.9			190	U	
TOTAL XYLENES		1.9	J	P	1.2	J	P	45	U	
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		34	U	
TRICHLOROETHENE		5.7			0.38	U		22000		
VINYL CHLORIDE		0.37	U		0.37	U		32	U	

Appendix B

Results as Reported by the Laboratory

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-004-C-22 Lab Sample ID: 140-7292-2

Matrix: Air Lab File ID: JC03P101.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 11:30

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 16:43

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9072 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.50		0.40	0.075
67-66-3	Chloroform	119.38	0.87		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	9.5		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.42		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.093	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.81	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.13	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.51		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	20		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	76		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-004-C-22 | Lab Sample ID: 140-7292-2

Matrix: Air | Lab File ID: JC03P101.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:30

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 16:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	4.3		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	38		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.37	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.91	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	2.0		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	110		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	76		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-015-A-22 | Lab Sample ID: 140-7292-15

Matrix: Air | Lab File ID: JC03P110.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:15

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 23:23

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.36	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.7		0.40	0.075
67-66-3	Chloroform	119.38	0.12	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.18	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.42		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.49		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	1.5		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.93	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.39	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.42		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.55	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	70		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-015-A-22 | Lab Sample ID: 140-7292-15

Matrix: Air | Lab File ID: JC03P110.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:15

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 23:23

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.2	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	6.1		1.4	0.27
67-66-3	Chloroform	119.38	0.58	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.73	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	2.0		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	6.0		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	2.1	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.4	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	70		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-060-C-22 | Lab Sample ID: 140-7292-3

Matrix: Air | Lab File ID: JC03P102.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:19

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 17:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.1		0.40	0.075
67-66-3	Chloroform	119.38	1.9		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	1.0		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	1.9		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.30	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	7.8		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.86	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.91		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.17	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.21	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	4.2		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	50		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.25	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.21	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	72		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	79		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-060-C-22 Lab Sample ID: 140-7292-3

Matrix: Air Lab File ID: JC03P102.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 11:19

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 17:27

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9072 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.40	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.8		1.4	0.27
67-66-3	Chloroform	119.38	9.1		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	4.0		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	7.6		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.2	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	34		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	4.8		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.1	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.83	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	23		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	270		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.2	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.1	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	310		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	79		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-075-A-22 | Lab Sample ID: 140-7292-17

Matrix: Air | Lab File ID: JC03P112.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 11:01

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 00:53

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.75		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.88	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	17		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.55		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	11		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	23		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	13		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	84		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-075-A-22 | Lab Sample ID: 140-7292-17

Matrix: Air | Lab File ID: JC03P112.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 11:01

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 00:53

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.6		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.88	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	92		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	3.0		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	54		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	110		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	64		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	13		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	84		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-076-A-22 | Lab Sample ID: 140-7292-18

Matrix: Air | Lab File ID: JC03P113.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:55

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 01:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.48		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.35	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.27	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.69	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.83		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.70		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.18	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.93		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	2.0		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	1.1		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	1.1		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	78		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-076-A-22 | Lab Sample ID: 140-7292-18

Matrix: Air | Lab File ID: JC03P113.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:55

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 01:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.7	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.2	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	4.4		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.6		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.97	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	5.0		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	9.9		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	5.4		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	5.5		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	78		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-078-A-22 | Lab Sample ID: 140-7292-19

Matrix: Air | Lab File ID: JC03P114.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:58

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 02:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.77		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.81	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.75		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.25	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	2.0		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.61	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-078-A-22 | Lab Sample ID: 140-7292-19

Matrix: Air | Lab File ID: JC03P114.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:58

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 02:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.47	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.3	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	11		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.67	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.6	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-079-A-22 | Lab Sample ID: 140-7292-20

Matrix: Air | Lab File ID: JC03P115.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:37

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 03:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.95		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.43		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.72	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.22	J	0.40	0.080
108-88-3	Toluene	92.14	1.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.15	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	7.7		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.72	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	83		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-079-A-22 Lab Sample ID: 140-7292-20

Matrix: Air Lab File ID: JC03P115.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 10:37

Sample wt/vol: 100(mL) Date Analyzed: 03/04/2017 03:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9072 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.51	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.4		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.87	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.5	J	2.7	0.54
108-88-3	Toluene	92.14	3.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.83	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	41		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.70	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.1	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	83		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-081-A-22 Lab Sample ID: 140-7292-21

Matrix: Air Lab File ID: JC03P116.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 10:32

Sample wt/vol: 100(mL) Date Analyzed: 03/04/2017 04:35

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9072 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.11	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.6		0.40	0.075
67-66-3	Chloroform	119.38	0.63		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.21	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.90	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	1.4		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.37	J	0.40	0.080
108-88-3	Toluene	92.14	4.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.94		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	*1,2,3-Trimethylbenzene*	*120.19*	*100*	*E*	*0.40*	*0.17*
95-63-6	1,2,4-Trimethylbenzene	120.20	8.6		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	4.7		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.9		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	76		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-081-A-22 | Lab Sample ID: 140-7292-21

Matrix: Air | Lab File ID: JC03P116.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:32

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 04:35

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.68	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.8		1.4	0.27
67-66-3	Chloroform	119.38	3.1		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.92	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	7.6		1.0	1.0
127-18-4	Tetrachloroethene	165.83	2.5	J	2.7	0.54
108-88-3	Toluene	92.14	15		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	5.1		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	*1,2,3-Trimethylbenzene*	*120.19*	*490*	*E*	*2.0*	*0.84*
95-63-6	1,2,4-Trimethylbenzene	120.20	42		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	23		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	76		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-081-A-22 DL Lab Sample ID: 140-7292-21 DL

Matrix: Air Lab File ID: JC04p204.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 10:32

Sample wt/vol: 50(mL) Date Analyzed: 03/04/2017 21:48

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9073 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
526-73-8	1,2,3-Trimethylbenzene	120.19	89		0.80	0.34

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	76		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-081-A-22 DL Lab Sample ID: 140-7292-21 DL

Matrix: Air Lab File ID: JC04p204.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 10:32

Sample wt/vol: 50(mL) Date Analyzed: 03/04/2017 21:48

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9073 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
526-73-8	1,2,3-Trimethylbenzene	120.19	440		3.9	1.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	76		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-088-C-22 | Lab Sample ID: 140-7292-4

Matrix: Air | Lab File ID: JC03P103.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 10:54

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 18:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.62		0.40	0.075
67-66-3	Chloroform	119.38	0.12	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	3.6		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.95	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.23		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.15	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	16		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.22	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	84		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-088-C-22 | Lab Sample ID: 140-7292-4

Matrix: Air | Lab File ID: JC03P103.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 10:54

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 18:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.2		1.4	0.27
67-66-3	Chloroform	119.38	0.58	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	14		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.87	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.2		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.59	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	84		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	1.1	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.67	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.3		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	84		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-100-B-22 | Lab Sample ID: 140-7292-28

Matrix: Air | Lab File ID: JC03P204.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:13

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 07:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.40		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	0.42		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.43		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.77	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.17	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.063	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.5		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.17	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-100-B-22 | Lab Sample ID: 140-7292-28

Matrix: Air | Lab File ID: JC03P204.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:13

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 07:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	2.5		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	2.0		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.2	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.34	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	8.1		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	0.85	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-101-B-22 | Lab Sample ID: 140-7292-29

Matrix: Air | Lab File ID: EC03P116.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:11

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 04:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9031 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.34	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.1		0.40	0.075
67-66-3	Chloroform	119.38	0.083	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	1.1		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.37	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.90	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.28		0.20	0.20
127-18-4	Tetrachloroethene	165.83	4.6		0.40	0.080
108-88-3	Toluene	92.14	1.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	24		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	11		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.31	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.48		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.29	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-101-B-22 | Lab Sample ID: 140-7292-29

Matrix: Air | Lab File ID: EC03P116.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:11

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 04:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9031 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	2.1	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	7.4		1.4	0.27
67-66-3	Chloroform	119.38	0.40	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	5.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.6	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.5		1.0	1.0
127-18-4	Tetrachloroethene	165.83	31		2.7	0.54
108-88-3	Toluene	92.14	6.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	130		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	59		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	1.5	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.3		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.4	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	14		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-102-C-22 | Lab Sample ID: 140-7292-5

Matrix: Air | Lab File ID: EC03P110.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:26

Sample wt/vol: 12(mL) | Date Analyzed: 03/04/2017 00:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9031 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.7	J	3.3	0.96
56-23-5	Carbon tetrachloride	153.81	ND		3.3	0.63
75-45-6	Chlorodifluoromethane	86.47	1.3	J	3.3	0.63
67-66-3	Chloroform	119.38	11		3.3	0.63
156-59-2	cis-1,2-Dichloroethene	96.94	11		3.3	1.0
75-71-8	Dichlorodifluoromethane	120.91	ND		3.3	1.1
75-34-3	*1,1-Dichloroethane*	*98.96*	*870*	*E*	*3.3*	*0.42*
107-06-2	1,2-Dichloroethane	98.96	ND		3.3	0.79
75-35-4	1,1-Dichloroethene	96.94	510		3.3	0.58
100-41-4	Ethylbenzene	106.17	130		3.3	1.1
75-09-2	Methylene Chloride	84.93	ND		8.3	5.4
1634-04-4	Methyl tert-butyl ether	88.15	ND		17	2.8
91-20-3	Naphthalene	128.17	58		1.7	1.7
127-18-4	Tetrachloroethene	165.83	ND		3.3	0.67
108-88-3	Toluene	92.14	13		5.0	5.0
156-60-5	trans-1,2-Dichloroethene	96.94	0.85	J	3.3	0.83
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.3	1.6
71-55-6	1,1,1-Trichloroethane	133.41	570		3.3	0.50
79-00-5	1,1,2-Trichloroethane	133.41	ND		3.3	0.88
79-01-6	Trichloroethene	131.39	190		1.7	0.58
526-73-8	1,2,3-Trimethylbenzene	120.19	7.0		3.3	1.4
95-63-6	1,2,4-Trimethylbenzene	120.20	6.3		3.3	1.0
108-67-8	1,3,5-Trimethylbenzene	120.20	2.6	J	3.3	1.1
75-01-4	Vinyl chloride	62.50	3.2		1.7	1.2
1330-20-7	Xylenes, Total	106.17	1100		6.7	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-102-C-22 | Lab Sample ID: 140-7292-5

Matrix: Air | Lab File ID: EC03P110.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:26

Sample wt/vol: 12(mL) | Date Analyzed: 03/04/2017 00:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9031 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	5.5	J	11	3.1
56-23-5	Carbon tetrachloride	153.81	ND		21	3.9
75-45-6	Chlorodifluoromethane	86.47	4.6	J	12	2.2
67-66-3	Chloroform	119.38	53		16	3.1
156-59-2	cis-1,2-Dichloroethene	96.94	45		13	4.0
75-71-8	Dichlorodifluoromethane	120.91	ND		16	5.6
75-34-3	*1,1-Dichloroethane*	*98.96*	*3500*	*E*	*13*	*1.7*
107-06-2	1,2-Dichloroethane	98.96	ND		13	3.2
75-35-4	1,1-Dichloroethene	96.94	2000		13	2.3
100-41-4	Ethylbenzene	106.17	580		14	4.9
75-09-2	Methylene Chloride	84.93	ND		29	19
1634-04-4	Methyl tert-butyl ether	88.15	ND		60	10
91-20-3	Naphthalene	128.17	310		8.7	8.7
127-18-4	Tetrachloroethene	165.83	ND		23	4.5
108-88-3	Toluene	92.14	49		19	19
156-60-5	trans-1,2-Dichloroethene	96.94	3.4	J	13	3.3
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		25	12
71-55-6	1,1,1-Trichloroethane	133.41	3100		18	2.7
79-00-5	1,1,2-Trichloroethane	133.41	ND		18	4.8
79-01-6	Trichloroethene	131.39	1000		9.0	3.1
526-73-8	1,2,3-Trimethylbenzene	120.19	35		16	7.0
95-63-6	1,2,4-Trimethylbenzene	120.20	31		16	5.1
108-67-8	1,3,5-Trimethylbenzene	120.20	13	J	16	5.3
75-01-4	Vinyl chloride	62.50	8.1		4.3	3.1
1330-20-7	Xylenes, Total	106.17	4600		29	4.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-102-C-22 DL Lab Sample ID: 140-7292-5 DL

Matrix: Air Lab File ID: JC04p201.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 11:26

Sample wt/vol: 11(mL) Date Analyzed: 03/04/2017 18:50

Soil Aliquot Vol: Dilution Factor: 4.15

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9073 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	950		15	1.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	74		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-102-C-22 DL Lab Sample ID: 140-7292-5 DL

Matrix: Air Lab File ID: JC04p201.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 11:26

Sample wt/vol: 11(mL) Date Analyzed: 03/04/2017 18:50

Soil Aliquot Vol: Dilution Factor: 4.15

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9073 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	3900		61	7.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	74		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-113-C-22 | Lab Sample ID: 140-7292-6

Matrix: Air | Lab File ID: JC03P104.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:05

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 18:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.77		0.40	0.075
67-66-3	Chloroform	119.38	0.27	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	4.2		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.43		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.65	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	33		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.62	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	76		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-113-C-22 | Lab Sample ID: 140-7292-6

Matrix: Air | Lab File ID: JC03P104.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:05

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 18:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.7		1.4	0.27
67-66-3	Chloroform	119.38	1.3	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	17		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	180		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.7	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	76		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-116-A-22 | Lab Sample ID: 140-7292-16

Matrix: Air | Lab File ID: JC03P111.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:04

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 00:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.086	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	5.1		0.40	0.075
67-66-3	Chloroform	119.38	0.13	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.11	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.69	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	2.6		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-116-A-22 Lab Sample ID: 140-7292-16

Matrix: Air Lab File ID: JC03P111.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 10:04

Sample wt/vol: 100(mL) Date Analyzed: 03/04/2017 00:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9072 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.43	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.54	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	18		1.4	0.27
67-66-3	Chloroform	119.38	0.65	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.42	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	14		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-118-A-22 | Lab Sample ID: 140-7292-24

Matrix: Air | Lab File ID: EC03P115.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:16

Sample wt/vol: 25(mL) | Date Analyzed: 03/04/2017 03:54

Soil Aliquot Vol: | Dilution Factor: 3.81

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9031 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		6.1	1.8
56-23-5	Carbon tetrachloride	153.81	ND		6.1	1.1
75-45-6	Chlorodifluoromethane	86.47	ND		6.1	1.1
67-66-3	Chloroform	119.38	1.6	J	6.1	1.1
156-59-2	cis-1,2-Dichloroethene	96.94	30		6.1	1.8
75-71-8	Dichlorodifluoromethane	120.91	ND		6.1	2.1
75-34-3	1,1-Dichloroethane	98.96	8.9		6.1	0.76
107-06-2	1,2-Dichloroethane	98.96	ND		6.1	1.4
75-35-4	1,1-Dichloroethene	96.94	120		6.1	1.1
100-41-4	Ethylbenzene	106.17	2.9	J	6.1	2.1
75-09-2	Methylene Chloride	84.93	ND		15	9.9
1634-04-4	Methyl tert-butyl ether	88.15	ND		30	5.2
91-20-3	Naphthalene	128.17	ND		3.0	3.0
127-18-4	Tetrachloroethene	165.83	ND		6.1	1.2
108-88-3	Toluene	92.14	ND		9.1	9.1
156-60-5	trans-1,2-Dichloroethene	96.94	2.6	J	6.1	1.5
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		6.1	3.0
71-55-6	1,1,1-Trichloroethane	133.41	3.4	J	6.1	0.91
79-00-5	1,1,2-Trichloroethane	133.41	ND		6.1	1.6
79-01-6	Trichloroethene	131.39	370		3.0	1.1
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		6.1	2.6
95-63-6	1,2,4-Trimethylbenzene	120.20	2.6	J	6.1	1.9
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		6.1	2.0
75-01-4	Vinyl chloride	62.50	ND		3.0	2.2
1330-20-7	Xylenes, Total	106.17	28		12	1.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-118-A-22 | Lab Sample ID: 140-7292-24

Matrix: Air | Lab File ID: EC03P115.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:16

Sample wt/vol: 25(mL) | Date Analyzed: 03/04/2017 03:54

Soil Aliquot Vol: | Dilution Factor: 3.81

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9031 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		19	5.6
56-23-5	Carbon tetrachloride	153.81	ND		38	7.2
75-45-6	Chlorodifluoromethane	86.47	ND		22	4.0
67-66-3	Chloroform	119.38	7.8	J	30	5.6
156-59-2	cis-1,2-Dichloroethene	96.94	120		24	7.3
75-71-8	Dichlorodifluoromethane	120.91	ND		30	10
75-34-3	1,1-Dichloroethane	98.96	36		25	3.1
107-06-2	1,2-Dichloroethane	98.96	ND		25	5.9
75-35-4	1,1-Dichloroethene	96.94	470		24	4.2
100-41-4	Ethylbenzene	106.17	12	J	26	8.9
75-09-2	Methylene Chloride	84.93	ND		53	34
1634-04-4	Methyl tert-butyl ether	88.15	ND		110	19
91-20-3	Naphthalene	128.17	ND		16	16
127-18-4	Tetrachloroethene	165.83	ND		41	8.3
108-88-3	Toluene	92.14	ND		34	34
156-60-5	trans-1,2-Dichloroethene	96.94	10	J	24	6.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		45	22
71-55-6	1,1,1-Trichloroethane	133.41	18	J	33	5.0
79-00-5	1,1,2-Trichloroethane	133.41	ND		33	8.7
79-01-6	Trichloroethene	131.39	2000		16	5.7
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		30	13
95-63-6	1,2,4-Trimethylbenzene	120.20	13	J	30	9.4
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		30	9.7
75-01-4	Vinyl chloride	62.50	ND		7.8	5.6
1330-20-7	Xylenes, Total	106.17	120		53	7.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-126-C-22 Lab Sample ID: 140-7292-7

Matrix: Air Lab File ID: EC03P111.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 10:41

Sample wt/vol: 10(mL) Date Analyzed: 03/04/2017 01:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9031 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	34		4.0	1.2
56-23-5	Carbon tetrachloride	153.81	ND		4.0	0.75
75-45-6	Chlorodifluoromethane	86.47	ND		4.0	0.75
67-66-3	Chloroform	119.38	ND		4.0	0.75
156-59-2	cis-1,2-Dichloroethene	96.94	47		4.0	1.2
75-71-8	Dichlorodifluoromethane	120.91	ND		4.0	1.4
75-34-3	1,1-Dichloroethane	98.96	ND		4.0	0.50
107-06-2	1,2-Dichloroethane	98.96	ND		4.0	0.95
75-35-4	1,1-Dichloroethene	96.94	160		4.0	0.70
100-41-4	Ethylbenzene	106.17	ND		4.0	1.4
75-09-2	Methylene Chloride	84.93	ND		10	6.5
1634-04-4	Methyl tert-butyl ether	88.15	ND		20	3.4
91-20-3	Naphthalene	128.17	ND		2.0	2.0
127-18-4	Tetrachloroethene	165.83	ND		4.0	0.80
108-88-3	Toluene	92.14	ND		6.0	6.0
156-60-5	trans-1,2-Dichloroethene	96.94	4.0		4.0	1.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		4.0	2.0
71-55-6	1,1,1-Trichloroethane	133.41	ND		4.0	0.60
79-00-5	1,1,2-Trichloroethane	133.41	ND		4.0	1.1
79-01-6	Trichloroethene	131.39	58		2.0	0.70
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		4.0	1.7
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		4.0	1.3
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		4.0	1.3
75-01-4	*Vinyl chloride*	*62.50*	*1000*	*E*	*2.0*	*1.5*
1330-20-7	Xylenes, Total	106.17	ND		8.0	1.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-126-C-22 Lab Sample ID: 140-7292-7

Matrix: Air Lab File ID: EC03P111.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 10:41

Sample wt/vol: 10(mL) Date Analyzed: 03/04/2017 01:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9031 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	110		13	3.7
56-23-5	Carbon tetrachloride	153.81	ND		25	4.7
75-45-6	Chlorodifluoromethane	86.47	ND		14	2.7
67-66-3	Chloroform	119.38	ND		20	3.7
156-59-2	cis-1,2-Dichloroethene	96.94	190		16	4.8
75-71-8	Dichlorodifluoromethane	120.91	ND		20	6.7
75-34-3	1,1-Dichloroethane	98.96	ND		16	2.0
107-06-2	1,2-Dichloroethane	98.96	ND		16	3.8
75-35-4	1,1-Dichloroethene	96.94	620		16	2.8
100-41-4	Ethylbenzene	106.17	ND		17	5.9
75-09-2	Methylene Chloride	84.93	ND		35	23
1634-04-4	Methyl tert-butyl ether	88.15	ND		72	12
91-20-3	Naphthalene	128.17	ND		10	10
127-18-4	Tetrachloroethene	165.83	ND		27	5.4
108-88-3	Toluene	92.14	ND		23	23
156-60-5	trans-1,2-Dichloroethene	96.94	16		16	4.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		30	14
71-55-6	1,1,1-Trichloroethane	133.41	ND		22	3.3
79-00-5	1,1,2-Trichloroethane	133.41	ND		22	5.7
79-01-6	Trichloroethene	131.39	310		11	3.8
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		20	8.4
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		20	6.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		20	6.4
75-01-4	*Vinyl chloride*	*62.50*	*2600*	*E*	*5.1*	*3.7*
1330-20-7	Xylenes, Total	106.17	ND		35	5.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-126-C-22 DL Lab Sample ID: 140-7292-7 DL

Matrix: Air Lab File ID: JC04p202.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 10:41

Sample wt/vol: 10(mL) Date Analyzed: 03/04/2017 19:34

Soil Aliquot Vol: Dilution Factor: 3.66

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9073 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	62.50	710		7.3	5.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	71		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-126-C-22 DL Lab Sample ID: 140-7292-7 DL

Matrix: Air Lab File ID: JC04p202.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 10:41

Sample wt/vol: 10(mL) Date Analyzed: 03/04/2017 19:34

Soil Aliquot Vol: Dilution Factor: 3.66

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9073 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	62.50	1800		19	14

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	71		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-131-C-22 | Lab Sample ID: 140-7292-8

Matrix: Air | Lab File ID: JC03P105.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 10:35

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 19:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.54		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.31	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.94	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.79		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.92		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.48		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.40		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	81		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-131-C-22 | Lab Sample ID: 140-7292-8

Matrix: Air | Lab File ID: JC03P105.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 10:35

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 19:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.4	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	4.1		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	4.5		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.3		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	2.0		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	9.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	81		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-136-A-22 | Lab Sample ID: 140-7292-25

Matrix: Air | Lab File ID: JC03P201.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:52

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 05:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.45		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.67		0.40	0.075
67-66-3	Chloroform	119.38	1.6		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.29	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.70		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.72	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	55		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.49		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.16	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.5		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	77		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-136-A-22 Lab Sample ID: 140-7292-25

Matrix: Air Lab File ID: JC03P201.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 10:52

Sample wt/vol: 100(mL) Date Analyzed: 03/04/2017 05:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9072 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.4		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.4		1.4	0.27
67-66-3	Chloroform	119.38	7.8		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	1.2	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.1		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	9.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	300		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	2.4		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.79	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	15		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	77		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-138-A-22 | Lab Sample ID: 140-7292-26

Matrix: Air | Lab File ID: JC03P202.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:06

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 06:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.082	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	5.5		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	1.4		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.56		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	2.5		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.74	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.091	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.062	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	15		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	79		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-138-A-22 | Lab Sample ID: 140-7292-26

Matrix: Air | Lab File ID: JC03P202.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:06

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 06:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.62	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.52	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	19		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	5.7		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	2.3		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	9.9		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.6	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.62	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.34	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	82		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	79		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-139-A-22 Lab Sample ID: 140-7292-27

Matrix: Air Lab File ID: JC03P203.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 10:48

Sample wt/vol: 100(mL) Date Analyzed: 03/04/2017 06:50

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9072 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.67		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.42		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.1		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	1.2		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.2		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.14	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.46		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	2.7		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	1.3		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	1.9		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	9.6		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	78		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-139-A-22 | Lab Sample ID: 140-7292-27

Matrix: Air | Lab File ID: JC03P203.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 10:48

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 06:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.4		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	4.7		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	6.5		1.0	1.0
127-18-4	Tetrachloroethene	165.83	8.0		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.76	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	13		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	6.2		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	9.2		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	42		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	78		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-142-C-22 Lab Sample ID: 140-7292-9

Matrix: Air Lab File ID: JC04p203.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 10:52

Sample wt/vol: 100(mL) Date Analyzed: 03/04/2017 21:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9073 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.090	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.49		0.40	0.075
67-66-3	Chloroform	119.38	1.1		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.41	B	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.7		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	81		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-142-C-22 | Lab Sample ID: 140-7292-9

Matrix: Air | Lab File ID: JC04p203.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 10:52

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 21:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9073 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.57	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	5.2		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.86	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	8.2		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	2.1	B	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	8.9		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.8		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	81		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-149-C-22 | Lab Sample ID: 140-7292-10

Matrix: Air | Lab File ID: JC03P106.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 10:43

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 20:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.27	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.25	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.93	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.82		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.61	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-149-C-22 | Lab Sample ID: 140-7292-10

Matrix: Air | Lab File ID: JC03P106.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 10:43

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 20:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.87	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	0.88	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	4.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.6	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-150-C-22 Lab Sample ID: 140-7292-11

Matrix: Air Lab File ID: JC03P107.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 10:45

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 21:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9072 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.37	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	7.6		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.43		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.41		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.87	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.9		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.21	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.093	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.18	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.5		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	68		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-150-C-22 Lab Sample ID: 140-7292-11

Matrix: Air Lab File ID: JC03P107.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 10:45

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 21:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9072 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.2	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	27		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	7.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.1	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.50	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.91	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	68		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-152-C-22 | Lab Sample ID: 140-7292-12

Matrix: Air | Lab File ID: EC03P113.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 10:46

Sample wt/vol: 10(mL) | Date Analyzed: 03/04/2017 02:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9031 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		4.0	1.2
56-23-5	Carbon tetrachloride	153.81	ND		4.0	0.75
75-45-6	Chlorodifluoromethane	86.47	5.3		4.0	0.75
67-66-3	Chloroform	119.38	1.1	J	4.0	0.75
156-59-2	cis-1,2-Dichloroethene	96.94	10		4.0	1.2
75-71-8	Dichlorodifluoromethane	120.91	ND		4.0	1.4
75-34-3	1,1-Dichloroethane	98.96	0.81	J	4.0	0.50
107-06-2	1,2-Dichloroethane	98.96	ND		4.0	0.95
75-35-4	1,1-Dichloroethene	96.94	ND		4.0	0.70
100-41-4	Ethylbenzene	106.17	ND		4.0	1.4
75-09-2	Methylene Chloride	84.93	ND		10	6.5
1634-04-4	Methyl tert-butyl ether	88.15	ND		20	3.4
91-20-3	Naphthalene	128.17	ND		2.0	2.0
127-18-4	Tetrachloroethene	165.83	ND		4.0	0.80
108-88-3	Toluene	92.14	ND		6.0	6.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		4.0	1.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		4.0	2.0
71-55-6	1,1,1-Trichloroethane	133.41	3.6	J	4.0	0.60
79-00-5	1,1,2-Trichloroethane	133.41	ND		4.0	1.1
79-01-6	Trichloroethene	131.39	250		2.0	0.70
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		4.0	1.7
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		4.0	1.3
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		4.0	1.3
75-01-4	Vinyl chloride	62.50	ND		2.0	1.5
1330-20-7	Xylenes, Total	106.17	ND		8.0	1.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-152-C-22 | Lab Sample ID: 140-7292-12

Matrix: Air | Lab File ID: EC03P113.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 10:46

Sample wt/vol: 10(mL) | Date Analyzed: 03/04/2017 02:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9031 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		13	3.7
56-23-5	Carbon tetrachloride	153.81	ND		25	4.7
75-45-6	Chlorodifluoromethane	86.47	19		14	2.7
67-66-3	Chloroform	119.38	5.5	J	20	3.7
156-59-2	cis-1,2-Dichloroethene	96.94	41		16	4.8
75-71-8	Dichlorodifluoromethane	120.91	ND		20	6.7
75-34-3	1,1-Dichloroethane	98.96	3.3	J	16	2.0
107-06-2	1,2-Dichloroethane	98.96	ND		16	3.8
75-35-4	1,1-Dichloroethene	96.94	ND		16	2.8
100-41-4	Ethylbenzene	106.17	ND		17	5.9
75-09-2	Methylene Chloride	84.93	ND		35	23
1634-04-4	Methyl tert-butyl ether	88.15	ND		72	12
91-20-3	Naphthalene	128.17	ND		10	10
127-18-4	Tetrachloroethene	165.83	ND		27	5.4
108-88-3	Toluene	92.14	ND		23	23
156-60-5	trans-1,2-Dichloroethene	96.94	ND		16	4.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		30	14
71-55-6	1,1,1-Trichloroethane	133.41	19	J	22	3.3
79-00-5	1,1,2-Trichloroethane	133.41	ND		22	5.7
79-01-6	Trichloroethene	131.39	1300		11	3.8
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		20	8.4
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		20	6.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		20	6.4
75-01-4	Vinyl chloride	62.50	ND		5.1	3.7
1330-20-7	Xylenes, Total	106.17	ND		35	5.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-153-C-22 | Lab Sample ID: 140-7292-13

Matrix: Air | Lab File ID: JC03P108.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:20

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 21:54

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.1		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.79	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.70		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.1		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.44	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	80		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-153-C-22 Lab Sample ID: 140-7292-13

Matrix: Air Lab File ID: JC03P108.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 11:20

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 21:54

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9072 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.6		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	5.7		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.64	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.9	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	80		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-155-C-22 | Lab Sample ID: 140-7292-14

Matrix: Air | Lab File ID: JC03P109.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:23

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 22:39

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.83		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.78		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.28	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	75		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-155-C-22 | Lab Sample ID: 140-7292-14

Matrix: Air | Lab File ID: JC03P109.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 11:23

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 22:39

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9072 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.48	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	75		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-168-A-22 | Lab Sample ID: 140-7292-23

Matrix: Air | Lab File ID: EC03P114.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 11:04

Sample wt/vol: 13(mL) | Date Analyzed: 03/04/2017 03:11

Soil Aliquot Vol: | Dilution Factor: 11.16

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9031 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		34	9.9
56-23-5	Carbon tetrachloride	153.81	ND		34	6.4
75-45-6	Chlorodifluoromethane	86.47	ND		34	6.4
67-66-3	Chloroform	119.38	25	J	34	6.4
156-59-2	cis-1,2-Dichloroethene	96.94	67		34	10
75-71-8	Dichlorodifluoromethane	120.91	ND		34	12
75-34-3	1,1-Dichloroethane	98.96	17	J	34	4.3
107-06-2	1,2-Dichloroethane	98.96	ND		34	8.2
75-35-4	1,1-Dichloroethene	96.94	1200		34	6.0
100-41-4	Ethylbenzene	106.17	ND		34	12
75-09-2	Methylene Chloride	84.93	ND		86	56
1634-04-4	Methyl tert-butyl ether	88.15	ND		170	29
91-20-3	Naphthalene	128.17	ND		17	17
127-18-4	Tetrachloroethene	165.83	ND		34	6.9
108-88-3	Toluene	92.14	ND		52	52
156-60-5	trans-1,2-Dichloroethene	96.94	ND		34	8.6
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		34	17
71-55-6	1,1,1-Trichloroethane	133.41	11	J	34	5.2
79-00-5	1,1,2-Trichloroethane	133.41	ND		34	9.0
79-01-6	Trichloroethene	131.39	4100		17	6.0
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		34	15
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		34	11
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		34	11
75-01-4	Vinyl chloride	62.50	ND		17	12
1330-20-7	Xylenes, Total	106.17	ND		69	10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-168-A-22 Lab Sample ID: 140-7292-23

Matrix: Air Lab File ID: EC03P114.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 11:04

Sample wt/vol: 13(mL) Date Analyzed: 03/04/2017 03:11

Soil Aliquot Vol: Dilution Factor: 11.16

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9031 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		110	32
56-23-5	Carbon tetrachloride	153.81	ND		220	41
75-45-6	Chlorodifluoromethane	86.47	ND		120	23
67-66-3	Chloroform	119.38	120	J	170	31
156-59-2	cis-1,2-Dichloroethene	96.94	270		140	41
75-71-8	Dichlorodifluoromethane	120.91	ND		170	57
75-34-3	1,1-Dichloroethane	98.96	70	J	140	17
107-06-2	1,2-Dichloroethane	98.96	ND		140	33
75-35-4	1,1-Dichloroethene	96.94	4900		140	24
100-41-4	Ethylbenzene	106.17	ND		150	50
75-09-2	Methylene Chloride	84.93	ND		300	190
1634-04-4	Methyl tert-butyl ether	88.15	ND		620	110
91-20-3	Naphthalene	128.17	ND		90	90
127-18-4	Tetrachloroethene	165.83	ND		230	47
108-88-3	Toluene	92.14	ND		190	190
156-60-5	trans-1,2-Dichloroethene	96.94	ND		140	34
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		250	120
71-55-6	1,1,1-Trichloroethane	133.41	59	J	190	28
79-00-5	1,1,2-Trichloroethane	133.41	ND		190	49
79-01-6	Trichloroethene	131.39	22000		92	32
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		170	72
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		170	53
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		170	55
75-01-4	Vinyl chloride	62.50	ND		44	32
1330-20-7	Xylenes, Total	106.17	ND		300	45

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

Appendix C

Support Documentation

Job Narrative
140-7292-1

Receipt
The samples were received on 3/2/2017 at 9:50 AM. The samples arrived in good condition and properly preserved.

Sample SV-001-C-22 (140-7292-1) was received with the canister valve in the open position. The sample was at ambient pressure (approximately 0 psi). The client was contacted and the laboratory was instructed to cancel analysis.

Sample SV-093-A-22 (140-7292-22) was received with a pressure of - 26 or lower inches of mercury: Flow controllers are set to fill approximately 3/4 of the summa canister volume. This would result in an ending pressure of approximately - 5 inches of Hg. In order to proceed with analysis, the canister was pressurized due to insufficient sample. This pressurization (dilution) may result in higher reporting limits than desired. All flow controllers are cleaned and verified to be in good working condition prior to being sent to the field. The flow controller was also checked upon receipt and was found to be faulty due to presence water. The client was contacted and the lab was instructed to cancel analysis.

Air - GC/MS VOA
EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

Methods TO 15 LL, TO-14A, TO-15: This report includes canister certification data for the batch certified and/or individually certified canisters used to collect samples as well as for any canisters used for dilution of those samples. All of the canisters used for sample collection or sample dilution for this job were certified to be clean to the levels listed on the results page. Please note that results for individually certified canisters that were not used for sample collection or sample dilution may also be included in the report because these canisters were in the same cleaning batch as the canisters used for this project. Since these canisters were not used for this job, the results have no bearing on the sample results.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments
No additional comments.

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Tetra Tech, Inc.
Project/Site: Feb 2017 MRC IA-SV

TestAmerica Job ID: 140-7292-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: Feb 2017 MRC IA-SV

TestAmerica Job ID: 140-7292-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-7292-2	SV-004-C-22	Air	02/28/17 11:30	03/02/17 09:50
140-7292-3	SV-060-C-22	Air	02/28/17 11:19	03/02/17 09:50
140-7292-4	SV-088-C-22	Air	02/28/17 10:54	03/02/17 09:50
140-7292-5	SV-102-C-22	Air	02/28/17 11:26	03/02/17 09:50
140-7292-6	SV-113-C-22	Air	02/28/17 11:05	03/02/17 09:50
140-7292-7	SV-126-C-22	Air	02/28/17 10:41	03/02/17 09:50
140-7292-8	SV-131-C-22	Air	02/28/17 10:35	03/02/17 09:50
140-7292-9	SV-142-C-22	Air	02/28/17 10:52	03/02/17 09:50
140-7292-10	SV-149-C-22	Air	02/28/17 10:43	03/02/17 09:50
140-7292-11	SV-150-C-22	Air	02/28/17 10:45	03/02/17 09:50
140-7292-12	SV-152-C-22	Air	02/28/17 10:46	03/02/17 09:50
140-7292-13	SV-153-C-22	Air	02/28/17 11:20	03/02/17 09:50
140-7292-14	SV-155-C-22	Air	02/28/17 11:23	03/02/17 09:50
140-7292-15	SV-015-A-22	Air	03/01/17 10:15	03/02/17 09:50
140-7292-16	SV-116-A-22	Air	03/01/17 10:04	03/02/17 09:50
140-7292-17	SV-075-A-22	Air	03/01/17 11:01	03/02/17 09:50
140-7292-18	SV-076-A-22	Air	03/01/17 10:55	03/02/17 09:50
140-7292-19	SV-078-A-22	Air	03/01/17 10:58	03/02/17 09:50
140-7292-20	SV-079-A-22	Air	03/01/17 10:37	03/02/17 09:50
140-7292-21	SV-081-A-22	Air	03/01/17 10:32	03/02/17 09:50
140-7292-23	SV-168-A-22	Air	03/01/17 11:04	03/02/17 09:50
140-7292-24	SV-118-A-22	Air	03/01/17 10:16	03/02/17 09:50
140-7292-25	SV-136-A-22	Air	03/01/17 10:52	03/02/17 09:50
140-7292-26	SV-138-A-22	Air	03/01/17 10:06	03/02/17 09:50
140-7292-27	SV-139-A-22	Air	03/01/17 10:48	03/02/17 09:50
140-7292-28	SV-100-B-22	Air	02/28/17 11:13	03/02/17 09:50
140-7292-29	SV-101-B-22	Air	02/28/17 11:11	03/02/17 09:50

Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

180325

BALTIMORE

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Tony Apanavage	Site Contact: Tony Apanavage	Date: 3/1/17	COC No:
Tetra Tech	Tel/Fax: 301-233-8230	Lab Contact:	Carrier: Fedex	_____ of _____ COCs
20251 Century Blvd, Suite 200				Job No.
Germantown, MD 20874				
301-233-8230 Phone				SDG No.
301-528-3000 FAX				
Project Name: Feb 2017 MRC IA-SV				
Site: Middle River, MD				Sampler:
P O #				

Analysis Turnaround Time
Calendar (C) or Work Days (W) STANDARD
TAT if different from Below _____
☐ 2 weeks
☐ 1 week
☐ 2 days
☐ 1 day

140-7292 Chain of Custody

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	Sample Specific Notes:
SV-001-C-22	2/28/2017	1028	1128	-30	-7	10296	9750	x	Received @ ambient, 5 boxes Fedex Tr.# 7785 4899 2927
SV-004-C-22	2/28/2017	1030	1130	-30	-5	10784	9829	x	Fedex Sp. No. custody seal
SV-060-C-22	2/28/2017	1014	1119	-29	0	11051	9636	x	" " 2950
SV-088-C-22	2/28/2017	0953	1054	-30	-3	10155	9807	x	" " 3360
SV-102-C-22	2/28/2017	1026	1126	-30	-3	10586	11520	x	" " 3202
SV-113-C-22	2/28/2017	0957	1105	-30	-5	11511	10754	x	" " 3853, KW 2/17
SV-126-C-22 131	2/28/2017	0925	1041	-30	0	11527	11539	x	SV-131-C-22
SV-142-C-22	2/28/2017	0918	1035	-30	0	11056	10344	x	
SV-149-C-22	2/28/2017	0950	1052	-29	-1	11502	11267	x	
SV-150-C-22	2/28/2017	0926	1043	-30	0	~~T.A.~~	~~T.A.~~	x	10494 CAN ID 11314 FLOW ID
SV-152-C-22	2/28/2017	0934	1045	-30	0	10589	09823	x	
SV-153-C-22	2/28/2017	0936	1046	-28	0	1573	10783	x	
SV-155-C-22	2/28/2017	1019	1120	-30	0	10437	10578	x	
	2/28/2017	1020	1123	-30	-3	9906	10923	x	

Special Instructions/QC Requirements & Comments: **Contracted Analyte List**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Tetra Tech	3/1/17 1450		TA	3/1/17 1450
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TestAmerica	3-1-2017/1550		TA	3/2/17 0950
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 2, dated 03/06/2012

58 cans, 64 flows

03/13/2017

Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

18032

BALTIMORE

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Tony Apanavage	Site Contact: Tony Apanavage	Date: 3/1/17	COC No:
Tetra Tech	Tel/Fax: 301-233-8230	Lab Contact:	Carrier: Fedex	____ of ____ COCs
20251 Century Blvd, Suite 200				Job No.
Germantown, MD 20874				
301-233-8230 Phone				SDG No.
301-528-3000 FAX				
Project Name: Feb 2017 MRC IA-SV				Sampler:
Site: Middle River, MD				
P O #				Sample Specific Notes:

Analysis Turnaround Time
Calendar (C) or Work Days (W) STANDARD
TAT if different from Below ____
☐ 2 weeks
☐ 1 week
☐ 2 days
☐ 1 day

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Ston)	Flow Controller ID	Canister ID	TO-15
SV-015-A-22	3/1/2017	0912	1015	-30	0	09900	10922	x
SV-018-A-22 (116)	3/1/2017	0857	1004	-30	0	10196	11298	x
SV-075-A-22	3/1/2017	0954	1101	-29	0	11311	09637	x
SV-076-A-22	3/1/2017	0948	1055	-30	-1	10583	09668	x
SV-078-A-22	3/1/2017	0952	1058	-28	0	10304	09744	x
SV-079-A-22	3/1/2017	0937	1037	-30	-2	09949	10782	x
SV-081-A-22	3/1/2017	0929	1032	-29	-2	10859	10748	x
SV-093-A-22	3/1/2017	0904	1007	-30	0	10194	10502	x
SV-[illegible]-A-22 (168)	3/1/2017	0957	1104	-29	0	10359	10500	x
SV-118-A-22	3/1/2017	0915	1016	-28	-2	11500	10834	x
SV-136-A-22	3/1/2017	0943	1052	-30	-3	10349	11492	x
SV-138-A-22	3/1/2017	0900	1006	-30	0	11482	09888	x
SV-139-A-22	3/1/2017	0939	1048	-30	0	11477	11257	x
SV-100-B-22	2/28/2017	1007	1113	-30	-2	10193	9660	x
SV-101-B-22	2/28/2017	1004	1111	-30	-2	11250	9803	x

SV-168-A-22

Special Instructions/QC Requirements & Comments: **Contracted Analyte List**

Relinquished by:	Company: TETRA TECH	Date/Time: 3/1/17 1450	Received by:	Company: TA	Date/Time: 3/1/17 1451
Relinquished by:	Company: TA	Date/Time:	Received by:	Company: TA	Date/Time: 3/2/17 0950
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 2, dated 03/06/2012

03/13/2017

Loc: 140
7292

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓			☐ Containers, Broken
2. Were ambient air containers received intact?			✓	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			✓	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			✓	☐ Cooler Out of Temp, Client Contacted, Proceed/Cancel ☐ Cooler Out of Temp, Same Day Receipt
5. Were all of the sample containers received intact?	✓			☐ Containers, Broken
6. Were samples received in appropriate containers?	✓			☐ Containers, Improper; Client Contacted; Proceed/Cancel
7. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ COC & Samples Do Not Match ☐ COC Incorrect/Incomplete ☐ COC Not Received
8. Were all of the samples listed on the COC received?	✓			☐ Sample Received, Not on COC ☐ Sample on COC; Not Received
9. Is the date/time of sample collection noted?	✓			☐ COC; No Date/Time; Client Contacted
10. Was the sampler identified on the COC?		✓		☑ Sampler Not Listed on COC
11. Is the client and project name/# identified?	✓			☐ COC Incorrect/Incomplete
12. Are tests/parameters listed for each sample?	✓			☐ COC No tests on COC
13. Is the matrix of the samples noted?	✓			☐ COC Incorrect/Incomplete
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ COC Incorrect/Incomplete
15. Were samples received within holding time?	✓			☐ Holding Time - Receipt
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ pH Adjusted, pH Included (See box 16A) ☐ Incorrect Preservative
17. Were VOA samples received without headspace?			✓	☐ Headspace (VOA only)
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			✓	☐ Residual Chlorine
19. For 1613B water samples is pH<9?			✓	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info

Project #: 1400295 PM Instructions: _____

Sample Receiving Associate: _____ Date: 3/2/17

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:	
Lot Number:	
Exp Date:	
Analyst:	
Date:	
Time:	

QA026R30.doc, 080916

03/13/2017

140-7292

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 3/2/2017

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
AFB	140-7292-a-1	09750	6860	B	1	0	1615	OPEN NCM# 6557
AFB	140-7292-a-2	09829	7074	B	1	-2.7	1616	
AFB	140-7292-a-3	09636	7118	B	1	-1.4	1617	
AFB	140-7292-a-4	09807	7098	B	1	-3.2	1618	
AFB	140-7292-a-5	11520	7098	B	1	-2.9	1619	
AFB	140-7292-a-6	10754	7118	B	1	0	1620	
AFB	140-7292-a-7	11539	7098	B	1	0	1621	
AFB	140-7292-a-8	10344	6860	B	1	0	1622	
AFB	140-7292-a-9	11267	7118	B	1	-1.9	1623	
AFB	140-7292-a-10	10494	7118	B	1	0	1624	
AFB	140-7292-a-11	09823	7118	B	1	0	1625	
AFB	140-7292-a-12	10783	6860	B	1	-1.2	1626	
AFB	140-7292-a-13	10518	7118	B	1	-2.0	1627	
AFB	140-7292-a-14	10923	7118	B	1	-2.2	1628	
AFB	140-7292-a-15	10922	7118	B	1	-2.6	1629	
AFB	140-7292-a-16	11288	7098	B	1	-1.1	1630	
AFB	140-7292-a-17	09637	7118	B	1	-1.5	1631	
AFB	140-7292-a-18	09668	7098	B	1	-1.3	1632	
AFB	140-7292-a-19	09744	7098	B	1	-2.0	1633	
AFB	140-7292-a-20	10782	6860	B	1	-2.6	1634	
AFB	140-7292-a-21	10748	7098	B	1	-2.4	1635	
AFB	140-7292-a-22	10502	7118	B	1	-26.4	1636	4.4 FLOW10194-WATER NCM# 6559
AFB	140-7292-A-23	10500	7074	B	1	-1.9	1650	
AFB	140-7292-A-24	10834	7098	B	1	-3.4	1651	
AFB	140-7292-A-25	11492	7089	B	1	-1.0	1652	
AFB	140-7292-A-26	09888	7098	B	1	0	1653	
AFB	140-7292-A-27	11257	7098	B	1	-1.5	1654	
AFB	140-7292-A-28	09660	7118	B	1	-1.4	1655	
AFB	140-7292-A-29	09803	7118	B	1	-1.3	1656	

FIELD DUPLICATE PRECISION - SV-131-C-22 / SV-DUP01-C-22							
ANALYTE	**SV-131-C-22**	**QUAL**	**SV-DUP01-C-22**	**QUAL**	**RPD**	**DIFFERENCE**	**RL**
1,2,3-TRIMETHYLBENZENE	4.5		3.1		36.84	~~1.4~~	2
1,2,4-TRIMETHYLBENZENE	2.3		1.8	J	~~24.39~~	0.5	2
1,3,5-TRIMETHYLBENZENE	2		1.5	J	~~28.57~~	0.5	2
CHLORODIFLUOROMETHANE	1.9		2.3		19.05	~~0.4~~	1.4
DICHLORODIFLUOROMETHANE	1.9	J	2		~~5.13~~	0.1	2
ETHYLBENZENE	1.4	J	1.2	J	~~15.38~~	0.2	1.7
METHYLENE CHLORIDE	3.3	J	2.5	J	~~27.59~~	0.8	3.5
NAPHTHALENE	4.1	J	2.1	J	64.52	~~2~~	1
TOTAL XYLENES	9.2		8.3		10.29	0.9	3.5

FIELD DUPLICATE PRECISION - SV-153-C-22 / SV-DUP02-C-22							
ANALYTE	**SV-153-C-22**	**QUAL**	**SV-DUP02-C-22**	**QUAL**	**RPD**	**DIFFERENCE**	**RL**
1,2,4-TRIMETHYLBENZENE	0.64	J	0.63	J	~~1.57~~	0.01	2
CHLORODIFLUOROMETHANE	3.8		3.9		2.60	~~0.1~~	1.4
DICHLORODIFLUOROMETHANE	1.9	J	2.3		~~19.05~~	0.4	2
METHYLENE CHLORIDE	2.7	J	3.6		~~28.57~~	0.9	3.5
TETRACHLOROETHENE	0.54	U	0.58	J	~~7.14~~	0.04	2.7
TOLUENE	2.6		2.3	U	~~12.24~~	0.3	2.3
TOTAL XYLENES	1.9	J	2.3	J	~~19.05~~	0.4	3.5
TRICHLOROETHENE	5.7		5.3		7.27	~~0.4~~	1.1

FIELD DUPLICATE PRECISION - SV-015-A-22 / SV-DUP03-A-22							
ANALYTE	**SV-015-A-22**	**QUAL**	**SV-DUP03-A-22**	**QUAL**	**RPD**	**DIFFERENCE**	**RL**
1,1,1-TRICHLOROETHANE	2.1	J	3.9	J	~~60.00~~	1.8	22
1,1-DICHLOROETHANE	2		4.1	J	~~68.85~~	2.1	16
1,1-DICHLOROETHENE	6		13	J	~~73.68~~	7	16
BENZENE	1.2	J	3.7	U	~~102.04~~	2.5	13
CHLORODIFLUOROMETHANE	6.1		8.7	J	~~35.14~~	2.6	14
CHLOROFORM	0.58	J	3.7	U	~~145.79~~	3.12	20
CIS-1,2-DICHLOROETHENE	0.73	J	4.8	U	~~147.20~~	4.07	16
DICHLORODIFLUOROMETHANE	2.1		6.7	U	~~104.55~~	4.6	20
METHYLENE CHLORIDE	3.2	J	23	U	~~151.15~~	19.8	35
TOLUENE	4.2		23	U	~~138.24~~	18.8	23
TOTAL XYLENES	2.4	J	5.2	U	~~73.68~~	2.8	35
TRICHLOROETHENE	2.3		3.8	U	~~49.18~~	1.5	11

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Lab File ID: EXA25BFB.D BFB Injection Date: 01/25/2017

Instrument ID: ME BFB Injection Time: 17:46

Analysis Batch No.: 8130

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.0	
75	30.0 - 60.0 % of mass 95	56.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	103.2	
175	5.0 - 9.0 % of mass 174	7.6	(7.3) 1
176	95.0 - 101.0 % of mass 174	101.3	(98.1) 1
177	5.0 - 9.0 % of mass 176	7.1	(7.0) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-8130/9	EXA25IC01.D	01/25/2017	19:00
	IC 140-8130/10	EXA25IC02.D	01/25/2017	19:44
	IC 140-8130/11	EXA25IC03.D	01/25/2017	20:30
	IC 140-8130/12	EXA25IC04.D	01/25/2017	21:14
	IC 140-8130/13	EXA25IC05.D	01/25/2017	21:59
	ICIS 140-8130/14	EXA25IC06.D	01/25/2017	22:45
	IC 140-8130/15	EXA25IC07.D	01/25/2017	23:28
	IC 140-8130/16	EXA25IC08.D	01/26/2017	00:12
	IC 140-8130/17	EXA25IC09.D	01/26/2017	00:56
	ICV 140-8130/23	EXA25LCS.D	01/26/2017	05:13

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 8130

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/25/2017 19:00 Calibration End Date: 01/26/2017 00:56 Calibration ID: 879

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-8130/9	EXA25IC01.D
Level 2	IC 140-8130/10	EXA25IC02.D
Level 3	IC 140-8130/11	EXA25IC03.D
Level 4	IC 140-8130/12	EXA25IC04.D
Level 5	IC 140-8130/13	EXA25IC05.D
Level 6	ICIS 140-8130/14	EXA25IC06.D
Level 7	IC 140-8130/15	EXA25IC07.D
Level 8	IC 140-8130/16	EXA25IC08.D
Level 9	IC 140-8130/17	EXA25IC09.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	0.5686 0.4757	0.5551 0.4611	0.5691 0.5394	0.5376 0.5265	0.5713	Ave		0.5338				7.6		30.0			
Propene	+++++ 0.8292	1.1107 0.7835	1.0909 0.9120	1.0218 0.8291	1.0243	Ave		0.9502				13.5		30.0			
Dichlorodifluoromethane	5.5541 4.5255	5.3793 4.2573	5.3708 4.8213	5.2807 4.2465	5.4664	Ave		4.9891				10.7		30.0			
Chloromethane	+++++ 0.2940	0.4255 0.2832	0.4472 0.3247	0.3565 0.3024	0.3589	Ave		0.3490				17.4		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	3.4640 2.8122	3.2031 2.7581	3.1576 3.2444	3.1834 3.0149	3.3806	Ave		3.1354				7.6		30.0			
Acetaldehyde	+++++ 0.2721	+++++ 0.2502	0.4731 0.2454	0.3397 0.2483	0.2567	Ave		0.2979				28.2		30.0			
Vinyl chloride	1.3172 1.0882	1.2548 1.0834	1.3130 1.2369	1.3104 1.1866	1.3121	Ave		1.2336				7.7		30.0			
1,3-Butadiene	0.9335 0.7647	0.8894 0.7693	0.9101 0.8562	0.8888 0.8375	0.8913	Ave		0.8601				6.9		30.0			
Butane	1.9096 1.2954	1.6386 1.2739	1.6852 1.3902	1.6254 1.3395	1.5518	Ave		1.5233				14.0		30.0			
Bromomethane	1.4772 1.1999	1.4376 1.1946	1.3571 1.3790	1.3569 1.3403	1.4026	Ave		1.3495				7.1		30.0			
Chloroethane	0.6338 0.5185	0.5869 0.5228	0.5983 0.6027	0.6062 0.5949	0.5911	Ave		0.5839				6.6		30.0			
Ethanol	0.2906 0.2278	0.2759 0.2072	0.2712 0.2161	0.2618 0.2073	0.2220	Ave		0.2422				13.4		30.0			
Vinyl bromide	1.4394 1.1865	1.3167 1.1904	1.3223 1.3591	1.3099 1.3207	1.3678	Ave		1.3125				6.2		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 8130

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/25/2017 19:00 Calibration End Date: 01/26/2017 00:56 Calibration ID: 879

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	+++++ 0.8941	1.3051 0.8920	1.1151 0.9823	1.1231 0.9541	1.0439	Ave		1.0387				13.5		30.0			
Trichlorofluoromethane	5.1357 4.2253	4.9235 4.0821	4.9220 4.3758	4.8846 3.9941	4.8798	Ave		4.6025				9.3		30.0			
Acrolein	+++++ 0.2568	+++++ 0.2451	0.3521 0.2050	0.3031 0.2399	0.2115	Ave		0.2591				20.2		30.0			
Acetonitrile	+++++ 0.2311	0.2935 0.2254	0.2685 0.2351	0.2714 0.2408	0.1798	Ave		0.2432				14.3		30.0			
Acetone	+++++ 0.3338	+++++ 0.3079	+++++ 0.2607	0.4537 0.2674	0.2503	Ave		0.3123				24.4		30.0			
Pentane	0.1995 0.1908	0.2297 0.1893	0.2191 0.2129	0.2242 0.2137	0.2121	Ave		0.2101				6.7		30.0			
Isopropyl alcohol	1.1475 0.9681	1.0752 0.9070	1.1174 0.9587	1.1642 0.9095	1.0605	Ave		1.0342				9.7		30.0			
Ethyl ether	0.4825 0.5209	0.5301 0.5005	0.5689 0.4404	0.5596 0.4596	0.4096	Ave		0.4969				10.8		30.0			
1,1-Dichloroethene	1.3867 1.0968	1.2972 1.0820	1.2671 1.2178	1.2317 1.2050	1.2343	Ave		1.2243				7.7		30.0			
Acrylonitrile	+++++ 0.4753	0.5682 0.4659	0.6136 0.4329	0.5212 0.4424	0.4014	Ave		0.4901				14.7		30.0			
tert-Butyl alcohol	1.6858 1.5982	1.6975 1.5513	1.7374 1.7389	1.8427 1.6936	1.7971	Ave		1.7047				5.3		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	3.0488 2.4425	2.8842 2.4144	2.9106 2.6036	2.8502 2.5901	2.6794	Ave		2.7138				8.1		30.0			
Methylene Chloride	+++++ 0.9945	+++++ 0.9812	1.7033 1.0890	1.3271 1.0819	1.1178	Ave		1.1850				21.5		30.0			
3-Chloropropene	1.2417 1.0199	1.1658 0.9616	1.2129 1.0446	1.1837 1.0058	1.0977	Ave		1.1037				9.1		30.0			
Carbon disulfide	3.7659 3.1655	3.4606 3.1724	3.6037 3.7244	3.5930 3.4630	3.6759	Ave		3.5138				6.3		30.0			
trans-1,2-Dichloroethene	1.3410 1.1720	1.2829 1.1556	1.3021 1.3114	1.2912 1.2880	1.2513	Ave		1.2661				5.0		30.0			
2-Methylpentane	2.5019 1.8676	2.3816 1.7775	2.3420 1.9396	2.2749 1.8211	2.1487	Ave		2.1172				12.8		30.0			
Methyl tert-butyl ether	2.6579 3.1281	2.9195 2.9110	3.2514 2.6722	3.2168 2.6783	2.3493	Ave		2.8649				10.5		30.0			
1,1-Dichloroethane	2.4478 2.0156	2.2792 1.9499	2.3590 2.1057	2.3332 2.0755	2.0914	Ave		2.1841				8.0		30.0			
Vinyl acetate	1.9176 1.8998	1.8017 1.9303	2.1574 1.8637	2.1883 1.9021	1.6525	Ave		1.9237				8.6		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 8130

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/25/2017 19:00 Calibration End Date: 01/26/2017 00:56 Calibration ID: 879

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	0.3617 0.4073	0.4213 0.3840	0.4611 0.3927	0.4992 0.4027	0.3368	Ave		0.4074				12.1		30.0			
Hexane	1.1260 0.7988	0.9917 0.7765	1.0449 0.8589	0.9825 0.8333	0.8820	Ave		0.9216				13.0		30.0			
Isopropyl ether	2.3897 2.8008	2.7033 2.5218	2.9846 2.3754	3.0061 2.2853	2.2305	Ave		2.5886				11.4		30.0			
cis-1,2-Dichloroethene	1.2852 1.1671	1.2397 1.1475	1.2774 1.2679	1.3162 1.2756	1.1806	Ave		1.2397				4.8		30.0			
Ethyl acetate	1.4073 1.5962	1.5843 1.4817	1.7603 1.4654	1.9537 1.5201	1.3353	Ave		1.5672				12.1		30.0			
Chloroform	3.2774 2.7466	3.1909 2.6518	3.2594 2.8396	3.1888 2.7970	2.8391	Ave		2.9767				8.3		30.0			
Tert-butyl ethyl ether	2.5053 3.0527	2.7872 2.8168	3.1265 2.7327	3.1162 2.6800	2.3902	Ave		2.8009				9.3		30.0			
Tetrahydrofuran	0.8902 0.8226	0.8125 0.7633	0.9118 0.7590	0.9487 0.7839	0.6578	Ave		0.8167				11.0		30.0			
1,1,1-Trichloroethane	3.9092 3.3913	3.8051 3.3056	3.7776 3.6342	3.7916 3.5512	3.6134	Ave		3.6421				5.5		30.0			
1,2-Dichloroethane	0.4747 0.4140	0.4973 0.3907	0.5318 0.4198	0.5077 0.4104	0.4238	Ave		0.4523				11.3		30.0			
Cyclohexane	0.1360 0.1151	0.1279 0.1113	0.1336 0.1274	0.1371 0.1209	0.1293	Ave		0.1265				7.2		30.0			
Benzene	0.9231 0.6236	0.8281 0.6216	0.8446 0.6585	0.7643 0.6170	0.6437	Ave		0.7249				16.1		30.0			
1-Butanol	+++++ 0.0526	0.0638 0.0482	0.0601 0.0570	0.0549 0.0508	0.0618	Ave		0.0561				9.8		30.0			
Carbon tetrachloride	0.9640 0.8376	0.9993 0.8040	1.0042 0.9071	0.9520 0.8471	0.9174	Ave		0.9147				7.9		30.0			
2,3-Dimethylpentane	0.1862 0.1638	0.2032 0.1595	0.1966 0.1868	0.1913 0.1843	0.1801	Ave		0.1835				7.7		30.0			
Thiophene	0.4323 0.3760	0.4134 0.3797	0.4722 0.4169	0.4509 0.4091	0.3826	Ave		0.4148				8.0		30.0			
Tert-amyl methyl ether	+++++ 0.6884	0.5631 0.6367	0.7112 0.5764	0.7139 0.5567	0.5455	Ave		0.6240				11.6		30.0			
2,2,4-Trimethylpentane	1.3268 1.0862	1.3560 1.0212	1.3216 1.1538	1.3024 1.0783	1.1907	Ave		1.2041				10.5		30.0			
Heptane	0.2676 0.2224	0.2648 0.2285	0.2820 0.2600	0.2757 0.2565	0.2452	Ave		0.2559				7.9		30.0			
1,2-Dichloropropane	0.2433 0.2137	0.2473 0.2194	0.2780 0.2370	0.2570 0.2348	0.2246	Ave		0.2395				8.3		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 8130

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/25/2017 19:00 Calibration End Date: 01/26/2017 00:56 Calibration ID: 879

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.3850 0.3405	0.4095 0.3435	0.4175 0.3884	0.4227 0.3863	0.3616	Ave		0.3839				7.9		30.0			
Dibromomethane	0.3837 0.3105	0.3922 0.3028	0.3830 0.3374	0.3719 0.3326	0.3242	Ave		0.3487				9.8		30.0			
Bromodichloromethane	0.6173 0.5666	0.6148 0.5756	0.6840 0.6383	0.6752 0.6319	0.5934	Ave		0.6219				6.5		30.0			
1,4-Dioxane	0.1073 0.1029	0.1011 0.0938	0.1033 0.1121	0.1077 0.1089	0.0951	Ave		0.1036				6.0		30.0			
Methyl methacrylate	0.1991 0.2175	0.1995 0.2060	0.2206 0.2185	0.2452 0.2255	0.1752	Ave		0.2119				9.4		30.0			
Methylcyclohexane	+++++ 0.5711	0.6554 0.5539	0.6684 0.6338	0.6605 0.6047	0.6170	Ave		0.6206				6.8		30.0			
4-Methyl-2-pentanone (MIBK)	0.3152 0.3415	0.3637 0.3143	0.3583 0.3978	0.4451 0.3864	0.3452	Ave		0.3630				11.5		30.0			
cis-1,3-Dichloropropene	0.3941 0.3606	0.3984 0.3807	0.4538 0.4276	0.4599 0.4260	0.3919	Ave		0.4103				8.2		30.0			
trans-1,3-Dichloropropene	0.3907 0.3579	0.3701 0.3776	0.4455 0.3988	0.4496 0.3961	0.3930	Ave		0.3977				7.9		30.0			
Toluene	0.8551 0.7181	0.7643 0.7671	0.9363 0.7560	0.8736 0.7243	0.7680	Ave		0.7959				9.4		30.0			
Toluene Range	1.9419 1.6955	1.9461 1.8212	2.2351 2.0136	2.1693 2.0061	1.8224	Ave		1.9612				8.7		30.0			
1,1,2-Trichloroethane	0.2446 0.2150	0.2373 0.2248	0.2794 0.2286	0.2763 0.2268	0.2351	Ave		0.2409				9.4		30.0			
2-Methylthiophene	0.6806 0.6139	0.6354 0.6641	0.7800 0.6620	0.7600 0.6393	0.6718	Ave		0.6786				8.2		30.0			
3-Methylthiophene	0.6657 0.5866	0.6153 0.6397	0.7659 0.6451	0.7503 0.6199	0.6491	Ave		0.6597				9.1		30.0			
2-Hexanone	0.1551 0.1973	0.1715 0.1893	0.1839 0.2175	0.2375 0.2152	0.2099	Ave		0.1975				12.9		30.0			
C8 Range	2.4048 2.0434	2.3416 1.9868	2.5630 2.2130	2.5279 2.1475	2.1713	Ave		2.2666				9.0		30.0			
Octane	0.2885 0.2638	0.2688 0.2702	0.3214 0.2713	0.3056 0.2636	0.2775	Ave		0.2812				7.2		30.0			
Dibromochloromethane	0.4860 0.5748	0.4884 0.6248	0.6412 0.6382	0.6522 0.6185	0.6159	Ave		0.5933				10.8		30.0			
1,2-Dibromoethane (EDB)	0.4571 0.4185	0.4489 0.4475	0.5149 0.4661	0.5363 0.4589	0.4728	Ave		0.4690				7.7		30.0			
Tetrachloroethene	0.4254 0.3401	0.3949 0.3557	0.4525 0.3539	0.4378 0.3465	0.3835	Ave		0.3878				10.9		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 8130

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/25/2017 19:00 Calibration End Date: 01/26/2017 00:56 Calibration ID: 879

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorobenzene	0.7898 0.6129	0.7326 0.6589	0.8643 0.6729	0.8271 0.6463	0.7085	Ave		0.7237				12.0		30.0			
2,3-Dimethylheptane	0.6599 0.5978	0.6514 0.5363	0.7404 0.5105	0.6879 0.4577	0.6179	Ave		0.6067				15.0		30.0			
Ethylbenzene	1.1284 0.9738	1.0086 1.0283	1.2592 1.0042	1.2385 0.9285	1.0259	Ave		1.0662				10.9		30.0			
2-Ethylthiophene	0.8235 0.7760	0.7808 0.8330	0.9775 0.8326	1.0013 0.7827	0.8560	Ave		0.8515				9.8		30.0			
m-Xylene & p-Xylene	0.8449 0.7740	0.8000 0.7925	0.9817 0.7524	0.9865 0.6694	0.8155	Ave		0.8241				12.5		30.0			
Bromoform	+++++ 0.6930	0.4713 0.7829	0.6947 0.7970	0.7356 0.7314	0.7487	Ave		0.7068				14.4		30.0			
Nonane	0.4725 0.4298	0.4498 0.4228	0.5333 0.4026	0.5440 0.3563	0.4823	Ave		0.4548				13.3		30.0			
Styrene	0.4412 0.5546	0.4699 0.6118	0.5863 0.6317	0.6521 0.5995	0.5958	Ave		0.5714				12.5		30.0			
o-Xylene	0.9169 0.8693	0.8569 0.8682	1.0645 0.8334	1.0401 0.7816	0.8601	Ave		0.8990				10.5		30.0			
1,1,2,2-Tetrachloroethane	0.5560 0.5916	0.5524 0.5836	0.6719 0.5759	0.6720 0.5422	0.6025	Ave		0.5942				8.1		30.0			
1,2,3-Trichloropropane	0.2220 0.2085	0.2107 0.2126	0.2620 0.2134	0.2487 0.2101	0.2132	Ave		0.2224				8.7		30.0			
Isopropylbenzene	1.3632 1.2534	1.2551 1.2183	1.4602 1.1436	1.4367 1.0340	1.1793	Ave		1.2604				11.0		30.0			
Propylbenzene	0.2890 0.3347	0.3012 0.3494	0.3689 0.3560	0.3913 0.3490	0.3324	Ave		0.3413				9.3		30.0			
2-Chlorotoluene	0.3398 0.3157	0.3204 0.3346	0.3897 0.3399	0.3901 0.3357	0.3436	Ave		0.3455				7.8		30.0			
4-Ethyltoluene	1.1181 1.2001	1.1033 1.1919	1.3529 1.1524	1.3862 1.0509	1.2068	Ave		1.1958				9.3		30.0			
1,3,5-Trimethylbenzene	0.5101 0.6117	0.5300 0.6041	0.6539 0.5886	0.6618 0.5665	0.5886	Ave		0.5906				8.6		30.0			
Alpha Methyl Styrene	+++++ 0.4774	+++++ 0.5119	0.3963 0.5373	0.4472 0.5311	0.4621	Ave		0.4805				10.5		30.0			
Decane	0.5246 0.5414	0.5250 0.5318	0.6701 0.5108	0.6624 0.4588	0.6089	Ave		0.5593				12.8		30.0			
tert-Butylbenzene	1.0721 1.2299	1.1270 1.1663	1.3617 1.0840	1.3479 0.9836	1.1629	Ave		1.1706				10.7		30.0			
1,2,4-Trimethylbenzene	0.9205 1.0911	0.9751 1.0483	1.2094 0.9877	1.2545 0.8869	1.1090	Ave		1.0536				11.9		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 8130

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/25/2017 19:00 Calibration End Date: 01/26/2017 00:56 Calibration ID: 879

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	1.4122 1.5283	1.3775 1.4436	1.7027 1.3232	1.7331 1.1252	1.5148	Ave		1.4623				12.8		30.0			
1,3-Dichlorobenzene	0.8672 0.7775	0.8539 0.8062	1.0043 0.8131	0.9954 0.7311	0.9195	Ave		0.8631				10.9		30.0			
Benzyl chloride	0.7824 0.9495	0.7992 0.9521	0.9546 0.9278	1.0918 0.8481	1.0226	Ave		0.9253				10.9		30.0			
1,4-Dichlorobenzene	0.8930 0.7619	0.8504 0.7953	0.9832 0.8192	0.9892 0.7482	0.9238	Ave		0.8627				10.5		30.0			
4-Isopropyltoluene	1.1303 1.3800	1.1595 1.3021	1.4848 1.2196	1.5075 1.0845	1.3733	Ave		1.2935				11.9		30.0			
1,2,3-Trimethylbenzene	0.7086 0.8429	0.7255 0.8182	0.9405 0.7786	0.9578 0.7342	0.8523	Ave		0.8176				11.1		30.0			
Butylcyclohexane	0.7589 0.7792	0.7403 0.7449	0.9308 0.7162	0.9099 0.6451	0.8577	Ave		0.7870				11.9		30.0			
1,2-Dichlorobenzene	0.8456 0.7810	0.8233 0.7962	0.9715 0.7846	0.9622 0.7046	0.9008	Ave		0.8411				10.6		30.0			
Indane	0.8972 0.9645	0.8608 0.9573	1.1113 0.9205	1.1180 0.8097	1.0311	Ave		0.9634				11.1		30.0			
Indene	0.5343 0.7266	0.5755 0.7357	0.7121 0.7516	0.7652 0.7102	0.7636	Ave		0.6972				12.0		30.0			
Butylbenzene	1.0747 1.2277	1.1137 1.1373	1.4000 1.0757	1.4336 0.9427	1.3176	Ave		1.1915				13.8		30.0			
Undecane	0.5433 0.5784	0.5341 0.5671	0.6449 0.5338	0.7382 0.4781	0.6845	Ave		0.5891				14.1		30.0			
1,2-Dimethyl-4-Ethylbenzene	0.7989 1.0395	0.8284 0.9747	1.0280 0.9380	1.0979 0.8587	1.0683	Ave		0.9591				11.4		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.4436	0.2684 0.4433	0.4013 0.4458	0.4143 0.4346	0.4448	Ave		0.4120				14.6		30.0			
1,2,4,5-Tetramethylbenzene	0.8943 1.2361	0.9419 1.1550	1.1019 1.1137	1.3011 0.9847	1.2974	Ave		1.1140				13.5		30.0			
1,2,3,5-Tetramethylbenzene	0.5840 0.7646	0.6004 0.7140	0.7039 0.7091	0.7997 0.6716	0.7910	Ave		0.7043				10.8		30.0			
1,2,3,4-Tetramethylbenzene	0.7922 0.9715	0.8053 0.9205	0.9378 0.9366	1.0619 0.8519	1.0828	Ave		0.9290				11.0		30.0			
Dodecane	0.6314 0.5241	0.6112 0.4409	0.6079 0.4544	0.6321 0.3901	0.7382	Ave		0.5589				20.2		30.0			
1,2,4-Trichlorobenzene	0.9429 0.9238	0.9163 0.8578	1.1106 0.8547	1.0473 0.7438	1.1041	Ave		0.9446				13.0		30.0			
Naphthalene	1.2897 1.4476	1.2964 1.3125	1.6011 1.3219	1.6235 1.1302	1.6951	Ave		1.4131				13.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

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CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 8130

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/25/2017 19:00 Calibration End Date: 01/26/2017 00:56 Calibration ID: 879

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	0.8524 0.9043	0.8399 0.8112	1.0081 0.8582	1.0223 0.7833	1.0636	Ave		0.9048				11.2		30.0			
Hexachlorobutadiene	1.0894 1.1407	1.1070 1.0327	1.3706 0.9199	1.2003 0.7671	1.2343	Ave		1.0958				16.2		30.0			
1,2,3-Trichlorobenzene	0.8725 0.8461	0.8448 0.6961	0.9679 0.7213	0.9144 0.6391	1.0358	Ave		0.8376				15.6		30.0			
2-Methylnaphthalene	0.2133 0.2330	0.1935 0.2102	0.2288 0.1976	0.1446 0.1922	0.3136	Ave		0.2141				21.2		50.0			
1-Methylnaphthalene	0.1873 0.1775	0.1587 0.1647	0.1793 0.1509	0.1075 0.1505	0.2405	Ave		0.1685				21.2		50.0			
4-Bromofluorobenzene (Surr)	0.7624 0.7679	0.7683 0.7598	0.7938 0.7541	0.7755 0.7462	0.7646	Ave		0.7659				1.8		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 8130

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/25/2017 19:00 Calibration End Date: 01/26/2017 00:56 Calibration ID: 879

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-8130/9	EXA25IC01.D
Level 2	IC 140-8130/10	EXA25IC02.D
Level 3	IC 140-8130/11	EXA25IC03.D
Level 4	IC 140-8130/12	EXA25IC04.D
Level 5	IC 140-8130/13	EXA25IC05.D
Level 6	ICIS 140-8130/14	EXA25IC06.D
Level 7	IC 140-8130/15	EXA25IC07.D
Level 8	IC 140-8130/16	EXA25IC08.D
Level 9	IC 140-8130/17	EXA25IC09.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	1987 91876	3692 187087	7570 372177	17692 712875	49675	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Propene	CBM	Ave	+++++ 160139	7388 317883	14511 629240	33629 1122463	89074	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Dichlorodifluoromethane	CBM	Ave	19409 873979	35780 1727381	71440 3326497	173787 5749133	475349	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Chloromethane	CBM	Ave	+++++ 56772	2830 114900	5948 224029	11731 409359	31207	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	12105 543108	21305 1119070	42001 2238487	104765 4081783	293973	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Acetaldehyde	CBM	Ave	+++++ 262733	+++++ 507609	31464 846586	55904 1681138	111607	+++++ 9.99	+++++ 20.0	0.793 40.0	2.00 80.0	4.99
Vinyl chloride	CBM	Ave	4603 210152	8346 439566	17465 853396	43125 1606496	114097	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,3-Butadiene	CBM	Ave	3262 147682	5916 312136	12106 590769	29250 1133859	77507	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Butane	CBM	Ave	6673 250174	10899 516869	22416 959205	53491 1813458	134943	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Bromomethane	CBM	Ave	5162 231722	9562 484707	18052 951439	44656 1814566	121971	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Chloroethane	CBM	Ave	2215 100129	3904 212111	7959 415826	19949 805460	51405	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Ethanol	CBM	Ave	5077 219973	9175 420406	18036 745575	43073 1403410	96528	0.196 9.99	0.392 20.0	0.793 40.0	2.00 80.0	4.99
Vinyl bromide	CBM	Ave	5030 229137	8758 482988	17589 937739	43108 1788108	118937	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2-Methylbutane	CBM	Ave	+++++ 172680	8681 361920	14833 677746	36961 1291757	90771	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999

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RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 8130

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/25/2017 19:00 Calibration End Date: 01/26/2017 00:56 Calibration ID: 879

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Trichlorofluoromethane	CBM	Ave	17947 816007	32748 1656276	65470 3019102	160752 5407515	424335	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Acrolein	CBM	Ave	+++++ 49591	+++++ 99461	4684 141428	9975 324803	18390	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
Acetonitrile	CBM	Ave	+++++ 44632	1952 91444	3571 162184	8931 325979	15638	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Acetone	CBM	Ave	+++++ 193436	+++++ 374762	+++++ 539664	44799 1086332	65298	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.00
Pentane	CBM	Ave	697 36850	1528 76823	2914 146926	7378 289319	18440	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Isopropyl alcohol	CBM	Ave	12031 560915	21457 1104059	44591 1984593	114951 3694285	276668	0.118 5.99	0.235 12.0	0.476 24.0	1.20 48.0	3.00
Ethyl ether	CBM	Ave	1686 100603	3526 203074	7567 303831	18417 622239	35622	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,1-Dichloroethene	CBM	Ave	4846 211809	8628 438997	16854 840233	40535 1631438	107329	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Acrylonitrile	CBM	Ave	+++++ 91797	3779 189036	8162 298674	17154 598982	34904	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
tert-Butyl alcohol	CBM	Ave	5891 308641	11291 629421	23110 1199805	60644 2292845	156270	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,1,2-Trichloro-1,2,2-trifluoroetha ne	CBM	Ave	10654 471704	19184 979614	38716 1796378	93800 3506598	232997	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Methylene Chloride	CBM	Ave	+++++ 192055	+++++ 398108	22657 751371	43676 1464741	97197	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
3-Chloropropene	CBM	Ave	4339 196967	7754 390173	16133 720723	38955 1361747	95451	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Carbon disulfide	CBM	Ave	13160 611323	23018 1287189	47935 2569712	118247 4688421	319646	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
trans-1,2-Dichloroethene	CBM	Ave	4686 226333	8533 468881	17320 904799	42493 1743738	108809	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2-Methylpentane	CBM	Ave	8743 360686	15841 721193	31153 1338237	74868 2465533	186843	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Methyl tert-butyl ether	CBM	Ave	9288 604111	19419 1181121	43249 1843717	105864 3625994	204293	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,1-Dichloroethane	CBM	Ave	8554 389258	15160 791156	31379 1452832	76784 2809890	181860	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Vinyl acetate	CBM	Ave	6701 366895	11984 783203	28697 1285869	72018 2575250	143695	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2-Butanone (MEK)	CBM	Ave	1264 78663	2802 155805	6134 270975	16429 545176	29287	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Hexane	CBM	Ave	3935 154263	6596 315049	13899 592575	32334 1128136	76693	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999

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ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isopropyl ether	CBM	Ave	8351 540902	17981 1023215	39700 1638934	98931 3094011	193956	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
cis-1,2-Dichloroethene	CBM	Ave	4491 225398	8246 465591	16992 874834	43317 1726970	102663	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Ethyl acetate	CBM	Ave	4918 308270	10538 601171	23415 1011038	64297 2057997	116117	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Chloroform	CBM	Ave	11453 530430	21224 1075946	43355 1959198	104945 3786693	246881	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Tert-butyl ethyl ether	CBM	Ave	8755 589555	18539 1142905	41588 1885480	102555 3628388	207847	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Tetrahydrofuran	CBM	Ave	3111 158872	5404 309695	12129 523689	31221 1061270	57205	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,1,1-Trichloroethane	CBM	Ave	13661 654941	25309 1341209	50248 2507426	124781 4807791	314213	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dichloroethane	DFBZ	Ave	7276 363653	13916 729291	29631 1295550	72727 2504898	166312	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Cyclohexane	DFBZ	Ave	2084 101129	3580 207834	7445 393104	19646 737586	50724	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Benzene	DFBZ	Ave	14147 547863	23174 1160218	47058 2032114	109484 3765685	252575	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1-Butanol	DFBZ	Ave	+++++ 46203	1784 90050	3350 175999	7866 309792	24233	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Carbon tetrachloride	DFBZ	Ave	14775 735810	27964 1500664	55950 2799394	136371 5169972	359970	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2,3-Dimethylpentane	DFBZ	Ave	2854 143857	5686 297715	10952 576453	27400 1124814	70651	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Thiophene	DFBZ	Ave	6625 330311	11569 708797	26310 1286521	64584 2497047	150134	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Tert-amyl methyl ether	CBZd5	Ave	+++++ 580200	16225 1153718	37684 1934683	101661 3770186	205555	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2,2,4-Trimethylpentane	DFBZ	Ave	20334 954231	37944 1906200	73639 3560536	186574 6581210	467227	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Heptane	DFBZ	Ave	4102 195365	7411 426481	15714 802495	39500 1565533	96220	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dichloropropane	DFBZ	Ave	3729 187772	6920 409452	15489 731367	36818 1433071	88119	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Trichloroethene	DFBZ	Ave	5900 299113	11460 641221	23264 1198701	60550 2357385	141892	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Dibromomethane	DFBZ	Ave	5880 272764	10974 565191	21338 1041178	53274 2029638	127196	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Bromodichloromethane	DFBZ	Ave	9461 497726	17205 1074453	38109 1969851	96720 3856435	232853	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999

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			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DFBZ	Ave	1644 90419	2828 175176	5758 345843	15426 664550	37314	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Methyl methacrylate	DFBZ	Ave	3051 191058	5582 384557	12292 674434	35131 1376084	68744	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Methylcyclohexane	DFBZ	Ave	+++++ 501695	18340 1033944	37243 1955991	94619 3690424	242084	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	4831 300010	10177 586625	19963 1227446	63767 2358306	135441	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
cis-1,3-Dichloropropene	DFBZ	Ave	6040 316815	11148 710598	25284 1319426	65877 2599872	153772	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
trans-1,3-Dichloropropene	CBZd 5	Ave	5868 301595	10664 684312	23606 1338775	64031 2682733	148119	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Toluene	CBZd 5	Ave	12844 605204	22021 1390093	49613 2537583	124409 4905512	289439	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Toluene Range	DFBZ	Ave	29762 1489438	54457 3399464	124533 6213754	310746 12243651	715097	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,1,2-Trichloroethane	CBZd 5	Ave	3674 181229	6838 407389	14803 767417	39348 1536275	88601	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2-Methylthiophene	CBZd 5	Ave	10222 517399	18307 1203423	41331 2222193	108235 4329889	253161	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
3-Methylthiophene	CBZd 5	Ave	9999 494357	17728 1159268	40580 2165486	106843 4198602	244601	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2-Hexanone	CBZd 5	Ave	2329 166308	4942 343058	9744 729973	33816 1457747	79116	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
C8 Range	DFBZ	Ave	36856 1795059	65525 3708563	142805 6829118	362124 13106293	851980	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Octane	CBZd 5	Ave	4333 222310	7744 489684	17031 910803	43525 1785295	104583	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Dibromochloromethane	CBZd 5	Ave	7299 484437	14072 1132211	33977 2142293	92880 4189412	232094	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dibromoethane (EDB)	CBZd 5	Ave	6865 352695	12935 810874	27285 1564557	76370 3108041	178173	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Tetrachloroethene	CBZd 5	Ave	6390 286605	11378 644497	23978 1187957	62350 2346796	144525	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Chlorobenzene	CBZd 5	Ave	11863 516527	21108 1193978	45798 2258777	117787 4377204	267001	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2,3-Dimethylheptane	CBZd 5	Ave	9911 503788	18770 971878	39231 1713765	97969 3100100	232860	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Ethylbenzene	CBZd 5	Ave	16948 820725	29060 1863514	66718 3370982	176373 6288952	386622	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2-Ethylthiophene	CBZd 5	Ave	12369 653967	22497 1509527	51794 2794718	142591 5301231	322568	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 8130

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/25/2017 19:00 Calibration End Date: 01/26/2017 00:56 Calibration ID: 879

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m-Xylene & p-Xylene	CBZd 5	Ave	25381 1304690	46100 2872278	104031 5051170	280968 9067426	614653	0.0784 3.99	0.157 8.00	0.317 16.0	0.800 32.0	2.00
Bromoform	CBZd 5	Ave	+++++ 584055	13578 1418657	36812 2675385	104756 4953998	282142	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Nonane	CBZd 5	Ave	7097 362242	12960 766200	28257 1351357	77465 2413534	181764	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Styrene	CBZd 5	Ave	6626 467388	13540 1108611	31065 2120443	92868 4060171	224529	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
o-Xylene	CBZd 5	Ave	13771 732634	24690 1573213	56402 2797554	148116 5293792	324112	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	8351 498581	15917 1057615	35603 1933019	95692 3672572	227055	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2,3-Trichloropropane	CBZd 5	Ave	3335 175748	6072 385267	13880 716476	35417 1422989	80332	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Isopropylbenzene	CBZd 5	Ave	20475 1056348	36162 2207653	77369 3838867	204602 7003328	444411	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Propylbenzene	CBZd 5	Ave	4340 282097	8677 633221	19547 1194899	55729 2363929	125269	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2-Chlorotoluene	CBZd 5	Ave	5104 266059	9231 606283	20647 1140941	55554 2273888	129486	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
4-Ethyltoluene	CBZd 5	Ave	16794 1011424	31789 2159977	71684 3868266	197405 7117620	454790	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,3,5-Trimethylbenzene	CBZd 5	Ave	7661 515554	15270 1094727	34648 1975878	94252 3837007	221801	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Alpha Methyl Styrene	CBZd 5	Ave	+++++ 402322	+++++ 927620	20996 1803717	63686 3597313	174145	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
Decane	CBZd 5	Ave	7880 456322	15126 963771	35507 1714544	94334 3107200	229484	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
tert-Butylbenzene	CBZd 5	Ave	16103 1036524	32472 2113553	72149 3638781	191956 6661823	438251	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2,4-Trimethylbenzene	CBZd 5	Ave	13826 919609	28096 1899582	64082 3315314	178650 6007001	417918	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
sec-Butylbenzene	CBZd 5	Ave	21211 1288051	39689 2615969	90219 4441497	246808 7620795	570856	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,3-Dichlorobenzene	CBZd 5	Ave	13025 655259	24602 1460967	53214 2729456	141747 4951770	346498	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Benzyl chloride	CBZd 5	Ave	11752 800220	23027 1725307	50583 3114407	155474 5743832	385379	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,4-Dichlorobenzene	CBZd 5	Ave	13412 642167	24503 1441250	52097 2749736	140868 5067483	348146	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
4-Isopropyltoluene	CBZd 5	Ave	16977 1163049	33408 2359607	78673 4093723	214676 7345053	517519	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 8130

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/25/2017 19:00 Calibration End Date: 01/26/2017 00:56 Calibration ID: 879

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZd 5	Ave	10643 710427	20904 1482625	49834 2613413	136394 4972485	321196	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Butylcyclohexane	CBZd 5	Ave	11399 656714	21331 1349783	49322 2404214	129571 4369418	323237	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dichlorobenzene	CBZd 5	Ave	12701 658187	23722 1442836	51474 2633677	137026 4771986	339458	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Indane	CBZd 5	Ave	13475 812880	24801 1734712	58886 3089990	159210 5484339	388572	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Indene	CBZd 5	Ave	8025 612397	16581 1333157	37734 2523064	108966 4810055	287760	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Butylbenzene	CBZd 5	Ave	16141 1034726	32089 2061000	74182 3610961	204152 6385190	496545	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Undecane	CBZd 5	Ave	8160 487473	15388 1027621	34172 1791725	105123 3238201	257970	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	Ave	11999 876052	23868 1766355	54469 3148516	156346 5815741	402574	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	+++++ 373825	7734 803247	21262 1496297	59000 2943535	167625	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	13432 1041747	27139 2093048	58383 3738553	185282 6669044	488910	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	8772 644384	17299 1293952	37295 2380193	113884 4548692	298089	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	11899 818793	23204 1667986	49693 3143998	151217 5769690	408074	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Dodecane	CBZd 5	Ave	9483 441719	17611 798950	32213 1525180	90009 2641850	278180	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2,4-Trichlorobenzene	CBZd 5	Ave	14162 778574	26400 1554517	58847 2868860	149138 5037681	416072	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Naphthalene	CBZd 5	Ave	19371 1219988	37354 2378349	84838 4437226	231204 7654784	638806	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Benzo(b)thiophene	CBZd 5	Ave	12803 762114	24200 1469981	53415 2880671	145580 5305272	400832	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Hexachlorobutadiene	CBZd 5	Ave	16362 961358	31895 1871431	72625 3087857	170932 5195422	465147	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2,3-Trichlorobenzene	CBZd 5	Ave	13104 713078	24341 1261459	51284 2421177	130224 4328634	390351	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2-Methylnaphthalene	CBZd 5	Ave	10013 613559	17426 1190400	37878 2073102	64330 4068003	369254	0.122 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.12
1-Methylnaphthalene	CBZd 5	Ave	8790 467536	14284 932853	29684 1582697	47834 3186069	283227	0.122 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.12
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1168402 1296131	1129390 1376952	1060404 1265713	1104367 1263553	1154086	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 8130

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/25/2017 19:00 Calibration End Date: 01/26/2017 00:56 Calibration ID: 879

Curve Type Legend:
Ave = Average ISTD

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Lab Sample ID: ICV 140-8130/23 Calibration Date: 01/26/2017 05:13

Instrument ID: ME Calib Start Date: 01/25/2017 19:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/26/2017 00:56

Lab File ID: EXA25LCS.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.5338	0.5473		2.05	2.00	2.5	35.0
Propene	Ave	0.9502	0.9423		1.98	2.00	-0.8	35.0
Dichlorodifluoromethane	Ave	4.989	5.141		2.06	2.00	3.1	35.0
Chloromethane	Ave	0.3490	0.3093		1.77	2.00	-11.4	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.135	3.151		2.01	2.00	0.5	35.0
Acetaldehyde	Ave	0.2979	0.2038		6.84	10.0	-31.6	35.0
Vinyl chloride	Ave	1.234	1.176		1.91	2.00	-4.6	35.0
1,3-Butadiene	Ave	0.8601	0.7869		1.83	2.00	-8.5	35.0
Butane	Ave	1.523	1.373		1.80	2.00	-9.8	35.0
Bromomethane	Ave	1.349	1.225		1.82	2.00	-9.2	35.0
Chloroethane	Ave	0.5839	0.5443		1.86	2.00	-6.8	35.0
Ethanol	Ave	0.2422	0.1913		7.90	10.0	-21.0	35.0
Vinyl bromide	Ave	1.313	1.305		1.99	2.00	-0.6	35.0
2-Methylbutane	Ave	1.039	0.9198		1.77	2.00	-11.5	35.0
Trichlorofluoromethane	Ave	4.603	4.362		1.90	2.00	-5.2	35.0
Acrolein	Ave	0.2591	0.2113		1.63	2.00	-18.4	35.0
Acetonitrile	Ave	0.2432	0.1807		1.49	2.00	-25.7	35.0
Acetone	Ave	0.3123	0.2422		4.65	6.00	-22.4	35.0
Isopropyl alcohol	Ave	1.034	0.9430		5.47	6.00	-8.8	35.0
Pentane	Ave	0.2101	0.2029		1.93	2.00	-3.4	35.0
Ethyl ether	Ave	0.4969	0.3814		1.54	2.00	-23.2	35.0
1,1-Dichloroethene	Ave	1.224	1.165		1.90	2.00	-4.8	35.0
tert-Butyl alcohol	Ave	1.705	1.598		1.87	2.00	-6.3	35.0
Acrylonitrile	Ave	0.4901	0.4049		1.65	2.00	-17.4	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.714	2.426		1.79	2.00	-10.6	35.0
Methylene Chloride	Ave	1.185	0.9494		1.60	2.00	-19.9	35.0
3-Chloropropene	Ave	1.104	0.9660		1.75	2.00	-12.5	35.0
Carbon disulfide	Ave	3.514	3.189		1.82	2.00	-9.2	35.0
trans-1,2-Dichloroethene	Ave	1.266	1.110		1.75	2.00	-12.3	35.0
2-Methylpentane	Ave	2.117	2.044		1.93	2.00	-3.4	35.0
Methyl tert-butyl ether	Ave	2.865	2.556		1.78	2.00	-10.8	35.0
1,1-Dichloroethane	Ave	2.184	1.758		1.61	2.00	-19.5	35.0
Vinyl acetate	Ave	1.924	1.722		1.79	2.00	-10.5	35.0
2-Butanone (MEK)	Ave	0.4074	0.3465		1.70	2.00	-14.9	35.0
Hexane	Ave	0.9216	0.7814		1.70	2.00	-15.2	35.0
Isopropyl ether	Ave	2.589	2.225		1.72	2.00	-14.0	35.0
cis-1,2-Dichloroethene	Ave	1.240	1.027		1.66	2.00	-17.1	35.0
Ethyl acetate	Ave	1.567	1.338		1.71	2.00	-14.6	35.0
Chloroform	Ave	2.977	2.423		1.63	2.00	-18.6	35.0
Tert-butyl ethyl ether	Ave	2.801	2.744		1.96	2.00	-2.0	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Lab Sample ID: ICV 140-8130/23 Calibration Date: 01/26/2017 05:13

Instrument ID: ME Calib Start Date: 01/25/2017 19:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/26/2017 00:56

Lab File ID: EXA25LCS.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8167	0.6876		1.68	2.00	-15.8	35.0
1,1,1-Trichloroethane	Ave	3.642	3.046		1.67	2.00	-16.4	35.0
1,2-Dichloroethane	Ave	0.4523	0.3564		1.58	2.00	-21.2	35.0
Cyclohexane	Ave	0.1265	0.1058		1.67	2.00	-16.4	35.0
Benzene	Ave	0.7249	0.5573		1.54	2.00	-23.1	35.0
1-Butanol	Ave	0.0561	0.0434		1.55	2.00	-22.6	35.0
Carbon tetrachloride	Ave	0.9147	0.7760		1.70	2.00	-15.2	35.0
2,3-Dimethylpentane	Ave	0.1835	0.1352		1.47	2.00	-26.3	35.0
Thiophene	Ave	0.4148	0.3422		1.65	2.00	-17.5	35.0
Tert-amyl methyl ether	Ave	0.6240	0.5564		1.78	2.00	-10.8	35.0
2,2,4-Trimethylpentane	Ave	1.204	0.9568		1.59	2.00	-20.5	35.0
Heptane	Ave	0.2559	0.2046		1.60	2.00	-20.0	35.0
1,2-Dichloropropane	Ave	0.2395	0.1927		1.61	2.00	-19.5	35.0
Trichloroethene	Ave	0.3839	0.3332		1.74	2.00	-13.2	35.0
Dibromomethane	Ave	0.3487	0.2833		1.62	2.00	-18.8	35.0
Bromodichloromethane	Ave	0.6219	0.5303		1.71	2.00	-14.7	35.0
1,4-Dioxane	Ave	0.1036	0.0873		1.69	2.00	-15.7	35.0
Methyl methacrylate	Ave	0.2119	0.1848		1.74	2.00	-12.8	35.0
Methylcyclohexane	Ave	0.6206	0.4081		1.32	2.00	-34.2	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3630	0.3270		1.80	2.00	-9.9	35.0
cis-1,3-Dichloropropene	Ave	0.4103	0.3730		1.82	2.00	-9.1	35.0
trans-1,3-Dichloropropene	Ave	0.3977	0.3827		1.92	2.00	-3.8	35.0
Toluene	Ave	0.7959	0.7202		1.81	2.00	-9.5	35.0
1,1,2-Trichloroethane	Ave	0.2409	0.2118		1.76	2.00	-12.1	35.0
2-Methylthiophene	Ave	0.6786	0.6432		1.90	2.00	-5.2	35.0
3-Methylthiophene	Ave	0.6597	0.6540		1.98	2.00	-0.9	35.0
2-Hexanone	Ave	0.1975	0.1853		1.88	2.00	-6.2	35.0
Octane	Ave	0.2812	0.2506		1.78	2.00	-10.9	35.0
Dibromochloromethane	Ave	0.5933	0.5957		2.01	2.00	0.4	35.0
1,2-Dibromoethane (EDB)	Ave	0.4690	0.4425		1.89	2.00	-5.6	35.0
Tetrachloroethene	Ave	0.3878	0.3341		1.72	2.00	-13.8	35.0
Chlorobenzene	Ave	0.7237	0.6654		1.84	2.00	-8.1	35.0
2,3-Dimethylheptane	Ave	0.6067	0.5228		1.72	2.00	-13.8	35.0
Ethylbenzene	Ave	1.066	1.026		1.93	2.00	-3.7	35.0
2-Ethylthiophene	Ave	0.8515	0.8365		1.96	2.00	-1.8	35.0
m-Xylene & p-Xylene	Ave	0.8241	0.8298		4.03	4.00	0.7	35.0
Bromoform	Ave	0.7068	0.7677		2.17	2.00	8.6	35.0
Nonane	Ave	0.4548	0.4356		1.92	2.00	-4.2	35.0
Styrene	Ave	0.5714	0.6099		2.13	2.00	6.7	35.0
o-Xylene	Ave	0.8990	0.8646		1.92	2.00	-3.8	35.0
1,1,2,2-Tetrachloroethane	Ave	0.5942	0.5524		1.86	2.00	-7.0	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Lab Sample ID: ICV 140-8130/23 Calibration Date: 01/26/2017 05:13

Instrument ID: ME Calib Start Date: 01/25/2017 19:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/26/2017 00:56

Lab File ID: EXA25LCS.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2224	0.2106		1.89	2.00	-5.3	35.0
Isopropylbenzene	Ave	1.260	1.256		1.99	2.00	-0.3	35.0
Propylbenzene	Ave	0.3413	0.3622		2.12	2.00	6.1	35.0
2-Chlorotoluene	Ave	0.3455	0.3419		1.98	2.00	-1.0	35.0
4-Ethyltoluene	Ave	1.196	1.207		2.02	2.00	0.9	35.0
1,3,5-Trimethylbenzene	Ave	0.5906	0.6182		2.09	2.00	4.7	35.0
Alpha Methyl Styrene	Ave	0.4805	0.4438		1.85	2.00	-7.6	35.0
Decane	Ave	0.5593	0.5611		2.01	2.00	0.3	35.0
tert-Butylbenzene	Ave	1.171	1.215		2.07	2.00	3.7	35.0
1,2,4-Trimethylbenzene	Ave	1.054	1.112		2.11	2.00	5.5	35.0
1,3-Dichlorobenzene	Ave	0.8631	0.8570		1.99	2.00	-0.7	35.0
sec-Butylbenzene	Ave	1.462	1.531		2.09	2.00	4.7	35.0
Benzyl chloride	Ave	0.9253	0.9162		1.98	2.00	-1.0	35.0
1,4-Dichlorobenzene	Ave	0.8627	0.8495		1.97	2.00	-1.5	35.0
4-Isopropyltoluene	Ave	1.293	1.354		2.09	2.00	4.7	35.0
1,2,3-Trimethylbenzene	Ave	0.8176	0.9032		2.21	2.00	10.5	35.0
Butylcyclohexane	Ave	0.7870	0.7470		1.90	2.00	-5.1	35.0
1,2-Dichlorobenzene	Ave	0.8411	0.8268		1.97	2.00	-1.7	35.0
Indane	Ave	0.9634	0.9561		1.98	2.00	-0.8	35.0
Indene	Ave	0.6972	0.8732		2.50	2.00	25.2	35.0
Butylbenzene	Ave	1.191	1.216		2.04	2.00	2.1	35.0
Undecane	Ave	0.5891	0.6009		2.04	2.00	2.0	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.9591	1.221		2.55	2.00	27.3	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.4120	0.3506		1.70	2.00	-14.9	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.114	1.270		2.28	2.00	14.0	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.7043	0.7947		2.26	2.00	12.8	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.9290	1.030		2.22	2.00	10.8	35.0
Dodecane	Ave	0.5589	0.5487		1.96	2.00	-1.8	35.0
1,2,4-Trichlorobenzene	Ave	0.9446	0.9269		1.96	2.00	-1.9	35.0
Naphthalene	Ave	1.413	1.373		1.94	2.00	-2.8	35.0
Benzo(b)thiophene	Ave	0.9048	0.8560		1.89	2.00	-5.4	35.0
Hexachlorobutadiene	Ave	1.096	1.054		1.92	2.00	-3.8	35.0
1,2,3-Trichlorobenzene	Ave	0.8376	0.8267		1.97	2.00	-1.3	35.0
2-Methylnaphthalene	Ave	0.2141	0.2148		6.27	6.25	0.3	50.0
1-Methylnaphthalene	Ave	0.1685	0.2068		7.67	6.25	22.7	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7659	0.7659		4.00	4.00	0.0	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Lab File ID: EBFBC03C.D BFB Injection Date: 03/03/2017

Instrument ID: ME BFB Injection Time: 12:59

Analysis Batch No.: 9031

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.5	
75	30.0 - 60.0 % of mass 95	57.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.2	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	102.4	
175	5.0 - 9.0 % of mass 174	7.4	(7.2) 1
176	95.0 - 101.0 % of mass 174	100.0	(97.6) 1
177	5.0 - 9.0 % of mass 176	6.7	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-9031/9	ECCVC03C.D	03/03/2017	13:27
	LCS 140-9031/1009	ECCVC03C-LCS .d	03/03/2017	13:27
	MB 140-9031/12	EMB500C03.D	03/03/2017	16:22
SV-102-C-22	140-7292-5	EC03P110.D	03/04/2017	00:18
SV-126-C-22	140-7292-7	EC03P111.D	03/04/2017	01:01
SV-152-C-22	140-7292-12	EC03P113.D	03/04/2017	02:28
SV-168-A-22	140-7292-23	EC03P114.D	03/04/2017	03:11
SV-118-A-22	140-7292-24	EC03P115.D	03/04/2017	03:54
SV-101-B-22	140-7292-29	EC03P116.D	03/04/2017	04:37

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Lab Sample ID: CCVIS 140-9031/9 Calibration Date: 03/03/2017 13:27

Instrument ID: ME Calib Start Date: 01/25/2017 19:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/26/2017 00:56

Lab File ID: ECCVC03C.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.5338	0.6117		2.29	2.00	14.6	30.0
Propene	Ave	0.9502	1.024		2.16	2.00	7.7	30.0
Dichlorodifluoromethane	Ave	4.989	5.678		2.28	2.00	13.8	30.0
Chloromethane	Ave	0.3490	0.3921		2.25	2.00	12.3	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.135	3.648		2.33	2.00	16.4	30.0
Acetaldehyde	Ave	0.2979	0.3320		11.1	10.0	11.4	30.0
Vinyl chloride	Ave	1.234	1.480		2.40	2.00	19.9	30.0
1,3-Butadiene	Ave	0.8601	1.038		2.41	2.00	20.6	30.0
Butane	Ave	1.523	1.785		2.35	2.00	17.2	30.0
Bromomethane	Ave	1.349	1.611		2.39	2.00	19.4	30.0
Chloroethane	Ave	0.5839	0.7232		2.48	2.00	23.8	30.0
Ethanol	Ave	0.2422	0.3378		14.0	10.0	39.5*	30.0
Vinyl bromide	Ave	1.313	1.602		2.44	2.00	22.0	30.0
2-Methylbutane	Ave	1.039	1.291		2.49	2.00	24.3	30.0
Trichlorofluoromethane	Ave	4.603	5.734		2.49	2.00	24.6	30.0
Acrolein	Ave	0.2591	0.2699		2.08	2.00	4.2	30.0
Acetonitrile	Ave	0.2432	0.3000		2.47	2.00	23.4	30.0
Acetone	Ave	0.3123	0.4553		8.75	6.00	45.8*	30.0
Isopropyl alcohol	Ave	1.034	1.363		7.91	6.00	31.8*	30.0
Pentane	Ave	0.2101	0.2632		2.51	2.00	25.2	30.0
Ethyl ether	Ave	0.4969	0.6457		2.60	2.00	29.9	30.0
1,1-Dichloroethene	Ave	1.224	1.469		2.40	2.00	20.0	30.0
Acrylonitrile	Ave	0.4901	0.5411		2.21	2.00	10.4	30.0
tert-Butyl alcohol	Ave	1.705	2.129		2.50	2.00	24.9	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.714	3.374		2.49	2.00	24.3	30.0
Methylene Chloride	Ave	1.185	1.210		2.04	2.00	2.1	30.0
3-Chloropropene	Ave	1.104	1.114		2.02	2.00	0.9	30.0
Carbon disulfide	Ave	3.514	3.800		2.16	2.00	8.2	30.0
trans-1,2-Dichloroethene	Ave	1.266	1.344		2.12	2.00	6.1	30.0
2-Methylpentane	Ave	2.117	2.262		2.14	2.00	6.9	30.0
Methyl tert-butyl ether	Ave	2.865	3.416		2.39	2.00	19.2	30.0
1,1-Dichloroethane	Ave	2.184	2.107		1.93	2.00	-3.5	30.0
Vinyl acetate	Ave	1.924	1.960		2.04	2.00	1.9	30.0
2-Butanone (MEK)	Ave	0.4074	0.4848		2.38	2.00	19.0	30.0
Hexane	Ave	0.9216	0.9268		2.01	2.00	0.6	30.0
Isopropyl ether	Ave	2.589	2.992		2.31	2.00	15.6	30.0
cis-1,2-Dichloroethene	Ave	1.240	1.204		1.94	2.00	-2.9	30.0
Ethyl acetate	Ave	1.567	1.825		2.33	2.00	16.4	30.0
Chloroform	Ave	2.977	2.875		1.93	2.00	-3.4	30.0
Tert-butyl ethyl ether	Ave	2.801	3.351		2.39	2.00	19.7	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Lab Sample ID: CCVIS 140-9031/9 Calibration Date: 03/03/2017 13:27

Instrument ID: ME Calib Start Date: 01/25/2017 19:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/26/2017 00:56

Lab File ID: ECCVC03C.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8167	0.8970		2.20	2.00	9.8	30.0
1,1,1-Trichloroethane	Ave	3.642	4.165		2.29	2.00	14.4	30.0
1,2-Dichloroethane	Ave	0.4523	0.3978		1.76	2.00	-12.0	30.0
Benzene	Ave	0.7249	0.6404		1.77	2.00	-11.7	30.0
Cyclohexane	Ave	0.1265	0.1472		2.33	2.00	16.3	30.0
1-Butanol	Ave	0.0561	0.0640		2.28	2.00	14.0	30.0
Carbon tetrachloride	Ave	0.9147	1.075		2.35	2.00	17.5	30.0
2,3-Dimethylpentane	Ave	0.1835	0.1967		2.15	2.00	7.2	30.0
Thiophene	Ave	0.4148	0.3697		1.78	2.00	-10.9	30.0
Tert-amyl methyl ether	Ave	0.6240	0.7770		2.49	2.00	24.5	30.0
2,2,4-Trimethylpentane	Ave	1.204	1.244		2.07	2.00	3.3	30.0
Heptane	Ave	0.2559	0.2462		1.93	2.00	-3.8	30.0
1,2-Dichloropropane	Ave	0.2395	0.2254		1.88	2.00	-5.9	30.0
Trichloroethene	Ave	0.3839	0.3930		2.05	2.00	2.4	30.0
Dibromomethane	Ave	0.3487	0.3091		1.77	2.00	-11.3	30.0
Bromodichloromethane	Ave	0.6219	0.6002		1.93	2.00	-3.5	30.0
1,4-Dioxane	Ave	0.1036	0.1266		2.44	2.00	22.2	30.0
Methyl methacrylate	Ave	0.2119	0.2458		2.32	2.00	16.0	30.0
Methylcyclohexane	Ave	0.6206	0.6901		2.23	2.00	11.2	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3630	0.4446		2.45	2.00	22.4	30.0
cis-1,3-Dichloropropene	Ave	0.4103	0.3983		1.94	2.00	-2.9	30.0
trans-1,3-Dichloropropene	Ave	0.3977	0.4111		2.07	2.00	3.4	30.0
Toluene	Ave	0.7959	0.7991		2.01	2.00	0.4	30.0
1,1,2-Trichloroethane	Ave	0.2409	0.2404		2.00	2.00	-0.2	30.0
2-Methylthiophene	Ave	0.6786	0.6869		2.03	2.00	1.2	30.0
3-Methylthiophene	Ave	0.6597	0.6641		2.01	2.00	0.7	30.0
2-Hexanone	Ave	0.1975	0.2395		2.43	2.00	21.3	30.0
Octane	Ave	0.2812	0.2824		2.01	2.00	0.4	30.0
Dibromochloromethane	Ave	0.5933	0.6234		2.10	2.00	5.1	30.0
1,2-Dibromoethane (EDB)	Ave	0.4690	0.4725		2.02	2.00	0.8	30.0
Tetrachloroethene	Ave	0.3878	0.3754		1.94	2.00	-3.2	30.0
Chlorobenzene	Ave	0.7237	0.7242		2.00	2.00	0.0	30.0
2,3-Dimethylheptane	Ave	0.6067	0.6032		1.99	2.00	-0.6	30.0
Ethylbenzene	Ave	1.066	1.167		2.19	2.00	9.5	30.0
2-Ethylthiophene	Ave	0.8515	0.9416		2.21	2.00	10.6	30.0
m-Xylene & p-Xylene	Ave	0.8241	0.9271		4.50	4.00	12.5	30.0
Bromoform	Ave	0.7068	0.7713		2.18	2.00	9.1	30.0
Nonane	Ave	0.4548	0.4816		2.12	2.00	5.9	30.0
Styrene	Ave	0.5714	0.6886		2.41	2.00	20.5	30.0
o-Xylene	Ave	0.8990	1.001		2.23	2.00	11.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5942	0.5844		1.97	2.00	-1.6	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Lab Sample ID: CCVIS 140-9031/9 Calibration Date: 03/03/2017 13:27

Instrument ID: ME Calib Start Date: 01/25/2017 19:00

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/26/2017 00:56

Lab File ID: ECCVC03C.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2224	0.2468		2.22	2.00	11.0	30.0
Isopropylbenzene	Ave	1.260	1.416		2.25	2.00	12.4	30.0
Propylbenzene	Ave	0.3413	0.4005		2.35	2.00	17.3	30.0
2-Chlorotoluene	Ave	0.3455	0.3759		2.18	2.00	8.8	30.0
4-Ethyltoluene	Ave	1.196	1.405		2.35	2.00	17.5	30.0
1,3,5-Trimethylbenzene	Ave	0.5906	0.6942		2.35	2.00	17.5	30.0
Alpha Methyl Styrene	Ave	0.4805	0.5333		2.22	2.00	11.0	30.0
Decane	Ave	0.5593	0.6227		2.23	2.00	11.3	30.0
tert-Butylbenzene	Ave	1.171	1.379		2.36	2.00	17.8	30.0
1,2,4-Trimethylbenzene	Ave	1.054	1.253		2.38	2.00	18.9	30.0
1,3-Dichlorobenzene	Ave	0.8631	0.9635		2.23	2.00	11.6	30.0
sec-Butylbenzene	Ave	1.462	1.754		2.40	2.00	20.0	30.0
Benzyl chloride	Ave	0.9253	1.167		2.52	2.00	26.1	30.0
1,4-Dichlorobenzene	Ave	0.8627	0.9592		2.22	2.00	11.2	30.0
4-Isopropyltoluene	Ave	1.293	1.591		2.46	2.00	23.0	30.0
1,2,3-Trimethylbenzene	Ave	0.8176	0.9639		2.36	2.00	17.9	30.0
Butylcyclohexane	Ave	0.7870	0.8581		2.18	2.00	9.0	30.0
1,2-Dichlorobenzene	Ave	0.8411	0.9375		2.23	2.00	11.5	30.0
Indane	Ave	0.9634	1.146		2.38	2.00	19.0	30.0
Indene	Ave	0.6972	0.8358		2.40	2.00	19.9	30.0
Butylbenzene	Ave	1.191	1.439		2.42	2.00	20.8	30.0
Undecane	Ave	0.5891	0.7225		2.45	2.00	22.6	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.9591	1.168		2.44	2.00	21.8	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.4120	0.4642		2.25	2.00	12.7	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.114	1.394		2.50	2.00	25.1	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.7043	0.8342		2.37	2.00	18.5	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.9290	1.073		2.31	2.00	15.5	30.0
Dodecane	Ave	0.5589	0.4033		1.44	2.00	-27.8	30.0
1,2,4-Trichlorobenzene	Ave	0.9446	0.7889		1.67	2.00	-16.5	30.0
Naphthalene	Ave	1.413	1.278		1.81	2.00	-9.5	30.0
Benzo(b)thiophene	Ave	0.9048	0.7103		1.57	2.00	-21.5	30.0
Hexachlorobutadiene	Ave	1.096	0.9498		1.73	2.00	-13.3	30.0
1,2,3-Trichlorobenzene	Ave	0.8376	0.5686		1.36	2.00	-32.1*	30.0
2-Methylnaphthalene	Ave	0.2141	0.1115		3.26	6.25	-47.9	50.0
1-Methylnaphthalene	Ave	0.1685	0.0882		3.27	6.25	-47.7	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7659	0.7802		4.07	4.00	1.9	30.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Lab File ID: JBFBK25X.D BFB Injection Date: 11/25/2016

Instrument ID: MJ BFB Injection Time: 18:19

Analysis Batch No.: 7241

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	23.8	
75	30.0 - 60.0 % of mass 95	45.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	98.9	
175	5.0 - 9.0 % of mass 174	7.8	(7.9) 1
176	95.0 - 101.0 % of mass 174	97.9	(99.0) 1
177	5.0 - 9.0 % of mass 176	6.5	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-7241/2	JK25IC01X.D	11/25/2016	18:47
	IC 140-7241/3	JK25IC02X.D	11/25/2016	19:41
	IC 140-7241/4	JK25IC03X.D	11/25/2016	20:34
	IC 140-7241/5	JK25IC04X.D	11/25/2016	21:29
	IC 140-7241/6	JK25IC05X.D	11/25/2016	22:23
	ICIS 140-7241/7	JK25IC06X.D	11/25/2016	23:17
	IC 140-7241/8	JK25IC07X.D	11/26/2016	00:11
	IC 140-7241/9	JK25IC08X.D	11/26/2016	01:05
	IC 140-7241/10	JK25IC09X.D	11/26/2016	01:58
	ICV 140-7241/23	JK25ICVX.D	11/26/2016	12:43

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-7241/2	JK25IC01X.D
Level 2	IC 140-7241/3	JK25IC02X.D
Level 3	IC 140-7241/4	JK25IC03X.D
Level 4	IC 140-7241/5	JK25IC04X.D
Level 5	IC 140-7241/6	JK25IC05X.D
Level 6	ICIS 140-7241/7	JK25IC06X.D
Level 7	IC 140-7241/8	JK25IC07X.D
Level 8	IC 140-7241/9	JK25IC08X.D
Level 9	IC 140-7241/10	JK25IC09X.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.3279	0.5209 0.3424	0.3376 0.3408	0.3209 0.3492	0.3466	Ave		0.3608				18.1		30.0			
Propene	+++++ 1.1758	+++++ 1.1993	1.3594 1.2672	1.2515 1.2587	1.2062	Ave		1.2455				4.9		30.0			
Dichlorodifluoromethane	3.8475 3.0537	3.3487 3.2136	3.1580 3.1835	2.9958 3.2159	3.1307	Ave		3.2386				7.7		30.0			
Chloromethane	+++++ 0.4359	0.5252 0.4576	0.4677 0.4580	0.4181 0.4804	0.4514	Ave		0.4618				6.9		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++ 2.0718	1.8918 1.6896	1.9626 1.5936	1.6292 1.6718	1.8086	Ave		1.7899				9.6		30.0			
Acetaldehyde	+++++ 0.4566	+++++ 0.4368	0.6805 0.4719	0.4532 0.5131	0.4805	Ave		0.4989				16.8		30.0			
Vinyl chloride	1.5299 1.3297	1.4001 1.3957	1.3464 1.3972	1.2586 1.4297	1.3793	Ave		1.3852				5.4		30.0			
Butane	2.9735 2.2299	2.5054 2.3309	2.3789 2.3726	2.1780 2.4282	2.3273	Ave		2.4138				9.6		30.0			
1,3-Butadiene	+++++ 1.0536	1.1806 1.1114	1.1186 1.1221	1.0201 1.1708	1.1152	Ave		1.1116				4.8		30.0			
Bromomethane	+++++ 1.1936	1.2661 1.2491	1.2107 1.2599	1.1307 1.2876	1.2587	Ave		1.2320				4.1		30.0			
Chloroethane	+++++ 0.6554	0.7015 0.6546	0.6348 0.6662	0.6137 0.6695	0.6603	Ave		0.6570				3.9		30.0			
Ethanol	0.5705 0.5223	0.5667 0.5053	0.5919 0.4982	0.4772 0.4781	0.5432	Ave		0.5282				8.0		30.0			
Vinyl bromide	1.3456 1.1540	1.2167 1.2054	1.1654 1.2260	1.0712 1.2467	1.2246	Ave		1.2062				6.2		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	2.0288 1.6960	1.8143 1.7503	1.6822 1.7808	1.5836 1.8155	1.7549	Ave		1.7674				6.9		30.0			
Trichlorofluoromethane	3.6024 3.2281	3.3180 3.3173	3.1843 3.3742	2.9197 3.3969	3.3115	Ave		3.2947				5.6		30.0			
Acrolein	+++++ 0.3517	+++++ 0.3409	0.5264 0.3539	0.3333 0.4239	0.3839	Ave		0.3877				17.7		30.0			
Acetonitrile	+++++ 0.4656	+++++ 0.4481	0.5197 0.4687	0.4059 0.5215	0.5094	Ave		0.4770				9.0		30.0			
Acetone	+++++ 0.4196	+++++ 0.3917	+++++ 0.3945	0.4202 0.4174	0.4431	Ave		0.4144				4.6		30.0			
Isopropyl alcohol	2.1209 1.9104	1.9735 1.9294	1.9325 1.9239	1.6981 1.9040	1.9590	Ave		1.9280				5.6		30.0			
Pentane	+++++ 0.1846	+++++ 0.1866	0.1863 0.1929	0.1616 0.1996	0.1846	Ave		0.1852				6.3		30.0			
Ethyl ether	+++++ 1.3268	1.4955 1.2979	1.4011 1.3235	1.1595 1.4364	1.4228	Ave		1.3579				7.7		30.0			
1,1-Dichloroethene	1.4517 1.1478	1.2123 1.1795	1.1371 1.2067	1.0798 1.2269	1.1937	Ave		1.2040				8.6		30.0			
Acrylonitrile	0.9001 0.7158	0.7984 0.7022	0.8029 0.7410	0.6242 0.8371	0.7564	Ave		0.7642				10.6		30.0			
tert-Butyl alcohol	1.8439 1.9956	1.9418 2.0218	1.9150 2.0374	1.7291 1.9964	2.0129	Ave		1.9438				5.2		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	2.8738 2.6185	2.7163 2.6279	2.5695 2.7290	2.4107 2.8100	2.6551	Ave		2.6679				5.1		30.0			
Methylene Chloride	+++++ 1.0931	+++++ 1.0697	1.5404 1.0991	1.1635 1.1074	1.1789	Ave		1.1789				13.9		30.0			
3-Chloropropene	+++++ 1.3409	1.4536 1.3288	1.5147 1.3596	1.2743 1.4217	1.4115	Ave		1.3881				5.5		30.0			
Carbon disulfide	3.9115 3.3893	3.7671 3.4592	3.4541 3.5389	3.2558 3.5681	3.5744	Ave		3.5465				5.5		30.0			
trans-1,2-Dichloroethene	1.3787 1.1690	1.2657 1.1718	1.1799 1.2095	1.0788 1.2275	1.2113	Ave		1.2102				6.7		30.0			
2-Methylpentane	3.5552 3.0451	3.2099 3.0193	3.0439 3.1532	2.7866 3.2386	3.1086	Ave		3.1289				6.6		30.0			
Methyl tert-butyl ether	2.8993 2.3272	2.8445 2.2839	2.5815 2.3429	2.0927 2.4349	2.4571	Ave		2.4738				10.6		30.0			
1,1-Dichloroethane	2.6041 2.2322	2.4643 2.1350	2.2671 2.2124	2.1642 2.3110	2.3145	Ave		2.3005				6.5		30.0			
Vinyl acetate	2.9851 2.7422	3.0101 2.6575	2.9743 2.7570	2.3823 3.0708	2.9180	Ave		2.8330				7.8		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.3708	0.3334 0.3586	0.3892 0.3677	0.3327 0.3798	0.3687	Ave		0.3626				5.6		30.0			
Hexane	+++++ 1.0259	1.2313 0.9943	1.0969 1.0492	0.9671 1.1068	1.0490	Ave		1.0651				7.7		30.0			
Isopropyl ether	4.0607 3.6638	3.7881 3.6242	3.9354 3.7695	3.2767 3.8864	3.9218	Ave		3.7696				6.1		30.0			
cis-1,2-Dichloroethene	1.4783 1.1314	1.2330 1.0794	1.1960 1.1235	1.1085 1.1935	1.1910	Ave		1.1928				9.9		30.0			
Ethyl acetate	2.4761 2.0850	2.2471 2.0350	2.1376 2.0630	1.7887 2.1294	2.0820	Ave		2.1160				8.6		30.0			
Chloroform	3.0247 2.3882	2.7668 2.2280	2.6010 2.3049	2.3218 2.4506	2.4911	Ave		2.5086				10.1		30.0			
Tert-butyl ethyl ether	2.7965 2.8749	3.0587 2.8302	3.0183 2.9494	2.4991 3.0294	3.0020	Ave		2.8954				6.1		30.0			
Tetrahydrofuran	+++++ 1.1460	1.3809 1.0826	1.2631 1.1127	1.0323 1.2144	1.1865	Ave		1.1773				9.4		30.0			
1,1,1-Trichloroethane	3.1145 2.5058	2.7531 2.3548	2.6301 2.4015	2.4118 2.5385	2.5942	Ave		2.5894				9.0		30.0			
1,2-Dichloroethane	0.4336 0.3666	0.3727 0.3311	0.3707 0.3547	0.3467 0.4034	0.3755	Ave		0.3728				8.2		30.0			
1-Butanol	+++++ 0.1215	0.1246 0.1211	0.1092 0.1266	0.0991 0.1337	0.1196	Ave		0.1194				9.0		30.0			
Cyclohexane	+++++ 0.1293	+++++ 0.1205	0.1569 0.1244	0.1230 0.1388	0.1342	Ave		0.1325				9.5		30.0			
Benzene	0.9199 0.6870	0.7288 0.6372	0.7252 0.6816	0.6544 0.7950	0.7103	Ave		0.7266				11.8		30.0			
Carbon tetrachloride	0.7660 0.6506	0.6614 0.6021	0.6423 0.5137	0.5728 0.6916	0.6637	Ave		0.6405				11.3		30.0			
2,3-Dimethylpentane	+++++ 0.1639	0.1817 0.1498	0.1699 0.1601	0.1592 0.1819	0.1674	Ave		0.1667				6.6		30.0			
Thiophene	0.5058 0.3990	0.4152 0.3696	0.4238 0.3916	0.3745 0.4451	0.4135	Ave		0.4153				10.0		30.0			
Tert-amyl methyl ether	+++++ 0.6604	0.5982 0.6006	0.5926 0.6188	0.5386 0.6438	0.7224	Ave		0.6219				8.8		30.0			
2,2,4-Trimethylpentane	+++++ 1.3383	1.5785 1.2186	1.4409 1.2948	1.2908 1.4822	1.3763	Ave		1.3776				8.5		30.0			
Heptane	0.3156 0.2383	0.2763 0.2197	0.2614 0.2336	0.2274 0.2722	0.2470	Ave		0.2546				11.8		30.0			
1,2-Dichloropropane	0.3317 0.2850	0.2964 0.2668	0.2887 0.2829	0.2636 0.3323	0.3019	Ave		0.2944				8.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.4047 0.3224	0.3508 0.3009	0.3621 0.3176	0.3154 0.3719	0.3318	Ave		0.3420				9.7		30.0			
Dibromomethane	0.4152 0.3099	0.3258 0.2848	0.3210 0.3000	0.3016 0.3484	0.3163	Ave		0.3248				11.8		30.0			
Bromodichloromethane	0.7155 0.5386	0.5955 0.4942	0.5617 0.5262	0.4941 0.6104	0.5528	Ave		0.5654				12.2		30.0			
1,4-Dioxane	0.0760 0.0803	0.0765 0.0791	0.0708 0.0817	0.0636 0.0846	0.0805	Ave		0.0770				8.3		30.0			
Methyl methacrylate	+++++ 0.2758	0.2781 0.2750	0.2691 0.2947	0.2314 0.3249	0.2784	Ave		0.2784				9.4		30.0			
Methylcyclohexane	+++++ 0.5470	0.6129 0.4948	0.5612 0.5246	0.5222 0.5970	0.5628	Ave		0.5528				7.1		30.0			
4-Methyl-2-pentanone (MIBK)	0.6044 0.5456	0.5569 0.5396	0.5362 0.5676	0.4620 0.6066	0.5373	Ave		0.5507				7.8		30.0			
cis-1,3-Dichloropropene	0.4472 0.3699	0.3541 0.3619	0.3536 0.3931	0.3411 0.4436	0.3748	Ave		0.3821				10.1		30.0			
trans-1,3-Dichloropropene	0.4678 0.3274	0.3618 0.3204	0.2858 0.3429	0.2743 0.3961	0.3224	Ave		0.3443				17.2		30.0			
Toluene Range	2.9852 2.1585	2.2448 2.0285	2.1821 2.1704	1.8063 2.4356	2.2621	Ave		2.2526				14.4		30.0			
Toluene	+++++ 0.8479	0.8984 0.7936	0.8894 0.8539	0.7495 0.9595	0.8883	Ave		0.8601				7.6		30.0			
1,1,2-Trichloroethane	0.3435 0.2646	0.2696 0.2425	0.2602 0.2572	0.2323 0.2883	0.2753	Ave		0.2704				11.9		30.0			
2-Methylthiophene	+++++ 0.7403	0.7593 0.6716	0.6686 0.7239	0.6483 0.8025	0.7594	Ave		0.7217				7.5		30.0			
3-Methylthiophene	+++++ 0.6788	0.7328 0.6493	0.6904 0.6885	0.6001 0.7729	0.6991	Ave		0.6890				7.5		30.0			
2-Hexanone	+++++ 0.2614	0.2290 0.2734	0.2173 0.2785	0.1991 0.2986	0.2517	Ave		0.2511				13.4		30.0			
C8 Range	+++++ 3.1096	+++++ 2.8109	3.2020 2.9646	2.7739 3.3358	3.2719	Ave		3.0670				7.2		30.0			
Octane	0.3590 0.2789	0.3147 0.2536	0.2752 0.2683	0.2446 0.3054	0.2923	Ave		0.2880				12.1		30.0			
Dibromochloromethane	0.7263 0.6428	0.6250 0.5873	0.5865 0.6267	0.5131 0.7138	0.6522	Ave		0.6304				10.4		30.0			
1,2-Dibromoethane (EDB)	0.5581 0.4501	0.4574 0.4226	0.4244 0.4524	0.3554 0.5175	0.4565	Ave		0.4549				12.6		30.0			
Tetrachloroethene	0.4997 0.3580	0.4044 0.3239	0.3567 0.3458	0.3374 0.3924	0.3731	Ave		0.3768				14.0		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorobenzene	0.8119 0.6651	0.6711 0.6266	0.6199 0.6745	0.5616 0.7759	0.6719	Ave		0.6754				11.4		30.0			
2,3-Dimethylheptane	1.1660 1.0785	1.1670 0.9808	1.0695 1.0153	0.9629 1.1134	1.1327	Ave		1.0762				7.1		30.0			
Ethylbenzene	1.3653 0.9774	1.0019 0.9174	0.9920 0.9981	0.7905 1.1242	1.0145	Ave		1.0201				15.4		30.0			
2-Ethylthiophene	0.9035 0.7469	0.7527 0.7105	0.7245 0.7758	0.6125 0.8812	0.7573	Ave		0.7628				11.5		30.0			
m-Xylene & p-Xylene	0.9161 0.7347	0.7271 0.6977	0.7185 0.7666	0.5864 0.8663	0.7608	Ave		0.7527				12.7		30.0			
Nonane	0.7785 0.6367	0.6093 0.6067	0.6044 0.6540	0.5024 0.7504	0.6488	Ave		0.6435				12.7		30.0			
Bromoform	0.6867 0.5981	0.5302 0.5880	0.5387 0.6519	0.4509 0.8044	0.5555	Ave		0.6005				17.2		30.0			
Styrene	0.6616 0.5192	0.4669 0.5187	0.4666 0.5854	0.3764 0.6988	0.5235	Ave		0.5352				18.7		30.0			
o-Xylene	1.0374 0.7741	0.8121 0.7268	0.8252 0.7878	0.6459 0.8841	0.8122	Ave		0.8117				13.3		30.0			
1,1,2,2-Tetrachloroethane	0.7578 0.5860	0.5524 0.5636	0.5036 0.6170	0.4597 0.6778	0.5995	Ave		0.5908				15.1		30.0			
1,2,3-Trichloropropane	+++++ 0.1362	0.1351 0.1310	0.1263 0.1469	0.1017 0.1656	0.1423	Ave		0.1356				13.5		30.0			
Isopropylbenzene	1.4300 1.0460	1.1107 0.9870	1.0783 1.0790	0.8534 1.2030	1.0952	Ave		1.0980				14.3		30.0			
Propylbenzene	0.3117 0.2615	0.2150 0.2492	0.2338 0.2793	0.1871 0.3270	0.2606	Ave		0.2584				17.1		30.0			
2-Chlorotoluene	0.3232 0.2648	0.2511 0.2595	0.2653 0.2876	0.2101 0.3338	0.2744	Ave		0.2744				13.6		30.0			
4-Ethyltoluene	1.1777 0.9153	0.7877 0.8908	0.8034 0.9987	0.6479 1.1417	0.9015	Ave		0.9183				18.4		30.0			
1,3,5-Trimethylbenzene	0.5614 0.4580	0.4000 0.4385	0.4540 0.4896	0.3436 0.5642	0.4574	Ave		0.4630				15.2		30.0			
Alpha Methyl Styrene	0.4217 0.3608	0.2786 0.3630	0.2794 0.4253	0.2366 0.5040	0.3478	Ave		0.3575				23.7		30.0			
Decane	+++++ 0.6528	0.6013 0.6570	0.5953 0.7392	0.4586 0.8575	0.6448	Ave		0.6508				17.7		30.0			
tert-Butylbenzene	1.1493 0.9074	0.8557 0.8661	0.9100 0.9720	0.7027 1.1125	0.9329	Ave		0.9343				14.4		30.0			
1,2,4-Trimethylbenzene	0.9974 0.7933	0.6954 0.7726	0.7121 0.8661	0.5683 0.9996	0.7846	Ave		0.7988				17.5		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	1.5378 1.1932	1.0946 1.1562	1.1832 1.2867	0.8961 1.4520	1.2291	Ave		1.2254				15.4		30.0			
1,3-Dichlorobenzene	0.5550 0.4199	0.3703 0.4402	0.3233 0.5410	0.2865 0.6876	0.4043	Ave		0.4476				28.3		30.0			
Benzyl chloride	+++++ 0.4344	0.3207 0.4606	0.2811 0.5817	0.2549 +++++	0.3836	Ave		0.3881				29.5		30.0			
1,4-Dichlorobenzene	0.4368 0.3614	0.2948 0.3825	0.2705 0.4825	0.2323 +++++	0.3308	Ave		0.3490				24.2		30.0			
4-Isopropyltoluene	1.2247 0.9539	0.8120 0.9215	0.8627 1.0355	0.6793 1.1549	0.9553	Ave		0.9555				17.6		30.0			
1,2,3-Trimethylbenzene	0.7389 0.5904	0.5559 0.5663	0.5748 0.6310	0.4445 0.7050	0.5967	Ave		0.6004				14.3		30.0			
Butylcyclohexane	0.9939 0.7487	0.6964 0.7290	0.7343 0.8014	0.5920 0.8884	0.7723	Ave		0.7729				14.9		30.0			
Indane	0.8395 0.6893	0.5975 0.6764	0.6142 0.7856	0.4850 0.9222	0.6825	Ave		0.6991				19.0		30.0			
1,2-Dichlorobenzene	0.5313 0.4395	0.3695 0.4481	0.3510 0.5483	0.2920 0.6744	0.4257	Ave		0.4533				25.7		30.0			
Indene	0.5216 0.4348	0.3300 0.4414	0.3234 0.5337	0.2717 0.6454	0.4085	Ave		0.4345				27.3		30.0			
Butylbenzene	1.0320 0.8033	0.6580 0.8001	0.6470 0.9309	0.5248 1.0536	0.7655	Ave		0.8017				22.3		30.0			
Undecane	+++++ 0.5973	0.5390 0.5900	0.4922 0.6843	0.4020 0.8030	0.5661	Ave		0.5842				20.7		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 0.6180	0.5048 0.6086	0.5006 0.6944	0.4163 0.7766	0.5937	Ave		0.5891				19.5		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.1739	0.1315 0.1811	0.1242 0.2201	0.1052 +++++	0.1558	Ave		0.1560				25.2		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 0.7255	0.5992 0.7149	0.6031 0.8093	0.4817 0.8971	0.6875	Ave		0.6898				18.8		30.0			
1,2,3,5-Tetramethylbenzene	+++++ 0.4432	0.3662 0.4420	0.3835 0.4915	0.2965 0.5445	0.4246	Ave		0.4240				18.1		30.0			
1,2,3,4-Tetramethylbenzene	+++++ 0.5580	0.5018 0.5469	0.4684 0.6231	0.3685 0.6869	0.5361	Ave		0.5362				17.9		30.0			
Dodecane	+++++ 0.5103	0.4533 0.4838	0.4122 0.5557	0.3131 0.6262	0.5110	Ave		0.4832				19.5		30.0			
1,2,4-Trichlorobenzene	0.1681 0.1556	0.1028 0.1706	0.0957 +++++	0.0776 +++++	0.1423	Ave		0.1304				29.0		30.0			
Naphthalene	0.4947 0.3598	0.2746 0.3910	0.2282 0.5046	0.2037 +++++	0.3360	Ave		0.3491				32.3	*	30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	+++++ 0.1503	0.1107 0.1611	0.0905 0.2166	0.0836 +++++	0.1388	Ave		0.1359				34.0	*	30.0			
Hexachlorobutadiene	0.6292 0.4815	0.4595 0.4700	0.4647 0.5481	0.3282 0.6640	0.4975	Ave		0.5047				19.7		30.0			
1,2,3-Trichlorobenzene	0.1979 0.1824	0.1457 0.1937	0.1256 0.2459	0.0937 +++++	0.1794	Ave		0.1705				27.8		30.0			
2-Methylnaphthalene	+++++ 0.0376	0.0294 0.0397	0.0240 0.0458	0.0144 0.0500	0.0333	Ave		0.0343				33.9		50.0			
1-Methylnaphthalene	+++++ 0.0439	0.0354 0.0453	0.0295 0.0483	0.0162 0.0466	0.0401	Ave		0.0381				28.5		50.0			
4-Bromofluorobenzene (Surr)	0.5598 0.6420	0.6032 0.6644	0.6008 0.6801	0.6245 0.7022	0.6235	Ave		0.6334				7.0		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-7241/2	JK25IC01X.D
Level 2	IC 140-7241/3	JK25IC02X.D
Level 3	IC 140-7241/4	JK25IC03X.D
Level 4	IC 140-7241/5	JK25IC04X.D
Level 5	IC 140-7241/6	JK25IC05X.D
Level 6	ICIS 140-7241/7	JK25IC06X.D
Level 7	IC 140-7241/8	JK25IC07X.D
Level 8	IC 140-7241/9	JK25IC08X.D
Level 9	IC 140-7241/10	JK25IC09X.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 58411	3817 118844	5092 235313	11982 484336	30842	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propene	CBM	Ave	+++++ 209464	+++++ 416325	20501 875090	46736 1745617	107343	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	13281 544024	24537 1115556	47625 2198367	111873 4459893	278609	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	+++++ 77658	3848 158851	7053 316299	15615 666251	40173	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	+++++ 369090	13862 586542	29597 1100458	60841 2318437	160950	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 406708	+++++ 758197	51314 1629284	84629 3557537	213784	+++++ 9.99	+++++ 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl chloride	CBM	Ave	5281 236881	10259 484487	20305 964833	47000 1982759	122746	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butane	CBM	Ave	10264 397262	18358 809131	35876 1638360	81334 3367418	207118	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	+++++ 187703	8651 385793	16869 774881	38093 1623732	99249	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	+++++ 212632	9277 433625	18258 870033	42225 1785611	112019	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	+++++ 116765	5140 227227	9573 460075	22919 928476	58761	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	9847 465217	20763 876962	44631 1720033	89104 3315415	241723	0.196 9.99	0.392 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl bromide	CBM	Ave	4645 205590	8915 418434	17575 846638	40004 1728904	108983	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	7003 302142	13294 607591	25369 1229715	59137 2517794	156174	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Trichlorofluoromethane	CBM	Ave	12435 575081	24312 1151548	48022 2330072	109033 4710858	294702	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrolein	CBM	Ave	+++++ 62656	+++++ 118346	7938 244387	12447 587930	34165	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 82955	+++++ 155542	7837 323650	15157 723270	45336	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 224276	+++++ 407996	+++++ 817306	47081 1736723	118305	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.01
Isopropyl alcohol	CBM	Ave	21965 1021108	43385 2009448	87437 3985916	190258 7921894	523062	0.118 5.99	0.235 12.0	0.476 24.0	1.20 48.0	3.01
Pentane	CBM	Ave	+++++ 32889	+++++ 64760	2810 133194	6036 276851	16429	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl ether	CBM	Ave	+++++ 236371	10958 450555	21130 913954	43301 1992033	126616	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	5011 204488	8883 409463	17148 833287	40325 1701547	106234	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	3107 127525	5850 243769	12108 511675	23310 1160939	67317	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butyl alcohol	CBM	Ave	6365 355509	14228 701844	28880 1406893	64571 2768624	179135	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroetha ne	CBM	Ave	9920 466491	19903 912233	38750 1884507	90023 3896999	236287	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 194734	+++++ 371333	23231 758999	43448 1535696	104918	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	+++++ 238874	10651 461294	22843 938863	47589 1971589	125613	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	13502 603813	27603 1200814	52091 2443791	121583 4948271	318098	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	4759 208258	9274 406768	17794 835250	40286 1702361	107797	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylpentane	CBM	Ave	12272 542486	23520 1048110	45905 2177430	104062 4491353	276646	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	10008 414593	20843 792821	38931 1617852	78151 3376773	218669	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	8989 397664	18057 741147	34190 1527772	80819 3204866	205971	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	10304 488532	22056 922514	44854 1903842	88963 4258617	259685	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Butanone (MEK)	CBM	Ave	+++++ 66052	2443 124487	5869 253927	12424 526678	32810	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Hexane	CBM	Ave	+++++ 182768	9022 345145	16542 724504	36117 1534885	93351	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isopropyl ether	CBM	Ave	14017 652700	27757 1258094	59349 2603004	122364 5389640	349017	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	5103 201554	9035 374711	18037 775858	41397 1655099	105995	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	8547 371439	16465 706434	32237 1424609	66797 2953037	185284	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroform	CBM	Ave	10441 425460	20273 773414	39225 1591650	86703 3398489	221690	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	9653 512166	22412 982477	45518 2036709	93325 4201218	267158	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	+++++ 204152	10118 375805	19048 768341	38550 1684106	105594	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	10751 446406	20173 817437	39664 1658324	90067 3520443	230864	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFBZ	Ave	6047 287059	12345 518857	25128 1078779	58242 2324578	148871	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1-Butanol	DFBZ	Ave	+++++ 95163	4128 189813	7404 385011	16643 770202	47398	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Cyclohexane	DFBZ	Ave	+++++ 101218	+++++ 188882	10636 378419	20665 799986	53224	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Benzene	DFBZ	Ave	12828 537887	24141 998620	49152 2072736	109926 4580943	281600	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFBZ	Ave	10682 509407	21907 943611	43534 1562157	96221 3985428	263147	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylpentane	DFBZ	Ave	+++++ 128303	6018 234828	11513 486787	26735 1047976	66382	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Thiophene	DFBZ	Ave	7053 312374	13753 579159	28726 1190849	62914 2564706	163933	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-amyl methyl ether	CBZd5	Ave	+++++ 439550	16558 826406	34262 1687255	78058 3478703	238993	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 1047845	52286 1909813	97663 3937619	216817 8541251	545679	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Heptane	DFBZ	Ave	4401 186596	9153 344303	17720 710384	38197 1568743	97916	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFBZ	Ave	4626 223106	9817 418060	19570 860195	44282 1914762	119711	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Trichloroethene	DFBZ	Ave	5644 252436	11621 471497	24542 965984	52984 2143254	131547	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromomethane	DFBZ	Ave	5790 242664	10791 446341	21756 912301	50658 2007775	125422	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromodichloromethane	DFBZ	Ave	9978 421714	19726 774474	38075 1600155	83001 3517359	219152	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DFBZ	Ave	1060 62903	2535 123907	4802 248451	10682 487655	31913	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl methacrylate	DFBZ	Ave	+++++ 215926	9213 430899	18239 896296	38866 1872520	110367	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylcyclohexane	DFBZ	Ave	+++++ 428267	20303 775502	38039 1595324	87709 3440508	223142	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	8429 427163	18448 845642	36347 1726160	77604 3495706	213021	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFBZ	Ave	6237 289600	11728 567162	23969 1195443	57296 2556154	148579	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZd 5	Ave	4949 217897	10015 440824	16526 934863	39757 2140300	106665	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene Range	CBZd 5	Ave	31580 1436613	62136 2791156	126167 5917756	261800 13161341	748324	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene	CBZd 5	Ave	+++++ 564299	24869 1091996	51423 2328051	108634 5184820	293852	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZd 5	Ave	3634 176087	7462 333675	15047 701197	33667 1557835	91074	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylthiophene	CBZd 5	Ave	+++++ 492684	21017 924136	38657 1973707	93967 4336537	251216	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
3-Methylthiophene	CBZd 5	Ave	+++++ 451800	20285 893344	39921 1877320	86973 4176696	231259	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Hexanone	CBZd 5	Ave	+++++ 173958	6340 376223	12562 759406	28857 1613389	83279	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
C8 Range	CBZd 5	Ave	+++++ 2069587	+++++ 3867680	185140 8082975	402043 18025464	1082393	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Octane	CBZd 5	Ave	3798 185643	8712 348881	15913 731653	35453 1650234	96708	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZd 5	Ave	7683 427846	17301 808128	33912 1708750	74369 3856951	215761	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	5904 299565	12660 581436	24538 1233456	51514 2796441	151021	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZd 5	Ave	5286 238290	11194 445648	20627 942886	48901 2120157	123410	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chlorobenzene	CBZd 5	Ave	8589 442675	18576 862198	35843 1839152	81389 4192705	222281	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylheptane	CBZd 5	Ave	12335 717787	32304 1349555	61836 2768264	139554 6016570	374711	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethylbenzene	CBZd 5	Ave	14443 650505	27733 1262362	57358 2721372	114570 6074677	335611	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Ethylthiophene	CBZd 5	Ave	9558 497116	20835 977657	41893 2115122	88766 4761553	250527	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m-Xylene & p-Xylene	CBZd 5	Ave	19383 978007	40253 1919976	83085 4180493	169976 9362617	503389	0.0784 3.99	0.157 8.00	0.317 16.0	0.800 32.0	2.00
Nonane	CBZd 5	Ave	8236 423733	16865 834807	34945 1783024	72811 4054710	214636	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromoform	CBZd 5	Ave	7264 398085	14675 809091	31148 1777546	65347 4346492	183780	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Styrene	CBZd 5	Ave	6999 345579	12925 713753	26979 1596019	54555 3775896	173185	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
o-Xylene	CBZd 5	Ave	10974 515214	22480 1000055	47711 2147893	93610 4777380	268703	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	8017 389997	15290 775460	29118 1682135	66629 3662446	198338	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZd 5	Ave	+++++ 90650	3741 180195	7300 400421	14733 894821	47060	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Isopropylbenzene	CBZd 5	Ave	15128 696162	30745 1358053	62346 2941806	123682 6500407	362291	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propylbenzene	CBZd 5	Ave	3297 174024	5951 342915	13516 761562	27120 1767252	86216	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZd 5	Ave	3419 176214	6950 357053	15341 784198	30458 1803940	90776	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZd 5	Ave	12458 609217	21804 1225761	46453 2722956	93901 6169617	298239	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZd 5	Ave	5939 304811	11072 603355	26253 1334976	49807 3048962	151317	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZd 5	Ave	4461 240130	7712 499500	16153 1159461	34288 2723428	115072	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Decane	CBZd 5	Ave	+++++ 434454	16645 903971	34420 2015482	66474 4633466	213303	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butylbenzene	CBZd 5	Ave	12158 603936	23687 1191702	52616 2650102	101841 6011355	308625	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZd 5	Ave	10551 527968	19250 1063039	41173 2361494	82370 5401392	259545	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZd 5	Ave	16268 794110	30298 1590827	68410 3508321	129882 7846256	406602	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Dichlorobenzene	CBZd 5	Ave	5871 279497	10249 605637	18695 1475008	41517 3715351	133752	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzyl chloride	CBZd 5	Ave	+++++ 289147	8876 633760	16254 1586115	36944 +++++	126892	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
1,4-Dichlorobenzene	CBZd 5	Ave	4621 240547	8160 526340	15642 1315653	33672 +++++	109444	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
4-Isopropyltoluene	CBZd 5	Ave	12956 634861	22476 1267933	49882 2823302	98451 6240921	316041	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZd 5	Ave	7817 392961	15387 779253	33236 1720307	64421 3809531	197400	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylcyclohexane	CBZd 5	Ave	10514 498300	19278 1003008	42456 2185035	85795 4800601	255485	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indane	CBZd 5	Ave	8881 458736	16540 930740	35512 2141880	70292 4983494	225790	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorobenzene	CBZd 5	Ave	5620 292486	10229 616546	20295 1494867	42321 3643973	140823	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indene	CBZd 5	Ave	5518 289355	9134 607320	18700 1455216	39379 3487774	135133	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylbenzene	CBZd 5	Ave	10917 534655	18213 1100830	37412 2538094	76064 5693195	253234	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Undecane	CBZd 5	Ave	+++++ 397504	14919 811824	28458 1865694	58268 4338903	187279	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	Ave	+++++ 411342	13973 837435	28944 1893275	60335 4196638	196408	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	+++++ 115728	3641 249204	7180 600110	15249 +++++	51540	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 482854	16586 983706	34869 2206639	69812 4847664	227428	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 294960	10137 608119	22173 1340133	42970 2942221	140477	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	+++++ 371381	13891 752440	27081 1698919	53410 3711528	177361	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dodecane	CBZd 5	Ave	+++++ 339664	12548 665748	23834 1515010	45381 3383807	169033	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZd 5	Ave	1778 103584	2846 234735	5532 +++++	11248 +++++	47080	0.0392 2.00	0.0784 4.00	0.159 +++++	0.400 +++++	1.00
Naphthalene	CBZd 5	Ave	5233 239465	7601 538060	13194 1375773	29521 +++++	111140	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
Benzo(b)thiophene	CBZd 5	Ave	+++++ 100021	3065 221729	5231 590694	12110 +++++	45901	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
Hexachlorobutadiene	CBZd 5	Ave	6656 320484	12720 646694	26869 1494370	47565 3588165	164579	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZd 5	Ave	2094 121404	4032 266581	7260 670480	13575 +++++	59332	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
2-Methylnaphthalene	CBZd 5	Ave	+++++ 78199	2539 170697	4331 389989	6537 844376	34373	+++++ 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
1-Methylnaphthalene	CBZd 5	Ave	+++++ 91252	3063 194863	5326 411293	7334 786213	41424	+++++ 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	604280 855705	851872 914153	875722 927094	905137 948626	823670	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

Curve Type Legend:
Ave = Average ISTD

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Lab Sample ID: ICV 140-7241/23 Calibration Date: 11/26/2016 12:43

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JK25ICVX.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3608	0.3705		5.14	5.00	2.7	35.0
Propene	Ave	1.245	1.241		4.99	5.00	-0.3	35.0
Dichlorodifluoromethane	Ave	3.239	3.419		5.28	5.00	5.6	35.0
Chloromethane	Ave	0.4618	0.4743		5.14	5.00	2.7	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	1.790	1.884		5.27	5.00	5.3	35.0
Acetaldehyde	Ave	0.4989	0.3583		18.0	25.0	-28.2	35.0
Vinyl chloride	Ave	1.385	1.509		5.45	5.00	8.9	35.0
1,3-Butadiene	Ave	1.112	1.176		5.29	5.00	5.8	35.0
Butane	Ave	2.414	2.507		5.20	5.00	3.9	35.0
Bromomethane	Ave	1.232	1.311		5.32	5.00	6.4	35.0
Chloroethane	Ave	0.6570	0.7069		5.38	5.00	7.6	35.0
Ethanol	Ave	0.5282	0.5157		24.4	25.0	-2.4	35.0
Vinyl bromide	Ave	1.206	1.358		5.63	5.00	12.6	35.0
2-Methylbutane	Ave	1.767	1.965		5.56	5.00	11.2	35.0
Trichlorofluoromethane	Ave	3.295	3.456		5.25	5.00	4.9	35.0
Acrolein	Ave	0.3877	0.2724		3.52	5.00	-29.7	35.0
Acetonitrile	Ave	0.4770	0.4058		4.26	5.00	-14.9	35.0
Acetone	Ave	0.4144	0.3857		14.0	15.0	-6.9	35.0
Isopropyl alcohol	Ave	1.928	1.788		13.9	15.0	-7.3	35.0
Pentane	Ave	0.1852	0.2026		5.47	5.00	9.4	35.0
Ethyl ether	Ave	1.358	1.081		3.98	5.00	-20.4	35.0
1,1-Dichloroethene	Ave	1.204	1.241		5.16	5.00	3.1	35.0
tert-Butyl alcohol	Ave	1.944	2.069		5.32	5.00	6.4	35.0
Acrylonitrile	Ave	0.7642	0.5954		3.90	5.00	-22.1	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.668	2.817		5.28	5.00	5.6	35.0
Methylene Chloride	Ave	1.179	1.175		4.98	5.00	-0.4	35.0
3-Chloropropene	Ave	1.388	1.376		4.96	5.00	-0.8	35.0
Carbon disulfide	Ave	3.546	3.662		5.17	5.00	3.2	35.0
trans-1,2-Dichloroethene	Ave	1.210	1.236		5.11	5.00	2.1	35.0
2-Methylpentane	Ave	3.129	3.555		5.68	5.00	13.6	35.0
Methyl tert-butyl ether	Ave	2.474	2.133		4.31	5.00	-13.8	35.0
1,1-Dichloroethane	Ave	2.301	2.250		4.89	5.00	-2.2	35.0
Vinyl acetate	Ave	2.833	2.267		4.00	5.00	-20.0	35.0
2-Butanone (MEK)	Ave	0.3626	0.3534		4.88	5.00	-2.5	35.0
Hexane	Ave	1.065	1.065		5.00	5.00	0.0	35.0
Isopropyl ether	Ave	3.770	3.246		4.31	5.00	-13.9	35.0
cis-1,2-Dichloroethene	Ave	1.193	1.143		4.79	5.00	-4.2	35.0
Ethyl acetate	Ave	2.116	1.904		4.50	5.00	-10.0	35.0
Chloroform	Ave	2.509	2.224		4.44	5.00	-11.3	35.0
Tert-butyl ethyl ether	Ave	2.895	2.951		5.10	5.00	1.9	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Lab Sample ID: ICV 140-7241/23 Calibration Date: 11/26/2016 12:43

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JK25ICVX.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.177	1.029		4.37	5.00	-12.6	35.0
1,1,1-Trichloroethane	Ave	2.589	2.431		4.70	5.00	-6.1	35.0
1,2-Dichloroethane	Ave	0.3728	0.3331		4.47	5.00	-10.6	35.0
1-Butanol	Ave	0.1194	0.1320		5.53	5.00	10.5	35.0
Benzene	Ave	0.7266	0.6472		4.46	5.00	-10.9	35.0
Cyclohexane	Ave	0.1325	0.1354		5.11	5.00	2.2	35.0
Carbon tetrachloride	Ave	0.6405	0.5383		4.20	5.00	-16.0	35.0
2,3-Dimethylpentane	Ave	0.1667	0.1469		4.41	5.00	-11.9	35.0
Thiophene	Ave	0.4153	0.3865		4.66	5.00	-6.9	35.0
Tert-amyl methyl ether	Ave	0.6219	0.6301		5.07	5.00	1.3	35.0
2,2,4-Trimethylpentane	Ave	1.378	1.272		4.62	5.00	-7.7	35.0
Heptane	Ave	0.2546	0.2203		4.33	5.00	-13.5	35.0
1,2-Dichloropropane	Ave	0.2944	0.2593		4.41	5.00	-11.9	35.0
Trichloroethene	Ave	0.3420	0.3070		4.49	5.00	-10.2	35.0
Dibromomethane	Ave	0.3248	0.2893		4.46	5.00	-10.9	35.0
Bromodichloromethane	Ave	0.5654	0.4828		4.27	5.00	-14.6	35.0
1,4-Dioxane	Ave	0.0770	0.0788		5.12	5.00	2.3	35.0
Methyl methacrylate	Ave	0.2784	0.2524		4.53	5.00	-9.4	35.0
Methylcyclohexane	Ave	0.5528	0.4249		3.84	5.00	-23.1	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5507	0.5440		4.94	5.00	-1.2	35.0
cis-1,3-Dichloropropene	Ave	0.3821	0.3480		4.56	5.00	-8.9	35.0
trans-1,3-Dichloropropene	Ave	0.3443	0.2824		4.10	5.00	-18.0	35.0
Toluene	Ave	0.8601	0.7365		4.28	5.00	-14.4	35.0
1,1,2-Trichloroethane	Ave	0.2704	0.2321		4.29	5.00	-14.1	35.0
2-Methylthiophene	Ave	0.7217	0.6585		4.56	5.00	-8.8	35.0
3-Methylthiophene	Ave	0.6890	0.6262		4.55	5.00	-9.1	35.0
2-Hexanone	Ave	0.2511	0.2749		5.48	5.00	9.5	35.0
Octane	Ave	0.2880	0.2562		4.45	5.00	-11.0	35.0
Dibromochloromethane	Ave	0.6304	0.5684		4.51	5.00	-9.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.4549	0.4014		4.41	5.00	-11.8	35.0
Tetrachloroethene	Ave	0.3768	0.3388		4.50	5.00	-10.1	35.0
Chlorobenzene	Ave	0.6754	0.5874		4.35	5.00	-13.0	35.0
2,3-Dimethylheptane	Ave	1.076	1.001		4.66	5.00	-6.9	35.0
Ethylbenzene	Ave	1.020	0.8619		4.23	5.00	-15.5	35.0
2-Ethylthiophene	Ave	0.7628	0.6393		4.19	5.00	-16.2	35.0
m-Xylene & p-Xylene	Ave	0.7527	0.6661		8.85	10.0	-11.5	35.0
Nonane	Ave	0.6435	0.5289		4.11	5.00	-17.8	35.0
Bromoform	Ave	0.6005	0.4851		4.04	5.00	-19.2	35.0
Styrene	Ave	0.5352	0.4649		4.35	5.00	-13.1	35.0
o-Xylene	Ave	0.8117	0.6937		4.28	5.00	-14.5	35.0
1,1,2,2-Tetrachloroethane	Ave	0.5908	0.5430		4.60	5.00	-8.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Lab Sample ID: ICV 140-7241/23 Calibration Date: 11/26/2016 12:43

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JK25ICVX.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1356	0.1254		4.63	5.00	-7.5	35.0
Isopropylbenzene	Ave	1.098	0.9755		4.44	5.00	-11.2	35.0
Propylbenzene	Ave	0.2584	0.2385		4.62	5.00	-7.7	35.0
2-Chlorotoluene	Ave	0.2744	0.2388		4.35	5.00	-13.0	35.0
4-Ethyltoluene	Ave	0.9183	0.8030		4.37	5.00	-12.6	35.0
1,3,5-Trimethylbenzene	Ave	0.4630	0.4348		4.70	5.00	-6.1	35.0
Alpha Methyl Styrene	Ave	0.3575	0.3290		4.60	5.00	-8.0	35.0
Decane	Ave	0.6508	0.5684		4.37	5.00	-12.7	35.0
tert-Butylbenzene	Ave	0.9343	0.8580		4.59	5.00	-8.2	35.0
1,2,4-Trimethylbenzene	Ave	0.7988	0.7413		4.64	5.00	-7.2	35.0
sec-Butylbenzene	Ave	1.225	1.102		4.50	5.00	-10.1	35.0
1,3-Dichlorobenzene	Ave	0.4476	0.3966		4.43	5.00	-11.4	35.0
Benzyl chloride	Ave	0.3881	0.4276		5.51	5.00	10.2	35.0
1,4-Dichlorobenzene	Ave	0.3490	0.3506		5.03	5.00	0.5	35.0
4-Isopropyltoluene	Ave	0.9555	0.8776		4.59	5.00	-8.2	35.0
1,2,3-Trimethylbenzene	Ave	0.6004	0.6092		5.08	5.00	1.5	35.0
Butylcyclohexane	Ave	0.7729	0.6164		3.99	5.00	-20.2	35.0
1,2-Dichlorobenzene	Ave	0.4533	0.4131		4.56	5.00	-8.9	35.0
Indane	Ave	0.6991	0.6137		4.39	5.00	-12.2	35.0
Indene	Ave	0.4345	0.5118		5.89	5.00	17.8	35.0
Butylbenzene	Ave	0.8017	0.7838		4.89	5.00	-2.2	35.0
Undecane	Ave	0.5842	0.6440		5.51	5.00	10.2	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.5891	0.7608		6.46	5.00	29.1	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.1560	0.1383		4.44	5.00	-11.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	0.6898	0.8152		5.91	5.00	18.2	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.4240	0.5148		6.07	5.00	21.4	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.5362	0.6309		5.89	5.00	17.7	35.0
Dodecane	Ave	0.4832	0.5920		6.13	5.00	22.5	35.0
1,2,4-Trichlorobenzene	Ave	0.1304	0.1647		6.32	5.00	26.3	35.0
Naphthalene	Ave	0.3491	0.3828		5.49	5.00	9.7	35.0
Benzo(b)thiophene	Ave	0.1359	0.1714		6.31	5.00	26.1	35.0
Hexachlorobutadiene	Ave	0.5047	0.4629		4.59	5.00	-8.3	35.0
1,2,3-Trichlorobenzene	Ave	0.1705	0.1957		5.74	5.00	14.7	35.0
2-Methylnaphthalene	Ave	0.0343	0.0305		13.9	15.6	-11.1	50.0
1-Methylnaphthalene	Ave	0.0381	0.0373		15.3	15.6	-2.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6334	0.6342		10.0	10.0	0.1	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Lab File ID: JBFBC03C.D BFB Injection Date: 03/03/2017

Instrument ID: MJ BFB Injection Time: 13:14

Analysis Batch No.: 9072

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	26.2	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	106.7	
175	5.0 - 9.0 % of mass 174	8.6	(8.1) 1
176	95.0 - 101.0 % of mass 174	107.7	(100.9) 1
177	5.0 - 9.0 % of mass 176	7.4	(6.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-9072/10	JCCVC03Z.D	03/03/2017	13:40
	LCS 140-9072/1010	JCCVC03Z-LCS.d	03/03/2017	13:40
	MB 140-9072/12	J500BC03.D	03/03/2017	15:59
SV-004-C-22	140-7292-2	JC03P101.D	03/03/2017	16:43
SV-060-C-22	140-7292-3	JC03P102.D	03/03/2017	17:27
SV-088-C-22	140-7292-4	JC03P103.D	03/03/2017	18:12
SV-113-C-22	140-7292-6	JC03P104.D	03/03/2017	18:56
SV-131-C-22	140-7292-8	JC03P105.D	03/03/2017	19:40
SV-149-C-22	140-7292-10	JC03P106.D	03/03/2017	20:24
SV-150-C-22	140-7292-11	JC03P107.D	03/03/2017	21:10
SV-153-C-22	140-7292-13	JC03P108.D	03/03/2017	21:54
SV-155-C-22	140-7292-14	JC03P109.D	03/03/2017	22:39
SV-015-A-22	140-7292-15	JC03P110.D	03/03/2017	23:23
SV-116-A-22	140-7292-16	JC03P111.D	03/04/2017	00:08
SV-075-A-22	140-7292-17	JC03P112.D	03/04/2017	00:53
SV-076-A-22	140-7292-18	JC03P113.D	03/04/2017	01:37
SV-078-A-22	140-7292-19	JC03P114.D	03/04/2017	02:22
SV-079-A-22	140-7292-20	JC03P115.D	03/04/2017	03:06
SV-081-A-22	140-7292-21	JC03P116.D	03/04/2017	04:35
SV-136-A-22	140-7292-25	JC03P201.D	03/04/2017	05:20
SV-138-A-22	140-7292-26	JC03P202.D	03/04/2017	06:05
SV-139-A-22	140-7292-27	JC03P203.D	03/04/2017	06:50
SV-100-B-22	140-7292-28	JC03P204.D	03/04/2017	07:34

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Lab Sample ID: CCVIS 140-9072/10 Calibration Date: 03/03/2017 13:40

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JCCVC03Z.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3608	0.2855		1.58	2.00	-20.9	30.0
Propene	Ave	1.245	1.201		1.93	2.00	-3.6	30.0
Dichlorodifluoromethane	Ave	3.239	2.920		1.80	2.00	-9.8	30.0
Chloromethane	Ave	0.4618	0.4485		1.94	2.00	-2.9	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	1.790	2.099		2.35	2.00	17.3	30.0
Acetaldehyde	Ave	0.4989	0.3413		6.84	10.0	-31.6*	30.0
Vinyl chloride	Ave	1.385	1.258		1.82	2.00	-9.2	30.0
1,3-Butadiene	Ave	1.112	1.022		1.84	2.00	-8.1	30.0
Butane	Ave	2.414	2.199		1.82	2.00	-8.9	30.0
Bromomethane	Ave	1.232	1.118		1.82	2.00	-9.3	30.0
Chloroethane	Ave	0.6570	0.5816		1.77	2.00	-11.5	30.0
Ethanol	Ave	0.5282	0.3933		7.45	10.0	-25.5	30.0
Vinyl bromide	Ave	1.206	1.056		1.75	2.00	-12.4	30.0
2-Methylbutane	Ave	1.767	1.637		1.85	2.00	-7.4	30.0
Trichlorofluoromethane	Ave	3.295	3.067		1.86	2.00	-6.9	30.0
Acrolein	Ave	0.3877	0.2390		1.23	2.00	-38.4*	30.0
Acetonitrile	Ave	0.4770	0.3826		1.60	2.00	-19.8	30.0
Acetone	Ave	0.4144	0.3798		5.50	6.00	-8.4	30.0
Isopropyl alcohol	Ave	1.928	1.572		4.90	6.00	-18.4	30.0
Pentane	Ave	0.1852	0.1763		1.91	2.00	-4.8	30.0
Ethyl ether	Ave	1.358	1.066		1.57	2.00	-21.5	30.0
1,1-Dichloroethene	Ave	1.204	1.152		1.91	2.00	-4.3	30.0
tert-Butyl alcohol	Ave	1.944	1.790		1.84	2.00	-7.9	30.0
Acrylonitrile	Ave	0.7642	0.5846		1.53	2.00	-23.5	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.668	2.604		1.95	2.00	-2.4	30.0
Methylene Chloride	Ave	1.179	1.054		1.79	2.00	-10.6	30.0
3-Chloropropene	Ave	1.388	1.051		1.52	2.00	-24.3	30.0
Carbon disulfide	Ave	3.546	3.355		1.89	2.00	-5.4	30.0
trans-1,2-Dichloroethene	Ave	1.210	1.141		1.89	2.00	-5.8	30.0
2-Methylpentane	Ave	3.129	3.088		1.97	2.00	-1.3	30.0
Methyl tert-butyl ether	Ave	2.474	2.197		1.78	2.00	-11.2	30.0
1,1-Dichloroethane	Ave	2.301	1.927		1.68	2.00	-16.2	30.0
Vinyl acetate	Ave	2.833	2.319		1.64	2.00	-18.1	30.0
2-Butanone (MEK)	Ave	0.3626	0.3455		1.91	2.00	-4.7	30.0
Hexane	Ave	1.065	0.997		1.87	2.00	-6.4	30.0
Isopropyl ether	Ave	3.770	3.839		2.04	2.00	1.8	30.0
cis-1,2-Dichloroethene	Ave	1.193	1.035		1.74	2.00	-13.2	30.0
Ethyl acetate	Ave	2.116	2.025		1.91	2.00	-4.3	30.0
Chloroform	Ave	2.509	2.105		1.68	2.00	-16.1	30.0
Tert-butyl ethyl ether	Ave	2.895	2.894		2.00	2.00	-0.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Lab Sample ID: CCVIS 140-9072/10 Calibration Date: 03/03/2017 13:40

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JCCVC03Z.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.177	1.091		1.85	2.00	-7.3	30.0
1,1,1-Trichloroethane	Ave	2.589	2.288		1.77	2.00	-11.6	30.0
1,2-Dichloroethane	Ave	0.3728	0.2725		1.46	2.00	-26.9	30.0
1-Butanol	Ave	0.1194	0.1061		1.78	2.00	-11.2	30.0
Benzene	Ave	0.7266	0.5463		1.50	2.00	-24.8	30.0
Cyclohexane	Ave	0.1325	0.1200		1.81	2.00	-9.4	30.0
Carbon tetrachloride	Ave	0.6405	0.6263		1.96	2.00	-2.2	30.0
2,3-Dimethylpentane	Ave	0.1667	0.1570		1.88	2.00	-5.8	30.0
Thiophene	Ave	0.4153	0.3423		1.65	2.00	-17.6	30.0
Tert-amyl methyl ether	Ave	0.6219	0.6861		2.21	2.00	10.3	30.0
2,2,4-Trimethylpentane	Ave	1.378	1.366		1.98	2.00	-0.8	30.0
Heptane	Ave	0.2546	0.2209		1.74	2.00	-13.2	30.0
1,2-Dichloropropane	Ave	0.2944	0.2462		1.67	2.00	-16.4	30.0
Trichloroethene	Ave	0.3420	0.3317		1.94	2.00	-3.0	30.0
Dibromomethane	Ave	0.3248	0.2592		1.60	2.00	-20.2	30.0
Bromodichloromethane	Ave	0.5654	0.4413		1.56	2.00	-22.0	30.0
1,4-Dioxane	Ave	0.0770	0.0844		2.19	2.00	9.6	30.0
Methyl methacrylate	Ave	0.2784	0.2694		1.94	2.00	-3.2	30.0
Methylcyclohexane	Ave	0.5528	0.5281		1.91	2.00	-4.5	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5507	0.5807		2.11	2.00	5.5	30.0
cis-1,3-Dichloropropene	Ave	0.3821	0.2924		1.53	2.00	-23.5	30.0
trans-1,3-Dichloropropene	Ave	0.3443	0.2801		1.63	2.00	-18.7	30.0
Toluene	Ave	0.8601	0.8232		1.92	2.00	-4.3	30.0
1,1,2-Trichloroethane	Ave	0.2704	0.2416		1.79	2.00	-10.7	30.0
2-Methylthiophene	Ave	0.7217	0.6848		1.90	2.00	-5.1	30.0
3-Methylthiophene	Ave	0.6890	0.6515		1.89	2.00	-5.4	30.0
2-Hexanone	Ave	0.2511	0.2936		2.34	2.00	16.9	30.0
Octane	Ave	0.2880	0.2456		1.71	2.00	-14.7	30.0
Dibromochloromethane	Ave	0.6304	0.5633		1.79	2.00	-10.6	30.0
1,2-Dibromoethane (EDB)	Ave	0.4549	0.4079		1.79	2.00	-10.3	30.0
Tetrachloroethene	Ave	0.3768	0.3692		1.96	2.00	-2.0	30.0
Chlorobenzene	Ave	0.6754	0.6425		1.90	2.00	-4.9	30.0
2,3-Dimethylheptane	Ave	1.076	0.9562		1.78	2.00	-11.2	30.0
Ethylbenzene	Ave	1.020	1.001		1.96	2.00	-1.8	30.0
2-Ethylthiophene	Ave	0.7628	0.7415		1.95	2.00	-2.8	30.0
m-Xylene & p-Xylene	Ave	0.7527	0.7601		4.04	4.00	1.0	30.0
Nonane	Ave	0.6435	0.5451		1.70	2.00	-15.3	30.0
Bromoform	Ave	0.6005	0.5279		1.76	2.00	-12.1	30.0
Styrene	Ave	0.5352	0.5055		1.89	2.00	-5.6	30.0
o-Xylene	Ave	0.8117	0.8177		2.02	2.00	0.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5908	0.5608		1.90	2.00	-5.1	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Lab Sample ID: CCVIS 140-9072/10 Calibration Date: 03/03/2017 13:40

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JCCVC03Z.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1356	0.1304		1.92	2.00	-3.9	30.0
Isopropylbenzene	Ave	1.098	1.122		2.04	2.00	2.2	30.0
Propylbenzene	Ave	0.2584	0.2696		2.09	2.00	4.4	30.0
2-Chlorotoluene	Ave	0.2744	0.2751		2.01	2.00	0.2	30.0
4-Ethyltoluene	Ave	0.9183	0.9296		2.03	2.00	1.2	30.0
1,3,5-Trimethylbenzene	Ave	0.4630	0.4925		2.13	2.00	6.4	30.0
Alpha Methyl Styrene	Ave	0.3575	0.3397		1.90	2.00	-5.0	30.0
Decane	Ave	0.6508	0.6350		1.95	2.00	-2.4	30.0
tert-Butylbenzene	Ave	0.9343	0.9593		2.05	2.00	2.7	30.0
1,2,4-Trimethylbenzene	Ave	0.7988	0.7987		2.00	2.00	-0.0	30.0
sec-Butylbenzene	Ave	1.225	1.234		2.01	2.00	0.7	30.0
1,3-Dichlorobenzene	Ave	0.4476	0.4239		1.90	2.00	-5.3	30.0
Benzyl chloride	Ave	0.3881	0.3537		1.82	2.00	-8.9	30.0
1,4-Dichlorobenzene	Ave	0.3490	0.3573		2.05	2.00	2.4	30.0
4-Isopropyltoluene	Ave	0.9555	1.015		2.13	2.00	6.3	30.0
1,2,3-Trimethylbenzene	Ave	0.6004	0.6054		2.02	2.00	0.8	30.0
Butylcyclohexane	Ave	0.7729	0.6616		1.71	2.00	-14.4	30.0
1,2-Dichlorobenzene	Ave	0.4533	0.4296		1.90	2.00	-5.2	30.0
Indane	Ave	0.6991	0.6903		1.98	2.00	-1.3	30.0
Indene	Ave	0.4345	0.3990		1.84	2.00	-8.2	30.0
Butylbenzene	Ave	0.8017	0.7918		1.98	2.00	-1.2	30.0
Undecane	Ave	0.5842	0.7031		2.41	2.00	20.3	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.5891	0.6474		2.20	2.00	9.9	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.1560	0.1468		1.88	2.00	-5.9	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.6898	0.7667		2.22	2.00	11.1	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.4240	0.4763		2.25	2.00	12.3	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.5362	0.5861		2.19	2.00	9.3	30.0
Dodecane	Ave	0.4832	0.6151		2.55	2.00	27.3	30.0
1,2,4-Trichlorobenzene	Ave	0.1304	0.1587		2.43	2.00	21.7	30.0
Naphthalene	Ave	0.3491	0.3367		1.93	2.00	-3.5	30.0
Benzo(b)thiophene	Ave	0.1359	0.1586		2.33	2.00	16.7	30.0
Hexachlorobutadiene	Ave	0.5047	0.6047		2.40	2.00	19.8	30.0
1,2,3-Trichlorobenzene	Ave	0.1705	0.1868		2.19	2.00	9.5	30.0
2-Methylnaphthalene	Ave	0.0343	0.0225		4.10	6.25	-34.4	50.0
1-Methylnaphthalene	Ave	0.0381	0.0206		3.38	6.25	-46.0	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6334	0.4506		2.85	4.00	-28.9	30.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Lab File ID: JBFBC04.D BFB Injection Date: 03/04/2017

Instrument ID: MJ BFB Injection Time: 10:17

Analysis Batch No.: 9073

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	26.8	
75	30.0 - 60.0 % of mass 95	51.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	107.8	
175	5.0 - 9.0 % of mass 174	8.7	(8.1) 1
176	95.0 - 101.0 % of mass 174	108.7	(100.8) 1
177	5.0 - 9.0 % of mass 176	6.8	(6.3) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-9073/2	JCCVC04.D	03/04/2017	10:42
	LCS 140-9073/1002	JCCVC04-LCS.d	03/04/2017	10:42
	MB 140-9073/10	JMB500C04.D	03/04/2017	18:05
SV-102-C-22 DL	140-7292-5 DL	JC04p201.D	03/04/2017	18:50
SV-126-C-22 DL	140-7292-7 DL	JC04p202.D	03/04/2017	19:34
SV-142-C-22	140-7292-9	JC04p203.D	03/04/2017	21:03
SV-081-A-22 DL	140-7292-21 DL	JC04p204.D	03/04/2017	21:48

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Lab Sample ID: CCVIS 140-9073/2 Calibration Date: 03/04/2017 10:42

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JCCVC04.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3608	0.2681		1.49	2.00	-25.7	30.0
Propene	Ave	1.245	1.103		1.77	2.00	-11.5	30.0
Dichlorodifluoromethane	Ave	3.239	2.672		1.65	2.00	-17.5	30.0
Chloromethane	Ave	0.4618	0.4026		1.74	2.00	-12.8	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	1.790	1.809		2.02	2.00	1.0	30.0
Acetaldehyde	Ave	0.4989	0.4049		8.12	10.0	-18.8	30.0
Vinyl chloride	Ave	1.385	1.089		1.57	2.00	-21.4	30.0
1,3-Butadiene	Ave	1.112	0.8977		1.62	2.00	-19.2	30.0
Butane	Ave	2.414	1.941		1.61	2.00	-19.6	30.0
Bromomethane	Ave	1.232	0.9547		1.55	2.00	-22.5	30.0
Chloroethane	Ave	0.6570	0.4935		1.50	2.00	-24.9	30.0
Ethanol	Ave	0.5282	0.4641		8.79	10.0	-12.1	30.0
Vinyl bromide	Ave	1.206	0.9084		1.51	2.00	-24.7	30.0
2-Methylbutane	Ave	1.767	1.425		1.61	2.00	-19.4	30.0
Trichlorofluoromethane	Ave	3.295	2.694		1.64	2.00	-18.2	30.0
Acrolein	Ave	0.3877	0.2750		1.42	2.00	-29.1	30.0
Acetonitrile	Ave	0.4770	0.4370		1.83	2.00	-8.4	30.0
Acetone	Ave	0.4144	0.4554		6.60	6.00	9.9	30.0
Isopropyl alcohol	Ave	1.928	1.714		5.34	6.00	-11.1	30.0
Pentane	Ave	0.1852	0.1470		1.59	2.00	-20.6	30.0
Ethyl ether	Ave	1.358	1.130		1.66	2.00	-16.8	30.0
1,1-Dichloroethene	Ave	1.204	1.002		1.66	2.00	-16.8	30.0
tert-Butyl alcohol	Ave	1.944	1.770		1.82	2.00	-8.9	30.0
Acrylonitrile	Ave	0.7642	0.6459		1.69	2.00	-15.5	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.668	2.278		1.71	2.00	-14.6	30.0
Methylene Chloride	Ave	1.179	0.9734		1.65	2.00	-17.4	30.0
3-Chloropropene	Ave	1.388	1.026		1.48	2.00	-26.1	30.0
Carbon disulfide	Ave	3.546	2.839		1.60	2.00	-19.9	30.0
trans-1,2-Dichloroethene	Ave	1.210	1.002		1.66	2.00	-17.2	30.0
2-Methylpentane	Ave	3.129	2.771		1.77	2.00	-11.4	30.0
Methyl tert-butyl ether	Ave	2.474	2.217		1.79	2.00	-10.4	30.0
1,1-Dichloroethane	Ave	2.301	1.865		1.62	2.00	-18.9	30.0
Vinyl acetate	Ave	2.833	2.526		1.78	2.00	-10.8	30.0
2-Butanone (MEK)	Ave	0.3626	0.3897		2.15	2.00	7.5	30.0
Hexane	Ave	1.065	0.9091		1.71	2.00	-14.6	30.0
Isopropyl ether	Ave	3.770	3.870		2.05	2.00	2.7	30.0
cis-1,2-Dichloroethene	Ave	1.193	0.9808		1.65	2.00	-17.8	30.0
Ethyl acetate	Ave	2.116	2.209		2.09	2.00	4.4	30.0
Chloroform	Ave	2.509	1.997		1.59	2.00	-20.4	30.0
Tert-butyl ethyl ether	Ave	2.895	2.888		2.00	2.00	-0.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Lab Sample ID: CCVIS 140-9073/2 Calibration Date: 03/04/2017 10:42

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JCCVC04.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.177	1.179		2.00	2.00	0.1	30.0
1,1,1-Trichloroethane	Ave	2.589	2.135		1.65	2.00	-17.5	30.0
1,2-Dichloroethane	Ave	0.3728	0.2773		1.49	2.00	-25.6	30.0
1-Butanol	Ave	0.1194	0.1097		1.84	2.00	-8.1	30.0
Benzene	Ave	0.7266	0.5493		1.51	2.00	-24.4	30.0
Cyclohexane	Ave	0.1325	0.1058		1.60	2.00	-20.1	30.0
Carbon tetrachloride	Ave	0.6405	0.5828		1.82	2.00	-9.0	30.0
2,3-Dimethylpentane	Ave	0.1667	0.1384		1.66	2.00	-17.0	30.0
Thiophene	Ave	0.4153	0.3337		1.61	2.00	-19.7	30.0
Tert-amyl methyl ether	Ave	0.6219	0.6676		2.15	2.00	7.4	30.0
2,2,4-Trimethylpentane	Ave	1.378	1.221		1.77	2.00	-11.4	30.0
Heptane	Ave	0.2546	0.2019		1.59	2.00	-20.7	30.0
1,2-Dichloropropane	Ave	0.2944	0.2439		1.66	2.00	-17.1	30.0
Trichloroethene	Ave	0.3420	0.3406		1.99	2.00	-0.4	30.0
Dibromomethane	Ave	0.3248	0.2525		1.56	2.00	-22.3	30.0
Bromodichloromethane	Ave	0.5654	0.4425		1.57	2.00	-21.7	30.0
1,4-Dioxane	Ave	0.0770	0.0931		2.42	2.00	20.8	30.0
Methyl methacrylate	Ave	0.2784	0.2825		2.03	2.00	1.5	30.0
Methylcyclohexane	Ave	0.5528	0.4837		1.75	2.00	-12.5	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5507	0.5599		2.03	2.00	1.7	30.0
cis-1,3-Dichloropropene	Ave	0.3821	0.2960		1.55	2.00	-22.5	30.0
trans-1,3-Dichloropropene	Ave	0.3443	0.2765		1.61	2.00	-19.7	30.0
Toluene	Ave	0.8601	0.7740		1.80	2.00	-10.0	30.0
1,1,2-Trichloroethane	Ave	0.2704	0.2317		1.71	2.00	-14.3	30.0
2-Methylthiophene	Ave	0.7217	0.6335		1.76	2.00	-12.2	30.0
3-Methylthiophene	Ave	0.6890	0.6346		1.84	2.00	-7.9	30.0
2-Hexanone	Ave	0.2511	0.2590		2.06	2.00	3.1	30.0
Octane	Ave	0.2880	0.2335		1.62	2.00	-18.9	30.0
Dibromochloromethane	Ave	0.6304	0.5760		1.83	2.00	-8.6	30.0
1,2-Dibromoethane (EDB)	Ave	0.4549	0.4039		1.78	2.00	-11.2	30.0
Tetrachloroethene	Ave	0.3768	0.3349		1.78	2.00	-11.1	30.0
Chlorobenzene	Ave	0.6754	0.6300		1.87	2.00	-6.7	30.0
2,3-Dimethylheptane	Ave	1.076	0.9617		1.79	2.00	-10.6	30.0
Ethylbenzene	Ave	1.020	0.9881		1.94	2.00	-3.1	30.0
2-Ethylthiophene	Ave	0.7628	0.7359		1.93	2.00	-3.5	30.0
m-Xylene & p-Xylene	Ave	0.7527	0.7511		3.99	4.00	-0.2	30.0
Nonane	Ave	0.6435	0.5625		1.75	2.00	-12.6	30.0
Bromoform	Ave	0.6005	0.5377		1.79	2.00	-10.5	30.0
Styrene	Ave	0.5352	0.4984		1.86	2.00	-6.9	30.0
o-Xylene	Ave	0.8117	0.7923		1.95	2.00	-2.4	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5908	0.4807		1.63	2.00	-18.6	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Lab Sample ID: CCVIS 140-9073/2 Calibration Date: 03/04/2017 10:42

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JCCVC04.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1356	0.1321		1.95	2.00	-2.6	30.0
Isopropylbenzene	Ave	1.098	1.106		2.01	2.00	0.7	30.0
Propylbenzene	Ave	0.2584	0.2744		2.13	2.00	6.2	30.0
2-Chlorotoluene	Ave	0.2744	0.2705		1.97	2.00	-1.4	30.0
4-Ethyltoluene	Ave	0.9183	0.9498		2.07	2.00	3.4	30.0
1,3,5-Trimethylbenzene	Ave	0.4630	0.4942		2.14	2.00	6.7	30.0
Alpha Methyl Styrene	Ave	0.3575	0.3272		1.83	2.00	-8.5	30.0
Decane	Ave	0.6508	0.6575		2.02	2.00	1.0	30.0
tert-Butylbenzene	Ave	0.9343	0.9734		2.08	2.00	4.2	30.0
1,2,4-Trimethylbenzene	Ave	0.7988	0.7978		2.00	2.00	-0.1	30.0
sec-Butylbenzene	Ave	1.225	1.236		2.02	2.00	0.9	30.0
1,3-Dichlorobenzene	Ave	0.4476	0.3802		1.70	2.00	-15.0	30.0
Benzyl chloride	Ave	0.3881	0.3104		1.60	2.00	-20.0	30.0
1,4-Dichlorobenzene	Ave	0.3490	0.3114		1.79	2.00	-10.8	30.0
4-Isopropyltoluene	Ave	0.9555	0.9893		2.07	2.00	3.5	30.0
1,2,3-Trimethylbenzene	Ave	0.6004	0.6058		2.02	2.00	0.9	30.0
Butylcyclohexane	Ave	0.7729	0.6921		1.79	2.00	-10.5	30.0
1,2-Dichlorobenzene	Ave	0.4533	0.3933		1.74	2.00	-13.2	30.0
Indane	Ave	0.6991	0.6786		1.94	2.00	-2.9	30.0
Indene	Ave	0.4345	0.3546		1.63	2.00	-18.4	30.0
Butylbenzene	Ave	0.8017	0.7448		1.86	2.00	-7.1	30.0
Undecane	Ave	0.5842	0.6544		2.24	2.00	12.0	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.5891	0.6026		2.05	2.00	2.3	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.1560	0.1330		1.71	2.00	-14.7	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.6898	0.6937		2.01	2.00	0.6	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.4240	0.4348		2.05	2.00	2.6	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.5362	0.5299		1.98	2.00	-1.2	30.0
Dodecane	Ave	0.4832	0.5100		2.11	2.00	5.5	30.0
1,2,4-Trichlorobenzene	Ave	0.1304	0.1309		2.01	2.00	0.4	30.0
Naphthalene	Ave	0.3491	0.2905		1.67	2.00	-16.8	30.0
Benzo(b)thiophene	Ave	0.1359	0.1284		1.89	2.00	-5.6	30.0
Hexachlorobutadiene	Ave	0.5047	0.5617		2.23	2.00	11.3	30.0
1,2,3-Trichlorobenzene	Ave	0.1705	0.1578		1.85	2.00	-7.5	30.0
2-Methylnaphthalene	Ave	0.0343	0.0166		3.03	6.25	-51.6*	50.0
1-Methylnaphthalene	Ave	0.0381	0.0149		2.44	6.25	-60.9*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6334	0.4926		3.11	4.00	-22.2	30.0

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Lab File ID: EMB500C03.D Lab Sample ID: MB 140-9031/12

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: ME Date Analyzed: 03/03/2017 16:22

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
SV-102-C-22	140-7292-5	EC03P110.D	03/04/2017 00:18
SV-126-C-22	140-7292-7	EC03P111.D	03/04/2017 01:01
SV-152-C-22	140-7292-12	EC03P113.D	03/04/2017 02:28
SV-168-A-22	140-7292-23	EC03P114.D	03/04/2017 03:11
SV-118-A-22	140-7292-24	EC03P115.D	03/04/2017 03:54
SV-101-B-22	140-7292-29	EC03P116.D	03/04/2017 04:37

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-9031/12

Matrix: Air | Lab File ID: EMB500C03.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 03/03/2017 16:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9031 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-9031/12

Matrix: Air | Lab File ID: EMB500C03.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 03/03/2017 16:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9031 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Matrix: Air Level: Low Lab File ID: ECCVC03C-LCS.d

Lab ID: LCS 140-9031/1009 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.77	88	70-130	
Carbon tetrachloride	2.00	2.35	118	70-130	
Chlorodifluoromethane	2.00	2.29	115	60-140	
Chloroform	2.00	1.93	97	70-130	
cis-1,2-Dichloroethene	2.00	1.94	97	70-130	
Dichlorodifluoromethane	2.00	2.28	114	60-140	
1,1-Dichloroethane	2.00	1.93	96	70-130	
1,2-Dichloroethane	2.00	1.76	88	70-130	
1,1-Dichloroethene	2.00	2.40	120	70-130	
Ethylbenzene	2.00	2.19	109	70-130	
Methylene Chloride	2.00	2.04	102	70-130	
Methyl tert-butyl ether	2.00	2.39	119	60-140	
Naphthalene	2.00	1.81	90	60-140	
Tetrachloroethene	2.00	1.94	97	70-130	
Toluene	2.00	2.01	100	70-130	
trans-1,2-Dichloroethene	2.00	2.12	106	70-130	
1,2,4-Trichlorobenzene	2.00	1.67	84	60-140	
1,1,1-Trichloroethane	2.00	2.29	114	70-130	
1,1,2-Trichloroethane	2.00	2.00	100	70-130	
Trichloroethene	2.00	2.05	102	70-130	
1,2,3-Trimethylbenzene	2.00	2.36	118	70-130	
1,2,4-Trimethylbenzene	2.00	2.38	119	70-130	
1,3,5-Trimethylbenzene	2.00	2.35	118	70-130	
Vinyl chloride	2.00	2.40	120	70-130	
Xylenes, Total	6.00	6.73	112	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Lab File ID: J500BC03.D Lab Sample ID: MB 140-9072/12

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MJ Date Analyzed: 03/03/2017 15:59

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-9072/1010	JCCVC03Z-LCS.d	03/03/2017 13:40
SV-004-C-22	140-7292-2	JC03P101.D	03/03/2017 16:43
SV-060-C-22	140-7292-3	JC03P102.D	03/03/2017 17:27
SV-088-C-22	140-7292-4	JC03P103.D	03/03/2017 18:12
SV-113-C-22	140-7292-6	JC03P104.D	03/03/2017 18:56
SV-131-C-22	140-7292-8	JC03P105.D	03/03/2017 19:40
SV-149-C-22	140-7292-10	JC03P106.D	03/03/2017 20:24
SV-150-C-22	140-7292-11	JC03P107.D	03/03/2017 21:10
SV-153-C-22	140-7292-13	JC03P108.D	03/03/2017 21:54
SV-155-C-22	140-7292-14	JC03P109.D	03/03/2017 22:39
SV-015-A-22	140-7292-15	JC03P110.D	03/03/2017 23:23
SV-116-A-22	140-7292-16	JC03P111.D	03/04/2017 00:08
SV-075-A-22	140-7292-17	JC03P112.D	03/04/2017 00:53
SV-076-A-22	140-7292-18	JC03P113.D	03/04/2017 01:37
SV-078-A-22	140-7292-19	JC03P114.D	03/04/2017 02:22
SV-079-A-22	140-7292-20	JC03P115.D	03/04/2017 03:06
SV-081-A-22	140-7292-21	JC03P116.D	03/04/2017 04:35
SV-136-A-22	140-7292-25	JC03P201.D	03/04/2017 05:20
SV-138-A-22	140-7292-26	JC03P202.D	03/04/2017 06:05
SV-139-A-22	140-7292-27	JC03P203.D	03/04/2017 06:50
SV-100-B-22	140-7292-28	JC03P204.D	03/04/2017 07:34

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-9072/12

Matrix: Air Lab File ID: J500BC03.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/03/2017 15:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9072 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-9072/12

Matrix: Air Lab File ID: J500BC03.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/03/2017 15:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9072 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Matrix: Air Level: Low Lab File ID: JCCVC03Z-LCS.d

Lab ID: LCS 140-9072/1010 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.50	75	70-130	
Carbon tetrachloride	2.00	1.96	98	70-130	
Chlorodifluoromethane	2.00	1.58	79	60-140	
Chloroform	2.00	1.68	84	70-130	
cis-1,2-Dichloroethene	2.00	1.74	87	70-130	
Dichlorodifluoromethane	2.00	1.80	90	60-140	
1,1-Dichloroethane	2.00	1.68	84	70-130	
1,2-Dichloroethane	2.00	1.46	73	70-130	
1,1-Dichloroethene	2.00	1.91	96	70-130	
Ethylbenzene	2.00	1.96	98	70-130	
Methylene Chloride	2.00	1.79	89	70-130	
Methyl tert-butyl ether	2.00	1.78	89	60-140	
Naphthalene	2.00	1.93	96	60-140	
Tetrachloroethene	2.00	1.96	98	70-130	
Toluene	2.00	1.92	96	70-130	
trans-1,2-Dichloroethene	2.00	1.89	94	70-130	
1,2,4-Trichlorobenzene	2.00	2.43	122	60-140	
1,1,1-Trichloroethane	2.00	1.77	88	70-130	
1,1,2-Trichloroethane	2.00	1.79	89	70-130	
Trichloroethene	2.00	1.94	97	70-130	
1,2,3-Trimethylbenzene	2.00	2.02	101	70-130	
1,2,4-Trimethylbenzene	2.00	2.00	100	70-130	
1,3,5-Trimethylbenzene	2.00	2.13	106	70-130	
Vinyl chloride	2.00	1.82	91	70-130	
Xylenes, Total	6.00	6.06	101	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Lab File ID: JMB500C04.D Lab Sample ID: MB 140-9073/10

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MJ Date Analyzed: 03/04/2017 18:05

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
SV-102-C-22 DL	140-7292-5 DL	JC04p201.D	03/04/2017 18:50
SV-126-C-22 DL	140-7292-7 DL	JC04p202.D	03/04/2017 19:34
SV-142-C-22	140-7292-9	JC04p203.D	03/04/2017 21:03
SV-081-A-22 DL	140-7292-21 DL	JC04p204.D	03/04/2017 21:48

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-9073/10

Matrix: Air | Lab File ID: JMB500C04.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 03/04/2017 18:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9073 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	0.0454		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7292-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-9073/10

Matrix: Air | Lab File ID: JMB500C04.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 03/04/2017 18:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9073 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	0.238		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Matrix: Air Level: Low Lab File ID: JCCVC04-LCS.d

Lab ID: LCS 140-9073/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.51	76	70-130	
Carbon tetrachloride	2.00	1.82	91	70-130	
Chlorodifluoromethane	2.00	1.49	74	60-140	
Chloroform	2.00	1.59	80	70-130	
cis-1,2-Dichloroethene	2.00	1.65	82	70-130	
Dichlorodifluoromethane	2.00	1.65	83	60-140	
1,1-Dichloroethane	2.00	1.62	81	70-130	
1,2-Dichloroethane	2.00	1.49	74	70-130	
1,1-Dichloroethene	2.00	1.66	83	70-130	
Ethylbenzene	2.00	1.94	97	70-130	
Methylene Chloride	2.00	1.65	83	70-130	
Methyl tert-butyl ether	2.00	1.79	90	60-140	
Naphthalene	2.00	1.67	83	60-140	
Tetrachloroethene	2.00	1.78	89	70-130	
Toluene	2.00	1.80	90	70-130	
trans-1,2-Dichloroethene	2.00	1.66	83	70-130	
1,2,4-Trichlorobenzene	2.00	2.01	100	60-140	
1,1,1-Trichloroethane	2.00	1.65	82	70-130	
1,1,2-Trichloroethane	2.00	1.71	86	70-130	
Trichloroethene	2.00	1.99	100	70-130	
1,2,3-Trimethylbenzene	2.00	2.02	101	70-130	
1,2,4-Trimethylbenzene	2.00	2.00	100	70-130	
1,3,5-Trimethylbenzene	2.00	2.14	107	70-130	
Vinyl chloride	2.00	1.57	79	70-130	
Xylenes, Total	6.00	5.94	99	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
SV-004-C-22	140-7292-2	76
SV-060-C-22	140-7292-3	79
SV-088-C-22	140-7292-4	84
SV-102-C-22	140-7292-5	105
SV-102-C-22 DL	140-7292-5 DL	74
SV-113-C-22	140-7292-6	76
SV-126-C-22	140-7292-7	106
SV-126-C-22 DL	140-7292-7 DL	71
SV-131-C-22	140-7292-8	81
SV-142-C-22	140-7292-9	81
SV-149-C-22	140-7292-10	85
SV-150-C-22	140-7292-11	68
SV-152-C-22	140-7292-12	101
SV-153-C-22	140-7292-13	80
SV-155-C-22	140-7292-14	75
SV-015-A-22	140-7292-15	70
SV-116-A-22	140-7292-16	82
SV-075-A-22	140-7292-17	84
SV-076-A-22	140-7292-18	78
SV-078-A-22	140-7292-19	82
SV-079-A-22	140-7292-20	83
SV-081-A-22	140-7292-21	76
SV-081-A-22 DL	140-7292-21 DL	76
SV-168-A-22	140-7292-23	103
SV-118-A-22	140-7292-24	101
SV-136-A-22	140-7292-25	77
SV-138-A-22	140-7292-26	79
SV-139-A-22	140-7292-27	78
SV-100-B-22	140-7292-28	82
SV-101-B-22	140-7292-29	108
	MB 140-9031/12	101
	MB 140-9072/12	82
	MB 140-9073/10	82
	LCS 140-9031/1009	102

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
	LCS 140-9072/1010	71
	LCS 140-9073/1002	78

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Sample No.: ICIS 140-8130/14 Date Analyzed: 01/25/2017 22:45

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): EXA25IC06.D Heated Purge: (Y/N) N

Calibration ID: 879

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		386762	7.54	1759320	9.75	1687839	14.76
UPPER LIMIT		541467	7.87	2463048	10.08	2362975	15.09
LOWER LIMIT		232057	7.21	1055592	9.42	1012703	14.43
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-8130/23		359125	7.54	1694069	9.75	1682230	14.76

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Sample No.: CCVIS 140-9031/9 Date Analyzed: 03/03/2017 13:27

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): ECCVC03C.D Heated Purge: (Y/N) N

Calibration ID: 879

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		307886	7.53	1375138	9.74	1371313	14.75
UPPER LIMIT		431040	7.86	1925193	10.07	1919838	15.08
LOWER LIMIT		184732	7.20	825083	9.41	822788	14.42
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-9031/1009		307886	7.53	1375138	9.74	1371313	14.75
MB 140-9031/12		354312	7.52	1515554	9.73	1381531	14.75
140-7292-5	SV-102-C-22	275233	7.53	1281424	9.74	1233488	14.75
140-7292-7	SV-126-C-22	377305	7.53	1610457	9.74	1714144	14.75
140-7292-12	SV-152-C-22	317846	7.53	1432714	9.74	1276748	14.75
140-7292-23	SV-168-A-22	337248	7.52	1545637	9.74	1519148	14.75
140-7292-24	SV-118-A-22	293154	7.51	1303286	9.73	1175530	14.74
140-7292-29	SV-101-B-22	294341	7.52	1306842	9.74	1289761	14.75

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Sample No.: ICIS 140-7241/7 Date Analyzed: 11/25/2016 23:17

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JK25IC06X.D Heated Purge: (Y/N) N

Calibration ID: 790

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		356777	8.64	1567971	10.84	1332891	15.61
UPPER LIMIT		499488	8.97	2195159	11.17	1866047	15.94
LOWER LIMIT		214066	8.31	940783	10.51	799735	15.28
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-7241/23		319485	8.63	1407958	10.83	1180826	15.61

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Sample No.: CCVIS 140-9072/10 Date Analyzed: 03/03/2017 13:40

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JCCVC03Z.D Heated Purge: (Y/N) N

Calibration ID: 790

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		332494	8.56	1382285	10.76	1132119	15.54
UPPER LIMIT		465492	8.89	1935199	11.09	1584967	15.87
LOWER LIMIT		199496	8.23	829371	10.43	679271	15.21
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-9072/1010		332494	8.56	1382285	10.76	1132119	15.54
MB 140-9072/12		381801	8.56	1613588	10.76	1280270	15.54
140-7292-2	SV-004-C-22	313773	8.56	1404270	10.76	1115217	15.54
140-7292-3	SV-060-C-22	320816	8.56	1436464	10.76	1143676	15.54
140-7292-4	SV-088-C-22	322032	8.56	1454807	10.76	1224985	15.54
140-7292-6	SV-113-C-22	300227	8.56	1325995	10.76	1022042	15.54
140-7292-8	SV-131-C-22	313540	8.56	1408081	10.76	1162607	15.54
140-7292-10	SV-149-C-22	308610	8.56	1381893	10.76	1151468	15.54
140-7292-11	SV-150-C-22	292072	8.56	1280431	10.76	936667	15.54
140-7292-13	SV-153-C-22	310650	8.56	1383894	10.76	1079692	15.54
140-7292-14	SV-155-C-22	298306	8.56	1360211	10.76	1096625	15.54
140-7292-15	SV-015-A-22	294341	8.58	1243332	10.77	913873	15.54
140-7292-16	SV-116-A-22	303601	8.56	1385593	10.76	1097510	15.54
140-7292-17	SV-075-A-22	289069	8.56	1300347	10.76	1061048	15.54
140-7292-18	SV-076-A-22	325646	8.57	1474650	10.76	1176605	15.54
140-7292-19	SV-078-A-22	301264	8.56	1356429	10.76	1110198	15.54
140-7292-20	SV-079-A-22	291901	8.56	1304592	10.76	1104460	15.54
140-7292-21	SV-081-A-22	267070	8.56	1136092	10.76	870083	15.54
140-7292-25	SV-136-A-22	283865	8.56	1137373	10.76	874312	15.54
140-7292-26	SV-138-A-22	297428	8.56	1333368	10.76	1061090	15.54
140-7292-27	SV-139-A-22	290387	8.56	1274744	10.76	1000271	15.54
140-7292-28	SV-100-B-22	289100	8.56	1297282	10.76	1086790	15.54

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Sample No.: CCVIS 140-9073/2 Date Analyzed: 03/04/2017 10:42

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JCCVC04.D Heated Purge: (Y/N) N

Calibration ID: 790

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		307225	8.56	1319117	10.76	1098970	15.54
UPPER LIMIT		430115	8.89	1846764	11.09	1538558	15.87
LOWER LIMIT		184335	8.23	791470	10.43	659382	15.21
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-9073/1002		307225	8.56	1319117	10.76	1098970	15.54
MB 140-9073/10		367792	8.56	1607414	10.76	1270116	15.54
140-7292-5 DL	SV-102-C-22 DL	307325	8.56	1363053	10.76	1013841	15.54
140-7292-7 DL	SV-126-C-22 DL	332749	8.56	1528720	10.76	1189514	15.54
140-7292-9	SV-142-C-22	294310	8.56	1336726	10.76	1123020	15.54
140-7292-21 DL	SV-081-A-22 DL	277234	8.56	1264807	10.76	1014519	15.53

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

LOCKHEED MARTIN CORPORATION (LMC) - MIDDLE RIVER COMPLEX (MRC)
SDG 140-7292-1

SAMPLE IDENTIFICATION	SV-168-A-22		
COMPOUND	TRICHLOROETHENE	MW=	131.39
		GAS CONSTANT =	24.45
COMPOUND AREA	1410389		
INTERNAL STANDARD AMOUNT (ppbv)	4		
CALIBRATION VOLUME (mL)	500		
DILUTION FACTOR	11.16		
INTERNAL STANDARD AREA	1545637		
AVERAGE RRF	0.3839		
SAMPLE VOLUME (mL)	13		
			9.50765219

4080.9769 ppbv
21930.45 µg/m³

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1

SDG No.:

Client Sample ID: SV-168-A-22 Lab Sample ID: 140-7292-23

Matrix: Air Lab File ID: EC03P114.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 11:04

Sample wt/vol: 13(mL) Date Analyzed: 03/04/2017 03:11

Soil Aliquot Vol: Dilution Factor: 11.16

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9031 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		34	9.9
56-23-5	Carbon tetrachloride	153.81	ND		34	6.4
75-45-6	Chlorodifluoromethane	86.47	ND		34	6.4
67-66-3	Chloroform	119.38	25	J	34	6.4
156-59-2	cis-1,2-Dichloroethene	96.94	67		34	10
75-71-8	Dichlorodifluoromethane	120.91	ND		34	12
75-34-3	1,1-Dichloroethane	98.96	17	J	34	4.3
107-06-2	1,2-Dichloroethane	98.96	ND		34	8.2
75-35-4	1,1-Dichloroethene	96.94	1200		34	6.0
100-41-4	Ethylbenzene	106.17	ND		34	12
75-09-2	Methylene Chloride	84.93	ND		86	56
1634-04-4	Methyl tert-butyl ether	88.15	ND		170	29
91-20-3	Naphthalene	128.17	ND		17	17
127-18-4	Tetrachloroethene	165.83	ND		34	6.9
108-88-3	Toluene	92.14	ND		52	52
156-60-5	trans-1,2-Dichloroethene	96.94	ND		34	8.6
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		34	17
71-55-6	1,1,1-Trichloroethane	133.41	11	J	34	5.2
79-00-5	1,1,2-Trichloroethane	133.41	ND		34	9.0
79-01-6	Trichloroethene	131.39	4100		17	6.0
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		34	15
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		34	11
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		34	11
75-01-4	Vinyl chloride	62.50	ND		17	12
1330-20-7	Xylenes, Total	106.17	ND		69	10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1
SDG No.:
Client Sample ID: SV-168-A-22 Lab Sample ID: 140-7292-23
Matrix: Air Lab File ID: EC03P114.D
Analysis Method: TO 15 LL Date Collected: 03/01/2017 11:04
Sample wt/vol: 13(mL) Date Analyzed: 03/04/2017 03:11
Soil Aliquot Vol: Dilution Factor: 11.16
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 9031 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		110	32
56-23-5	Carbon tetrachloride	153.81	ND		220	41
75-45-6	Chlorodifluoromethane	86.47	ND		120	23
67-66-3	Chloroform	119.38	120	J	170	31
156-59-2	cis-1,2-Dichloroethene	96.94	270		140	41
75-71-8	Dichlorodifluoromethane	120.91	ND		170	57
75-34-3	1,1-Dichloroethane	98.96	70	J	140	17
107-06-2	1,2-Dichloroethane	98.96	ND		140	33
75-35-4	1,1-Dichloroethene	96.94	4900		140	24
100-41-4	Ethylbenzene	106.17	ND		150	50
75-09-2	Methylene Chloride	84.93	ND		300	190
1634-04-4	Methyl tert-butyl ether	88.15	ND		620	110
91-20-3	Naphthalene	128.17	ND		90	90
127-18-4	Tetrachloroethene	165.83	ND		230	47
108-88-3	Toluene	92.14	ND		190	190
156-60-5	trans-1,2-Dichloroethene	96.94	ND		140	34
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		250	120
71-55-6	1,1,1-Trichloroethane	133.41	59	J	190	28
79-00-5	1,1,2-Trichloroethane	133.41	ND		190	49
79-01-6	Trichloroethene	131.39	22000		92	32
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		170	72
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		170	53
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		170	55
75-01-4	Vinyl chloride	62.50	ND		44	32
1330-20-7	Xylenes, Total	106.17	ND		300	45

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20170301-4182.b\EC03P114.D				
Lims ID:	140-7292-A-23				
Client ID:	SV-168-A-22				
Sample Type:	Client				
Inject. Date:	04-Mar-2017 03:11:30	ALS Bottle#:	14	Worklist Smp#:	27
Purge Vol:	500.000 mL	Dil. Factor:	11.1600		
Sample Info:	140-0004182-027				
Misc. Info.:	140-7292-a-23@11.16				
Operator ID:	7126	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20170301-4182.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	06-Mar-2017 10:36:06	Calib Date:	26-Jan-2017 00:56:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20170125-3926.b\EXA25IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK021				
First Level Reviewer: tajh		Date:	06-Mar-2017 10:34:01		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.519	7.530	-0.011	81	337248	4.00	
* 2 1,4-Difluorobenzene	114	9.736	9.741	-0.005	95	1545637	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.745	14.745	0.000	88	1519148	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.422	16.427	-0.005	94	1193075	4.10	
27 1,1-Dichloroethene	96	4.807	4.812	-0.005	98	295551	2.86	
31 Methylene Chloride	84	5.120	5.125	-0.005	94	7366	0.0737	
37 1,1-Dichloroethane	63	6.263	6.268	-0.005	98	7416	0.0403	
42 cis-1,2-Dichloroethene	96	7.201	7.212	-0.011	97	16329	0.1562	
44 Chloroform	83	7.535	7.546	-0.011	95	14415	0.0574	
47 1,1,1-Trichloroethane	97	8.533	8.544	-0.011	96	7704	0.0251	
59 Trichloroethene	130	10.507	10.512	-0.005	97	1410389	9.51	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7292-1 Analy Batch No.: 8130

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/25/2017 19:00 Calibration End Date: 01/26/2017 00:56 Calibration ID: 879

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.3850 0.3405	0.4095 0.3435	0.4175 0.3884	0.4227 0.3863	0.3616	Ave		0.3839				7.9		30.0			
Dibromomethane	0.3837 0.3105	0.3922 0.3028	0.3830 0.3374	0.3719 0.3326	0.3242	Ave		0.3487				9.8		30.0			
Bromodichloromethane	0.6173 0.5666	0.6148 0.5756	0.6840 0.6383	0.6752 0.6319	0.5934	Ave		0.6219				6.5		30.0			
1,4-Dioxane	0.1073 0.1029	0.1011 0.0938	0.1033 0.1121	0.1077 0.1089	0.0951	Ave		0.1036				6.0		30.0			
Methyl methacrylate	0.1991 0.2175	0.1995 0.2060	0.2206 0.2185	0.2452 0.2255	0.1752	Ave		0.2119				9.4		30.0			
Methylcyclohexane	+++++ 0.5711	0.6554 0.5539	0.6684 0.6338	0.6605 0.6047	0.6170	Ave		0.6206				6.8		30.0			
4-Methyl-2-pentanone (MIBK)	0.3152 0.3415	0.3637 0.3143	0.3583 0.3978	0.4451 0.3864	0.3452	Ave		0.3630				11.5		30.0			
cis-1,3-Dichloropropene	0.3941 0.3606	0.3984 0.3807	0.4538 0.4276	0.4599 0.4260	0.3919	Ave		0.4103				8.2		30.0			
trans-1,3-Dichloropropene	0.3907 0.3579	0.3701 0.3776	0.4455 0.3988	0.4496 0.3961	0.3930	Ave		0.3977				7.9		30.0			
Toluene	0.8551 0.7181	0.7643 0.7671	0.9363 0.7560	0.8736 0.7243	0.7680	Ave		0.7959				9.4		30.0			
Toluene Range	1.9419 1.6955	1.9461 1.8212	2.2351 2.0136	2.1693 2.0061	1.8224	Ave		1.9612				8.7		30.0			
1,1,2-Trichloroethane	0.2446 0.2150	0.2373 0.2248	0.2794 0.2286	0.2763 0.2268	0.2351	Ave		0.2409				9.4		30.0			
2-Methylthiophene	0.6806 0.6139	0.6354 0.6641	0.7800 0.6620	0.7600 0.6393	0.6718	Ave		0.6786				8.2		30.0			
3-Methylthiophene	0.6657 0.5866	0.6153 0.6397	0.7659 0.6451	0.7503 0.6199	0.6491	Ave		0.6597				9.1		30.0			
2-Hexanone	0.1551 0.1973	0.1715 0.1893	0.1839 0.2175	0.2375 0.2152	0.2099	Ave		0.1975				12.9		30.0			
C8 Range	2.4048 2.0434	2.3416 1.9868	2.5630 2.2130	2.5279 2.1475	2.1713	Ave		2.2666				9.0		30.0			
Octane	0.2885 0.2638	0.2688 0.2702	0.3214 0.2713	0.3056 0.2636	0.2775	Ave		0.2812				7.2		30.0			
Dibromochloromethane	0.4860 0.5748	0.4884 0.6248	0.6412 0.6382	0.6522 0.6185	0.6159	Ave		0.5933				10.8		30.0			
1,2-Dibromoethane (EDB)	0.4571 0.4185	0.4489 0.4475	0.5149 0.4661	0.5363 0.4589	0.4728	Ave		0.4690				7.7		30.0			
Tetrachloroethene	0.4254 0.3401	0.3949 0.3557	0.4525 0.3539	0.4378 0.3465	0.3835	Ave		0.3878				10.9		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

TETRA TECH

INTERNAL CORRESPONDENCE

TO: **S. BRENNER** **DATE:** **APRIL 4, 2017**

FROM: **LEIGH A. CIOFANI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
LOCKHEED MARTIN CORPORATION (LMC) – MIDDLE RIVER COMPLEX (MRC)
SAMPLE DELIVERY GROUP (SDG) 140-7294-1

SAMPLES: 29 / Air / VOC

BCK-1-22	BCK-2-22	BCK-3-22
BCK-4-22	IA-001-C-22	IA-004-C-22
IA-005-C-22	IA-033-B-22	IA-051-C-22
IA-060-C-22	IA-065-C-22	IA-088-C-22
IA-100-B-22	IA-101-B-22	IA-102-C-22
IA-113-C-22	IA-115-C-22	IA-126-C-22
IA-131-C-22	IA-135-C-22	IA-142-C-22
IA-144-C-22	IA-145-C-22	IA-146-C-22
IA-149-C-22	IA-150-C-22	IA-152-C-22
IA-153-C-22	IA-155-C-22	

OVERVIEW

The sample set for LMC – MRC, SDG 140-7294-1, consists of twenty-nine (29) indoor air/ambient air environmental samples. All samples were analyzed for select volatile organic compounds (VOC). Original samples from two (2) field duplicate sample pairs are included in this SDG: IA-131-C-22 (original / IA-DUP01-C-22 (duplicate – not in this SDG) and IA-153-C-22 (original) / IA-DUP02-C-22 (duplicate – not in this SDG). The samples were collected by Tetra Tech, Inc. on February 28, 2017 and analyzed by TestAmerica, Inc. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank results, surrogate spike recoveries, laboratory control sample results, internal standard areas, chromatographic resolution, compound identification, compound quantitation, field duplicate precision, and detection limits. Areas of concern are listed below.

MAJOR PROBLEMS

- None.

MINOR PROBLEMS

- The initial calibration performed on 11/25/16 on instrument MJ had a percent relative standard deviation (%RSD) for naphthalene that was greater than the 30% quality control limit. Samples IA-145-C-22, IA-150-C-22, BCK-1-22, and BCK-4-22 were associated with this calibration. Non-detected naphthalene results were qualified as estimated (UJ) in the associated samples.

- The continuing calibration performed on 03/03/17 at 11:17 on instrument MR had a percent difference (%D) for 1,2,3-trimethylbenzene that was greater than the 30% quality control limit. Samples IA-033-B-22, IA-100-B-22, IA-101-B-22, IA-001-C-22, IA-004-C-22, IA-005-C-22, IA-051-C-22, IA-060-C-22, IA-065-C-22, IA-088-C-22, IA-102-C-22, IA-113-C-22, IA-115-C-22, IA-126-C-22, IA-131-C-22, IA-153-C-22, IA-155-C-22, BCK-2-22, and BCK-3-22 were associated

with this calibration. Non-detected results for 1,2,3-trimethylbenzene were qualified as estimated (UJ) in the associated samples.

- The field duplicate pair samples IA-153-C-22 / IA-DUP02-C-22 had a %D for chlorodifluoromethane that was greater than the quality control limit of 2x the reporting limit (RL). The detected and non-detected results for chlorodifluoromethane were qualified as estimated (J and UJ, respectively) in samples IA-153-C-22 and IA-DUP02-C-22.

- Detected results reported below the RL limit but above the method detection limit (MDL) were qualified as estimated (J).

NOTES

Twenty-five VOC target compounds were reported for the TO-15 analysis of the samples.

Non-detected results were reported to the MDL.

The laboratory control sample (LCS) 140-8988/1002 associated with preparation batch 140-8988 had a percent recovery (%R) for 1,2,3-trimethylbenzene that was greater than the laboratory quality control limits. Samples IA-033-B-22, IA-100-B-22, IA-101-B-22, IA-001-C-22, IA-004-C-22, IA-005-C-22, IA-051-C-22, IA-060-C-22, IA-065-C-22, IA-088-C-22, IA-102-C-22, IA-113-C-22, IA-115-C-22, IA-126-C-22, IA-131-C-22, IA-153-C-22, IA-155-C-22, BCK-2-22, and BCK-3-22 were associated with this LCS. No action was necessary because results for 1,2,3-trimethylbenzene were non-detected in the associated samples.

EXECUTIVE SUMMARY

Laboratory Performance: Some non-detected results were qualified due to calibration noncompliance.

Other Factors Affecting Data Quality: Some detected and non-detected results were qualified for field duplicate imprecision. Results above the MDL but below the RL were qualified as estimated.

The data for these analyses were reviewed with reference to the USEPA "National Functional Guidelines for Organic Superfund Methods Data Review" (January 2017) and USEPA Method TO-15 analytical and reporting protocols. The text of this report has been formulated to address only those areas affecting data quality.

Leigh A. Ciofani

Tetra Tech, Inc.
Leigh A. Ciofani
Environmental Scientist/Data Validator

Tetra Tech, Inc.
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted method detection limit for sample and method.
J	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 07671	NSAMPLE	BCK-1-22			BCK-2-22			BCK-3-22			BCK-4-22		
SDG: 140-7294-1	LAB_ID	140-7294-26			140-7294-27			140-7294-28			140-7294-29		
FRACTION: OV-M3	SAMP_DATE	2/28/2017			2/28/2017			2/28/2017			2/28/2017		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		0.33	U		0.33	J	P
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	UJ	C	0.84	UJ	C	0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		0.61	U		0.61	U		0.61	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.79	J	P	0.51	J	P	0.52	J	P	0.48	J	P
CARBON TETRACHLORIDE		0.47	U		0.48	J	P	0.47	U		0.47	U	
CHLORODIFLUOROMETHANE		1.5			1.4	J	P	1	J	P	0.92	J	P
CHLOROFORM		0.37	U		0.37	U		0.37	U		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2.2			1.8	J	P	1.9	J	P	2		
ETHYLBENZENE		0.59	U		0.59	U		0.59	U		0.59	U	
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		25			2.5	J	P	2.7	J	P	2.3	U	
NAPHTHALENE		1	UJ	C	1	U		1	U		1	UJ	C
TETRACHLOROETHENE		0.54	U		0.54	U		3.4			0.54	U	
TOLUENE		3.9			2.3	U		2.3	U		2.3	U	
TOTAL XYLENES		2.1	J	P	0.52	U		0.52	U		0.52	U	
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.38	U		0.38	U		0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	IA-001-C-22			IA-004-C-22			IA-005-C-22			IA-033-B-22		
SDG: 140-7294-1	LAB_ID	140-7294-4			140-7294-5			140-7294-6			140-7294-1		
FRACTION: OV-M3	SAMP_DATE	2/28/2017			2/28/2017			2/28/2017			2/28/2017		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		0.33	U		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	UJ	C	0.84	UJ	C	0.84	UJ	C	0.84	UJ	C
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		0.61	U		0.61	U		0.74	J	P
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.54	J	P	0.55	J	P	0.52	J	P	0.72	J	P
CARBON TETRACHLORIDE		0.51	J	P	0.47	U		0.47	U		0.47	U	
CHLORODIFLUOROMETHANE		2.7			3.5			3.2			5.8		
CHLOROFORM		0.37	U		0.37	U		0.37	U		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		1.8	J	P	1.9	J	P	1.7	J	P	1.8	J	P
ETHYLBENZENE		0.59	U		0.59	U		0.59	U		2.4		
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		2.3	U		2.3	U		2.3	U		5.2		
NAPHTHALENE		1	U		1	U		1	U		1	U	
TETRACHLOROETHENE		0.54	U		0.54	U		0.54	U		0.54	U	
TOLUENE		2.3			3.6			3.3			70		
TOTAL XYLENES		0.52	U		1.2	J	P	0.52	U		12		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.38	U		0.38	U		0.54	J	P
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	IA-051-C-22			IA-060-C-22			IA-065-C-22			IA-088-C-22		
SDG: 140-7294-1	LAB_ID	140-7294-7			140-7294-8			140-7294-9			140-7294-10		
FRACTION: OV-M3	SAMP_DATE	2/28/2017			2/28/2017			2/28/2017			2/28/2017		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		0.33	U		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	UJ	C	0.84	UJ	C	0.84	UJ	C	0.84	UJ	C
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		0.61	U		0.61	U		0.61	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.6	J	P	0.54	J	P	0.64	J	P	0.63	J	P
CARBON TETRACHLORIDE		0.47	U		0.47	U		0.47	U		0.47	U	
CHLORODIFLUOROMETHANE		54			3.7			10			3.3		
CHLOROFORM		0.37	U		0.37	U		0.37	U		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2			1.8	J	P	1.8	J	P	1.9	J	P
ETHYLBENZENE		0.59	U		0.59	U		0.59	U		0.59	U	
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		2.3	U		2.3	U		2.4	J	P	2.3	U	
NAPHTHALENE		1	U		1	U		1	U		1	U	
TETRACHLOROETHENE		1	J	P	0.54	U		1.9	J	P	0.54	U	
TOLUENE		51			4.2			59			4.8		
TOTAL XYLENES		1.2	J	P	3.1	J	P	1.3	J	P	2.3	J	P
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.38	U		0.38	U		0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	IA-100-B-22			IA-101-B-22			IA-102-C-22			IA-113-C-22		
SDG: 140-7294-1	LAB_ID	140-7294-2			140-7294-3			140-7294-11			140-7294-12		
FRACTION: OV-M3	SAMP_DATE	2/28/2017			2/28/2017			2/28/2017			2/28/2017		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		0.33	U		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	UJ	C	0.84	UJ	C	0.84	UJ	C	0.84	UJ	C
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		0.61	U		0.61	U		0.61	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.62	J	P	0.71	J	P	0.56	J	P	0.54	J	P
CARBON TETRACHLORIDE		0.47	U		0.47	U		0.47	U		0.47	U	
CHLORODIFLUOROMETHANE		3.7			2.3			3.5			3.5		
CHLOROFORM		0.37	U		0.37	U		0.58	J	P	0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		1.9	J	P	1.9	J	P	1.6	J	P	1.7	J	P
ETHYLBENZENE		2			2.8			0.59	U		0.59	U	
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		12			2.7	J	P	2.3	J	P	2.3	U	
NAPHTHALENE		1	U		1	U		1	U		1	U	
TETRACHLOROETHENE		0.54	U		0.54	U		0.54	U		0.54	U	
TOLUENE		57			67			3.3			4		
TOTAL XYLENES		9.9			15			2.4	J	P	1.2	J	P
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.6	J	P	0.38	U		0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	IA-115-C-22			IA-126-C-22			IA-131-C-22			IA-135-C-22		
SDG: 140-7294-1	LAB_ID	140-7294-13			140-7294-14			140-7294-15			140-7294-16		
FRACTION: OV-M3	SAMP_DATE	2/28/2017			2/28/2017			2/28/2017			2/28/2017		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		0.33	U		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	UJ	C	0.84	UJ	C	0.84	UJ	C	0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.62	J	P	0.61	U		0.61	U		0.61	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.67	J	P	1.4			0.7	J	P	0.5	J	P
CARBON TETRACHLORIDE		0.47	U		0.47	U		0.47	U		0.47	U	
CHLORODIFLUOROMETHANE		3.2			1.8			2.8			3.6		
CHLOROFORM		0.37	U		0.37	U		0.37	U		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		1.6	J	P	1.7	J	P	1.9	J	P	2.5		
ETHYLBENZENE		0.59	U		0.64	J	P	0.64	J	P	0.59	U	
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		2.3	U		2.8	J	P	2.7	J	P	2.5	J	P
NAPHTHALENE		1	U		1	U		1	U		1	U	
TETRACHLOROETHENE		0.54	U		35			0.54	U		0.54	U	
TOLUENE		12			2000			3.7			4.1		
TOTAL XYLENES		2.8	J	P	2.6	J	P	3.6			0.52	U	
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.38	U		0.38	U		0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	IA-142-C-22			IA-144-C-22			IA-145-C-22			IA-146-C-22		
SDG: 140-7294-1	LAB_ID	140-7294-17			140-7294-18			140-7294-19			140-7294-20		
FRACTION: OV-M3	SAMP_DATE	2/28/2017			2/28/2017			2/28/2017			2/28/2017		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.35	J	P	0.33	U		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		0.61	U		0.61	U		0.61	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.49	J	P	0.63	J	P	0.55	J	P	0.65	J	P
CARBON TETRACHLORIDE		0.47	U		0.47	U		0.47	U		0.47	U	
CHLORODIFLUOROMETHANE		3.2			17			36			41		
CHLOROFORM		0.37	U		0.37	J	P	0.37	U		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2.4			2.4			2.1			2.4		
ETHYLBENZENE		0.59	U		0.7	J	P	0.64	J	P	0.59	U	
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		2.3	J	P	4.8			6.2			2.6	J	P
NAPHTHALENE		1	U		1	U		1	UJ	C	1	U	
TETRACHLOROETHENE		0.56	J	P	0.54	U		1.5	J	P	0.54	U	
TOLUENE		10			5.4			15			12		
TOTAL XYLENES		0.52	U		3.5			3.4	J	P	2.6	J	P
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.38	U		0.38	U		0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	IA-149-C-22			IA-150-C-22			IA-152-C-22			IA-153-C-22		
SDG: 140-7294-1	LAB_ID	140-7294-21			140-7294-22			140-7294-23			140-7294-24		
FRACTION: OV-M3	SAMP_DATE	2/28/2017			2/28/2017			2/28/2017			2/28/2017		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		0.41	J	P	0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	UJ	C
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		0.61	U		0.61	U		0.61	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		1.5			0.44	J	P	0.63	J	P	0.54	J	P
CARBON TETRACHLORIDE		0.58	J	P	0.48	J	P	0.47	U		0.47	U	
CHLORODIFLUOROMETHANE		1.8			34			20			3.4	J	G
CHLOROFORM		0.54	J	P	0.37	U		0.37	U		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2.6			2			2.3			2.2		
ETHYLBENZENE		0.59	U		0.59	U		0.75	J	P	0.59	U	
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		4.7			2.3	U		3.2	J	P	2.3	J	P
NAPHTHALENE		1	U		1	UJ	C	1	U		1	U	
TETRACHLOROETHENE		36			0.54	U		0.54	U		0.54	U	
TOLUENE		760			12			6.7			3		
TOTAL XYLENES		1.6	J	P	2.6	J	P	3.9			1.9	J	P
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.38	U		0.38	U		0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	IA-155-C-22		
SDG: 140-7294-1	LAB_ID	140-7294-25		
FRACTION: OV-M3	SAMP_DATE	2/28/2017		
MEDIA: AIR	QC_TYPE	NM		
	UNITS	UG/M3		
	PCT_SOLIDS			
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U	
1,1-DICHLOROETHANE		0.2	U	
1,1-DICHLOROETHENE		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	UJ	C
1,2,4-TRICHLOROBENZENE		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.61	U	
1,2-DICHLOROETHANE		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U	
BENZENE		0.52	J	P
CARBON TETRACHLORIDE		0.47	U	
CHLORODIFLUOROMETHANE		3.6		
CHLOROFORM		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U	
DICHLORODIFLUOROMETHANE		1.9	J	P
ETHYLBENZENE		0.59	U	
METHYL TERT-BUTYL ETHER		1.2	U	
METHYLENE CHLORIDE		3.6		
NAPHTHALENE		1	U	
TETRACHLOROETHENE		0.54	U	
TOLUENE		3.2		
TOTAL XYLENES		2	J	P
TRANS-1,2-DICHLOROETHENE		0.4	U	
TRICHLOROETHENE		0.38	U	
VINYL CHLORIDE		0.37	U	

Appendix B

Results as Reported by the Laboratory

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: BCK-1-22 | Lab Sample ID: 140-7294-26

Matrix: Air | Lab File ID: JC06P112.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 15:37

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 00:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9074 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.25	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.42		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.44		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	7.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.48	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	74		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: BCK-1-22 | Lab Sample ID: 140-7294-26

Matrix: Air | Lab File ID: JC06P112.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 15:37

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 00:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9074 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.79	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	25		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.1	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	74		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: BCK-2-22 | Lab Sample ID: 140-7294-27

Matrix: Air | Lab File ID: RC03P203.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 15:34

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 05:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8988 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.39	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.37	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.72	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: BCK-2-22 | Lab Sample ID: 140-7294-27

Matrix: Air | Lab File ID: RC03P203.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 15:34

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 05:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8988 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.51	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.8	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: BCK-3-22 Lab Sample ID: 140-7294-28

Matrix: Air Lab File ID: RC03P204.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 15:21

Sample wt/vol: 100(mL) Date Analyzed: 03/04/2017 06:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.29	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.78	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.50		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: BCK-3-22 Lab Sample ID: 140-7294-28

Matrix: Air Lab File ID: RC03P204.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 15:21

Sample wt/vol: 100(mL) Date Analyzed: 03/04/2017 06:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.52	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.0	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	3.4		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: BCK-4-22 Lab Sample ID: 140-7294-29

Matrix: Air Lab File ID: JC06P113.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 15:28

Sample wt/vol: 100(mL) Date Analyzed: 03/07/2017 01:04

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9074 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.26	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.061	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	78		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: BCK-4-22 | Lab Sample ID: 140-7294-29

Matrix: Air | Lab File ID: JC06P113.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 15:28

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 01:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9074 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.48	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	0.92	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.33	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	78		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-001-C-22 | Lab Sample ID: 140-7294-4

Matrix: Air | Lab File ID: RC03P104.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:37

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 16:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8988 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.78		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.37	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.61		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-001-C-22 | Lab Sample ID: 140-7294-4

Matrix: Air | Lab File ID: RC03P104.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:37

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 16:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8988 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.8	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-004-C-22 | Lab Sample ID: 140-7294-5

Matrix: Air | Lab File ID: RC03P105.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:38

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 17:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8988 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.98		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.95		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.28	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-004-C-22 Lab Sample ID: 140-7294-5

Matrix: Air Lab File ID: RC03P105.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:38

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 17:29

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.55	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.6		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-005-C-22 | Lab Sample ID: 140-7294-6

Matrix: Air | Lab File ID: RC03P106.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:39

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 18:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8988 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.90		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.35	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.88		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-005-C-22 | Lab Sample ID: 140-7294-6

Matrix: Air | Lab File ID: RC03P106.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:39

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 18:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8988 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.52	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.2		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.7	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-033-B-22 Lab Sample ID: 140-7294-1

Matrix: Air Lab File ID: RC03P101.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:17

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 14:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.22	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.7		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.36	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.56		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	19		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.10	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.15	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-033-B-22 Lab Sample ID: 140-7294-1

Matrix: Air Lab File ID: RC03P101.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:17

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 14:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.72	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.8	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.4		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.2		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	70		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.54	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.74	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	12		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-051-C-22 Lab Sample ID: 140-7294-7

Matrix: Air Lab File ID: RC03P107.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:23

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 19:04

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	15		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.15	J	0.40	0.080
108-88-3	Toluene	92.14	14		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.27	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-051-C-22 | Lab Sample ID: 140-7294-7

Matrix: Air | Lab File ID: RC03P107.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:23

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 19:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8988 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.60	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	54		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.0	J	2.7	0.54
108-88-3	Toluene	92.14	51		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-060-C-22 Lab Sample ID: 140-7294-8

Matrix: Air Lab File ID: RC03P108.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:27

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 19:51

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.0		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.37	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.71	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-060-C-22 Lab Sample ID: 140-7294-8

Matrix: Air Lab File ID: RC03P108.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:27

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 19:51

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.8	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.1	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-065-C-22 | Lab Sample ID: 140-7294-9

Matrix: Air | Lab File ID: RC03P109.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:22

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 20:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8988 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.8		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.37	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.69	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.29	J	0.40	0.080
108-88-3	Toluene	92.14	16		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.30	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-065-C-22 Lab Sample ID: 140-7294-9

Matrix: Air Lab File ID: RC03P109.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:22

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 20:38

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.64	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	10		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.8	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.9	J	2.7	0.54
108-88-3	Toluene	92.14	59		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-088-C-22 | Lab Sample ID: 140-7294-10

Matrix: Air | Lab File ID: RC03P110.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 17:13

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 21:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8988 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.93		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.53	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-088-C-22 Lab Sample ID: 140-7294-10

Matrix: Air Lab File ID: RC03P110.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 17:13

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 21:25

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.63	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.3		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-100-B-22 | Lab Sample ID: 140-7294-2

Matrix: Air | Lab File ID: RC03P102.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:19

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 15:07

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8988 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.1		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.46		0.40	0.14
75-09-2	Methylene Chloride	84.93	3.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	15		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-100-B-22 Lab Sample ID: 140-7294-2

Matrix: Air Lab File ID: RC03P102.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:19

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 15:07

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.62	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.0		1.7	0.59
75-09-2	Methylene Chloride	84.93	12		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	57		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	9.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-101-B-22 Lab Sample ID: 140-7294-3

Matrix: Air Lab File ID: RC03P103.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:18

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 15:54

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.22	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.65		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.65		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.78	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	18		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.11	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-101-B-22 | Lab Sample ID: 140-7294-3

Matrix: Air | Lab File ID: RC03P103.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:18

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 15:54

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8988 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.71	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.3		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	67		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.60	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	15		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-102-C-22 | Lab Sample ID: 140-7294-11

Matrix: Air | Lab File ID: RC03P111.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:35

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 22:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8988 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.0		0.40	0.075
67-66-3	Chloroform	119.38	0.12	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.33	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.67	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.88		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.55	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-102-C-22 | Lab Sample ID: 140-7294-11

Matrix: Air | Lab File ID: RC03P111.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:35

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 22:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8988 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.56	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.5		1.4	0.27
67-66-3	Chloroform	119.38	0.58	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.6	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.4	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-113-C-22 | Lab Sample ID: 140-7294-12

Matrix: Air | Lab File ID: RC03P112.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 17:15

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 23:00

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8988 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.0		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.35	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.28	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-113-C-22 Lab Sample ID: 140-7294-12

Matrix: Air Lab File ID: RC03P112.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 17:15

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 23:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.7	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-115-C-22 Lab Sample ID: 140-7294-13

Matrix: Air Lab File ID: RC03P113.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 17:16

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 23:48

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.21	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.92		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.32	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	3.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.65	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-115-C-22 Lab Sample ID: 140-7294-13

Matrix: Air Lab File ID: RC03P113.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 17:16

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 23:48

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.67	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.2		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.6	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	12		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.62	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.8	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-126-C-22 Lab Sample ID: 140-7294-14

Matrix: Air Lab File ID: RC03P114.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:25

Sample wt/vol: 100(mL) Date Analyzed: 03/04/2017 00:35

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.45		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.50		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.34	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.81	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	5.1		0.40	0.080
108-88-3	*Toluene*	*92.14*	*230*	*E*	*0.60*	*0.60*
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.60	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-126-C-22 Lab Sample ID: 140-7294-14

Matrix: Air Lab File ID: RC03P114.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:25

Sample wt/vol: 100(mL) Date Analyzed: 03/04/2017 00:35

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.4		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.7	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.64	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	35		2.7	0.54
108-88-3	*Toluene*	*92.14*	*880*	*E*	*2.3*	*2.3*
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.6	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-126-C-22 DL Lab Sample ID: 140-7294-14 DL

Matrix: Air Lab File ID: JC06P108.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:25

Sample wt/vol: 11(mL) Date Analyzed: 03/06/2017 21:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9074 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
108-88-3	Toluene	92.14	530		5.5	5.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	70		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-126-C-22 DL Lab Sample ID: 140-7294-14 DL

Matrix: Air Lab File ID: JC06P108.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:25

Sample wt/vol: 11(mL) Date Analyzed: 03/06/2017 21:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9074 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
108-88-3	Toluene	92.14	2000		21	21

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	70		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-131-C-22 | Lab Sample ID: 140-7294-15

Matrix: Air | Lab File ID: RC03P115.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:13

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 01:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8988 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.22	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.78		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.78	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.97		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.82		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-131-C-22 | Lab Sample ID: 140-7294-15

Matrix: Air | Lab File ID: RC03P115.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:13

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 01:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8988 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.70	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.64	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-135-C-22 | Lab Sample ID: 140-7294-16

Matrix: Air | Lab File ID: GC03P114.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 17:10

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 23:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9098 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.0		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.72	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-135-C-22 | Lab Sample ID: 140-7294-16

Matrix: Air | Lab File ID: GC03P114.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 17:10

Sample wt/vol: 100(mL) | Date Analyzed: 03/03/2017 23:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9098 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.50	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.6		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-142-C-22 | Lab Sample ID: 140-7294-17

Matrix: Air | Lab File ID: GC03P115.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 17:12

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 00:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9098 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.91		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.65	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.083	J	0.40	0.080
108-88-3	Toluene	92.14	2.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-142-C-22 | Lab Sample ID: 140-7294-17

Matrix: Air | Lab File ID: GC03P115.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 17:12

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 00:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9098 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.49	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.2		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.56	J	2.7	0.54
108-88-3	Toluene	92.14	10		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-144-C-22 | Lab Sample ID: 140-7294-18

Matrix: Air | Lab File ID: GC03P116.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:32

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 01:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9098 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	4.9		0.40	0.075
67-66-3	Chloroform	119.38	0.076	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.064	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.81		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-144-C-22 | Lab Sample ID: 140-7294-18

Matrix: Air | Lab File ID: GC03P116.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:32

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 01:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9098 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.63	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	17		1.4	0.27
67-66-3	Chloroform	119.38	0.37	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.70	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.8		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.35	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-145-C-22 | Lab Sample ID: 140-7294-19

Matrix: Air | Lab File ID: JC06P109.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:28

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 22:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9074 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	10		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.43		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.8		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.22	J	0.40	0.080
108-88-3	Toluene	92.14	4.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.78	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	83		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-145-C-22 | Lab Sample ID: 140-7294-19

Matrix: Air | Lab File ID: JC06P109.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:28

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 22:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9074 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.55	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	36		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.64	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	6.2		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.5	J	2.7	0.54
108-88-3	Toluene	92.14	15		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.4	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	83		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-146-C-22 | Lab Sample ID: 140-7294-20

Matrix: Air | Lab File ID: GC03P201.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:30

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 01:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9098 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	12		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.74	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	3.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.61	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-146-C-22 | Lab Sample ID: 140-7294-20

Matrix: Air | Lab File ID: GC03P201.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:30

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 01:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9098 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.65	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	41		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.6	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	12		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.6	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-149-C-22 | Lab Sample ID: 140-7294-21

Matrix: Air | Lab File ID: GC03P202.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:24

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 02:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9098 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.47		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.093	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.51		0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.53		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	5.4		0.40	0.080
108-88-3	*Toluene*	*92.14*	*370*	*E*	*0.60*	*0.60*
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.37	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-149-C-22 | Lab Sample ID: 140-7294-21

Matrix: Air | Lab File ID: GC03P202.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:24

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 02:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9098 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.5		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.58	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	0.54	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.7		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	36		2.7	0.54
108-88-3	*Toluene*	*92.14*	*1400*	*E*	*2.3*	*2.3*
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.6	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-149-C-22 DL Lab Sample ID: 140-7294-21 DL

Matrix: Air Lab File ID: JC06P110.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:24

Sample wt/vol: 11(mL) Date Analyzed: 03/06/2017 22:49

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9074 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
108-88-3	Toluene	92.14	200		5.5	5.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	69		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-149-C-22 DL Lab Sample ID: 140-7294-21 DL

Matrix: Air Lab File ID: JC06P110.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:24

Sample wt/vol: 11(mL) Date Analyzed: 03/06/2017 22:49

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9074 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
108-88-3	Toluene	92.14	760		21	21

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	69		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-150-C-22 | Lab Sample ID: 140-7294-22

Matrix: Air | Lab File ID: JC06P111.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:29

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 23:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9074 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.077	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	9.7		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	3.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.59	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-150-C-22 | Lab Sample ID: 140-7294-22

Matrix: Air | Lab File ID: JC06P111.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:29

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 23:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9074 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.44	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	34		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	12		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.6	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-152-C-22 | Lab Sample ID: 140-7294-23

Matrix: Air | Lab File ID: GC03P204.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:31

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 04:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9098 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	5.6		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.17	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.93	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.8		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.074	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.89		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-152-C-22 | Lab Sample ID: 140-7294-23

Matrix: Air | Lab File ID: GC03P204.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:31

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 04:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9098 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.63	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	20		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.75	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.41	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-153-C-22 Lab Sample ID: 140-7294-24

Matrix: Air Lab File ID: RC03P116.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:33

Sample wt/vol: 100(mL) Date Analyzed: 03/04/2017 02:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.96		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.66	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.80		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.43	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-153-C-22 | Lab Sample ID: 140-7294-24

Matrix: Air | Lab File ID: RC03P116.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:33

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 02:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8988 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.4		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.9	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-155-C-22 | Lab Sample ID: 140-7294-25

Matrix: Air | Lab File ID: RC03P201.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:34

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 03:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8988 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.0		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.85		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.47	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-155-C-22 | Lab Sample ID: 140-7294-25

Matrix: Air | Lab File ID: RC03P201.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 16:34

Sample wt/vol: 100(mL) | Date Analyzed: 03/04/2017 03:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8988 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.52	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.6		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.6		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.0	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

Appendix C

Support Documentation

Job Narrative
140-7294-1

Receipt
The samples were received on 3/2/2017 at 9:50 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA
EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

Method TO 15 LL: The continuing calibration verification (CCV) associated with batch 140-8988 exhibited % difference of > 30% for 1,2,4-trimethylbenzene; however, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

Method TO 15 LL: 1,2,4-Trimethylbenzene recovered outside control limits for the LCS associated with analytical batch 140-8988: This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Methods TO 15 LL, TO-15: Can Certification Comments:
Due to the large number of analytes in the CCV, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for several analytes to recover outside criteria for this method when analyzing for a full list. The CCV associated with the can cleaning batches had analytes outside control limits. These results have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments
No additional comments.

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Tetra Tech, Inc.
Project/Site: Feb 2017 MRC IA-SV

TestAmerica Job ID: 140-7294-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: Feb 2017 MRC IA-SV

TestAmerica Job ID: 140-7294-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-7294-1	IA-033-B-22	Air	02/28/17 16:17	03/02/17 09:50
140-7294-2	IA-100-B-22	Air	02/28/17 16:19	03/02/17 09:50
140-7294-3	IA-101-B-22	Air	02/28/17 16:18	03/02/17 09:50
140-7294-4	IA-001-C-22	Air	02/28/17 16:37	03/02/17 09:50
140-7294-5	IA-004-C-22	Air	02/28/17 16:38	03/02/17 09:50
140-7294-6	IA-005-C-22	Air	02/28/17 16:39	03/02/17 09:50
140-7294-7	IA-051-C-22	Air	02/28/17 16:23	03/02/17 09:50
140-7294-8	IA-060-C-22	Air	02/28/17 16:27	03/02/17 09:50
140-7294-9	IA-065-C-22	Air	02/28/17 16:22	03/02/17 09:50
140-7294-10	IA-088-C-22	Air	02/28/17 17:13	03/02/17 09:50
140-7294-11	IA-102-C-22	Air	02/28/17 16:35	03/02/17 09:50
140-7294-12	IA-113-C-22	Air	02/28/17 17:15	03/02/17 09:50
140-7294-13	IA-115-C-22	Air	02/28/17 17:16	03/02/17 09:50
140-7294-14	IA-126-C-22	Air	02/28/17 16:25	03/02/17 09:50
140-7294-15	IA-131-C-22	Air	02/28/17 16:13	03/02/17 09:50
140-7294-16	IA-135-C-22	Air	02/28/17 17:10	03/02/17 09:50
140-7294-17	IA-142-C-22	Air	02/28/17 17:12	03/02/17 09:50
140-7294-18	IA-144-C-22	Air	02/28/17 16:32	03/02/17 09:50
140-7294-19	IA-145-C-22	Air	02/28/17 16:28	03/02/17 09:50
140-7294-20	IA-146-C-22	Air	02/28/17 16:30	03/02/17 09:50
140-7294-21	IA-149-C-22	Air	02/28/17 16:24	03/02/17 09:50
140-7294-22	IA-150-C-22	Air	02/28/17 16:29	03/02/17 09:50
140-7294-23	IA-152-C-22	Air	02/28/17 16:31	03/02/17 09:50
140-7294-24	IA-153-C-22	Air	02/28/17 16:33	03/02/17 09:50
140-7294-25	IA-155-C-22	Air	02/28/17 16:34	03/02/17 09:50
140-7294-26	BCK-1-22	Air	02/28/17 15:37	03/02/17 09:50
140-7294-27	BCK-2-22	Air	02/28/17 15:34	03/02/17 09:50
140-7294-28	BCK-3-22	Air	02/28/17 15:21	03/02/17 09:50
140-7294-29	BCK-4-22	Air	02/28/17 15:28	03/02/17 09:50

Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

180325

BALTIMORE

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Tony Apanavage	Site Contact: Tony Apanavage	Date: 3/1/17	COC No:
Tetra Tech	Tel/Fax: 301-233-8230	Lab Contact:	Carrier: Fedex	____ of ____ COCs
20251 Century Blvd, Suite 200	Analysis Turnaround Time			Job No.
Germantown, MD 20874	Calendar (C) or Work Days (W) STANDARD			
301-233-8230 Phone	TAT if different from Below ____			
301-528-3000 FAX	☐ 2 weeks			SDG No.
Project Name: Feb 2017 MRC IA-SV	☐ 1 week			
Site: Middle River, MD	☐ 2 days			
P O #	☐ 1 day			Sampler:

140-7294 Chain of Custody

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	Sample Specific Notes:
[redacted] T.A.	T.A.							x	
IA-033-B-22	2/28/2017	0802	1617	-30	0	7358	9588	x	Received @ ambient, 5 boxes FedEx SO, No custody seal trk# 7785 4899 2927
IA-100-B-22	2/28/2017	0805	1619	-30	0	7107	9831	x	
IA-101-B-22	2/28/2017	0804	1618	-30	0	8465	9799	x	
IA-001-C-22	2/28/2017	0853	1637	-29	0	11266	9584	x	" " 2950
IA-004-C-22	2/28/2017	0855	1638	-30	-6	7197	11244	x	" " 3260
IA-005-C-22	2/28/2017	0856	1639	-30	-3	7120	9809	x	" " 3292
IA-051-C-22	2/28/2017	0812	1623	-30	-1	7416	11281	x	" " 3853
IA-060-C-22	2/28/2017	0825	1627	-30	0	7076	9647	x	KL 3/2/17
IA-065-C-22	2/28/2017	0810	1622	-30	0	7060	10747	x	
IA-088-C-22	2/28/2017	0944	1713	-29	0	7632	11546	x	
IA-102-C-22	2/28/2017	0847	1635	-30	-5	9560	9739	x	
IA-113-C-22	2/28/2017	0945	1715	-30	-2	7615	9646	x	
IA-115-C-22	2/28/2017	0946	1716	-30	-4	8661	10963	x	
IA-126-C-22	2/28/2017	0823	1625	-30	-1	7617	9792	x	

Special Instructions/QC Requirements & Comments: **Contracted Analyte List**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	TETRA TECH	3/1/17 1450	[signature]	TA	3/1/17 1457
Relinquished by: [signature]	Company: TestAmerica	Date/Time: 3-1-2017/1530	Received by: [signature]	Company: TA	Date/Time: 3/2/17 0950
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

18032

BALTIMORE

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Tony Apanavage	Site Contact: Tony Apanavage	Date: 3/1/17	COC No:
Tetra Tech	Tel/Fax: 301-233-8230	Lab Contact:	Carrier: Fedex	____ of ____ COCs
20251 Century Blvd, Suite 200	**Analysis Turnaround Time**			Job No.
Germantown, MD 20874	Calendar (C) or Work Days (W) STANDARD			
301-233-8230 Phone	TAT if different from Below ____			
301-528-3000 FAX	☐ 2 weeks			SDG No.
Project Name: Feb 2017 MRC IA-SV	☐ 1 week			
Site: Middle River, MD	☐ 2 days			Sampler:
P O #	☐ 1 day			

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	Sample Specific Notes:
IA-131-C-22	2/28/2017	0750	1613	-22	0	7461	10492	x	IA-131-C-22
IA-135-C-22	2/28/2017	0942	1710	-30	-5	7032	11493	x	
IA-142-C-22	2/28/2017	0943	1712	-30	-4	7589	10974	x	
IA-144-C-22	2/28/2017	0839	1632	-29	0	10201	10971	x	
IA-145-C-22	2/28/2017	0835	1628	-29	0	7058	9633	x	
IA-146-C-22	2/28/2017	0837	1630	-30	0	7273	10760	x	
IA-149-C-22	2/28/2017	0822	1624	-30	-5	8464	9736	x	
IA-150-C-22	2/28/2017	0836	1629	-30	-2	8565	10345	x	
IA-152-C-22	2/28/2017	0838	1631	-30	-2	10584	11494	x	
IA-153-C-22	2/28/2017	0848	1633	-30	-10	7064	10334	x	
IA-155-C-22	2/28/2017	0843	1634	-30	0	8549	11295	x	
BCK-1-22	2/28/2017	0740	1537	-30	-3	11506	11540	x	
BCK-2-22	2/28/2017	0737	1534	-30	-3	11568	09579	x	
BCK-3-22	2/28/2017	0731	1521	-30	-2	11263	10839	x	
BCK-4-22	2/28/2017	0733	1528	-30	-2	09550	09635	x	

Special Instructions/QC Requirements & Comments: **Contracted Analyte List**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TETRA TECH	3/1/17 1450			3/1/17 1450
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TestAmerica	3-1-2017/1550		TA	3/2/17 0950
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 2, dated 03/06/2012

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST **Log In Number:**

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓			☐ **Containers, Broken**
2. Were ambient air containers received intact?			✓	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			✓	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			✓	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	✓			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	✓			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	✓			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	✓			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?		✓		☑ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	✓			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	✓			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	✓			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	✓			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			✓	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			✓	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			✓	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: 1400295 PM Instructions: _____

Sample Receiving Associate: [signature] Date: 3/2/17

QA026R30.doc, 080916

140-7294

FIELD DUPLICATE PRECISION - IA-131-C-22 / IA-DUP01-C-22							
ANALYTE	**IA-131-C-22**	**QUAL**	**IA-DUP01-C-22**	**QUAL**	**RPD**	**DIFFERENCE**	**RL**
BENZENE	0.7	J	0.48	J	37.29	0.22	1.3
CHLORODIFLUOROMETHANE	2.8		2.5		11.32	0.3	1.4
DICHLORODIFLUOROMETHANE	1.9	J	2.1		10.00	0.2	2
ETHYLBENZENE	0.64	J	0.59	U	8.13	0.05	1.7
METHYLENE CHLORIDE	2.7	J	2.3	U	16.00	0.4	3.5
TOLUENE	3.7		2.6		34.92	1.1	2.3
TOTAL XYLENES	3.6		3	J	18.18	0.6	3.5

FIELD DUPLICATE PRECISION - IA-153-C-22 / IA-DUP02-C-22							
ANALYTE	**IA-153-C-22**	**QUAL**	**IA-DUP02-C-22**	**QUAL**	**RPD**	**DIFFERENCE**	**RL**
BENZENE	0.54	J	0.49	J	9.71	0.05	1.3
CHLORODIFLUOROMETHANE	3.4		0.27	U	170.57	3.13	1.4
DICHLORODIFLUOROMETHANE	2.2		1.9	J	14.63	0.3	2
METHYLENE CHLORIDE	2.3	J	2.3	U	0.00	0	3.5
TOLUENE	3		2.8		6.90	0.2	2.3
TOTAL XYLENES	1.9	J	1.3	J	37.50	0.6	3.5

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab File ID: GBFBC02.D BFB Injection Date: 03/02/2017

Instrument ID: MG BFB Injection Time: 12:22

Analysis Batch No.: 9079

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.4	
75	30.0 - 60.0 % of mass 95	55.3	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.5	(0.6) 1
174	50.0 - 120.00 % of mass 95	90.3	
175	5.0 - 9.0 % of mass 174	6.1	(6.8) 1
176	95.0 - 101.0 % of mass 174	87.4	(96.7) 1
177	5.0 - 9.0 % of mass 176	5.5	(6.3) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-9079/3	GC02IC01.D	03/02/2017	13:34
	IC 140-9079/5	GC02IC03.D	03/02/2017	14:57
	IC 140-9079/6	GC02IC04.D	03/02/2017	15:39
	IC 140-9079/7	GC02IC05.D	03/02/2017	16:20
	ICIS 140-9079/8	GC02IC06.D	03/02/2017	17:02
	IC 140-9079/9	GC02IC07.D	03/02/2017	17:44
	IC 140-9079/10	GC02IC08.D	03/02/2017	18:26
	IC 140-9079/11	GC02IC09.D	03/02/2017	19:08
	IC 140-9079/20	GC02IC02R.D	03/02/2017	20:31
	ICV 140-9079/15	GLCSC02.D	03/02/2017	23:17

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-9079/3	GC02IC01.D
Level 2	IC 140-9079/20	GC02IC02R.D
Level 3	IC 140-9079/5	GC02IC03.D
Level 4	IC 140-9079/6	GC02IC04.D
Level 5	IC 140-9079/7	GC02IC05.D
Level 6	ICIS 140-9079/8	GC02IC06.D
Level 7	IC 140-9079/9	GC02IC07.D
Level 8	IC 140-9079/10	GC02IC08.D
Level 9	IC 140-9079/11	GC02IC09.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.3713	0.4829 0.3442	0.4517 0.3643	0.3992 0.3308	0.3847	Ave		0.3912				13.4		30.0			
Propene	+++++ 0.9150	0.9940 0.8405	1.0782 0.8843	0.9663 0.8262	0.9533	Ave		0.9322				9.0		30.0			
Dichlorodifluoromethane	3.9419 3.5248	3.5597 3.3346	3.5281 3.5444	3.6178 3.1809	3.7080	Ave		3.5489				6.0		30.0			
Chloromethane	+++++ 0.2879	+++++ 0.2743	0.3571 0.2675	0.2844 0.2253	0.3080	Ave		0.2864				14.0		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.4106 2.2038	2.2539 1.9847	2.1523 2.0690	2.1642 1.9650	2.2985	Ave		2.1669				6.7		30.0			
Acetaldehyde	+++++ 0.4163	+++++ 0.3781	+++++ 0.3327	0.7190 0.2777	0.4376	Ave		0.4269				36.1	*	30.0			
Vinyl chloride	1.1787 1.1377	1.1356 1.0699	1.1228 1.0419	1.1236 0.8737	1.1841	Ave		1.0965				8.7		30.0			
1,3-Butadiene	0.9259 0.8245	0.8142 0.7719	0.7772 0.7527	0.7789 0.6260	0.8550	Ave		0.7918				10.3		30.0			
Butane	1.8650 1.6959	1.7718 1.6084	1.7079 1.5631	1.6895 1.2632	1.7835	Ave		1.6609				10.5		30.0			
Bromomethane	1.3004 1.1299	1.1620 1.0587	1.1063 1.0311	1.1238 0.9237	1.1815	Ave		1.1130				9.4		30.0			
Chloroethane	0.6834 0.5923	0.5898 0.5611	0.5831 0.5508	0.6053 0.4850	0.6310	Ave		0.5869				9.3		30.0			
Ethanol	+++++ 0.4423	0.4648 0.4163	0.4854 0.4219	0.4806 0.3783	0.4276	Ave		0.4396				8.2		30.0			
Vinyl bromide	1.2190 1.0498	1.1164 0.9598	1.1099 0.9741	1.0661 0.8945	1.1409	Ave		1.0589				9.6		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	+++++ 1.3221	1.3298 1.1980	1.3068 1.1754	1.3375 1.0110	1.4453	Ave		1.2657				10.5		30.0			
Acrolein	+++++ 0.1564	+++++ 0.1564	0.2411 0.1243	0.1533 0.1656	0.1508	Ave		0.1640				22.2		30.0			
Trichlorofluoromethane	4.0976 3.6041	3.8225 3.3210	3.6426 3.4112	3.6556 3.2570	3.9200	Ave		3.6368				7.7		30.0			
Acetonitrile	+++++ 0.3927	+++++ 0.3686	0.4603 0.3673	0.4960 0.3445	0.3843	Ave		0.4020				13.7		30.0			
Acetone	+++++ 0.4276	+++++ 0.3854	+++++ 0.3597	0.6479 0.3201	0.4238	Ave		0.4274				27.0		30.0			
Pentane	+++++ 0.2049	+++++ 0.1908	0.2085 0.1934	0.2059 0.1793	0.2314	Ave		0.2020				8.2		30.0			
Isopropyl alcohol	1.4098 1.3008	1.3158 1.1675	1.4551 1.1539	1.3749 1.0588	1.1732	Ave		1.2677				10.6		30.0			
Ethyl ether	1.3154 1.1717	1.1436 1.1277	1.3702 1.0627	1.1899 1.0209	1.1582	Ave		1.1734				9.4		30.0			
1,1-Dichloroethene	1.2857 1.0102	1.0381 0.9375	1.0194 0.9857	1.0065 0.9350	1.1059	Ave		1.0360				10.3		30.0			
Acrylonitrile	+++++ 0.5118	0.4904 0.5058	0.5108 0.4989	0.5107 0.4719	0.5060	Ave		0.5008				2.7		30.0			
tert-Butyl alcohol	+++++ 1.5862	+++++ 1.4800	1.6761 1.5118	1.5633 1.3704	1.4912	Ave		1.5256				6.3		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	2.4414 2.1749	2.2142 2.0564	2.1355 2.1477	2.1382 2.1010	2.3315	Ave		2.1934				5.5		30.0			
Methylene Chloride	+++++ 0.8715	+++++ 0.8113	1.4672 0.8126	1.0531 0.7603	0.9702	Ave		0.9637				25.3		30.0			
3-Chloropropene	+++++ 1.0547	0.9879 0.9694	1.1709 0.9580	0.9895 0.8404	1.0645	Ave		1.0044				9.6		30.0			
Carbon disulfide	3.0834 2.7502	2.8883 2.5890	2.7972 2.7076	2.6507 2.4966	2.8758	Ave		2.7599				6.4		30.0			
trans-1,2-Dichloroethene	1.1555 1.0341	1.1125 1.0017	1.0142 1.0794	1.0120 0.9936	1.0752	Ave		1.0531				5.3		30.0			
2-Methylpentane	2.1575 2.1113	2.1877 2.0070	2.0221 2.2077	2.0371 1.9323	2.1959	Ave		2.0954				4.7		30.0			
Methyl tert-butyl ether	2.8984 2.6881	2.6226 2.6579	2.8783 2.7985	2.8005 2.8262	2.5675	Ave		2.7487				4.3		30.0			
1,1-Dichloroethane	2.1797 1.9231	2.0450 1.8450	1.9405 1.9159	1.9135 1.8954	1.9760	Ave		1.9593				5.1		30.0			
Vinyl acetate	2.1760 2.1023	1.7777 2.1308	2.1065 2.1743	2.1399 2.3637	1.9326	Ave		2.1004				7.8		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	0.4773 0.4151	0.4409 0.4113	0.5050 0.4233	0.4973 0.4263	0.3898	Ave		0.4429				9.2		30.0			
Hexane	+++++ 0.7971	0.9073 0.7509	0.8517 0.7917	0.7865 0.7267	0.8271	Ave		0.8049				7.1		30.0			
Isopropyl ether	2.8649 2.7962	2.4694 2.7735	2.9472 2.9348	2.9874 2.9506	2.6842	Ave		2.8231				5.9		30.0			
cis-1,2-Dichloroethene	1.2654 1.0628	1.1590 1.0398	1.0839 1.1019	1.0579 1.0543	1.0952	Ave		1.1022				6.4		30.0			
Ethyl acetate	+++++ 1.7048	1.4608 1.7318	1.7602 1.8088	1.7781 1.8837	1.5752	Ave		1.7129				7.9		30.0			
Chloroform	3.0721 2.5787	2.7021 2.4795	2.6749 2.6043	2.6322 2.4369	2.6656	Ave		2.6496				6.9		30.0			
Tert-butyl ethyl ether	2.5945 2.6139	2.3959 2.6097	2.6843 2.7757	2.7006 2.7784	2.5017	Ave		2.6283				4.7		30.0			
Tetrahydrofuran	+++++ 0.9487	0.9556 0.9112	1.1108 0.9744	1.0388 0.9452	0.8547	Ave		0.9674				8.1		30.0			
1,1,1-Trichloroethane	3.2550 2.8890	2.9134 2.7739	2.8971 2.9100	2.8500 2.7901	2.9650	Ave		2.9159				4.8		30.0			
1,2-Dichloroethane	0.3807 0.3548	0.3428 0.3440	0.3554 0.3578	0.3455 0.3575	0.3545	Ave		0.3548				3.2		30.0			
Benzene	0.7029 0.6314	0.6407 0.6304	0.6219 0.6155	0.5993 0.5796	0.6168	Ave		0.6265				5.4		30.0			
Cyclohexane	+++++ 0.1114	0.1272 0.1111	0.1120 0.1072	0.1058 0.0968	0.1111	Ave		0.1103				7.7		30.0			
Carbon tetrachloride	0.5933 0.6165	0.5551 0.6034	0.5657 0.6220	0.4865 0.6226	0.5936	Ave		0.5843				7.5		30.0			
1-Butanol	0.0819 0.0746	0.0629 0.0753	0.0740 0.0820	0.0685 0.0761	0.0640	Ave		0.0732				9.4		30.0			
2,3-Dimethylpentane	0.1825 0.1517	0.1647 0.1469	0.1535 0.1556	0.1459 0.1410	0.1508	Ave		0.1547				8.0		30.0			
Thiophene	0.3794 0.3576	0.3609 0.3508	0.3606 0.3694	0.3445 0.3517	0.3585	Ave		0.3593				2.9		30.0			
Tert-amyl methyl ether	+++++ 0.5564	0.3783 0.5498	0.5207 0.5840	0.5537 0.5662	0.4922	Ave		0.5252				12.5		30.0			
2,2,4-Trimethylpentane	1.0869 0.9840	1.0077 0.9554	0.9925 1.0105	0.9615 0.9044	0.9842	Ave		0.9875				5.0		30.0			
Heptane	0.2616 0.2393	0.2501 0.2358	0.2460 0.2397	0.2323 0.2199	0.2390	Ave		0.2404				4.8		30.0			
1,2-Dichloropropane	0.2489 0.2339	0.2258 0.2281	0.2374 0.2388	0.2223 0.2147	0.2241	Ave		0.2304				4.5		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.3730 0.3630	0.3777 0.3562	0.3448 0.3580	0.3380 0.3483	0.3755	Ave		0.3594				3.9		30.0			
Dibromomethane	+++++ 0.2941	0.3032 0.2914	0.2994 0.2975	0.2784 0.2914	0.2958	Ave		0.2939				2.5		30.0			
Bromodichloromethane	0.4899 0.5399	0.4618 0.5409	0.4956 0.5585	0.4880 0.5377	0.5223	Ave		0.5150				6.3		30.0			
1,4-Dioxane	+++++ 0.0861	0.0800 0.0869	0.0832 0.0880	0.0851 0.0820	0.0786	Ave		0.0837				4.0		30.0			
Methyl methacrylate	0.2194 0.2298	0.2024 0.2357	0.2123 0.2551	0.2136 0.2591	0.1951	Ave		0.2247				9.9		30.0			
Methylcyclohexane	0.5765 0.5119	0.5274 0.5052	0.4975 0.5031	0.4894 0.4749	0.5057	Ave		0.5102				5.6		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.3758	+++++ 0.3711	0.3972 0.4086	0.3922 0.3864	0.3045	Ave		0.3765				9.1		30.0			
cis-1,3-Dichloropropene	0.4225 0.4126	0.3843 0.4046	0.3894 0.4247	0.3884 0.3977	0.4034	Ave		0.4030				3.6		30.0			
trans-1,3-Dichloropropene	0.3773 0.3973	0.3806 0.4036	0.3754 0.4280	0.3646 0.4205	0.3767	Ave		0.3916				5.6		30.0			
Toluene Range	+++++ 1.8053	+++++ 1.7951	+++++ 1.8537	1.7344 1.8102	1.7229	Ave		1.7869				2.8		30.0			
Toluene	0.7711 0.7126	0.7162 0.7433	0.7274 0.7628	0.6783 0.7504	0.6716	Ave		0.7260				4.8		30.0			
1,1,2-Trichloroethane	0.2346 0.2200	0.2167 0.2286	0.2159 0.2328	0.2117 0.2272	0.2052	Ave		0.2214				4.5		30.0			
2-Methylthiophene	0.6288 0.6354	0.6323 0.6581	0.6048 0.6746	0.6036 0.6550	0.6088	Ave		0.6335				4.0		30.0			
3-Methylthiophene	0.6220 0.6244	0.6149 0.6487	0.6149 0.6739	0.6011 0.6453	0.6011	Ave		0.6274				3.8		30.0			
2-Hexanone	+++++ 0.1824	+++++ 0.1874	0.1851 0.2087	0.1784 0.1989	0.1483	Ave		0.1842				10.3		30.0			
Octane	0.2808 0.2637	0.2753 0.2726	0.2627 0.2674	0.2561 0.2585	0.2623	Ave		0.2666				3.1		30.0			
C8 Range	+++++ 3.3336	+++++ 2.7089	+++++ 2.7845	3.8895 2.0971	4.0217	Ave		3.1392				23.7		30.0			
Dibromochloromethane	0.3658 0.5286	0.4016 0.5615	0.4242 0.5887	0.4305 0.6242	0.4870	Ave		0.4903				18.5		30.0			
1,2-Dibromoethane (EDB)	0.4195 0.4523	0.4210 0.4737	0.4087 0.4807	0.4123 0.4860	0.4290	Ave		0.4426				7.0		30.0			
Tetrachloroethene	0.3265 0.3133	0.3269 0.3179	0.3021 0.3344	0.2982 0.3561	0.3054	Ave		0.3201				5.7		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorobenzene	0.6378 0.6263	0.6543 0.6550	0.6088 0.6675	0.5969 0.6724	0.6134	Ave		0.6369				4.3		30.0			
2,3-Dimethylheptane	0.7298 0.6387	0.6528 0.6720	0.6471 0.6565	0.6346 0.5664	0.6399	Ave		0.6487				6.5		30.0			
Ethylbenzene	0.9354 0.9400	0.9245 0.9958	0.9270 1.0212	0.9360 1.0251	0.8787	Ave		0.9537				5.2		30.0			
2-Ethylthiophene	0.7774 0.7653	0.7278 0.8083	0.7405 0.8222	0.7507 0.8282	0.7197	Ave		0.7711				5.3		30.0			
m-Xylene & p-Xylene	0.7465 0.7403	0.6914 0.7782	0.7334 0.7900	0.7385 0.8170	0.6937	Ave		0.7477				5.6		30.0			
Bromoform	+++++ 0.4984	0.3242 0.5626	0.3549 0.6144	0.3533 0.6816	0.4308	Ave		0.4775				27.9		30.0			
Styrene	0.4838 0.5570	0.4547 0.5679	0.4739 0.5967	0.5026 0.6341	0.4994	Ave		0.5300				11.6		30.0			
Nonane	0.5411 0.4846	0.5367 0.4726	0.4787 0.4453	0.4749 0.3983	0.4842	Ave		0.4796				9.0		30.0			
o-Xylene	0.7933 0.7508	0.7152 0.7913	0.7611 0.8122	0.7535 0.8224	0.6981	Ave		0.7664				5.5		30.0			
1,1,2,2-Tetrachloroethane	0.4823 0.5023	0.4635 0.5417	0.4856 0.5522	0.4828 0.5559	0.4596	Ave		0.5029				7.5		30.0			
1,2,3-Trichloropropane	0.1701 0.1683	0.1670 0.1770	0.1662 0.1836	0.1686 0.1883	0.1568	Ave		0.1718				5.6		30.0			
Isopropylbenzene	1.2326 1.0738	1.0842 1.0968	1.1242 1.1363	1.0859 1.1921	1.0079	Ave		1.1149				6.0		30.0			
Propylbenzene	0.2758 0.2957	0.2723 0.3225	0.2890 0.3215	0.2831 0.3466	0.2661	Ave		0.2970				9.2		30.0			
2-Chlorotoluene	0.2773 0.2839	0.2761 0.3061	0.2812 0.3013	0.2687 0.3196	0.2674	Ave		0.2868				6.3		30.0			
4-Ethyltoluene	1.0167 1.0329	0.9877 1.1175	1.0185 1.1423	1.0205 1.1986	0.9369	Ave		1.0524				7.9		30.0			
1,3,5-Trimethylbenzene	0.4375 0.4881	0.4637 0.5310	0.4701 0.5417	0.4713 0.5872	0.4372	Ave		0.4920				10.4		30.0			
Alpha Methyl Styrene	0.3568 0.4189	0.3295 0.4693	0.3595 0.4944	0.3667 0.5331	0.3682	Ave		0.4107				17.5		30.0			
Decane	0.6012 0.5948	0.6176 0.6146	0.5894 0.5680	0.5667 0.5153	0.5867	Ave		0.5838				5.3		30.0			
tert-Butylbenzene	0.9434 1.0008	0.9204 1.0324	0.9462 1.1038	0.9528 1.2001	0.8852	Ave		0.9984				10.0		30.0			
1,2,4-Trimethylbenzene	0.8573 0.9161	0.8501 0.9444	0.8848 0.9960	0.8783 1.0739	0.8172	Ave		0.9131				8.8		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,3-Dichlorobenzene	0.6600 0.7459	0.7453 0.7649	0.6648 0.8573	0.6577 0.9387	0.6849	Ave		0.7466				13.0		30.0			
sec-Butylbenzene	1.1859 1.3433	1.2224 1.3600	1.2505 1.4707	1.2539 1.5387	1.1711	Ave		1.3107				9.8		30.0			
Benzyl chloride	0.7098 0.8659	0.7639 0.9136	0.7754 0.8903	0.7932 1.0007	0.7575	Ave		0.8300				11.2		30.0			
1,4-Dichlorobenzene	0.6888 0.7315	0.7564 0.7485	0.6795 0.8122	0.6592 0.9042	0.6702	Ave		0.7389				10.7		30.0			
4-Isopropyltoluene	1.0407 1.1378	1.0633 1.2007	1.0789 1.2610	1.0886 1.3435	1.0082	Ave		1.1358				9.8		30.0			
1,2,3-Trimethylbenzene	0.6316 0.6658	0.6389 0.7216	0.6747 0.7456	0.6650 0.7612	0.6064	Ave		0.6790				7.8		30.0			
Butylcyclohexane	0.8000 0.7925	0.8740 0.7953	0.7546 0.7850	0.7551 0.7630	0.7958	Ave		0.7906				4.6		30.0			
1,2-Dichlorobenzene	0.6228 0.6928	0.6806 0.7058	0.6392 0.7936	0.6184 0.8738	0.6254	Ave		0.6947				12.6		30.0			
Indane	0.7592 0.8705	0.7952 0.8888	0.8007 0.9739	0.7944 1.0584	0.7642	Ave		0.8561				12.0		30.0			
Indene	0.5669 0.6213	0.5859 0.6863	0.5640 0.7065	0.5682 0.7753	0.5551	Ave		0.6255				12.6		30.0			
Butylbenzene	1.0095 1.0552	1.0462 1.1041	1.0120 1.1114	1.0319 1.1392	0.9573	Ave		1.0519				5.5		30.0			
Undecane	0.6494 0.6237	0.6794 0.6564	0.6228 0.6227	0.6097 0.5466	0.6316	Ave		0.6269				5.9		30.0			
1,2-Dimethyl-4-Ethylbenzene	0.7435 0.8392	0.8211 0.9129	0.7564 0.9162	0.7739 0.9719	0.7552	Ave		0.8323				10.1		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.2858	0.2343 0.3191	0.2314 0.3271	0.2096 0.3606	0.2400	Ave		0.2760				19.9		30.0			
1,2,4,5-Tetramethylbenzene	0.8881 1.0306	1.0116 1.1035	0.9247 1.1545	0.8913 1.2049	0.9061	Ave		1.0128				11.8		30.0			
1,2,3,5-Tetramethylbenzene	0.5575 0.6091	0.6324 0.6464	0.5681 0.6727	0.5450 0.6855	0.5273	Ave		0.6049				9.6		30.0			
1,2,3,4-Tetramethylbenzene	0.7687 0.8435	0.9229 0.9067	0.7703 0.9302	0.7228 0.9148	0.7149	Ave		0.8328				10.7		30.0			
Dodecane	0.6486 0.5643	0.6823 0.5802	0.6341 0.5823	0.5328 0.3868	0.5873	Ave		0.5776				14.7		30.0			
1,2,4-Trichlorobenzene	0.5078 0.6098	0.7842 0.6410	0.5267 0.7310	0.4730 0.6435	0.5274	Ave		0.6049				17.5		30.0			
Naphthalene	1.0739 1.2747	1.8066 1.3578	1.1594 1.3739	0.9994 1.2327	1.0730	Ave		1.2613				19.2		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	+++++ 0.7413	+++++ 0.7885	0.6615 0.8003	0.5858 0.6798	0.6396	Ave		0.6995				11.4		30.0			
Hexachlorobutadiene	0.5816 0.5568	0.6333 0.5954	0.5542 0.7024	0.5089 0.5999	0.5805	Ave		0.5903				9.2		30.0			
1,2,3-Trichlorobenzene	+++++ 0.5976	+++++ 0.5787	0.5581 0.6573	0.4833 0.4310	0.5390	Ave		0.5493				13.6		30.0			
2-Methylnaphthalene	+++++ 0.2993	+++++ 0.2684	0.2482 0.2821	0.1885 +++++	0.2565	Ave		0.2572				14.9		50.0			
1-Methylnaphthalene	+++++ 0.2469	+++++ 0.2085	0.1965 0.2096	0.1589 +++++	0.2225	Ave		0.2071				14.1		50.0			
4-Bromofluorobenzene (Surr)	0.7462 0.7318	0.7456 0.7488	0.7448 0.7235	0.7532 0.7564	0.7523	Ave		0.7447				1.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-9079/3	GC02IC01.D
Level 2	IC 140-9079/20	GC02IC02R.D
Level 3	IC 140-9079/5	GC02IC03.D
Level 4	IC 140-9079/6	GC02IC04.D
Level 5	IC 140-9079/7	GC02IC05.D
Level 6	ICIS 140-9079/8	GC02IC06.D
Level 7	IC 140-9079/9	GC02IC07.D
Level 8	IC 140-9079/10	GC02IC08.D
Level 9	IC 140-9079/11	GC02IC09.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 73615	4117 149012	6808 306956	14940 593423	36701	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Propene	CBM	Ave	+++++ 181398	8474 363824	16251 745153	36163 1481915	90943	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Dichlorodifluoromethane	CBM	Ave	14956 698780	30346 1443467	53178 2986792	135386 5705597	353716	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Chloromethane	CBM	Ave	+++++ 57078	+++++ 118748	5382 225417	10642 404153	29383	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	9146 436894	19214 859118	32441 1743498	80988 3524679	219262	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Acetaldehyde	CBM	Ave	+++++ 412654	+++++ 818363	+++++ 1401677	134527 2490767	208740	+++++ 9.99	+++++ 20.0	+++++ 40.0	2.00 80.0	4.99
Vinyl chloride	CBM	Ave	4472 225546	9681 463110	16924 878033	42048 1567179	112960	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,3-Butadiene	CBM	Ave	3513 163453	6941 334116	11714 634250	29149 1122777	81559	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Butane	CBM	Ave	7076 336204	15104 696236	25743 1317188	63224 2265735	170131	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Bromomethane	CBM	Ave	4934 223993	9906 458263	16675 868899	42057 1656810	112705	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Chloroethane	CBM	Ave	2593 117430	5028 242874	8789 464117	22651 869966	60191	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Ethanol	CBM	Ave	+++++ 438460	19813 900932	36579 1777636	89923 3392647	203965	+++++ 9.99	0.397 20.0	0.793 40.0	2.00 80.0	4.99
Vinyl bromide	CBM	Ave	4625 208124	9517 415451	16729 820833	39895 1604482	108833	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
2-Methylbutane	CBM	Ave	+++++ 262104	11336 518587	19697 990458	50052 1813405	137869	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Acrolein	CBM	Ave	+++++ 31009	+++++ 67683	3634 104747	5738 297063	14386	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
Trichlorofluoromethane	CBM	Ave	15547 714498	32586 1437541	54904 2874535	136800 5842137	373948	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Acetonitrile	CBM	Ave	+++++ 77854	+++++ 159557	6938 309526	18563 617927	36659	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
Acetone	CBM	Ave	+++++ 254325	+++++ 500469	+++++ 909490	72746 1722579	121293	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.00
Pentane	CBM	Ave	+++++ 40620	+++++ 82609	3142 162991	7706 321694	22070	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
Isopropyl alcohol	CBM	Ave	16048 773681	33653 1516171	65802 2917385	154370 5697995	335763	0.118 5.99	0.238 12.0	0.476 24.0	1.20 48.0	3.00
Ethyl ether	CBM	Ave	4991 232288	9749 488155	20652 895503	44528 1831153	110481	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,1-Dichloroethene	CBM	Ave	4878 200269	8850 405837	15365 830595	37664 1677086	105498	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Acrylonitrile	CBM	Ave	+++++ 101460	4181 218964	7699 420450	19112 846465	48269	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
tert-Butyl alcohol	CBM	Ave	+++++ 314466	+++++ 640651	25264 1273967	58501 2458156	142251	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	9263 431163	18876 890153	32187 1809809	80017 3768634	222408	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Methylene Chloride	CBM	Ave	+++++ 172766	+++++ 351168	22114 684793	39408 1363735	92548	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
3-Chloropropene	CBM	Ave	+++++ 209098	8422 419643	17649 807303	37029 1507366	101547	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Carbon disulfide	CBM	Ave	11699 545212	24622 1120712	42161 2281669	99197 4478149	274333	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
trans-1,2-Dichloroethene	CBM	Ave	4384 205008	9484 433627	15286 909558	37871 1782185	102572	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
2-Methylpentane	CBM	Ave	8186 418548	18650 868758	30478 1860362	76233 3465926	209472	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Methyl tert-butyl ether	CBM	Ave	10997 532900	22357 1150545	43383 2358248	104801 5069342	244925	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,1-Dichloroethane	CBM	Ave	8270 381249	17433 798627	29248 1614530	71609 3399866	188496	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Vinyl acetate	CBM	Ave	8256 416770	15155 922344	31751 1832225	80081 4239860	184358	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
2-Butanone (MEK)	CBM	Ave	1811 82283	3759 178044	7612 356743	18610 764742	37188	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Hexane	CBM	Ave	+++++ 158031	7735 325047	12837 667134	29431 1303527	78896	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isopropyl ether	CBM	Ave	10870 554336	21051 1200569	44422 2473083	111795 5292599	256058	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
cis-1,2-Dichloroethene	CBM	Ave	4801 210694	9880 450081	16338 928515	39588 1891071	104471	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Ethyl acetate	CBM	Ave	+++++ 337970	12453 749629	26531 1524276	66540 3378757	150266	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Chloroform	CBM	Ave	11656 511221	23035 1073295	40318 2194591	98505 4371168	254283	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Tert-butyl ethyl ether	CBM	Ave	9844 518203	20425 1129672	40459 2339030	101064 4983675	238643	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Tetrahydrofuran	CBM	Ave	+++++ 188075	8146 394414	16742 821113	38873 1695370	81529	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,1,1-Trichloroethane	CBM	Ave	12350 572725	24836 1200734	43667 2452233	106654 5004599	282846	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dichloroethane	DFBZ	Ave	7484 353536	14813 743733	27616 1507864	67542 3179877	175618	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Benzene	DFBZ	Ave	13817 629128	27690 1362801	48318 2593773	117159 5155161	305578	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Cyclohexane	DFBZ	Ave	+++++ 110969	5499 240083	8701 451811	20685 860520	55034	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Carbon tetrachloride	DFBZ	Ave	11663 614207	23989 1304352	43951 2621123	95114 5537304	294089	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1-Butanol	DFBZ	Ave	1610 74293	2718 162687	5747 345495	13386 676762	31686	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
2,3-Dimethylpentane	DFBZ	Ave	3587 151135	7119 317495	11928 655602	28526 1254475	74710	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Thiophene	DFBZ	Ave	7458 356253	15596 758324	28016 1556761	67355 3127741	177621	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Tert-amyl methyl ether	DFBZ	Ave	+++++ 554414	16350 1188591	40454 2461073	108255 5035512	243858	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
2,2,4-Trimethylpentane	DFBZ	Ave	21366 980383	43551 2065349	77114 4258623	187987 8044250	487596	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Heptane	DFBZ	Ave	5142 238440	10809 509798	19116 1009968	45416 1955729	118391	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dichloropropane	DFBZ	Ave	4893 233060	9757 493172	18448 1006262	43467 1909170	110995	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Trichloroethene	DFBZ	Ave	7333 361708	16324 770017	26791 1508689	66089 3097983	186014	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Dibromomethane	DFBZ	Ave	+++++ 293074	13104 630013	23258 1253711	54422 2591765	146524	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Bromodichloromethane	DFBZ	Ave	9630 537969	19956 1169408	38506 2353711	95415 4782156	258735	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DFBZ	Ave	+++++ 85834	3457 187768	6467 370975	16645 729179	38926	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Methyl methacrylate	DFBZ	Ave	4314 228935	8746 509515	16492 1074957	41751 2304384	96652	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Methylcyclohexane	DFBZ	Ave	11334 510072	22792 1092146	38650 2120127	95681 4223787	250534	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	+++++ 374418	+++++ 802345	30859 1721840	76682 3436700	150862	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
cis-1,3-Dichloropropene	DFBZ	Ave	8305 411086	16607 874614	30253 1789747	75926 3537072	199844	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
trans-1,3-Dichloropropene	CBZd 5	Ave	7511 406181	16151 860494	29964 1762176	71985 3639858	190582	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Toluene Range	DFBZ	Ave	+++++ 1798669	+++++ 3880684	+++++ 7812063	339092 16100078	853542	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	0.999
Toluene	CBZd 5	Ave	15348 728639	30391 1584870	58057 3140955	133914 6495080	339763	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,1,2-Trichloroethane	CBZd 5	Ave	4669 224974	9194 487400	17236 958533	41787 1966781	103808	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
2-Methylthiophene	CBZd 5	Ave	12517 649696	26831 1403012	48275 2777537	119176 5668799	307996	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
3-Methylthiophene	CBZd 5	Ave	12381 638468	26092 1383056	49080 2774725	118682 5585386	304111	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
2-Hexanone	CBZd 5	Ave	+++++ 186539	+++++ 399503	14771 859377	35230 1721121	75024	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
Octane	CBZd 5	Ave	5590 269612	11680 581291	20968 1101196	50555 2237695	132681	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
C8 Range	DFBZ	Ave	+++++ 3321390	+++++ 5856098	+++++ 11734517	760418 18652465	1992357	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	0.999
Dibromochloromethane	CBZd 5	Ave	7282 540498	17043 1197096	33862 2424106	84996 5402658	246365	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dibromoethane (EDB)	CBZd 5	Ave	8350 462418	17865 1009922	32620 1979331	81398 4206014	217002	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Tetrachloroethene	CBZd 5	Ave	6499 320386	13873 677805	24115 1376890	58871 3082194	154481	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Chlorobenzene	CBZd 5	Ave	12695 640391	27763 1396401	48589 2748594	117838 5819873	310288	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
2,3-Dimethylheptane	CBZd 5	Ave	14526 653073	27702 1432853	51653 2703240	125279 4902679	323718	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Ethylbenzene	CBZd 5	Ave	18619 961131	39230 2123060	73987 4204604	184802 8872329	444543	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
2-Ethylthiophene	CBZd 5	Ave	15473 782539	30884 1723412	59106 3385428	148208 7168291	364072	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m-Xylene & p-Xylene	CBZd 5	Ave	29718 1513863	58678 3318439	117078 6505497	291621 14143266	701860	0.0784 3.99	0.159 8.00	0.317 16.0	0.800 32.0	2.00
Bromoform	CBZd 5	Ave	+++++ 509620	13758 1199597	28324 2529774	69748 5899101	217947	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Styrene	CBZd 5	Ave	9629 569507	19295 1210797	37823 2456959	99226 5488449	252653	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Nonane	CBZd 5	Ave	10771 495537	22773 1007618	38208 1833592	93758 3447492	244961	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
o-Xylene	CBZd 5	Ave	15791 767665	30347 1687122	60752 3344040	148753 7117819	353133	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	9601 513576	19669 1155005	38761 2273528	95320 4811457	232481	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2,3-Trichloropropane	CBZd 5	Ave	3385 172113	7086 377370	13265 755995	33294 1629852	79343	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Isopropylbenzene	CBZd 5	Ave	24534 1097926	46007 2338552	89734 4678588	214385 10317786	509862	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Propylbenzene	CBZd 5	Ave	5490 302377	11555 687647	23064 1323708	55901 2999820	134620	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
2-Chlorotoluene	CBZd 5	Ave	5519 290310	11716 652552	22442 1240764	53040 2766057	135297	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
4-Ethyltoluene	CBZd 5	Ave	20237 1056133	41911 2382649	81294 4703566	201470 10374169	473972	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,3,5-Trimethylbenzene	CBZd 5	Ave	8708 499066	19678 1132222	37525 2230504	93050 5082507	221193	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Alpha Methyl Styrene	CBZd 5	Ave	7102 428360	13981 1000574	28693 2035483	72396 4614322	186268	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Decane	CBZd 5	Ave	11966 608205	26206 1310271	47043 2338575	111892 4459815	296801	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
tert-Butylbenzene	CBZd 5	Ave	18779 1023334	39057 2201186	75521 4544874	188113 10386644	447831	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2,4-Trimethylbenzene	CBZd 5	Ave	17065 936657	36071 2013472	70625 4100916	173408 9294406	413399	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,3-Dichlorobenzene	CBZd 5	Ave	13137 762687	31625 1630912	53064 3530077	129852 8124131	346492	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
sec-Butylbenzene	CBZd 5	Ave	23605 1373491	51871 2899550	99807 6055449	247548 13317673	592460	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Benzyl chloride	CBZd 5	Ave	14129 885361	32413 1947940	61888 3665923	156606 8661607	383181	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,4-Dichlorobenzene	CBZd 5	Ave	13711 747931	32098 1595871	54236 3344089	130139 7825807	339022	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
4-Isopropyltoluene	CBZd 5	Ave	20714 1163365	45117 2559983	86111 5192056	214918 11628572	510030	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZd 5	Ave	12572 680764	27110 1538574	53855 3069806	131293 6588120	306762	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Butylcyclohexane	CBZd 5	Ave	15924 810366	37084 1695670	60233 3232242	149071 6603806	402561	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dichlorobenzene	CBZd 5	Ave	12396 708335	28881 1504756	51022 3267696	122080 7562744	316358	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Indane	CBZd 5	Ave	15111 890055	33742 1895000	63910 4009906	156836 9160313	386578	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Indene	CBZd 5	Ave	11285 635278	24860 1463201	45014 2908946	112170 6710686	280824	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Butylbenzene	CBZd 5	Ave	20094 1078971	44394 2354005	80776 4576198	203720 9859788	484303	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Undecane	CBZd 5	Ave	12926 637737	28830 1399535	49706 2564058	120374 4731040	319511	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	Ave	14800 858063	34842 1946396	60370 3772393	152789 8411661	382029	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	+++++ 292233	9943 680296	18473 1346687	41383 3121002	121417	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	17677 1053727	42923 2352685	73810 4753691	175959 10428510	458404	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	11096 622820	26835 1378186	45344 2770005	107601 5932758	266757	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	15300 862421	39160 1933165	61486 3830160	142698 7918123	361637	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Dodecane	CBZd 5	Ave	12911 576970	28951 1237066	50609 2397668	105194 3347426	297125	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2,4-Trichlorobenzene	CBZd 5	Ave	10108 623511	33274 1366584	42037 3009702	93377 5569204	266823	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Naphthalene	CBZd 5	Ave	21376 1303379	76660 2895014	92541 5657107	197303 10668835	542795	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Benzo(b)thiophene	CBZd 5	Ave	+++++ 758002	+++++ 1681098	52800 3295063	115646 5884116	323541	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
Hexachlorobutadiene	CBZd 5	Ave	11577 569346	26871 1269541	44234 2891958	100465 5192024	293683	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2,3-Trichlorobenzene	CBZd 5	Ave	+++++ 611029	+++++ 1233859	44545 2706266	95414 3730627	272663	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
2-Methylnaphthalene	CBZd 5	Ave	+++++ 956277	+++++ 1788441	61911 3629803	116309 +++++	405427	+++++ 6.24	+++++ 12.5	0.496 25.0	1.25 +++++	3.12
1-Methylnaphthalene	CBZd 5	Ave	+++++ 788833	+++++ 1389272	48997 2696789	98052 +++++	351664	+++++ 6.24	+++++ 12.5	0.496 25.0	1.25 +++++	3.12
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1515557 1498532	1595251 1596553	1498709 1489493	1486983 1636640	1524315	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

Curve Type Legend:
Ave = Average ISTD

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab Sample ID: ICV 140-9079/15 Calibration Date: 03/02/2017 23:17

Instrument ID: MG Calib Start Date: 03/02/2017 13:34

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/02/2017 20:31

Lab File ID: GLCSC02.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3912	0.4085		2.09	2.00	4.4	35.0
Propene	Ave	0.9322	0.9844		2.11	2.00	5.6	35.0
Dichlorodifluoromethane	Ave	3.549	3.925		2.21	2.00	10.6	35.0
Chloromethane	Ave	0.2864	0.3012		2.10	2.00	5.2	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.167	2.464		2.28	2.00	13.7	35.0
Acetaldehyde	Ave	0.4269	0.3600		8.44	10.0	-15.7	35.0
Vinyl chloride	Ave	1.096	1.243		2.27	2.00	13.4	35.0
1,3-Butadiene	Ave	0.7918	0.8621		2.18	2.00	8.9	35.0
Butane	Ave	1.661	1.840		2.22	2.00	10.8	35.0
Bromomethane	Ave	1.113	1.202		2.16	2.00	8.0	35.0
Chloroethane	Ave	0.5869	0.6319		2.15	2.00	7.7	35.0
Ethanol	Ave	0.4396	0.4185		9.52	10.0	-4.8	35.0
Vinyl bromide	Ave	1.059	1.252		2.37	2.00	18.3	35.0
2-Methylbutane	Ave	1.266	1.467		2.32	2.00	15.9	35.0
Acrolein	Ave	0.1640	0.1980		2.42	2.00	20.8	35.0
Trichlorofluoromethane	Ave	3.637	3.982		2.19	2.00	9.5	35.0
Acetonitrile	Ave	0.4020	0.3696		1.84	2.00	-8.0	35.0
Acetone	Ave	0.4274	0.3649		5.13	6.00	-14.6	35.0
Isopropyl alcohol	Ave	1.268	1.298		6.15	6.00	2.4	35.0
Pentane	Ave	0.2020	0.2391		2.37	2.00	18.3	35.0
Ethyl ether	Ave	1.173	1.190		2.03	2.00	1.4	35.0
1,1-Dichloroethene	Ave	1.036	1.163		2.25	2.00	12.3	35.0
Acrylonitrile	Ave	0.5008	0.5166		2.06	2.00	3.2	35.0
tert-Butyl alcohol	Ave	1.526	1.513		1.99	2.00	-0.8	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.193	2.399		2.19	2.00	9.4	35.0
Methylene Chloride	Ave	0.9637	0.9476		1.97	2.00	-1.7	35.0
3-Chloropropene	Ave	1.004	1.117		2.23	2.00	11.2	35.0
Carbon disulfide	Ave	2.760	2.900		2.10	2.00	5.1	35.0
trans-1,2-Dichloroethene	Ave	1.053	1.120		2.13	2.00	6.4	35.0
2-Methylpentane	Ave	2.095	2.396		2.29	2.00	14.3	35.0
Methyl tert-butyl ether	Ave	2.749	2.628		1.91	2.00	-4.4	35.0
1,1-Dichloroethane	Ave	1.959	2.032		2.08	2.00	3.7	35.0
Vinyl acetate	Ave	2.100	1.950		1.86	2.00	-7.2	35.0
2-Butanone (MEK)	Ave	0.4429	0.3715		1.68	2.00	-16.1	35.0
Hexane	Ave	0.8049	0.8279		2.06	2.00	2.9	35.0
Isopropyl ether	Ave	2.823	2.551		1.81	2.00	-9.6	35.0
cis-1,2-Dichloroethene	Ave	1.102	1.158		2.10	2.00	5.1	35.0
Ethyl acetate	Ave	1.713	1.484		1.73	2.00	-13.4	35.0
Chloroform	Ave	2.650	2.742		2.07	2.00	3.5	35.0
Tert-butyl ethyl ether	Ave	2.628	2.657		2.02	2.00	1.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab Sample ID: ICV 140-9079/15 Calibration Date: 03/02/2017 23:17

Instrument ID: MG Calib Start Date: 03/02/2017 13:34

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/02/2017 20:31

Lab File ID: GLCSC02.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.9674	0.8954		1.85	2.00	-7.4	35.0
1,1,1-Trichloroethane	Ave	2.916	3.025		2.08	2.00	3.7	35.0
1,2-Dichloroethane	Ave	0.3548	0.3715		2.10	2.00	4.7	35.0
Benzene	Ave	0.6265	0.6744		2.15	2.00	7.6	35.0
Cyclohexane	Ave	0.1103	0.1184		2.15	2.00	7.3	35.0
1-Butanol	Ave	0.0732	0.0729		1.99	2.00	-0.5	35.0
Carbon tetrachloride	Ave	0.5843	0.6507		2.23	2.00	11.4	35.0
2,3-Dimethylpentane	Ave	0.1547	0.1474		1.91	2.00	-4.8	35.0
Thiophene	Ave	0.3593	0.3956		2.20	2.00	10.1	35.0
Tert-amyl methyl ether	Ave	0.5252	0.5227		1.99	2.00	-0.5	35.0
2,2,4-Trimethylpentane	Ave	0.9875	1.041		2.11	2.00	5.4	35.0
Heptane	Ave	0.2404	0.2529		2.10	2.00	5.2	35.0
1,2-Dichloropropane	Ave	0.2304	0.2437		2.12	2.00	5.8	35.0
Trichloroethene	Ave	0.3594	0.4189		2.33	2.00	16.6	35.0
Dibromomethane	Ave	0.2939	0.3147		2.14	2.00	7.1	35.0
Bromodichloromethane	Ave	0.5150	0.5673		2.20	2.00	10.2	35.0
1,4-Dioxane	Ave	0.0837	0.0738		1.76	2.00	-11.9	35.0
Methyl methacrylate	Ave	0.2247	0.1974		1.76	2.00	-12.1	35.0
Methylcyclohexane	Ave	0.5102	0.4317		1.69	2.00	-15.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3765	0.2959		1.57	2.00	-21.4	35.0
cis-1,3-Dichloropropene	Ave	0.4030	0.4394		2.18	2.00	9.0	35.0
trans-1,3-Dichloropropene	Ave	0.3916	0.4165		2.13	2.00	6.4	35.0
Toluene	Ave	0.7260	0.7493		2.07	2.00	3.2	35.0
1,1,2-Trichloroethane	Ave	0.2214	0.2223		2.01	2.00	0.4	35.0
2-Methylthiophene	Ave	0.6335	0.6980		2.20	2.00	10.2	35.0
3-Methylthiophene	Ave	0.6274	0.7104		2.27	2.00	13.2	35.0
2-Hexanone	Ave	0.1842	0.1477		1.61	2.00	-19.8	35.0
Octane	Ave	0.2666	0.2840		2.13	2.00	6.5	35.0
Dibromochloromethane	Ave	0.4903	0.5559		2.27	2.00	13.4	35.0
1,2-Dibromoethane (EDB)	Ave	0.4426	0.4726		2.14	2.00	6.8	35.0
Tetrachloroethene	Ave	0.3201	0.3375		2.11	2.00	5.4	35.0
Chlorobenzene	Ave	0.6369	0.6800		2.14	2.00	6.8	35.0
2,3-Dimethylheptane	Ave	0.6487	0.6843		2.11	2.00	5.5	35.0
Ethylbenzene	Ave	0.9537	0.9274		1.95	2.00	-2.8	35.0
2-Ethylthiophene	Ave	0.7711	0.7614		1.98	2.00	-1.3	35.0
m-Xylene & p-Xylene	Ave	0.7477	0.7385		3.95	4.00	-1.2	35.0
Bromoform	Ave	0.4775	0.5088		2.13	2.00	6.6	35.0
Nonane	Ave	0.4796	0.5078		2.12	2.00	5.9	35.0
Styrene	Ave	0.5300	0.5600		2.11	2.00	5.7	35.0
o-Xylene	Ave	0.7664	0.7253		1.89	2.00	-5.4	35.0
1,1,2,2-Tetrachloroethane	Ave	0.5029	0.4759		1.89	2.00	-5.4	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab Sample ID: ICV 140-9079/15 Calibration Date: 03/02/2017 23:17

Instrument ID: MG Calib Start Date: 03/02/2017 13:34

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/02/2017 20:31

Lab File ID: GLCSC02.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1718	0.1610		1.88	2.00	-6.3	35.0
Isopropylbenzene	Ave	1.115	1.075		1.93	2.00	-3.6	35.0
Propylbenzene	Ave	0.2970	0.2921		1.97	2.00	-1.6	35.0
2-Chlorotoluene	Ave	0.2868	0.2973		2.07	2.00	3.6	35.0
4-Ethyltoluene	Ave	1.052	0.9380		1.78	2.00	-10.9	35.0
1,3,5-Trimethylbenzene	Ave	0.4920	0.4760		1.94	2.00	-3.3	35.0
Alpha Methyl Styrene	Ave	0.4107	0.4168		2.03	2.00	1.5	35.0
Decane	Ave	0.5838	0.6191		2.12	2.00	6.1	35.0
tert-Butylbenzene	Ave	0.998	0.9616		1.93	2.00	-3.7	35.0
1,2,4-Trimethylbenzene	Ave	0.9131	0.8698		1.91	2.00	-4.7	35.0
1,3-Dichlorobenzene	Ave	0.7466	0.7760		2.08	2.00	3.9	35.0
sec-Butylbenzene	Ave	1.311	1.300		1.99	2.00	-0.8	35.0
Benzyl chloride	Ave	0.8300	0.8314		2.00	2.00	0.2	35.0
1,4-Dichlorobenzene	Ave	0.7389	0.7398		2.00	2.00	0.1	35.0
4-Isopropyltoluene	Ave	1.136	1.073		1.89	2.00	-5.5	35.0
1,2,3-Trimethylbenzene	Ave	0.6790	0.6841		2.02	2.00	0.8	35.0
Butylcyclohexane	Ave	0.7906	0.8190		2.07	2.00	3.6	35.0
1,2-Dichlorobenzene	Ave	0.6947	0.6861		1.98	2.00	-1.2	35.0
Indane	Ave	0.8561	0.7776		1.82	2.00	-9.2	35.0
Indene	Ave	0.6255	0.7645		2.45	2.00	22.2	35.0
Butylbenzene	Ave	1.052	0.997		1.90	2.00	-5.2	35.0
Undecane	Ave	0.6269	0.6264		2.00	2.00	-0.0	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.8323	0.9747		2.34	2.00	17.1	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.2760	0.2279		1.65	2.00	-17.4	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.013	1.016		2.01	2.00	0.3	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.6049	0.6266		2.07	2.00	3.6	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.8328	0.8103		1.95	2.00	-2.7	35.0
Dodecane	Ave	0.5776	0.5728		1.98	2.00	-0.8	35.0
1,2,4-Trichlorobenzene	Ave	0.6049	0.6054		2.00	2.00	0.0	35.0
Naphthalene	Ave	1.261	1.176		1.87	2.00	-6.8	35.0
Benzo(b)thiophene	Ave	0.6995	0.7347		2.10	2.00	5.0	35.0
Hexachlorobutadiene	Ave	0.5903	0.5990		2.03	2.00	1.5	35.0
1,2,3-Trichlorobenzene	Ave	0.5493	0.5821		2.12	2.00	6.0	35.0
2-Methylnaphthalene	Ave	0.2572	0.2921		7.10	6.25	13.6	50.0
1-Methylnaphthalene	Ave	0.2071	0.2859		8.63	6.25	38.0	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7447	0.7480		4.02	4.00	0.4	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab File ID: GBFBC03.D BFB Injection Date: 03/03/2017

Instrument ID: MG BFB Injection Time: 09:02

Analysis Batch No.: 9098

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.5	
75	30.0 - 60.0 % of mass 95	53.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	87.9	
175	5.0 - 9.0 % of mass 174	6.2	(7.1) 1
176	95.0 - 101.0 % of mass 174	85.4	(97.1) 1
177	5.0 - 9.0 % of mass 176	5.5	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-9098/2	GCCVC03.D	03/03/2017	09:33
	LCS 140-9098/1002	GCCVC03-LCS.d	03/03/2017	09:33
	MB 140-9098/4	GMB500C03.D	03/03/2017	11:16
IA-135-C-22	140-7294-16	GC03P114.D	03/03/2017	23:57
IA-142-C-22	140-7294-17	GC03P115.D	03/04/2017	00:38
IA-144-C-22	140-7294-18	GC03P116.D	03/04/2017	01:19
IA-146-C-22	140-7294-20	GC03P201.D	03/04/2017	01:59
IA-149-C-22	140-7294-21	GC03P202.D	03/04/2017	02:40
IA-152-C-22	140-7294-23	GC03P204.D	03/04/2017	04:02

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab Sample ID: CCVIS 140-9098/2 Calibration Date: 03/03/2017 09:33

Instrument ID: MG Calib Start Date: 03/02/2017 13:34

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/02/2017 20:31

Lab File ID: GCCVC03.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3912	0.3987		2.04	2.00	1.9	30.0
Propene	Ave	0.9322	0.9366		2.01	2.00	0.5	30.0
Dichlorodifluoromethane	Ave	3.549	3.847		2.17	2.00	8.4	30.0
Chloromethane	Ave	0.2864	0.2806		1.96	2.00	-2.0	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.167	2.410		2.23	2.00	11.2	30.0
Acetaldehyde	Ave	0.4269	0.3412		8.00	10.0	-20.1	30.0
Vinyl chloride	Ave	1.096	1.161		2.12	2.00	5.8	30.0
1,3-Butadiene	Ave	0.7918	0.7936		2.01	2.00	0.2	30.0
Butane	Ave	1.661	1.676		2.02	2.00	0.9	30.0
Bromomethane	Ave	1.113	1.133		2.04	2.00	1.8	30.0
Chloroethane	Ave	0.5869	0.5933		2.02	2.00	1.1	30.0
Ethanol	Ave	0.4396	0.4462		10.2	10.0	1.5	30.0
Vinyl bromide	Ave	1.059	1.265		2.39	2.00	19.5	30.0
2-Methylbutane	Ave	1.266	1.401		2.21	2.00	10.7	30.0
Acrolein	Ave	0.1640	0.2068		2.52	2.00	26.1	30.0
Trichlorofluoromethane	Ave	3.637	4.040		2.22	2.00	11.1	30.0
Acetonitrile	Ave	0.4020	0.4303		2.14	2.00	7.0	30.0
Acetone	Ave	0.4274	0.4102		5.76	6.00	-4.0	30.0
Pentane	Ave	0.2020	0.2323		2.30	2.00	15.0	30.0
Isopropyl alcohol	Ave	1.268	1.466		6.94	6.00	15.6	30.0
Ethyl ether	Ave	1.173	1.295		2.21	2.00	10.4	30.0
1,1-Dichloroethene	Ave	1.036	1.124		2.17	2.00	8.5	30.0
Acrylonitrile	Ave	0.5008	0.5775		2.31	2.00	15.3	30.0
tert-Butyl alcohol	Ave	1.526	1.702		2.23	2.00	11.6	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.193	2.376		2.17	2.00	8.3	30.0
Methylene Chloride	Ave	0.9637	0.9143		1.90	2.00	-5.1	30.0
3-Chloropropene	Ave	1.004	1.127		2.25	2.00	12.2	30.0
Carbon disulfide	Ave	2.760	2.809		2.04	2.00	1.8	30.0
trans-1,2-Dichloroethene	Ave	1.053	1.092		2.07	2.00	3.7	30.0
2-Methylpentane	Ave	2.095	2.369		2.26	2.00	13.1	30.0
Methyl tert-butyl ether	Ave	2.749	3.043		2.22	2.00	10.7	30.0
1,1-Dichloroethane	Ave	1.959	2.048		2.09	2.00	4.5	30.0
Vinyl acetate	Ave	2.100	2.362		2.25	2.00	12.5	30.0
2-Butanone (MEK)	Ave	0.4429	0.4422		2.00	2.00	-0.2	30.0
Hexane	Ave	0.8049	0.8189		2.04	2.00	1.7	30.0
Isopropyl ether	Ave	2.823	2.968		2.10	2.00	5.1	30.0
cis-1,2-Dichloroethene	Ave	1.102	1.150		2.09	2.00	4.4	30.0
Ethyl acetate	Ave	1.713	1.834		2.14	2.00	7.1	30.0
Chloroform	Ave	2.650	2.813		2.12	2.00	6.2	30.0
Tert-butyl ethyl ether	Ave	2.628	3.112		2.37	2.00	18.4	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab Sample ID: CCVIS 140-9098/2 Calibration Date: 03/03/2017 09:33

Instrument ID: MG Calib Start Date: 03/02/2017 13:34

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/02/2017 20:31

Lab File ID: GCCVC03.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.9674	1.053		2.18	2.00	8.9	30.0
1,1,1-Trichloroethane	Ave	2.916	3.113		2.14	2.00	6.8	30.0
1,2-Dichloroethane	Ave	0.3548	0.3857		2.18	2.00	8.7	30.0
Benzene	Ave	0.6265	0.6842		2.19	2.00	9.2	30.0
Cyclohexane	Ave	0.1103	0.1130		2.05	2.00	2.4	30.0
1-Butanol	Ave	0.0732	0.0792		2.16	2.00	8.1	30.0
Carbon tetrachloride	Ave	0.5843	0.6640		2.27	2.00	13.6	30.0
2,3-Dimethylpentane	Ave	0.1547	0.1460		1.89	2.00	-5.6	30.0
Thiophene	Ave	0.3593	0.3996		2.23	2.00	11.2	30.0
Tert-amyl methyl ether	Ave	0.5252	0.6214		2.37	2.00	18.3	30.0
2,2,4-Trimethylpentane	Ave	0.9875	1.043		2.11	2.00	5.7	30.0
Heptane	Ave	0.2404	0.2500		2.08	2.00	4.0	30.0
1,2-Dichloropropane	Ave	0.2304	0.2334		2.03	2.00	1.3	30.0
Trichloroethene	Ave	0.3594	0.3847		2.14	2.00	7.0	30.0
Dibromomethane	Ave	0.2939	0.3248		2.21	2.00	10.5	30.0
Bromodichloromethane	Ave	0.5150	0.5826		2.26	2.00	13.1	30.0
1,4-Dioxane	Ave	0.0837	0.0878		2.10	2.00	4.9	30.0
Methyl methacrylate	Ave	0.2247	0.2484		2.21	2.00	10.5	30.0
Methylcyclohexane	Ave	0.5102	0.4300		1.69	2.00	-15.7	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3765	0.3921		2.08	2.00	4.1	30.0
cis-1,3-Dichloropropene	Ave	0.4030	0.4403		2.19	2.00	9.2	30.0
trans-1,3-Dichloropropene	Ave	0.3916	0.4182		2.14	2.00	6.8	30.0
Toluene	Ave	0.7260	0.7899		2.18	2.00	8.8	30.0
1,1,2-Trichloroethane	Ave	0.2214	0.2268		2.05	2.00	2.4	30.0
2-Methylthiophene	Ave	0.6335	0.6900		2.18	2.00	8.9	30.0
3-Methylthiophene	Ave	0.6274	0.7090		2.26	2.00	13.0	30.0
2-Hexanone	Ave	0.1842	0.1940		2.11	2.00	5.3	30.0
Octane	Ave	0.2666	0.2973		2.23	2.00	11.5	30.0
Dibromochloromethane	Ave	0.4903	0.5817		2.37	2.00	18.7	30.0
1,2-Dibromoethane (EDB)	Ave	0.4426	0.4811		2.18	2.00	8.7	30.0
Tetrachloroethene	Ave	0.3201	0.3520		2.20	2.00	10.0	30.0
Chlorobenzene	Ave	0.6369	0.6848		2.15	2.00	7.5	30.0
2,3-Dimethylheptane	Ave	0.6487	0.7232		2.23	2.00	11.5	30.0
Ethylbenzene	Ave	0.9537	1.072		2.25	2.00	12.4	30.0
2-Ethylthiophene	Ave	0.7711	0.8499		2.21	2.00	10.2	30.0
m-Xylene & p-Xylene	Ave	0.7477	0.8710		4.66	4.00	16.5	30.0
Bromoform	Ave	0.4775	0.5414		2.27	2.00	13.4	30.0
Nonane	Ave	0.4796	0.5473		2.28	2.00	14.1	30.0
Styrene	Ave	0.5300	0.6536		2.47	2.00	23.3	30.0
o-Xylene	Ave	0.7664	0.8600		2.25	2.00	12.2	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5029	0.5767		2.29	2.00	14.7	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab Sample ID: CCVIS 140-9098/2 Calibration Date: 03/03/2017 09:33

Instrument ID: MG Calib Start Date: 03/02/2017 13:34

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/02/2017 20:31

Lab File ID: GCCVC03.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1718	0.1976		2.30	2.00	15.0	30.0
Isopropylbenzene	Ave	1.115	1.273		2.28	2.00	14.2	30.0
Propylbenzene	Ave	0.2970	0.3491		2.35	2.00	17.5	30.0
2-Chlorotoluene	Ave	0.2868	0.3301		2.30	2.00	15.1	30.0
4-Ethyltoluene	Ave	1.052	1.150		2.19	2.00	9.3	30.0
1,3,5-Trimethylbenzene	Ave	0.4920	0.5798		2.36	2.00	17.9	30.0
Alpha Methyl Styrene	Ave	0.4107	0.4963		2.42	2.00	20.8	30.0
Decane	Ave	0.5838	0.6513		2.23	2.00	11.6	30.0
tert-Butylbenzene	Ave	0.998	1.205		2.42	2.00	20.7	30.0
1,2,4-Trimethylbenzene	Ave	0.9131	1.082		2.37	2.00	18.5	30.0
1,3-Dichlorobenzene	Ave	0.7466	0.8341		2.24	2.00	11.7	30.0
sec-Butylbenzene	Ave	1.311	1.575		2.40	2.00	20.1	30.0
Benzyl chloride	Ave	0.8300	1.022		2.46	2.00	23.2	30.0
1,4-Dichlorobenzene	Ave	0.7389	0.8292		2.25	2.00	12.2	30.0
4-Isopropyltoluene	Ave	1.136	1.340		2.36	2.00	18.0	30.0
1,2,3-Trimethylbenzene	Ave	0.6790	0.8475		2.50	2.00	24.8	30.0
Butylcyclohexane	Ave	0.7906	0.8600		2.18	2.00	8.8	30.0
1,2-Dichlorobenzene	Ave	0.6947	0.8049		2.32	2.00	15.9	30.0
Indane	Ave	0.8561	0.9574		2.24	2.00	11.8	30.0
Indene	Ave	0.6255	0.9318		2.98	2.00	49.0*	30.0
Butylbenzene	Ave	1.052	1.247		2.37	2.00	18.6	30.0
Undecane	Ave	0.6269	0.7374		2.35	2.00	17.6	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.8323	1.234		2.97	2.00	48.3*	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2760	0.2922		2.12	2.00	5.9	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.013	1.303		2.58	2.00	28.7	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.6049	0.7978		2.64	2.00	31.9*	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.8328	1.043		2.51	2.00	25.3	30.0
Dodecane	Ave	0.5776	0.6604		2.29	2.00	14.3	30.0
1,2,4-Trichlorobenzene	Ave	0.6049	0.7125		2.36	2.00	17.8	30.0
Naphthalene	Ave	1.261	1.452		2.30	2.00	15.1	30.0
Benzo(b)thiophene	Ave	0.6995	0.8846		2.53	2.00	26.5	30.0
Hexachlorobutadiene	Ave	0.5903	0.6771		2.30	2.00	14.7	30.0
1,2,3-Trichlorobenzene	Ave	0.5493	0.6933		2.53	2.00	26.2	30.0
2-Methylnaphthalene	Ave	0.2572	0.3548		8.63	6.25	38.0	50.0
1-Methylnaphthalene	Ave	0.2071	0.3520		10.6	6.25	69.9*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7447	0.7619		4.09	4.00	2.3	30.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab File ID: JBFBK25X.D BFB Injection Date: 11/25/2016

Instrument ID: MJ BFB Injection Time: 18:19

Analysis Batch No.: 7241

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	23.8	
75	30.0 - 60.0 % of mass 95	45.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	98.9	
175	5.0 - 9.0 % of mass 174	7.8	(7.9) 1
176	95.0 - 101.0 % of mass 174	97.9	(99.0) 1
177	5.0 - 9.0 % of mass 176	6.5	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-7241/2	JK25IC01X.D	11/25/2016	18:47
	IC 140-7241/3	JK25IC02X.D	11/25/2016	19:41
	IC 140-7241/4	JK25IC03X.D	11/25/2016	20:34
	IC 140-7241/5	JK25IC04X.D	11/25/2016	21:29
	IC 140-7241/6	JK25IC05X.D	11/25/2016	22:23
	ICIS 140-7241/7	JK25IC06X.D	11/25/2016	23:17
	IC 140-7241/8	JK25IC07X.D	11/26/2016	00:11
	IC 140-7241/9	JK25IC08X.D	11/26/2016	01:05
	IC 140-7241/10	JK25IC09X.D	11/26/2016	01:58
	ICV 140-7241/23	JK25ICVX.D	11/26/2016	12:43

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-7241/2	JK25IC01X.D
Level 2	IC 140-7241/3	JK25IC02X.D
Level 3	IC 140-7241/4	JK25IC03X.D
Level 4	IC 140-7241/5	JK25IC04X.D
Level 5	IC 140-7241/6	JK25IC05X.D
Level 6	ICIS 140-7241/7	JK25IC06X.D
Level 7	IC 140-7241/8	JK25IC07X.D
Level 8	IC 140-7241/9	JK25IC08X.D
Level 9	IC 140-7241/10	JK25IC09X.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.3279	0.5209 0.3424	0.3376 0.3408	0.3209 0.3492	0.3466	Ave		0.3608				18.1		30.0			
Propene	+++++ 1.1758	+++++ 1.1993	1.3594 1.2672	1.2515 1.2587	1.2062	Ave		1.2455				4.9		30.0			
Dichlorodifluoromethane	3.8475 3.0537	3.3487 3.2136	3.1580 3.1835	2.9958 3.2159	3.1307	Ave		3.2386				7.7		30.0			
Chloromethane	+++++ 0.4359	0.5252 0.4576	0.4677 0.4580	0.4181 0.4804	0.4514	Ave		0.4618				6.9		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++ 2.0718	1.8918 1.6896	1.9626 1.5936	1.6292 1.6718	1.8086	Ave		1.7899				9.6		30.0			
Acetaldehyde	+++++ 0.4566	+++++ 0.4368	0.6805 0.4719	0.4532 0.5131	0.4805	Ave		0.4989				16.8		30.0			
Vinyl chloride	1.5299 1.3297	1.4001 1.3957	1.3464 1.3972	1.2586 1.4297	1.3793	Ave		1.3852				5.4		30.0			
Butane	2.9735 2.2299	2.5054 2.3309	2.3789 2.3726	2.1780 2.4282	2.3273	Ave		2.4138				9.6		30.0			
1,3-Butadiene	+++++ 1.0536	1.1806 1.1114	1.1186 1.1221	1.0201 1.1708	1.1152	Ave		1.1116				4.8		30.0			
Bromomethane	+++++ 1.1936	1.2661 1.2491	1.2107 1.2599	1.1307 1.2876	1.2587	Ave		1.2320				4.1		30.0			
Chloroethane	+++++ 0.6554	0.7015 0.6546	0.6348 0.6662	0.6137 0.6695	0.6603	Ave		0.6570				3.9		30.0			
Ethanol	0.5705 0.5223	0.5667 0.5053	0.5919 0.4982	0.4772 0.4781	0.5432	Ave		0.5282				8.0		30.0			
Vinyl bromide	1.3456 1.1540	1.2167 1.2054	1.1654 1.2260	1.0712 1.2467	1.2246	Ave		1.2062				6.2		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	2.0288 1.6960	1.8143 1.7503	1.6822 1.7808	1.5836 1.8155	1.7549	Ave		1.7674				6.9		30.0			
Trichlorofluoromethane	3.6024 3.2281	3.3180 3.3173	3.1843 3.3742	2.9197 3.3969	3.3115	Ave		3.2947				5.6		30.0			
Acrolein	+++++ 0.3517	+++++ 0.3409	0.5264 0.3539	0.3333 0.4239	0.3839	Ave		0.3877				17.7		30.0			
Acetonitrile	+++++ 0.4656	+++++ 0.4481	0.5197 0.4687	0.4059 0.5215	0.5094	Ave		0.4770				9.0		30.0			
Acetone	+++++ 0.4196	+++++ 0.3917	+++++ 0.3945	0.4202 0.4174	0.4431	Ave		0.4144				4.6		30.0			
Isopropyl alcohol	2.1209 1.9104	1.9735 1.9294	1.9325 1.9239	1.6981 1.9040	1.9590	Ave		1.9280				5.6		30.0			
Pentane	+++++ 0.1846	+++++ 0.1866	0.1863 0.1929	0.1616 0.1996	0.1846	Ave		0.1852				6.3		30.0			
Ethyl ether	+++++ 1.3268	1.4955 1.2979	1.4011 1.3235	1.1595 1.4364	1.4228	Ave		1.3579				7.7		30.0			
1,1-Dichloroethene	1.4517 1.1478	1.2123 1.1795	1.1371 1.2067	1.0798 1.2269	1.1937	Ave		1.2040				8.6		30.0			
Acrylonitrile	0.9001 0.7158	0.7984 0.7022	0.8029 0.7410	0.6242 0.8371	0.7564	Ave		0.7642				10.6		30.0			
tert-Butyl alcohol	1.8439 1.9956	1.9418 2.0218	1.9150 2.0374	1.7291 1.9964	2.0129	Ave		1.9438				5.2		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	2.8738 2.6185	2.7163 2.6279	2.5695 2.7290	2.4107 2.8100	2.6551	Ave		2.6679				5.1		30.0			
Methylene Chloride	+++++ 1.0931	+++++ 1.0697	1.5404 1.0991	1.1635 1.1074	1.1789	Ave		1.1789				13.9		30.0			
3-Chloropropene	+++++ 1.3409	1.4536 1.3288	1.5147 1.3596	1.2743 1.4217	1.4115	Ave		1.3881				5.5		30.0			
Carbon disulfide	3.9115 3.3893	3.7671 3.4592	3.4541 3.5389	3.2558 3.5681	3.5744	Ave		3.5465				5.5		30.0			
trans-1,2-Dichloroethene	1.3787 1.1690	1.2657 1.1718	1.1799 1.2095	1.0788 1.2275	1.2113	Ave		1.2102				6.7		30.0			
2-Methylpentane	3.5552 3.0451	3.2099 3.0193	3.0439 3.1532	2.7866 3.2386	3.1086	Ave		3.1289				6.6		30.0			
Methyl tert-butyl ether	2.8993 2.3272	2.8445 2.2839	2.5815 2.3429	2.0927 2.4349	2.4571	Ave		2.4738				10.6		30.0			
1,1-Dichloroethane	2.6041 2.2322	2.4643 2.1350	2.2671 2.2124	2.1642 2.3110	2.3145	Ave		2.3005				6.5		30.0			
Vinyl acetate	2.9851 2.7422	3.0101 2.6575	2.9743 2.7570	2.3823 3.0708	2.9180	Ave		2.8330				7.8		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.3708	0.3334 0.3586	0.3892 0.3677	0.3327 0.3798	0.3687	Ave		0.3626				5.6		30.0			
Hexane	+++++ 1.0259	1.2313 0.9943	1.0969 1.0492	0.9671 1.1068	1.0490	Ave		1.0651				7.7		30.0			
Isopropyl ether	4.0607 3.6638	3.7881 3.6242	3.9354 3.7695	3.2767 3.8864	3.9218	Ave		3.7696				6.1		30.0			
cis-1,2-Dichloroethene	1.4783 1.1314	1.2330 1.0794	1.1960 1.1235	1.1085 1.1935	1.1910	Ave		1.1928				9.9		30.0			
Ethyl acetate	2.4761 2.0850	2.2471 2.0350	2.1376 2.0630	1.7887 2.1294	2.0820	Ave		2.1160				8.6		30.0			
Chloroform	3.0247 2.3882	2.7668 2.2280	2.6010 2.3049	2.3218 2.4506	2.4911	Ave		2.5086				10.1		30.0			
Tert-butyl ethyl ether	2.7965 2.8749	3.0587 2.8302	3.0183 2.9494	2.4991 3.0294	3.0020	Ave		2.8954				6.1		30.0			
Tetrahydrofuran	+++++ 1.1460	1.3809 1.0826	1.2631 1.1127	1.0323 1.2144	1.1865	Ave		1.1773				9.4		30.0			
1,1,1-Trichloroethane	3.1145 2.5058	2.7531 2.3548	2.6301 2.4015	2.4118 2.5385	2.5942	Ave		2.5894				9.0		30.0			
1,2-Dichloroethane	0.4336 0.3666	0.3727 0.3311	0.3707 0.3547	0.3467 0.4034	0.3755	Ave		0.3728				8.2		30.0			
1-Butanol	+++++ 0.1215	0.1246 0.1211	0.1092 0.1266	0.0991 0.1337	0.1196	Ave		0.1194				9.0		30.0			
Cyclohexane	+++++ 0.1293	+++++ 0.1205	0.1569 0.1244	0.1230 0.1388	0.1342	Ave		0.1325				9.5		30.0			
Benzene	0.9199 0.6870	0.7288 0.6372	0.7252 0.6816	0.6544 0.7950	0.7103	Ave		0.7266				11.8		30.0			
Carbon tetrachloride	0.7660 0.6506	0.6614 0.6021	0.6423 0.5137	0.5728 0.6916	0.6637	Ave		0.6405				11.3		30.0			
2,3-Dimethylpentane	+++++ 0.1639	0.1817 0.1498	0.1699 0.1601	0.1592 0.1819	0.1674	Ave		0.1667				6.6		30.0			
Thiophene	0.5058 0.3990	0.4152 0.3696	0.4238 0.3916	0.3745 0.4451	0.4135	Ave		0.4153				10.0		30.0			
Tert-amyl methyl ether	+++++ 0.6604	0.5982 0.6006	0.5926 0.6188	0.5386 0.6438	0.7224	Ave		0.6219				8.8		30.0			
2,2,4-Trimethylpentane	+++++ 1.3383	1.5785 1.2186	1.4409 1.2948	1.2908 1.4822	1.3763	Ave		1.3776				8.5		30.0			
Heptane	0.3156 0.2383	0.2763 0.2197	0.2614 0.2336	0.2274 0.2722	0.2470	Ave		0.2546				11.8		30.0			
1,2-Dichloropropane	0.3317 0.2850	0.2964 0.2668	0.2887 0.2829	0.2636 0.3323	0.3019	Ave		0.2944				8.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.4047 0.3224	0.3508 0.3009	0.3621 0.3176	0.3154 0.3719	0.3318	Ave		0.3420				9.7		30.0			
Dibromomethane	0.4152 0.3099	0.3258 0.2848	0.3210 0.3000	0.3016 0.3484	0.3163	Ave		0.3248				11.8		30.0			
Bromodichloromethane	0.7155 0.5386	0.5955 0.4942	0.5617 0.5262	0.4941 0.6104	0.5528	Ave		0.5654				12.2		30.0			
1,4-Dioxane	0.0760 0.0803	0.0765 0.0791	0.0708 0.0817	0.0636 0.0846	0.0805	Ave		0.0770				8.3		30.0			
Methyl methacrylate	+++++ 0.2758	0.2781 0.2750	0.2691 0.2947	0.2314 0.3249	0.2784	Ave		0.2784				9.4		30.0			
Methylcyclohexane	+++++ 0.5470	0.6129 0.4948	0.5612 0.5246	0.5222 0.5970	0.5628	Ave		0.5528				7.1		30.0			
4-Methyl-2-pentanone (MIBK)	0.6044 0.5456	0.5569 0.5396	0.5362 0.5676	0.4620 0.6066	0.5373	Ave		0.5507				7.8		30.0			
cis-1,3-Dichloropropene	0.4472 0.3699	0.3541 0.3619	0.3536 0.3931	0.3411 0.4436	0.3748	Ave		0.3821				10.1		30.0			
trans-1,3-Dichloropropene	0.4678 0.3274	0.3618 0.3204	0.2858 0.3429	0.2743 0.3961	0.3224	Ave		0.3443				17.2		30.0			
Toluene Range	2.9852 2.1585	2.2448 2.0285	2.1821 2.1704	1.8063 2.4356	2.2621	Ave		2.2526				14.4		30.0			
Toluene	+++++ 0.8479	0.8984 0.7936	0.8894 0.8539	0.7495 0.9595	0.8883	Ave		0.8601				7.6		30.0			
1,1,2-Trichloroethane	0.3435 0.2646	0.2696 0.2425	0.2602 0.2572	0.2323 0.2883	0.2753	Ave		0.2704				11.9		30.0			
2-Methylthiophene	+++++ 0.7403	0.7593 0.6716	0.6686 0.7239	0.6483 0.8025	0.7594	Ave		0.7217				7.5		30.0			
3-Methylthiophene	+++++ 0.6788	0.7328 0.6493	0.6904 0.6885	0.6001 0.7729	0.6991	Ave		0.6890				7.5		30.0			
2-Hexanone	+++++ 0.2614	0.2290 0.2734	0.2173 0.2785	0.1991 0.2986	0.2517	Ave		0.2511				13.4		30.0			
C8 Range	+++++ 3.1096	+++++ 2.8109	3.2020 2.9646	2.7739 3.3358	3.2719	Ave		3.0670				7.2		30.0			
Octane	0.3590 0.2789	0.3147 0.2536	0.2752 0.2683	0.2446 0.3054	0.2923	Ave		0.2880				12.1		30.0			
Dibromochloromethane	0.7263 0.6428	0.6250 0.5873	0.5865 0.6267	0.5131 0.7138	0.6522	Ave		0.6304				10.4		30.0			
1,2-Dibromoethane (EDB)	0.5581 0.4501	0.4574 0.4226	0.4244 0.4524	0.3554 0.5175	0.4565	Ave		0.4549				12.6		30.0			
Tetrachloroethene	0.4997 0.3580	0.4044 0.3239	0.3567 0.3458	0.3374 0.3924	0.3731	Ave		0.3768				14.0		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorobenzene	0.8119 0.6651	0.6711 0.6266	0.6199 0.6745	0.5616 0.7759	0.6719	Ave		0.6754				11.4		30.0			
2,3-Dimethylheptane	1.1660 1.0785	1.1670 0.9808	1.0695 1.0153	0.9629 1.1134	1.1327	Ave		1.0762				7.1		30.0			
Ethylbenzene	1.3653 0.9774	1.0019 0.9174	0.9920 0.9981	0.7905 1.1242	1.0145	Ave		1.0201				15.4		30.0			
2-Ethylthiophene	0.9035 0.7469	0.7527 0.7105	0.7245 0.7758	0.6125 0.8812	0.7573	Ave		0.7628				11.5		30.0			
m-Xylene & p-Xylene	0.9161 0.7347	0.7271 0.6977	0.7185 0.7666	0.5864 0.8663	0.7608	Ave		0.7527				12.7		30.0			
Nonane	0.7785 0.6367	0.6093 0.6067	0.6044 0.6540	0.5024 0.7504	0.6488	Ave		0.6435				12.7		30.0			
Bromoform	0.6867 0.5981	0.5302 0.5880	0.5387 0.6519	0.4509 0.8044	0.5555	Ave		0.6005				17.2		30.0			
Styrene	0.6616 0.5192	0.4669 0.5187	0.4666 0.5854	0.3764 0.6988	0.5235	Ave		0.5352				18.7		30.0			
o-Xylene	1.0374 0.7741	0.8121 0.7268	0.8252 0.7878	0.6459 0.8841	0.8122	Ave		0.8117				13.3		30.0			
1,1,2,2-Tetrachloroethane	0.7578 0.5860	0.5524 0.5636	0.5036 0.6170	0.4597 0.6778	0.5995	Ave		0.5908				15.1		30.0			
1,2,3-Trichloropropane	+++++ 0.1362	0.1351 0.1310	0.1263 0.1469	0.1017 0.1656	0.1423	Ave		0.1356				13.5		30.0			
Isopropylbenzene	1.4300 1.0460	1.1107 0.9870	1.0783 1.0790	0.8534 1.2030	1.0952	Ave		1.0980				14.3		30.0			
Propylbenzene	0.3117 0.2615	0.2150 0.2492	0.2338 0.2793	0.1871 0.3270	0.2606	Ave		0.2584				17.1		30.0			
2-Chlorotoluene	0.3232 0.2648	0.2511 0.2595	0.2653 0.2876	0.2101 0.3338	0.2744	Ave		0.2744				13.6		30.0			
4-Ethyltoluene	1.1777 0.9153	0.7877 0.8908	0.8034 0.9987	0.6479 1.1417	0.9015	Ave		0.9183				18.4		30.0			
1,3,5-Trimethylbenzene	0.5614 0.4580	0.4000 0.4385	0.4540 0.4896	0.3436 0.5642	0.4574	Ave		0.4630				15.2		30.0			
Alpha Methyl Styrene	0.4217 0.3608	0.2786 0.3630	0.2794 0.4253	0.2366 0.5040	0.3478	Ave		0.3575				23.7		30.0			
Decane	+++++ 0.6528	0.6013 0.6570	0.5953 0.7392	0.4586 0.8575	0.6448	Ave		0.6508				17.7		30.0			
tert-Butylbenzene	1.1493 0.9074	0.8557 0.8661	0.9100 0.9720	0.7027 1.1125	0.9329	Ave		0.9343				14.4		30.0			
1,2,4-Trimethylbenzene	0.9974 0.7933	0.6954 0.7726	0.7121 0.8661	0.5683 0.9996	0.7846	Ave		0.7988				17.5		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	1.5378 1.1932	1.0946 1.1562	1.1832 1.2867	0.8961 1.4520	1.2291	Ave		1.2254				15.4		30.0			
1,3-Dichlorobenzene	0.5550 0.4199	0.3703 0.4402	0.3233 0.5410	0.2865 0.6876	0.4043	Ave		0.4476				28.3		30.0			
Benzyl chloride	+++++ 0.4344	0.3207 0.4606	0.2811 0.5817	0.2549 +++++	0.3836	Ave		0.3881				29.5		30.0			
1,4-Dichlorobenzene	0.4368 0.3614	0.2948 0.3825	0.2705 0.4825	0.2323 +++++	0.3308	Ave		0.3490				24.2		30.0			
4-Isopropyltoluene	1.2247 0.9539	0.8120 0.9215	0.8627 1.0355	0.6793 1.1549	0.9553	Ave		0.9555				17.6		30.0			
1,2,3-Trimethylbenzene	0.7389 0.5904	0.5559 0.5663	0.5748 0.6310	0.4445 0.7050	0.5967	Ave		0.6004				14.3		30.0			
Butylcyclohexane	0.9939 0.7487	0.6964 0.7290	0.7343 0.8014	0.5920 0.8884	0.7723	Ave		0.7729				14.9		30.0			
Indane	0.8395 0.6893	0.5975 0.6764	0.6142 0.7856	0.4850 0.9222	0.6825	Ave		0.6991				19.0		30.0			
1,2-Dichlorobenzene	0.5313 0.4395	0.3695 0.4481	0.3510 0.5483	0.2920 0.6744	0.4257	Ave		0.4533				25.7		30.0			
Indene	0.5216 0.4348	0.3300 0.4414	0.3234 0.5337	0.2717 0.6454	0.4085	Ave		0.4345				27.3		30.0			
Butylbenzene	1.0320 0.8033	0.6580 0.8001	0.6470 0.9309	0.5248 1.0536	0.7655	Ave		0.8017				22.3		30.0			
Undecane	+++++ 0.5973	0.5390 0.5900	0.4922 0.6843	0.4020 0.8030	0.5661	Ave		0.5842				20.7		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 0.6180	0.5048 0.6086	0.5006 0.6944	0.4163 0.7766	0.5937	Ave		0.5891				19.5		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.1739	0.1315 0.1811	0.1242 0.2201	0.1052 +++++	0.1558	Ave		0.1560				25.2		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 0.7255	0.5992 0.7149	0.6031 0.8093	0.4817 0.8971	0.6875	Ave		0.6898				18.8		30.0			
1,2,3,5-Tetramethylbenzene	+++++ 0.4432	0.3662 0.4420	0.3835 0.4915	0.2965 0.5445	0.4246	Ave		0.4240				18.1		30.0			
1,2,3,4-Tetramethylbenzene	+++++ 0.5580	0.5018 0.5469	0.4684 0.6231	0.3685 0.6869	0.5361	Ave		0.5362				17.9		30.0			
Dodecane	+++++ 0.5103	0.4533 0.4838	0.4122 0.5557	0.3131 0.6262	0.5110	Ave		0.4832				19.5		30.0			
1,2,4-Trichlorobenzene	0.1681 0.1556	0.1028 0.1706	0.0957 +++++	0.0776 +++++	0.1423	Ave		0.1304				29.0		30.0			
Naphthalene	0.4947 0.3598	0.2746 0.3910	0.2282 0.5046	0.2037 +++++	0.3360	Ave		0.3491				32.3	*	30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	+++++ 0.1503	0.1107 0.1611	0.0905 0.2166	0.0836 +++++	0.1388	Ave		0.1359				34.0	*	30.0			
Hexachlorobutadiene	0.6292 0.4815	0.4595 0.4700	0.4647 0.5481	0.3282 0.6640	0.4975	Ave		0.5047				19.7		30.0			
1,2,3-Trichlorobenzene	0.1979 0.1824	0.1457 0.1937	0.1256 0.2459	0.0937 +++++	0.1794	Ave		0.1705				27.8		30.0			
2-Methylnaphthalene	+++++ 0.0376	0.0294 0.0397	0.0240 0.0458	0.0144 0.0500	0.0333	Ave		0.0343				33.9		50.0			
1-Methylnaphthalene	+++++ 0.0439	0.0354 0.0453	0.0295 0.0483	0.0162 0.0466	0.0401	Ave		0.0381				28.5		50.0			
4-Bromofluorobenzene (Surr)	0.5598 0.6420	0.6032 0.6644	0.6008 0.6801	0.6245 0.7022	0.6235	Ave		0.6334				7.0		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-7241/2	JK25IC01X.D
Level 2	IC 140-7241/3	JK25IC02X.D
Level 3	IC 140-7241/4	JK25IC03X.D
Level 4	IC 140-7241/5	JK25IC04X.D
Level 5	IC 140-7241/6	JK25IC05X.D
Level 6	ICIS 140-7241/7	JK25IC06X.D
Level 7	IC 140-7241/8	JK25IC07X.D
Level 8	IC 140-7241/9	JK25IC08X.D
Level 9	IC 140-7241/10	JK25IC09X.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 58411	3817 118844	5092 235313	11982 484336	30842	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propene	CBM	Ave	+++++ 209464	+++++ 416325	20501 875090	46736 1745617	107343	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	13281 544024	24537 1115556	47625 2198367	111873 4459893	278609	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	+++++ 77658	3848 158851	7053 316299	15615 666251	40173	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	+++++ 369090	13862 586542	29597 1100458	60841 2318437	160950	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 406708	+++++ 758197	51314 1629284	84629 3557537	213784	+++++ 9.99	+++++ 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl chloride	CBM	Ave	5281 236881	10259 484487	20305 964833	47000 1982759	122746	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butane	CBM	Ave	10264 397262	18358 809131	35876 1638360	81334 3367418	207118	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	+++++ 187703	8651 385793	16869 774881	38093 1623732	99249	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	+++++ 212632	9277 433625	18258 870033	42225 1785611	112019	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	+++++ 116765	5140 227227	9573 460075	22919 928476	58761	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	9847 465217	20763 876962	44631 1720033	89104 3315415	241723	0.196 9.99	0.392 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl bromide	CBM	Ave	4645 205590	8915 418434	17575 846638	40004 1728904	108983	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	7003 302142	13294 607591	25369 1229715	59137 2517794	156174	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Trichlorofluoromethane	CBM	Ave	12435 575081	24312 1151548	48022 2330072	109033 4710858	294702	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrolein	CBM	Ave	+++++ 62656	+++++ 118346	7938 244387	12447 587930	34165	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 82955	+++++ 155542	7837 323650	15157 723270	45336	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 224276	+++++ 407996	+++++ 817306	47081 1736723	118305	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.01
Isopropyl alcohol	CBM	Ave	21965 1021108	43385 2009448	87437 3985916	190258 7921894	523062	0.118 5.99	0.235 12.0	0.476 24.0	1.20 48.0	3.01
Pentane	CBM	Ave	+++++ 32889	+++++ 64760	2810 133194	6036 276851	16429	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl ether	CBM	Ave	+++++ 236371	10958 450555	21130 913954	43301 1992033	126616	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	5011 204488	8883 409463	17148 833287	40325 1701547	106234	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	3107 127525	5850 243769	12108 511675	23310 1160939	67317	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butyl alcohol	CBM	Ave	6365 355509	14228 701844	28880 1406893	64571 2768624	179135	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroetha ne	CBM	Ave	9920 466491	19903 912233	38750 1884507	90023 3896999	236287	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 194734	+++++ 371333	23231 758999	43448 1535696	104918	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	+++++ 238874	10651 461294	22843 938863	47589 1971589	125613	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	13502 603813	27603 1200814	52091 2443791	121583 4948271	318098	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	4759 208258	9274 406768	17794 835250	40286 1702361	107797	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylpentane	CBM	Ave	12272 542486	23520 1048110	45905 2177430	104062 4491353	276646	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	10008 414593	20843 792821	38931 1617852	78151 3376773	218669	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	8989 397664	18057 741147	34190 1527772	80819 3204866	205971	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	10304 488532	22056 922514	44854 1903842	88963 4258617	259685	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Butanone (MEK)	CBM	Ave	+++++ 66052	2443 124487	5869 253927	12424 526678	32810	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Hexane	CBM	Ave	+++++ 182768	9022 345145	16542 724504	36117 1534885	93351	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isopropyl ether	CBM	Ave	14017 652700	27757 1258094	59349 2603004	122364 5389640	349017	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	5103 201554	9035 374711	18037 775858	41397 1655099	105995	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	8547 371439	16465 706434	32237 1424609	66797 2953037	185284	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroform	CBM	Ave	10441 425460	20273 773414	39225 1591650	86703 3398489	221690	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	9653 512166	22412 982477	45518 2036709	93325 4201218	267158	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	+++++ 204152	10118 375805	19048 768341	38550 1684106	105594	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	10751 446406	20173 817437	39664 1658324	90067 3520443	230864	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFBZ	Ave	6047 287059	12345 518857	25128 1078779	58242 2324578	148871	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1-Butanol	DFBZ	Ave	+++++ 95163	4128 189813	7404 385011	16643 770202	47398	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Cyclohexane	DFBZ	Ave	+++++ 101218	+++++ 188882	10636 378419	20665 799986	53224	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Benzene	DFBZ	Ave	12828 537887	24141 998620	49152 2072736	109926 4580943	281600	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFBZ	Ave	10682 509407	21907 943611	43534 1562157	96221 3985428	263147	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylpentane	DFBZ	Ave	+++++ 128303	6018 234828	11513 486787	26735 1047976	66382	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Thiophene	DFBZ	Ave	7053 312374	13753 579159	28726 1190849	62914 2564706	163933	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-amyl methyl ether	CBZd5	Ave	+++++ 439550	16558 826406	34262 1687255	78058 3478703	238993	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 1047845	52286 1909813	97663 3937619	216817 8541251	545679	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Heptane	DFBZ	Ave	4401 186596	9153 344303	17720 710384	38197 1568743	97916	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFBZ	Ave	4626 223106	9817 418060	19570 860195	44282 1914762	119711	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Trichloroethene	DFBZ	Ave	5644 252436	11621 471497	24542 965984	52984 2143254	131547	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromomethane	DFBZ	Ave	5790 242664	10791 446341	21756 912301	50658 2007775	125422	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromodichloromethane	DFBZ	Ave	9978 421714	19726 774474	38075 1600155	83001 3517359	219152	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DFBZ	Ave	1060 62903	2535 123907	4802 248451	10682 487655	31913	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl methacrylate	DFBZ	Ave	+++++ 215926	9213 430899	18239 896296	38866 1872520	110367	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylcyclohexane	DFBZ	Ave	+++++ 428267	20303 775502	38039 1595324	87709 3440508	223142	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	8429 427163	18448 845642	36347 1726160	77604 3495706	213021	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFBZ	Ave	6237 289600	11728 567162	23969 1195443	57296 2556154	148579	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZd 5	Ave	4949 217897	10015 440824	16526 934863	39757 2140300	106665	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene Range	CBZd 5	Ave	31580 1436613	62136 2791156	126167 5917756	261800 13161341	748324	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene	CBZd 5	Ave	+++++ 564299	24869 1091996	51423 2328051	108634 5184820	293852	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZd 5	Ave	3634 176087	7462 333675	15047 701197	33667 1557835	91074	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylthiophene	CBZd 5	Ave	+++++ 492684	21017 924136	38657 1973707	93967 4336537	251216	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
3-Methylthiophene	CBZd 5	Ave	+++++ 451800	20285 893344	39921 1877320	86973 4176696	231259	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Hexanone	CBZd 5	Ave	+++++ 173958	6340 376223	12562 759406	28857 1613389	83279	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
C8 Range	CBZd 5	Ave	+++++ 2069587	+++++ 3867680	185140 8082975	402043 18025464	1082393	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Octane	CBZd 5	Ave	3798 185643	8712 348881	15913 731653	35453 1650234	96708	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZd 5	Ave	7683 427846	17301 808128	33912 1708750	74369 3856951	215761	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	5904 299565	12660 581436	24538 1233456	51514 2796441	151021	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZd 5	Ave	5286 238290	11194 445648	20627 942886	48901 2120157	123410	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chlorobenzene	CBZd 5	Ave	8589 442675	18576 862198	35843 1839152	81389 4192705	222281	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylheptane	CBZd 5	Ave	12335 717787	32304 1349555	61836 2768264	139554 6016570	374711	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethylbenzene	CBZd 5	Ave	14443 650505	27733 1262362	57358 2721372	114570 6074677	335611	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Ethylthiophene	CBZd 5	Ave	9558 497116	20835 977657	41893 2115122	88766 4761553	250527	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m-Xylene & p-Xylene	CBZd 5	Ave	19383 978007	40253 1919976	83085 4180493	169976 9362617	503389	0.0784 3.99	0.157 8.00	0.317 16.0	0.800 32.0	2.00
Nonane	CBZd 5	Ave	8236 423733	16865 834807	34945 1783024	72811 4054710	214636	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromoform	CBZd 5	Ave	7264 398085	14675 809091	31148 1777546	65347 4346492	183780	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Styrene	CBZd 5	Ave	6999 345579	12925 713753	26979 1596019	54555 3775896	173185	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
o-Xylene	CBZd 5	Ave	10974 515214	22480 1000055	47711 2147893	93610 4777380	268703	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	8017 389997	15290 775460	29118 1682135	66629 3662446	198338	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZd 5	Ave	+++++ 90650	3741 180195	7300 400421	14733 894821	47060	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Isopropylbenzene	CBZd 5	Ave	15128 696162	30745 1358053	62346 2941806	123682 6500407	362291	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propylbenzene	CBZd 5	Ave	3297 174024	5951 342915	13516 761562	27120 1767252	86216	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZd 5	Ave	3419 176214	6950 357053	15341 784198	30458 1803940	90776	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZd 5	Ave	12458 609217	21804 1225761	46453 2722956	93901 6169617	298239	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZd 5	Ave	5939 304811	11072 603355	26253 1334976	49807 3048962	151317	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZd 5	Ave	4461 240130	7712 499500	16153 1159461	34288 2723428	115072	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Decane	CBZd 5	Ave	+++++ 434454	16645 903971	34420 2015482	66474 4633466	213303	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butylbenzene	CBZd 5	Ave	12158 603936	23687 1191702	52616 2650102	101841 6011355	308625	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZd 5	Ave	10551 527968	19250 1063039	41173 2361494	82370 5401392	259545	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZd 5	Ave	16268 794110	30298 1590827	68410 3508321	129882 7846256	406602	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Dichlorobenzene	CBZd 5	Ave	5871 279497	10249 605637	18695 1475008	41517 3715351	133752	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzyl chloride	CBZd 5	Ave	+++++ 289147	8876 633760	16254 1586115	36944 +++++	126892	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
1,4-Dichlorobenzene	CBZd 5	Ave	4621 240547	8160 526340	15642 1315653	33672 +++++	109444	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
4-Isopropyltoluene	CBZd 5	Ave	12956 634861	22476 1267933	49882 2823302	98451 6240921	316041	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZd 5	Ave	7817 392961	15387 779253	33236 1720307	64421 3809531	197400	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylcyclohexane	CBZd 5	Ave	10514 498300	19278 1003008	42456 2185035	85795 4800601	255485	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indane	CBZd 5	Ave	8881 458736	16540 930740	35512 2141880	70292 4983494	225790	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorobenzene	CBZd 5	Ave	5620 292486	10229 616546	20295 1494867	42321 3643973	140823	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indene	CBZd 5	Ave	5518 289355	9134 607320	18700 1455216	39379 3487774	135133	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylbenzene	CBZd 5	Ave	10917 534655	18213 1100830	37412 2538094	76064 5693195	253234	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Undecane	CBZd 5	Ave	+++++ 397504	14919 811824	28458 1865694	58268 4338903	187279	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	Ave	+++++ 411342	13973 837435	28944 1893275	60335 4196638	196408	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	+++++ 115728	3641 249204	7180 600110	15249 +++++	51540	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 482854	16586 983706	34869 2206639	69812 4847664	227428	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 294960	10137 608119	22173 1340133	42970 2942221	140477	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	+++++ 371381	13891 752440	27081 1698919	53410 3711528	177361	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dodecane	CBZd 5	Ave	+++++ 339664	12548 665748	23834 1515010	45381 3383807	169033	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZd 5	Ave	1778 103584	2846 234735	5532 +++++	11248 +++++	47080	0.0392 2.00	0.0784 4.00	0.159 +++++	0.400 +++++	1.00
Naphthalene	CBZd 5	Ave	5233 239465	7601 538060	13194 1375773	29521 +++++	111140	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
Benzo(b)thiophene	CBZd 5	Ave	+++++ 100021	3065 221729	5231 590694	12110 +++++	45901	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
Hexachlorobutadiene	CBZd 5	Ave	6656 320484	12720 646694	26869 1494370	47565 3588165	164579	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZd 5	Ave	2094 121404	4032 266581	7260 670480	13575 +++++	59332	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
2-Methylnaphthalene	CBZd 5	Ave	+++++ 78199	2539 170697	4331 389989	6537 844376	34373	+++++ 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
1-Methylnaphthalene	CBZd 5	Ave	+++++ 91252	3063 194863	5326 411293	7334 786213	41424	+++++ 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	604280 855705	851872 914153	875722 927094	905137 948626	823670	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

Curve Type Legend:
Ave = Average ISTD

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab Sample ID: ICV 140-7241/23 Calibration Date: 11/26/2016 12:43

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JK25ICVX.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3608	0.3705		5.14	5.00	2.7	35.0
Propene	Ave	1.245	1.241		4.99	5.00	-0.3	35.0
Dichlorodifluoromethane	Ave	3.239	3.419		5.28	5.00	5.6	35.0
Chloromethane	Ave	0.4618	0.4743		5.14	5.00	2.7	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	1.790	1.884		5.27	5.00	5.3	35.0
Acetaldehyde	Ave	0.4989	0.3583		18.0	25.0	-28.2	35.0
Vinyl chloride	Ave	1.385	1.509		5.45	5.00	8.9	35.0
1,3-Butadiene	Ave	1.112	1.176		5.29	5.00	5.8	35.0
Butane	Ave	2.414	2.507		5.20	5.00	3.9	35.0
Bromomethane	Ave	1.232	1.311		5.32	5.00	6.4	35.0
Chloroethane	Ave	0.6570	0.7069		5.38	5.00	7.6	35.0
Ethanol	Ave	0.5282	0.5157		24.4	25.0	-2.4	35.0
Vinyl bromide	Ave	1.206	1.358		5.63	5.00	12.6	35.0
2-Methylbutane	Ave	1.767	1.965		5.56	5.00	11.2	35.0
Trichlorofluoromethane	Ave	3.295	3.456		5.25	5.00	4.9	35.0
Acrolein	Ave	0.3877	0.2724		3.52	5.00	-29.7	35.0
Acetonitrile	Ave	0.4770	0.4058		4.26	5.00	-14.9	35.0
Acetone	Ave	0.4144	0.3857		14.0	15.0	-6.9	35.0
Isopropyl alcohol	Ave	1.928	1.788		13.9	15.0	-7.3	35.0
Pentane	Ave	0.1852	0.2026		5.47	5.00	9.4	35.0
Ethyl ether	Ave	1.358	1.081		3.98	5.00	-20.4	35.0
1,1-Dichloroethene	Ave	1.204	1.241		5.16	5.00	3.1	35.0
tert-Butyl alcohol	Ave	1.944	2.069		5.32	5.00	6.4	35.0
Acrylonitrile	Ave	0.7642	0.5954		3.90	5.00	-22.1	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.668	2.817		5.28	5.00	5.6	35.0
Methylene Chloride	Ave	1.179	1.175		4.98	5.00	-0.4	35.0
3-Chloropropene	Ave	1.388	1.376		4.96	5.00	-0.8	35.0
Carbon disulfide	Ave	3.546	3.662		5.17	5.00	3.2	35.0
trans-1,2-Dichloroethene	Ave	1.210	1.236		5.11	5.00	2.1	35.0
2-Methylpentane	Ave	3.129	3.555		5.68	5.00	13.6	35.0
Methyl tert-butyl ether	Ave	2.474	2.133		4.31	5.00	-13.8	35.0
1,1-Dichloroethane	Ave	2.301	2.250		4.89	5.00	-2.2	35.0
Vinyl acetate	Ave	2.833	2.267		4.00	5.00	-20.0	35.0
2-Butanone (MEK)	Ave	0.3626	0.3534		4.88	5.00	-2.5	35.0
Hexane	Ave	1.065	1.065		5.00	5.00	0.0	35.0
Isopropyl ether	Ave	3.770	3.246		4.31	5.00	-13.9	35.0
cis-1,2-Dichloroethene	Ave	1.193	1.143		4.79	5.00	-4.2	35.0
Ethyl acetate	Ave	2.116	1.904		4.50	5.00	-10.0	35.0
Chloroform	Ave	2.509	2.224		4.44	5.00	-11.3	35.0
Tert-butyl ethyl ether	Ave	2.895	2.951		5.10	5.00	1.9	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab Sample ID: ICV 140-7241/23 Calibration Date: 11/26/2016 12:43

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JK25ICVX.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.177	1.029		4.37	5.00	-12.6	35.0
1,1,1-Trichloroethane	Ave	2.589	2.431		4.70	5.00	-6.1	35.0
1,2-Dichloroethane	Ave	0.3728	0.3331		4.47	5.00	-10.6	35.0
1-Butanol	Ave	0.1194	0.1320		5.53	5.00	10.5	35.0
Benzene	Ave	0.7266	0.6472		4.46	5.00	-10.9	35.0
Cyclohexane	Ave	0.1325	0.1354		5.11	5.00	2.2	35.0
Carbon tetrachloride	Ave	0.6405	0.5383		4.20	5.00	-16.0	35.0
2,3-Dimethylpentane	Ave	0.1667	0.1469		4.41	5.00	-11.9	35.0
Thiophene	Ave	0.4153	0.3865		4.66	5.00	-6.9	35.0
Tert-amyl methyl ether	Ave	0.6219	0.6301		5.07	5.00	1.3	35.0
2,2,4-Trimethylpentane	Ave	1.378	1.272		4.62	5.00	-7.7	35.0
Heptane	Ave	0.2546	0.2203		4.33	5.00	-13.5	35.0
1,2-Dichloropropane	Ave	0.2944	0.2593		4.41	5.00	-11.9	35.0
Trichloroethene	Ave	0.3420	0.3070		4.49	5.00	-10.2	35.0
Dibromomethane	Ave	0.3248	0.2893		4.46	5.00	-10.9	35.0
Bromodichloromethane	Ave	0.5654	0.4828		4.27	5.00	-14.6	35.0
1,4-Dioxane	Ave	0.0770	0.0788		5.12	5.00	2.3	35.0
Methyl methacrylate	Ave	0.2784	0.2524		4.53	5.00	-9.4	35.0
Methylcyclohexane	Ave	0.5528	0.4249		3.84	5.00	-23.1	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5507	0.5440		4.94	5.00	-1.2	35.0
cis-1,3-Dichloropropene	Ave	0.3821	0.3480		4.56	5.00	-8.9	35.0
trans-1,3-Dichloropropene	Ave	0.3443	0.2824		4.10	5.00	-18.0	35.0
Toluene	Ave	0.8601	0.7365		4.28	5.00	-14.4	35.0
1,1,2-Trichloroethane	Ave	0.2704	0.2321		4.29	5.00	-14.1	35.0
2-Methylthiophene	Ave	0.7217	0.6585		4.56	5.00	-8.8	35.0
3-Methylthiophene	Ave	0.6890	0.6262		4.55	5.00	-9.1	35.0
2-Hexanone	Ave	0.2511	0.2749		5.48	5.00	9.5	35.0
Octane	Ave	0.2880	0.2562		4.45	5.00	-11.0	35.0
Dibromochloromethane	Ave	0.6304	0.5684		4.51	5.00	-9.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.4549	0.4014		4.41	5.00	-11.8	35.0
Tetrachloroethene	Ave	0.3768	0.3388		4.50	5.00	-10.1	35.0
Chlorobenzene	Ave	0.6754	0.5874		4.35	5.00	-13.0	35.0
2,3-Dimethylheptane	Ave	1.076	1.001		4.66	5.00	-6.9	35.0
Ethylbenzene	Ave	1.020	0.8619		4.23	5.00	-15.5	35.0
2-Ethylthiophene	Ave	0.7628	0.6393		4.19	5.00	-16.2	35.0
m-Xylene & p-Xylene	Ave	0.7527	0.6661		8.85	10.0	-11.5	35.0
Nonane	Ave	0.6435	0.5289		4.11	5.00	-17.8	35.0
Bromoform	Ave	0.6005	0.4851		4.04	5.00	-19.2	35.0
Styrene	Ave	0.5352	0.4649		4.35	5.00	-13.1	35.0
o-Xylene	Ave	0.8117	0.6937		4.28	5.00	-14.5	35.0
1,1,2,2-Tetrachloroethane	Ave	0.5908	0.5430		4.60	5.00	-8.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab Sample ID: ICV 140-7241/23 Calibration Date: 11/26/2016 12:43

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JK25ICVX.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1356	0.1254		4.63	5.00	-7.5	35.0
Isopropylbenzene	Ave	1.098	0.9755		4.44	5.00	-11.2	35.0
Propylbenzene	Ave	0.2584	0.2385		4.62	5.00	-7.7	35.0
2-Chlorotoluene	Ave	0.2744	0.2388		4.35	5.00	-13.0	35.0
4-Ethyltoluene	Ave	0.9183	0.8030		4.37	5.00	-12.6	35.0
1,3,5-Trimethylbenzene	Ave	0.4630	0.4348		4.70	5.00	-6.1	35.0
Alpha Methyl Styrene	Ave	0.3575	0.3290		4.60	5.00	-8.0	35.0
Decane	Ave	0.6508	0.5684		4.37	5.00	-12.7	35.0
tert-Butylbenzene	Ave	0.9343	0.8580		4.59	5.00	-8.2	35.0
1,2,4-Trimethylbenzene	Ave	0.7988	0.7413		4.64	5.00	-7.2	35.0
sec-Butylbenzene	Ave	1.225	1.102		4.50	5.00	-10.1	35.0
1,3-Dichlorobenzene	Ave	0.4476	0.3966		4.43	5.00	-11.4	35.0
Benzyl chloride	Ave	0.3881	0.4276		5.51	5.00	10.2	35.0
1,4-Dichlorobenzene	Ave	0.3490	0.3506		5.03	5.00	0.5	35.0
4-Isopropyltoluene	Ave	0.9555	0.8776		4.59	5.00	-8.2	35.0
1,2,3-Trimethylbenzene	Ave	0.6004	0.6092		5.08	5.00	1.5	35.0
Butylcyclohexane	Ave	0.7729	0.6164		3.99	5.00	-20.2	35.0
1,2-Dichlorobenzene	Ave	0.4533	0.4131		4.56	5.00	-8.9	35.0
Indane	Ave	0.6991	0.6137		4.39	5.00	-12.2	35.0
Indene	Ave	0.4345	0.5118		5.89	5.00	17.8	35.0
Butylbenzene	Ave	0.8017	0.7838		4.89	5.00	-2.2	35.0
Undecane	Ave	0.5842	0.6440		5.51	5.00	10.2	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.5891	0.7608		6.46	5.00	29.1	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.1560	0.1383		4.44	5.00	-11.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	0.6898	0.8152		5.91	5.00	18.2	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.4240	0.5148		6.07	5.00	21.4	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.5362	0.6309		5.89	5.00	17.7	35.0
Dodecane	Ave	0.4832	0.5920		6.13	5.00	22.5	35.0
1,2,4-Trichlorobenzene	Ave	0.1304	0.1647		6.32	5.00	26.3	35.0
Naphthalene	Ave	0.3491	0.3828		5.49	5.00	9.7	35.0
Benzo(b)thiophene	Ave	0.1359	0.1714		6.31	5.00	26.1	35.0
Hexachlorobutadiene	Ave	0.5047	0.4629		4.59	5.00	-8.3	35.0
1,2,3-Trichlorobenzene	Ave	0.1705	0.1957		5.74	5.00	14.7	35.0
2-Methylnaphthalene	Ave	0.0343	0.0305		13.9	15.6	-11.1	50.0
1-Methylnaphthalene	Ave	0.0381	0.0373		15.3	15.6	-2.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6334	0.6342		10.0	10.0	0.1	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab File ID: JBFBC06A.D BFB Injection Date: 03/06/2017

Instrument ID: MJ BFB Injection Time: 11:18

Analysis Batch No.: 9074

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	26.5	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	109.3	
175	5.0 - 9.0 % of mass 174	8.3	(7.6) 1
176	95.0 - 101.0 % of mass 174	110.1	(100.8) 1
177	5.0 - 9.0 % of mass 176	7.2	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-9074/6	JCCVC06A.D	03/06/2017	11:45
	LCS 140-9074/1006	JCCVC06A-LCS .d	03/06/2017	11:45
	MB 140-9074/9	J200BC06.D	03/06/2017	14:03
IA-126-C-22 DL	140-7294-14 DL	JC06P108.D	03/06/2017	21:19
IA-145-C-22	140-7294-19	JC06P109.D	03/06/2017	22:04
IA-149-C-22 DL	140-7294-21 DL	JC06P110.D	03/06/2017	22:49
IA-150-C-22	140-7294-22	JC06P111.D	03/06/2017	23:34
BCK-1-22	140-7294-26	JC06P112.D	03/07/2017	00:18
BCK-4-22	140-7294-29	JC06P113.D	03/07/2017	01:04

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab Sample ID: CCVIS 140-9074/6 Calibration Date: 03/06/2017 11:45

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JCCVC06A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3608	0.2802		1.55	2.00	-22.3	30.0
Propene	Ave	1.245	1.182		1.90	2.00	-5.1	30.0
Dichlorodifluoromethane	Ave	3.239	2.844		1.76	2.00	-12.2	30.0
Chloromethane	Ave	0.4618	0.4293		1.86	2.00	-7.0	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	1.790	2.013		2.25	2.00	12.5	30.0
Acetaldehyde	Ave	0.4989	0.3781		7.58	10.0	-24.2	30.0
Vinyl chloride	Ave	1.385	1.209		1.75	2.00	-12.7	30.0
1,3-Butadiene	Ave	1.112	0.9913		1.78	2.00	-10.8	30.0
Butane	Ave	2.414	2.099		1.74	2.00	-13.1	30.0
Bromomethane	Ave	1.232	1.062		1.73	2.00	-13.8	30.0
Chloroethane	Ave	0.6570	0.5472		1.67	2.00	-16.7	30.0
Ethanol	Ave	0.5282	0.4182		7.92	10.0	-20.8	30.0
Vinyl bromide	Ave	1.206	1.009		1.67	2.00	-16.3	30.0
2-Methylbutane	Ave	1.767	1.558		1.76	2.00	-11.9	30.0
Trichlorofluoromethane	Ave	3.295	2.946		1.79	2.00	-10.6	30.0
Acrolein	Ave	0.3877	0.2368		1.22	2.00	-38.9*	30.0
Acetonitrile	Ave	0.4770	0.3939		1.65	2.00	-17.4	30.0
Acetone	Ave	0.4144	0.3808		5.52	6.00	-8.1	30.0
Isopropyl alcohol	Ave	1.928	1.553		4.84	6.00	-19.4	30.0
Pentane	Ave	0.1852	0.1588		1.72	2.00	-14.3	30.0
Ethyl ether	Ave	1.358	0.9211		1.36	2.00	-32.2*	30.0
1,1-Dichloroethene	Ave	1.204	1.094		1.82	2.00	-9.1	30.0
tert-Butyl alcohol	Ave	1.944	1.708		1.76	2.00	-12.1	30.0
Acrylonitrile	Ave	0.7642	0.5699		1.49	2.00	-25.4	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.668	2.504		1.88	2.00	-6.1	30.0
Methylene Chloride	Ave	1.179	1.051		1.78	2.00	-10.8	30.0
3-Chloropropene	Ave	1.388	1.131		1.63	2.00	-18.5	30.0
Carbon disulfide	Ave	3.546	3.057		1.72	2.00	-13.8	30.0
trans-1,2-Dichloroethene	Ave	1.210	1.125		1.86	2.00	-7.0	30.0
2-Methylpentane	Ave	3.129	3.005		1.92	2.00	-4.0	30.0
Methyl tert-butyl ether	Ave	2.474	1.787		1.45	2.00	-27.8	30.0
1,1-Dichloroethane	Ave	2.301	2.084		1.81	2.00	-9.4	30.0
Vinyl acetate	Ave	2.833	2.052		1.45	2.00	-27.6	30.0
2-Butanone (MEK)	Ave	0.3626	0.3236		1.79	2.00	-10.8	30.0
Hexane	Ave	1.065	1.006		1.89	2.00	-5.6	30.0
Isopropyl ether	Ave	3.770	3.122		1.66	2.00	-17.2	30.0
cis-1,2-Dichloroethene	Ave	1.193	1.119		1.88	2.00	-6.2	30.0
Ethyl acetate	Ave	2.116	1.816		1.72	2.00	-14.2	30.0
Chloroform	Ave	2.509	2.174		1.73	2.00	-13.4	30.0
Tert-butyl ethyl ether	Ave	2.895	2.325		1.61	2.00	-19.7	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab Sample ID: CCVIS 140-9074/6 Calibration Date: 03/06/2017 11:45

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JCCVC06A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.177	0.9694		1.65	2.00	-17.7	30.0
1,1,1-Trichloroethane	Ave	2.589	2.377		1.84	2.00	-8.2	30.0
1,2-Dichloroethane	Ave	0.3728	0.3140		1.69	2.00	-15.8	30.0
1-Butanol	Ave	0.1194	0.0973		1.63	2.00	-18.6	30.0
Cyclohexane	Ave	0.1325	0.1169		1.77	2.00	-11.8	30.0
Benzene	Ave	0.7266	0.6224		1.71	2.00	-14.3	30.0
Carbon tetrachloride	Ave	0.6405	0.6396		2.00	2.00	-0.1	30.0
2,3-Dimethylpentane	Ave	0.1667	0.1577		1.89	2.00	-5.4	30.0
Thiophene	Ave	0.4153	0.3813		1.84	2.00	-8.2	30.0
Tert-amyl methyl ether	Ave	0.6219	0.5290		1.70	2.00	-14.9	30.0
2,2,4-Trimethylpentane	Ave	1.378	1.364		1.98	2.00	-1.0	30.0
Heptane	Ave	0.2546	0.2205		1.73	2.00	-13.4	30.0
1,2-Dichloropropane	Ave	0.2944	0.2386		1.62	2.00	-18.9	30.0
Trichloroethene	Ave	0.3420	0.3890		2.28	2.00	13.7	30.0
Dibromomethane	Ave	0.3248	0.2854		1.76	2.00	-12.1	30.0
Bromodichloromethane	Ave	0.5654	0.4601		1.63	2.00	-18.6	30.0
1,4-Dioxane	Ave	0.0770	0.0790		2.05	2.00	2.6	30.0
Methyl methacrylate	Ave	0.2784	0.2330		1.67	2.00	-16.3	30.0
Methylcyclohexane	Ave	0.5528	0.5397		1.95	2.00	-2.4	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5507	0.4797		1.74	2.00	-12.9	30.0
cis-1,3-Dichloropropene	Ave	0.3821	0.2834		1.48	2.00	-25.8	30.0
trans-1,3-Dichloropropene	Ave	0.3443	0.2486		1.44	2.00	-27.8	30.0
Toluene	Ave	0.8601	0.6704		1.56	2.00	-22.0	30.0
1,1,2-Trichloroethane	Ave	0.2704	0.2069		1.53	2.00	-23.5	30.0
2-Methylthiophene	Ave	0.7217	0.5803		1.61	2.00	-19.6	30.0
3-Methylthiophene	Ave	0.6890	0.5467		1.59	2.00	-20.7	30.0
2-Hexanone	Ave	0.2511	0.2210		1.76	2.00	-12.0	30.0
Octane	Ave	0.2880	0.2246		1.56	2.00	-22.0	30.0
Dibromochloromethane	Ave	0.6304	0.5271		1.67	2.00	-16.4	30.0
1,2-Dibromoethane (EDB)	Ave	0.4549	0.3625		1.59	2.00	-20.3	30.0
Tetrachloroethene	Ave	0.3768	0.3332		1.77	2.00	-11.6	30.0
Chlorobenzene	Ave	0.6754	0.5376		1.59	2.00	-20.4	30.0
2,3-Dimethylheptane	Ave	1.076	0.8563		1.59	2.00	-20.4	30.0
Ethylbenzene	Ave	1.020	0.7862		1.54	2.00	-22.9	30.0
2-Ethylthiophene	Ave	0.7628	0.5911		1.55	2.00	-22.5	30.0
m-Xylene & p-Xylene	Ave	0.7527	0.5826		3.10	4.00	-22.6	30.0
Nonane	Ave	0.6435	0.4669		1.45	2.00	-27.4	30.0
Bromoform	Ave	0.6005	0.4682		1.56	2.00	-22.0	30.0
Styrene	Ave	0.5352	0.4085		1.53	2.00	-23.7	30.0
o-Xylene	Ave	0.8117	0.6169		1.52	2.00	-24.0	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5908	0.3995		1.35	2.00	-32.4*	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab Sample ID: CCVIS 140-9074/6 Calibration Date: 03/06/2017 11:45

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JCCVC06A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1356	0.1110		1.64	2.00	-18.1	30.0
Isopropylbenzene	Ave	1.098	0.8585		1.56	2.00	-21.8	30.0
Propylbenzene	Ave	0.2584	0.2167		1.68	2.00	-16.1	30.0
2-Chlorotoluene	Ave	0.2744	0.2245		1.64	2.00	-18.2	30.0
4-Ethyltoluene	Ave	0.9183	0.7510		1.64	2.00	-18.2	30.0
1,3,5-Trimethylbenzene	Ave	0.4630	0.3926		1.70	2.00	-15.2	30.0
Alpha Methyl Styrene	Ave	0.3575	0.2723		1.52	2.00	-23.8	30.0
Decane	Ave	0.6508	0.4888		1.50	2.00	-24.9	30.0
tert-Butylbenzene	Ave	0.9343	0.7588		1.63	2.00	-18.8	30.0
1,2,4-Trimethylbenzene	Ave	0.7988	0.6452		1.62	2.00	-19.2	30.0
sec-Butylbenzene	Ave	1.225	0.9850		1.61	2.00	-19.6	30.0
1,3-Dichlorobenzene	Ave	0.4476	0.3529		1.58	2.00	-21.2	30.0
Benzyl chloride	Ave	0.3881	0.3247		1.67	2.00	-16.3	30.0
1,4-Dichlorobenzene	Ave	0.3490	0.3053		1.75	2.00	-12.5	30.0
4-Isopropyltoluene	Ave	0.9555	0.7901		1.65	2.00	-17.3	30.0
1,2,3-Trimethylbenzene	Ave	0.6004	0.4797		1.60	2.00	-20.1	30.0
Butylcyclohexane	Ave	0.7729	0.5345		1.38	2.00	-30.8*	30.0
1,2-Dichlorobenzene	Ave	0.4533	0.3576		1.58	2.00	-21.1	30.0
Indane	Ave	0.6991	0.5584		1.60	2.00	-20.1	30.0
Indene	Ave	0.4345	0.3301		1.52	2.00	-24.0	30.0
Butylbenzene	Ave	0.8017	0.6053		1.51	2.00	-24.5	30.0
Undecane	Ave	0.5842	0.4770		1.63	2.00	-18.4	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.5891	0.4722		1.60	2.00	-19.9	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.1560	0.1389		1.78	2.00	-11.0	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.6898	0.5538		1.61	2.00	-19.7	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.4240	0.3460		1.63	2.00	-18.4	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.5362	0.4342		1.62	2.00	-19.0	30.0
Dodecane	Ave	0.4832	0.4228		1.75	2.00	-12.5	30.0
1,2,4-Trichlorobenzene	Ave	0.1304	0.1347		2.07	2.00	3.3	30.0
Naphthalene	Ave	0.3491	0.2983		1.71	2.00	-14.5	30.0
Benzo(b)thiophene	Ave	0.1359	0.1313		1.93	2.00	-3.4	30.0
Hexachlorobutadiene	Ave	0.5047	0.4387		1.74	2.00	-13.1	30.0
1,2,3-Trichlorobenzene	Ave	0.1705	0.1602		1.88	2.00	-6.1	30.0
2-Methylnaphthalene	Ave	0.0343	0.0219		4.00	6.25	-36.1	50.0
1-Methylnaphthalene	Ave	0.0381	0.0213		3.48	6.25	-44.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6334	0.5680		3.59	4.00	-10.3	30.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab File ID: RXBFBB23.D BFB Injection Date: 02/23/2017

Instrument ID: MR BFB Injection Time: 21:41

Analysis Batch No.: 8740

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	23.3	
75	30.0 - 60.0 % of mass 95	48.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.7	(0.7) 1
174	50.0 - 120.00 % of mass 95	101.5	
175	5.0 - 9.0 % of mass 174	6.8	(6.7) 1
176	95.0 - 101.0 % of mass 174	98.2	(96.8) 1
177	5.0 - 9.0 % of mass 176	6.2	(6.3) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-8740/3	RB23IC01.D	02/23/2017	22:59
	IC 140-8740/4	RB23IC02.D	02/23/2017	23:47
	IC 140-8740/5	RB23IC03.D	02/24/2017	00:35
	IC 140-8740/6	RB23IC04.D	02/24/2017	01:23
	IC 140-8740/7	RB23IC05.D	02/24/2017	02:09
	ICIS 140-8740/8	RB23IC06.D	02/24/2017	02:57
	IC 140-8740/9	RB23IC07.D	02/24/2017	03:45
	IC 140-8740/10	RB23IC08.D	02/24/2017	04:33
	IC 140-8740/11	RB23IC09.D	02/24/2017	05:21
	ICV 140-8740/17	RB23LCS.D	02/24/2017	09:49

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-8740/3	RB23IC01.D
Level 2	IC 140-8740/4	RB23IC02.D
Level 3	IC 140-8740/5	RB23IC03.D
Level 4	IC 140-8740/6	RB23IC04.D
Level 5	IC 140-8740/7	RB23IC05.D
Level 6	ICIS 140-8740/8	RB23IC06.D
Level 7	IC 140-8740/9	RB23IC07.D
Level 8	IC 140-8740/10	RB23IC08.D
Level 9	IC 140-8740/11	RB23IC09.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.3731	0.4091 0.3493	0.4038 0.3392	0.3740 0.3252	0.3822	Ave		0.3695				8.1		30.0			
Propene	+++++ 1.4939	1.6505 1.3071	1.6486 1.1638	1.5907 0.9824	1.6280	Ave		1.4331				17.7		30.0			
Dichlorodifluoromethane	3.3153 2.5992	2.5695 2.5447	2.5866 2.3376	2.6872 2.2279	3.3047	Ave		2.6859				14.2		30.0			
Chloromethane	+++++ 0.4562	0.5841 0.4094	0.6056 0.3794	0.5001 0.2916	0.5215	Ave		0.4685				22.7		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.7709 2.5520	2.6468 2.3328	2.6263 2.1374	2.7330 1.7039	2.8020	Ave		2.4783				14.6		30.0			
Acetaldehyde	+++++ 0.4021	+++++ 0.3107	+++++ 0.2687	0.7078 +++++	0.4726	Ave		0.4324				40.1	*	30.0			
Vinyl chloride	1.3668 1.0785	1.3820 0.8848	1.3775 0.8111	1.3056 0.6239	1.2312	Ave		1.1179				25.3		30.0			
1,3-Butadiene	+++++ 0.7631	0.9021 0.6328	0.9670 0.5940	0.9524 0.4984	0.8770	Ave		0.7734				23.2		30.0			
Butane	+++++ 1.4504	+++++ 1.1789	1.9631 1.1039	1.9363 0.9239	1.7034	Ave		1.4657				28.3		30.0			
Bromomethane	+++++ 0.8480	1.1425 0.7185	0.9606 0.6806	1.0053 0.6224	0.9491	Ave		0.8659				20.8		30.0			
Chloroethane	+++++ 0.3882	0.5582 0.3295	0.5338 0.3136	0.4775 0.2839	0.4198	Ave		0.4131				24.9		30.0			
Ethanol	+++++ 0.2824	+++++ 0.2364	0.3994 0.2237	0.3653 0.2031	0.3152	Ave		0.2894				25.7		30.0			
Vinyl bromide	+++++ 0.7125	0.9464 0.6138	0.8840 0.5944	0.8169 0.5515	0.7703	Ave		0.7362				19.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	+++++ 0.7229	+++++ 0.6328	1.1227 0.5891	0.9620 0.5495	0.8035	Ave		0.7689				27.3		30.0			
Acrolein	+++++ 0.2337	+++++ 0.2024	0.3972 +++++	0.2995 +++++	0.2535	Ave		0.2773				27.3		30.0			
Trichlorofluoromethane	3.7727 3.3109	3.5870 2.9703	3.4577 2.7814	3.4301 2.6431	3.4661	Ave		3.2688				11.7		30.0			
Acetonitrile	+++++ 0.5601	+++++ 0.4595	0.5548 0.4566	0.5670 0.4318	0.5563	Ave		0.5123				11.7		30.0			
Acetone	+++++ 0.6891	+++++ 0.6100	+++++ 0.5479	0.9304 0.4731	0.6987	Ave		0.6582				24.1		30.0			
Isopropyl alcohol	2.0365 2.1774	2.0902 1.9787	1.8661 1.8292	2.0186 1.4913	2.1810	Ave		1.9632				10.9		30.0			
Pentane	+++++ 0.2466	0.2477 0.2301	0.2220 0.2224	0.2222 0.1809	0.2489	Ave		0.2276				9.8		30.0			
Ethyl ether	1.6986 1.6959	1.7047 1.5009	1.5476 1.4067	1.6629 1.2258	1.7996	Ave		1.5825				11.4		30.0			
1,1-Dichloroethene	1.4051 1.2300	1.1956 1.2026	1.2127 1.2091	1.2152 1.1369	1.2559	Ave		1.2292				6.0		30.0			
Acrylonitrile	0.9742 1.0713	0.9216 1.0539	0.9746 1.0145	0.9745 0.9434	1.0785	Ave		1.0007				5.7		30.0			
tert-Butyl alcohol	2.1405 2.5828	2.1175 2.5381	2.2687 2.5154	2.2453 2.3793	2.4745	Ave		2.3624				7.4		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	2.8376 2.8263	2.9466 2.7276	2.8116 2.6690	2.8228 2.3461	2.8118	Ave		2.7555				6.2		30.0			
Methylene Chloride	+++++ 1.1952	+++++ 1.1350	1.7271 1.1024	1.3318 1.0021	1.2402	Ave		1.2477				18.9		30.0			
3-Chloropropene	+++++ 1.3189	1.5749 1.2376	1.0781 1.2079	1.1901 1.0799	1.2746	Ave		1.2452				12.7		30.0			
Carbon disulfide	3.6082 3.6305	3.6924 3.5624	3.4319 3.6504	3.5064 3.2914	3.5295	Ave		3.5448				3.5		30.0			
trans-1,2-Dichloroethene	1.2864 1.2837	1.2843 1.2506	1.2582 1.2680	1.2616 1.1723	1.2745	Ave		1.2600				2.8		30.0			
2-Methylpentane	3.1533 3.3038	2.9791 3.1230	2.8260 2.8727	3.0247 2.4396	3.2328	Ave		2.9950				8.7		30.0			
Methyl tert-butyl ether	2.9110 3.4617	2.9543 3.4884	2.9249 3.4882	3.0697 3.3070	3.2717	Ave		3.2085				7.7		30.0			
1,1-Dichloroethane	2.5277 2.6346	2.4435 2.5592	2.4124 2.5425	2.3753 2.3524	2.5012	Ave		2.4832				3.8		30.0			
Vinyl acetate	3.1388 4.1432	3.0315 3.9944	3.0241 3.8132	3.4033 3.5830	3.8989	Ave		3.5589				12.1		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.6313	0.5037 0.6247	0.6060 0.6235	0.6358 0.5916	0.5936	Ave		0.6013				7.1		30.0			
Hexane	1.2896 1.1683	1.1399 1.1294	1.0987 1.0857	1.0910 0.9551	1.1223	Ave		1.1200				7.8		30.0			
C6 Range	+++++ 2.0878	+++++ 1.9611	+++++ 1.8682	2.1313 1.6629	2.0464	Ave		1.9596				8.8		30.0			
Isopropyl ether	4.5315 5.4158	4.7751 5.1267	4.6868 4.7769	4.8896 4.1039	5.2884	Ave		4.8439				8.3		30.0			
cis-1,2-Dichloroethene	1.3415 1.3298	1.2774 1.3177	1.3418 1.3213	1.2750 1.2489	1.3413	Ave		1.3105				2.6		30.0			
Ethyl acetate	2.6219 3.5342	2.7766 3.3771	2.7499 3.2686	3.0384 2.9813	3.3703	Ave		3.0798				10.5		30.0			
Chloroform	2.7715 2.7684	2.7246 2.7497	2.6092 2.7447	2.5716 2.6040	2.6519	Ave		2.6884				2.9		30.0			
Tert-butyl ethyl ether	3.2647 4.2125	3.3053 4.1861	3.4728 4.1247	3.6325 3.7770	4.0277	Ave		3.7782				10.0		30.0			
Tetrahydrofuran	1.5920 1.7503	1.7103 1.6627	1.6474 1.6069	1.6372 1.4737	1.7291	Ave		1.6455				5.1		30.0			
1,1,1-Trichloroethane	2.4293 2.6928	2.4732 2.7127	2.2640 2.8175	2.3283 2.7180	2.5221	Ave		2.5509				7.6		30.0			
1,2-Dichloroethane	0.3558 0.3932	0.3650 0.3944	0.3378 0.3982	0.3419 0.3961	0.3638	Ave		0.3718				6.5		30.0			
1-Butanol	+++++ 0.1252	0.1086 0.1178	0.0913 0.1187	0.0955 0.1052	0.1130	Ave		0.1094				10.7		30.0			
Benzene	0.8259 0.7479	0.7754 0.7306	0.7230 0.6847	0.7352 0.5718	0.7253	Ave		0.7244				9.6		30.0			
Cyclohexane	0.1253 0.1286	0.1107 0.1243	0.1069 0.1124	0.1219 0.0876	0.1207	Ave		0.1154				11.0		30.0			
Carbon tetrachloride	0.5423 0.5884	0.5313 0.5941	0.5048 0.6016	0.4669 0.5646	0.5529	Ave		0.5497				8.0		30.0			
2,3-Dimethylpentane	0.1485 0.1869	0.1726 0.1828	0.1653 0.1776	0.1676 0.1609	0.1772	Ave		0.1710				6.9		30.0			
Thiophene	0.4231 0.4504	0.4291 0.4501	0.4202 0.4455	0.4348 0.4213	0.4364	Ave		0.4346				2.8		30.0			
Tert-amyl methyl ether	+++++ 0.7605	0.4378 0.7463	0.6877 0.7357	0.6536 0.6874	0.7204	Ave		0.6787				15.3		30.0			
2,2,4-Trimethylpentane	1.3172 1.4654	1.2566 1.4282	1.2953 1.3338	1.3473 1.1219	1.3998	Ave		1.3295				7.7		30.0			
1,2-Dichloropropane	0.3473 0.3318	0.3326 0.3229	0.3005 0.2904	0.3169 0.2248	0.3284	Ave		0.3106				11.8		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Heptane	0.2353 0.2908	0.2275 0.2815	0.2590 0.2612	0.2641 0.2024	0.2816	Ave		0.2559				11.3		30.0			
Trichloroethene	0.3763 0.3567	0.3817 0.3432	0.3529 0.3456	0.3658 0.3092	0.3578	Ave		0.3544				6.0		30.0			
Dibromomethane	0.3368 0.3240	0.3340 0.3255	0.3070 0.3261	0.3038 0.2958	0.3106	Ave		0.3182				4.5		30.0			
Bromodichloromethane	0.4663 0.5746	0.4798 0.5800	0.4513 0.5835	0.4868 0.5396	0.5299	Ave		0.5213				9.9		30.0			
1,4-Dioxane	0.0955 0.1208	0.0973 0.1162	0.1080 0.1119	0.1081 0.0937	0.1180	Ave		0.1077				9.4		30.0			
Methyl methacrylate	0.2948 0.4155	0.2926 0.4018	0.3019 0.3943	0.3382 0.3639	0.3887	Ave		0.3546				13.8		30.0			
Methylcyclohexane	0.5249 0.5800	0.4823 0.5724	0.5045 0.5475	0.5416 0.4768	0.5664	Ave		0.5329				7.2		30.0			
4-Methyl-2-pentanone (MIBK)	0.5451 0.7612	0.5831 0.7193	0.5890 0.6786	0.6733 0.5958	0.7057	Ave		0.6501				11.4		30.0			
cis-1,3-Dichloropropene	0.3325 0.4545	0.3580 0.4588	0.3691 0.4524	0.3881 0.4296	0.4163	Ave		0.4066				11.4		30.0			
trans-1,3-Dichloropropene	0.3439 0.4969	0.3713 0.5120	0.3700 0.5423	0.3990 0.5042	0.4502	Ave		0.4433				16.6		30.0			
Toluene	0.9897 1.1563	1.1262 1.1350	1.0484 1.1215	1.0868 0.9730	1.1353	Ave		1.0858				6.2		30.0			
1,1,2-Trichloroethane	0.3385 0.3438	0.3467 0.3365	0.3263 0.3306	0.3332 0.2836	0.3327	Ave		0.3302				5.6		30.0			
2-Methylthiophene	0.7648 0.9175	0.8124 0.9073	0.8091 0.9013	0.8550 0.7986	0.8939	Ave		0.8511				6.6		30.0			
3-Methylthiophene	0.7410 0.9150	0.7956 0.8949	0.7731 0.8873	0.8464 0.7837	0.8746	Ave		0.8346				7.5		30.0			
2-Hexanone	+++++ 0.4413	+++++ 0.4193	0.2939 0.4095	0.3464 0.3479	0.4025	Ave		0.3801				13.7		30.0			
Dibromochloromethane	0.4539 0.7002	0.4589 0.7087	0.5439 0.6920	0.5767 0.5676	0.6651	Ave		0.5963				16.8		30.0			
Octane	0.3050 0.3634	0.2812 0.3499	0.3062 0.3175	0.3226 0.2334	0.3580	Ave		0.3153				13.0		30.0			
1,2-Dibromoethane (EDB)	0.5025 0.6052	0.5348 0.6004	0.5271 0.6043	0.5526 0.5347	0.5718	Ave		0.5593				6.8		30.0			
Tetrachloroethene	0.4127 0.4118	0.4281 0.3977	0.4170 0.3891	0.3858 0.3259	0.4085	Ave		0.3974				7.6		30.0			
Chlorobenzene	1.0317 0.9145	0.9878 0.8942	0.9702 0.8663	0.9165 0.7600	0.9332	Ave		0.9194				8.5		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2,3-Dimethylheptane	1.0501 1.1998	1.0390 1.0884	1.0703 0.9834	1.1262 0.7362	1.1983	Ave		1.0546				13.2		30.0			
Ethylbenzene	1.3063 1.4538	1.4337 1.4187	1.3764 1.3421	1.3796 1.1735	1.4565	Ave		1.3712				6.5		30.0			
2-Ethylthiophene	0.8479 1.0639	0.9131 1.0422	0.9199 0.9980	0.9869 0.8991	1.0353	Ave		0.9674				7.8		30.0			
m-Xylene & p-Xylene	1.0164 1.1258	1.0833 1.0712	1.0855 0.9735	1.0961 0.7951	1.1333	Ave		1.0422				10.1		30.0			
Bromoform	+++++ 0.8185	0.2970 0.8349	0.6137 0.8051	0.6358 0.7265	0.7832	Ave		0.6894				25.9		30.0			
Styrene	0.5197 0.8003	0.5721 0.7785	0.6375 0.7450	0.7086 0.6553	0.7932	Ave		0.6900				14.6		30.0			
Nonane	0.6514 0.8033	0.6809 0.7192	0.7464 0.6330	0.8049 0.4629	0.8308	Ave		0.7036				16.3		30.0			
o-Xylene	1.1138 1.1413	1.1521 1.0964	1.1730 1.0251	1.1231 0.9159	1.1726	Ave		1.1015				7.5		30.0			
1,1,2,2-Tetrachloroethane	0.7878 0.8665	0.8367 0.8111	0.8501 0.7454	0.8438 0.6464	0.8988	Ave		0.8096				9.4		30.0			
1,2,3-Trichloropropane	0.2101 0.2375	0.2380 0.2278	0.2280 0.2197	0.2501 0.2101	0.2629	Ave		0.2316				7.6		30.0			
Isopropylbenzene	1.7492 1.5241	1.6875 1.4170	1.6330 1.3116	1.6163 1.1480	1.6399	Ave		1.5252				12.9		30.0			
Propylbenzene	0.3854 0.4272	0.4069 0.3895	0.4415 0.3553	0.4673 0.3080	0.4679	Ave		0.4054				13.0		30.0			
2-Chlorotoluene	0.4071 0.3909	0.4381 0.3650	0.4586 0.3350	0.4318 0.2943	0.4377	Ave		0.3954				13.8		30.0			
4-Ethyltoluene	1.3243 1.6298	1.4805 1.5104	1.5694 1.3764	1.6643 1.2214	1.7621	Ave		1.5043				11.5		30.0			
1,3,5-Trimethylbenzene	0.6749 0.7298	0.7066 0.6700	0.7458 0.6055	0.7784 0.5234	0.7913	Ave		0.6917				12.4		30.0			
Alpha Methyl Styrene	+++++ 0.6295	+++++ 0.5986	0.4980 0.5681	0.5540 0.5108	0.6499	Ave		0.5727				10.0		30.0			
Decane	0.6968 1.1564	0.8474 1.0233	0.9402 0.8697	1.0437 0.6547	1.1355	Ave		0.9298				19.2		30.0			
tert-Butylbenzene	1.2446 1.5225	1.4333 1.3789	1.4639 1.2312	1.5038 0.9844	1.5594	Ave		1.3691				13.5		30.0			
1,2,4-Trimethylbenzene	1.1996 1.4308	1.3154 1.2656	1.4107 1.0769	1.4603 0.8842	1.5433	Ave		1.2874				16.2		30.0			
1,3-Dichlorobenzene	1.1048 1.1072	1.1311 0.9704	1.1523 0.8363	1.1608 0.6809	1.2098	Ave		1.0393				17.0		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	1.8928 2.1829	1.9981 1.9160	1.9998 1.6284	2.1158 1.2558	2.2549	Ave		1.9161				16.1		30.0			
Benzyl chloride	+++++ 1.3549	0.9601 1.2520	0.9968 1.0577	1.1384 0.9364	1.3053	Ave		1.1252				14.5		30.0			
1,4-Dichlorobenzene	1.0766 1.1344	1.1599 0.9981	1.2010 0.8772	1.1747 0.7272	1.2284	Ave		1.0642				15.8		30.0			
4-Isopropyltoluene	1.4213 1.8407	1.5183 1.6610	1.6092 1.4559	1.7329 1.1632	1.8549	Ave		1.5842				14.0		30.0			
1,2,3-Trimethylbenzene	0.9732 1.1275	1.0118 1.0054	1.0688 0.9363	1.1322 0.8419	1.2012	Ave		1.0331				10.8		30.0			
Butylcyclohexane	0.9768 1.2131	1.0934 1.0887	1.0648 0.9689	1.1463 0.7608	1.2414	Ave		1.0616				13.8		30.0			
1,2-Dichlorobenzene	1.0234 1.1072	1.1221 0.9562	1.1167 0.8161	1.1528 0.6482	1.2005	Ave		1.0159				17.8		30.0			
Indane	1.2597 1.2576	1.2475 1.0987	1.2966 0.9372	1.3573 0.7525	1.4129	Ave		1.1800				18.1		30.0			
Indene	0.7109 1.0002	0.7763 0.9097	0.8300 0.8432	0.9159 0.7456	1.0499	Ave		0.8646				13.2		30.0			
Butylbenzene	1.5501 1.9872	1.6901 1.8259	1.7162 1.5829	1.7850 1.1976	1.9632	Ave		1.6998				14.2		30.0			
Undecane	0.8599 1.3923	0.9699 1.1925	1.0813 0.9635	1.1463 0.6664	1.3802	Ave		1.0725				22.1		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 1.4479	1.1654 1.3042	1.2700 1.0860	1.3013 +++++	1.4397	Ave		1.2878				10.3		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.5566	0.1595 0.5399	0.4032 0.5054	0.4088 0.4185	0.5302	Ave		0.4403				29.4		30.0			
1,2,4,5-Tetramethylbenzene	1.1956 1.7148	1.3327 1.6373	1.4080 1.5448	1.4358 1.1937	1.6947	Ave		1.4619				13.7		30.0			
1,2,3,5-Tetramethylbenzene	0.8256 1.0520	0.8320 1.0055	0.8607 0.9909	0.9064 0.8315	1.0442	Ave		0.9276				10.3		30.0			
1,2,3,4-Tetramethylbenzene	1.0921 1.4380	1.0723 1.3827	1.2008 1.3367	1.1955 1.0885	1.4212	Ave		1.2475				11.9		30.0			
Dodecane	+++++ 1.4735	0.7856 1.3165	1.0259 1.1351	0.9522 0.8207	1.3481	Ave		1.1072				23.0		30.0			
1,2,4-Trichlorobenzene	0.8581 1.3099	0.9338 1.2394	1.0791 1.1805	0.9985 0.9729	1.2415	Ave		1.0904				14.6		30.0			
Naphthalene	1.4479 2.3089	1.6362 2.2091	1.9175 2.0993	1.7509 1.6619	2.1982	Ave		1.9144				15.9		30.0			
Benzo(b)thiophene	+++++ 1.3129	0.8478 1.3020	1.0151 1.3124	0.9632 1.1588	1.2274	Ave		1.1425				15.7		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Hexachlorobutadiene	0.9831 1.2409	1.0290 1.1724	1.0951 1.1316	1.0316 1.0023	1.2395	Ave		1.1028				9.0		30.0			
1,2,3-Trichlorobenzene	0.9323 1.2522	0.9595 1.1927	1.0971 1.1249	0.9545 0.9587	1.2242	Ave		1.0773				11.9		30.0			
2-Methylnaphthalene	+++++ 0.1873	+++++ 0.2045	+++++ 0.2124	0.0469 0.2253	0.1287	Ave		0.1675				40.6		50.0			
1-Methylnaphthalene	+++++ 0.1549	+++++ 0.1697	0.0449 0.1697	0.0432 0.1782	0.1073	Ave		0.1240				47.9		50.0			
4-Bromofluorobenzene (Surr)	0.7152 0.7166	0.7077 0.7098	0.7161 0.6627	0.7225 0.5943	0.7386	Ave		0.6982				6.3		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-8740/3	RB23IC01.D
Level 2	IC 140-8740/4	RB23IC02.D
Level 3	IC 140-8740/5	RB23IC03.D
Level 4	IC 140-8740/6	RB23IC04.D
Level 5	IC 140-8740/7	RB23IC05.D
Level 6	ICIS 140-8740/8	RB23IC06.D
Level 7	IC 140-8740/9	RB23IC07.D
Level 8	IC 140-8740/10	RB23IC08.D
Level 9	IC 140-8740/11	RB23IC09.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 77337	2717 164616	5714 341742	13525 701702	36029	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Propene	CBM	Ave	+++++ 309645	10961 616102	23326 1172387	57519 2119514	153453	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Dichlorodifluoromethane	CBM	Ave	10481 538735	17064 1199423	36597 2354948	97168 4806853	311496	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Chloromethane	CBM	Ave	+++++ 94563	3879 192950	8569 382249	18083 629051	49158	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	8760 528953	17577 1099525	37159 2153188	98824 3676373	264107	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Acetaldehyde	CBM	Ave	+++++ 416688	+++++ 732315	+++++ 1353530	127965 +++++	222712	+++++ 9.99	+++++ 20.0	+++++ 40.0	2.00 +++++	4.99
Vinyl chloride	CBM	Ave	4321 223530	9178 417030	19490 817062	47210 1346176	116046	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,3-Butadiene	CBM	Ave	+++++ 158175	5991 298274	13682 598358	34439 1075330	82666	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Butane	CBM	Ave	+++++ 300625	+++++ 555644	27776 1112031	70015 1993462	160556	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
Bromomethane	CBM	Ave	+++++ 175754	7587 338670	13592 685673	36351 1342819	89463	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Chloroethane	CBM	Ave	+++++ 80451	3707 155307	7552 315958	17265 612586	39574	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Ethanol	CBM	Ave	+++++ 292636	+++++ 557068	28254 1126938	66047 2190820	148558	+++++ 9.99	+++++ 20.0	0.793 40.0	2.00 80.0	4.99
Vinyl bromide	CBM	Ave	+++++ 147675	6285 289326	12508 598787	29539 1189919	72610	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2-Methylbutane	CBM	Ave	+++++ 149838	+++++ 298288	15885 593509	34784 1185662	75735	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Acrolein	CBM	Ave	+++++ 48441	+++++ 95411	5620 +++++	10830 +++++	23899	+++++ 2.00	+++++ 4.00	0.159 +++++	0.400 +++++	0.999
Trichlorofluoromethane	CBM	Ave	11927 686235	23821 1400003	48923 2801983	124033 5702636	326703	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Acetonitrile	CBM	Ave	+++++ 116089	+++++ 216580	7850 460029	20501 931637	52436	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
Acetone	CBM	Ave	+++++ 428503	+++++ 862681	+++++ 1656093	100931 3062269	197602	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.00
Isopropyl alcohol	CBM	Ave	19316 1354035	41645 2798169	79216 5528721	218989 9653805	616764	0.118 5.99	0.235 12.0	0.476 24.0	1.20 48.0	3.00
Pentane	CBM	Ave	+++++ 51117	1645 108438	3141 224005	8034 390407	23465	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Ethyl ether	CBM	Ave	5370 351514	11321 707415	21897 1417102	60129 2644820	169629	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,1-Dichloroethene	CBM	Ave	4442 254943	7940 566831	17158 1218064	43941 2452857	118379	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Acrylonitrile	CBM	Ave	3080 222055	6120 496743	13790 1022056	35238 2035476	101655	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
tert-Butyl alcohol	CBM	Ave	6767 535332	14062 1196301	32099 2533997	81188 5133511	233237	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	8971 585806	19568 1285623	39781 2688728	102072 5061965	265033	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Methylene Chloride	CBM	Ave	+++++ 247716	+++++ 534995	24437 1110586	48158 2162136	116898	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
3-Chloropropene	CBM	Ave	+++++ 273367	10459 583311	15254 1216806	43032 2329963	120145	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Carbon disulfide	CBM	Ave	11407 752486	24521 1679091	48557 3677457	126789 7101466	332680	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
trans-1,2-Dichloroethene	CBM	Ave	4067 266070	8529 589438	17802 1277383	45618 2529264	120134	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2-Methylpentane	CBM	Ave	9969 684768	19784 1472011	39985 2893931	109374 5263706	304717	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Methyl tert-butyl ether	CBM	Ave	9203 717493	19619 1644239	41384 3514051	110998 7135130	308385	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,1-Dichloroethane	CBM	Ave	7991 546060	16227 1206246	34133 2561351	85892 5075426	235756	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Vinyl acetate	CBM	Ave	9923 858751	20132 1882713	42788 3841494	123061 7730530	367502	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2-Butanone (MEK)	CBM	Ave	+++++ 130850	3345 294463	8574 628092	22992 1276403	55955	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Hexane	CBM	Ave	4077 242145	7570 532333	15546 1093784	39451 2060711	105783	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
C6 Range	DFBZ	Ave	+++++ 2114371	+++++ 4501964	+++++ 9178276	369743 17203049	946720	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	0.999
Isopropyl ether	CBM	Ave	14326 1122507	31711 2416434	66313 4812302	176808 8854520	498469	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
cis-1,2-Dichloroethene	CBM	Ave	4241 275633	8483 621102	18985 1331136	46105 2694692	126425	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Ethyl acetate	CBM	Ave	8289 732523	18439 1591786	38908 3292786	109869 6432390	317674	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Chloroform	CBM	Ave	8762 573807	18094 1296029	36917 2765081	92987 5618386	249964	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Tert-butyl ethyl ether	CBM	Ave	10321 873119	21950 1973104	49137 4155244	131350 8149213	379641	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Tetrahydrofuran	CBM	Ave	5033 362782	11358 783690	23309 1618818	59200 3179689	162980	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,1,1-Trichloroethane	CBM	Ave	7680 558131	16424 1278599	32033 2838322	84191 5864283	237728	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dichloroethane	DFBZ	Ave	5395 398175	11614 905386	22850 1956139	59318 4097974	168285	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1-Butanol	DFBZ	Ave	+++++ 126841	3455 270509	6173 583174	16572 1087852	52295	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Benzene	DFBZ	Ave	12524 757353	24674 1677250	48907 3363998	127540 5915532	335562	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Cyclohexane	DFBZ	Ave	1900 130260	3521 285427	7234 552190	21140 906562	55861	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Carbon tetrachloride	DFBZ	Ave	8224 595862	16905 1363863	34144 2955600	81002 5840819	255790	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2,3-Dimethylpentane	DFBZ	Ave	2252 189272	5491 419595	11183 872362	29068 1664608	81981	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Thiophene	DFBZ	Ave	6417 456153	13654 1033269	28426 2188596	75422 4358587	201904	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Tert-amyl methyl ether	DFBZ	Ave	+++++ 770144	13931 1713213	46518 3614164	113391 7110699	333304	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2,2,4-Trimethylpentane	DFBZ	Ave	19975 1483986	39986 3278689	87619 6552928	233738 11606245	647577	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dichloropropane	DFBZ	Ave	5267 335988	10585 741321	20327 1426473	54978 2325405	151945	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Heptane	DFBZ	Ave	3569 294527	7240 646231	17517 1283209	45810 2094048	130261	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Trichloroethene	DFBZ	Ave	5706 361242	12147 787921	23873 1697706	63467 3199084	165540	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Dibromomethane	DFBZ	Ave	5107 328140	10628 747292	20765 1602016	52696 3060446	143675	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Bromodichloromethane	DFBZ	Ave	7071 581937	15268 1331396	30527 2866521	84444 5582595	245143	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,4-Dioxane	DFBZ	Ave	1448 122338	3097 266658	7308 549623	18752 969543	54586	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Methyl methacrylate	DFBZ	Ave	4470 420770	9311 922438	20422 1936917	58677 3764789	179826	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Methylcyclohexane	DFBZ	Ave	7960 587324	15346 1314112	34127 2689602	93957 4932261	262049	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	8267 770834	18554 1651361	39845 3334023	116812 6163255	326469	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
cis-1,3-Dichloropropene	DFBZ	Ave	5043 460289	11393 1053282	24970 2222764	67326 4444447	192581	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
trans-1,3-Dichloropropene	CBZd 5	Ave	4190 407884	9323 961977	20070 2116906	55793 4314889	168680	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Toluene	CBZd 5	Ave	12057 949069	28273 2132262	56866 4377764	151950 8326940	425356	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,1,2-Trichloroethane	CBZd 5	Ave	4124 282164	8704 632212	17701 1290344	46587 2427275	124669	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2-Methylthiophene	CBZd 5	Ave	9317 753080	20397 1704543	43887 3518170	119545 6834736	334934	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
3-Methylthiophene	CBZd 5	Ave	9027 751011	19973 1681316	41936 3463489	118345 6707253	327679	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2-Hexanone	CBZd 5	Ave	+++++ 362209	+++++ 787724	15939 1598395	48432 2977612	150804	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
Dibromochloromethane	CBZd 5	Ave	5530 574706	11521 1331407	29500 2701236	80628 4857610	249214	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Octane	CBZd 5	Ave	3716 298259	7061 657401	16610 1239163	45104 1997649	134151	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dibromoethane (EDB)	CBZd 5	Ave	6121 496771	13427 1127971	28588 2358773	77258 4575751	214254	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Tetrachloroethene	CBZd 5	Ave	5027 338008	10747 747185	22616 1518756	53937 2789077	153057	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Chlorobenzene	CBZd 5	Ave	12568 750598	24800 1679949	52626 3381719	128145 6504560	349650	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2,3-Dimethylheptane	CBZd 5	Ave	12792 984747	26084 2044712	58055 3838726	157463 6300729	448957	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Ethylbenzene	CBZd 5	Ave	15913 1193234	35993 2665373	74659 5238775	192894 10042970	545725	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2-Ethylthiophene	CBZd 5	Ave	10329 873189	22924 1958038	49896 3895698	137984 7694998	387899	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
m-Xylene & p-Xylene	CBZd 5	Ave	24763 1848010	54395 4024786	117759 7600175	306509 13609680	849245	0.0784 3.99	0.157 8.00	0.317 16.0	0.800 32.0	2.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Bromoform	CBZd 5	Ave	+++++ 671801	7456 1568536	33288 3142805	88903 6217969	293454	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Styrene	CBZd 5	Ave	6331 656912	14364 1462535	34579 2907897	99070 5608457	297206	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Nonane	CBZd 5	Ave	7935 659323	17094 1351079	40483 2470879	112542 3961418	311279	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
o-Xylene	CBZd 5	Ave	13569 936796	28924 2059774	63625 4001349	157032 7838829	439347	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	9597 711168	21006 1523825	46111 2909802	117978 5531960	336748	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2,3-Trichloropropane	CBZd 5	Ave	2560 194922	5974 428051	12366 857552	34975 1797695	98499	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Isopropylbenzene	CBZd 5	Ave	21309 1250923	42366 2662166	88577 5119668	225985 9824520	614427	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Propylbenzene	CBZd 5	Ave	4695 350675	10216 731805	23946 1386895	65333 2635592	175311	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2-Chlorotoluene	CBZd 5	Ave	4959 320862	10999 685774	24877 1307704	60368 2518415	164005	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
4-Ethyltoluene	CBZd 5	Ave	16133 1337683	37169 2837542	85126 5372799	232695 10452735	660235	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,3,5-Trimethylbenzene	CBZd 5	Ave	8222 598983	17741 1258645	40452 2363652	108841 4479062	296486	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Alpha Methyl Styrene	CBZd 5	Ave	+++++ 516658	+++++ 1124551	27013 2217522	77461 4371974	243487	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
Decane	CBZd 5	Ave	8489 949126	21274 1922503	50999 3394674	145932 5603231	425460	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
tert-Butylbenzene	CBZd 5	Ave	15162 1249656	35984 2590545	79403 4805951	210262 8424853	584282	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2,4-Trimethylbenzene	CBZd 5	Ave	14614 1174348	33025 2377769	76518 4203802	204178 7566924	578234	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,3-Dichlorobenzene	CBZd 5	Ave	13459 908799	28396 1823090	62501 3264552	162298 5827565	453278	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
sec-Butylbenzene	CBZd 5	Ave	23058 1791681	50165 3599528	108474 6356290	295827 10747733	844875	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Benzyl chloride	CBZd 5	Ave	+++++ 1112104	24103 2352128	54066 4128671	159172 8014177	489081	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,4-Dichlorobenzene	CBZd 5	Ave	13115 931133	29121 1875178	65142 3424013	164245 6223742	460249	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
4-Isopropyltoluene	CBZd 5	Ave	17315 1510793	38119 3120571	87284 5683045	242297 9955102	694973	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2,3-Trimethylbenzene	CBZd 5	Ave	11856 925394	25401 1888807	57972 3654635	158300 7205534	450050	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Butylcyclohexane	CBZd 5	Ave	11900 995717	27451 2045438	57754 3782240	160274 6510976	465131	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dichlorobenzene	CBZd 5	Ave	12467 908758	28172 1796455	60572 3185630	161183 5547661	449782	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Indane	CBZd 5	Ave	15346 1032175	31320 2064201	70331 3658240	189774 6439833	529393	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Indene	CBZd 5	Ave	8660 820907	19489 1709131	45019 3291239	128054 6380743	393389	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Butylbenzene	CBZd 5	Ave	18884 1631072	42432 3430316	93087 6178847	249573 10249297	735562	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Undecane	CBZd 5	Ave	10476 1142764	24349 2240401	58652 3760994	160272 5703184	517142	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	Ave	+++++ 1188411	29259 2450287	68884 4239183	181950 +++++	539412	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	0.999
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	+++++ 456821	4005 1014303	21869 1973001	57159 3581933	198649	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	14565 1407460	33459 3075927	76370 6030209	200754 10215880	634976	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	10058 863457	20887 1889050	46686 3867833	126732 7116459	391237	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	13304 1180268	26921 2597679	65134 5217806	167151 9315480	532497	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Dodecane	CBZd 5	Ave	+++++ 1209447	19723 2473317	55647 4430925	133130 7023895	505118	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2,4-Trichlorobenzene	CBZd 5	Ave	10453 1075136	23444 2328403	58530 4608196	139606 8326267	465148	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Naphthalene	CBZd 5	Ave	17639 1895111	41077 4150285	104007 8194497	244813 14223211	823611	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Benzo(b)thiophene	CBZd 5	Ave	+++++ 1077615	21284 2446149	55059 5123070	134679 9916966	459875	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Hexachlorobutadiene	CBZd 5	Ave	11976 1018485	25833 2202550	59398 4417255	144240 8577746	464424	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2,3-Trichlorobenzene	CBZd 5	Ave	11357 1027789	24088 2240673	59506 4390985	133457 8204831	458690	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2-Methylnaphthalene	CBZd 5	Ave	+++++ 480479	+++++ 1200547	+++++ 2590764	20471 6023991	150695	+++++ 6.24	+++++ 12.5	+++++ 25.0	1.25 50.0	3.12
1-Methylnaphthalene	CBZd 5	Ave	+++++ 397397	+++++ 996171	7607 2070086	18889 4765773	125607	+++++ 6.24	+++++ 12.5	0.496 25.0	1.25 50.0	3.12
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	889007 1177919	906481 1333550	979197 1293417	1010124 1271651	1108358	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

Curve Type Legend:
Ave = Average ISTD

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab Sample ID: ICV 140-8740/17 Calibration Date: 02/24/2017 09:49

Instrument ID: MR Calib Start Date: 02/23/2017 22:59

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/24/2017 05:21

Lab File ID: RB23LCS.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3695	0.3555		1.92	2.00	-3.8	35.0
Propene	Ave	1.433	1.488		2.08	2.00	3.8	35.0
Dichlorodifluoromethane	Ave	2.686	3.091		2.30	2.00	15.1	35.0
Chloromethane	Ave	0.4685	0.4454		1.90	2.00	-4.9	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.478	2.523		2.04	2.00	1.8	35.0
Acetaldehyde	Ave	0.4324	0.3634		8.41	10.0	-15.9	35.0
Vinyl chloride	Ave	1.118	1.072		1.92	2.00	-4.1	35.0
1,3-Butadiene	Ave	0.7734	0.7341		1.90	2.00	-5.1	35.0
Butane	Ave	1.466	1.472		2.01	2.00	0.4	35.0
Bromomethane	Ave	0.8659	0.8083		1.87	2.00	-6.6	35.0
Chloroethane	Ave	0.4131	0.3819		1.85	2.00	-7.5	35.0
Ethanol	Ave	0.2894	0.2755		9.52	10.0	-4.8	35.0
Vinyl bromide	Ave	0.7362	0.7130		1.94	2.00	-3.2	35.0
2-Methylbutane	Ave	0.7689	0.7311		1.90	2.00	-4.9	35.0
Acrolein	Ave	0.2773	0.2235		1.61	2.00	-19.4	35.0
Trichlorofluoromethane	Ave	3.269	2.983		1.83	2.00	-8.7	35.0
Acetonitrile	Ave	0.5123	0.5710		2.23	2.00	11.5	35.0
Acetone	Ave	0.6582	0.6347		5.79	6.00	-3.6	35.0
Isopropyl alcohol	Ave	1.963	2.164		6.61	6.00	10.2	35.0
Pentane	Ave	0.2276	0.2477		2.18	2.00	8.8	35.0
Ethyl ether	Ave	1.583	1.716		2.17	2.00	8.4	35.0
1,1-Dichloroethene	Ave	1.229	1.183		1.92	2.00	-3.8	35.0
Acrylonitrile	Ave	1.001	1.090		2.18	2.00	8.9	35.0
tert-Butyl alcohol	Ave	2.362	2.403		2.03	2.00	1.7	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.755	2.690		1.95	2.00	-2.4	35.0
Methylene Chloride	Ave	1.248	1.145		1.84	2.00	-8.2	35.0
3-Chloropropene	Ave	1.245	1.236		1.99	2.00	-0.7	35.0
Carbon disulfide	Ave	3.545	3.496		1.97	2.00	-1.4	35.0
trans-1,2-Dichloroethene	Ave	1.260	1.231		1.95	2.00	-2.3	35.0
2-Methylpentane	Ave	2.995	3.496		2.33	2.00	16.7	35.0
Methyl tert-butyl ether	Ave	3.209	3.281		2.04	2.00	2.2	35.0
1,1-Dichloroethane	Ave	2.483	2.498		2.01	2.00	0.6	35.0
Vinyl acetate	Ave	3.559	3.670		2.06	2.00	3.1	35.0
2-Butanone (MEK)	Ave	0.6013	0.6036		2.01	2.00	0.4	35.0
Hexane	Ave	1.120	1.149		2.05	2.00	2.6	35.0
Isopropyl ether	Ave	4.844	5.072		2.09	2.00	4.7	35.0
cis-1,2-Dichloroethene	Ave	1.311	1.336		2.04	2.00	1.9	35.0
Ethyl acetate	Ave	3.080	3.301		2.14	2.00	7.2	35.0
Chloroform	Ave	2.688	2.669		1.99	2.00	-0.7	35.0
Tert-butyl ethyl ether	Ave	3.778	4.305		2.28	2.00	14.0	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab Sample ID: ICV 140-8740/17 Calibration Date: 02/24/2017 09:49

Instrument ID: MR Calib Start Date: 02/23/2017 22:59

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/24/2017 05:21

Lab File ID: RB23LCS.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.646	1.749		2.13	2.00	6.3	35.0
1,1,1-Trichloroethane	Ave	2.551	2.593		2.03	2.00	1.6	35.0
1,2-Dichloroethane	Ave	0.3718	0.3596		1.93	2.00	-3.3	35.0
1-Butanol	Ave	0.1094	0.0869		1.59	2.00	-20.6	35.0
Benzene	Ave	0.7244	0.7633		2.11	2.00	5.4	35.0
Cyclohexane	Ave	0.1154	0.1274		2.21	2.00	10.4	35.0
Carbon tetrachloride	Ave	0.5497	0.5602		2.04	2.00	1.9	35.0
2,3-Dimethylpentane	Ave	0.1710	0.1717		2.01	2.00	0.4	35.0
Thiophene	Ave	0.4346	0.4614		2.12	2.00	6.2	35.0
Tert-amyl methyl ether	Ave	0.6787	0.7580		2.23	2.00	11.7	35.0
2,2,4-Trimethylpentane	Ave	1.330	1.474		2.22	2.00	10.9	35.0
1,2-Dichloropropane	Ave	0.3106	0.3354		2.16	2.00	8.0	35.0
Heptane	Ave	0.2559	0.2888		2.26	2.00	12.8	35.0
Trichloroethene	Ave	0.3544	0.3778		2.13	2.00	6.6	35.0
Dibromomethane	Ave	0.3182	0.3226		2.03	2.00	1.4	35.0
1,4-Dioxane	Ave	0.1077	0.1115		2.07	2.00	3.5	35.0
Bromodichloromethane	Ave	0.5213	0.5518		2.12	2.00	5.8	35.0
Methyl methacrylate	Ave	0.3546	0.3841		2.17	2.00	8.3	35.0
Methylcyclohexane	Ave	0.5329	0.4682		1.76	2.00	-12.2	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.6501	0.7120		2.19	2.00	9.5	35.0
cis-1,3-Dichloropropene	Ave	0.4066	0.4492		2.21	2.00	10.5	35.0
trans-1,3-Dichloropropene	Ave	0.4433	0.4823		2.18	2.00	8.8	35.0
Toluene	Ave	1.086	1.196		2.20	2.00	10.1	35.0
1,1,2-Trichloroethane	Ave	0.3302	0.3422		2.07	2.00	3.6	35.0
2-Methylthiophene	Ave	0.8511	0.9630		2.26	2.00	13.1	35.0
3-Methylthiophene	Ave	0.8346	0.9902		2.37	2.00	18.6	35.0
2-Hexanone	Ave	0.3801	0.4004		2.11	2.00	5.3	35.0
Dibromochloromethane	Ave	0.5963	0.6766		2.27	2.00	13.5	35.0
Octane	Ave	0.3153	0.3610		2.29	2.00	14.5	35.0
1,2-Dibromoethane (EDB)	Ave	0.5593	0.5976		2.14	2.00	6.9	35.0
Tetrachloroethene	Ave	0.3974	0.4091		2.06	2.00	3.0	35.0
Chlorobenzene	Ave	0.9194	0.9416		2.05	2.00	2.4	35.0
2,3-Dimethylheptane	Ave	1.055	1.211		2.30	2.00	14.8	35.0
Ethylbenzene	Ave	1.371	1.476		2.15	2.00	7.6	35.0
2-Ethylthiophene	Ave	0.9674	1.053		2.18	2.00	8.8	35.0
m-Xylene & p-Xylene	Ave	1.042	1.158		4.44	4.00	11.1	35.0
Bromoform	Ave	0.6894	0.8066		2.34	2.00	17.0	35.0
Styrene	Ave	0.6900	0.7578		2.20	2.00	9.8	35.0
Nonane	Ave	0.7036	0.8296		2.36	2.00	17.9	35.0
o-Xylene	Ave	1.101	1.146		2.08	2.00	4.0	35.0
1,1,2,2-Tetrachloroethane	Ave	0.8096	0.8071		1.99	2.00	-0.3	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab Sample ID: ICV 140-8740/17 Calibration Date: 02/24/2017 09:49

Instrument ID: MR Calib Start Date: 02/23/2017 22:59

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/24/2017 05:21

Lab File ID: RB23LCS.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2316	0.2372		2.05	2.00	2.4	35.0
Isopropylbenzene	Ave	1.525	1.601		2.10	2.00	5.0	35.0
Propylbenzene	Ave	0.4054	0.4516		2.23	2.00	11.4	35.0
2-Chlorotoluene	Ave	0.3954	0.4202		2.13	2.00	6.3	35.0
4-Ethyltoluene	Ave	1.504	1.620		2.15	2.00	7.7	35.0
1,3,5-Trimethylbenzene	Ave	0.6917	0.7557		2.18	2.00	9.2	35.0
Alpha Methyl Styrene	Ave	0.5727	0.4734		1.65	2.00	-17.3	35.0
Decane	Ave	0.9298	1.177		2.53	2.00	26.6	35.0
tert-Butylbenzene	Ave	1.369	1.531		2.24	2.00	11.8	35.0
1,2,4-Trimethylbenzene	Ave	1.287	1.462		2.27	2.00	13.6	35.0
1,3-Dichlorobenzene	Ave	1.039	1.115		2.15	2.00	7.3	35.0
sec-Butylbenzene	Ave	1.916	2.192		2.29	2.00	14.4	35.0
Benzyl chloride	Ave	1.125	1.142		2.03	2.00	1.5	35.0
1,4-Dichlorobenzene	Ave	1.064	1.134		2.13	2.00	6.5	35.0
4-Isopropyltoluene	Ave	1.584	1.805		2.28	2.00	13.9	35.0
1,2,3-Trimethylbenzene	Ave	1.033	1.249		2.42	2.00	20.9	35.0
Butylcyclohexane	Ave	1.062	1.199		2.26	2.00	13.0	35.0
1,2-Dichlorobenzene	Ave	1.016	1.109		2.18	2.00	9.2	35.0
Indane	Ave	1.180	1.239		2.10	2.00	5.0	35.0
Indene	Ave	0.8646	1.067		2.47	2.00	23.4	35.0
Butylbenzene	Ave	1.700	1.919		2.26	2.00	12.9	35.0
Undecane	Ave	1.072	1.283		2.39	2.00	19.7	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	1.288	1.659		2.58	2.00	28.8	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.4403	0.4387		1.99	2.00	-0.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.462	1.721		2.35	2.00	17.7	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.9276	1.071		2.31	2.00	15.4	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.248	1.381		2.21	2.00	10.7	35.0
Dodecane	Ave	1.107	1.027		1.85	2.00	-7.3	35.0
1,2,4-Trichlorobenzene	Ave	1.090	1.130		2.07	2.00	3.6	35.0
Naphthalene	Ave	1.914	1.912		2.00	2.00	-0.1	35.0
Benzo(b)thiophene	Ave	1.142	1.092		1.91	2.00	-4.4	35.0
Hexachlorobutadiene	Ave	1.103	1.093		1.98	2.00	-0.9	35.0
1,2,3-Trichlorobenzene	Ave	1.077	1.019		1.89	2.00	-5.4	35.0
2-Methylnaphthalene	Ave	0.1675	0.0445		1.66	6.25	-73.5*	50.0
1-Methylnaphthalene	Ave	0.1240	0.0477		2.40	6.25	-61.5*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6982	0.7365		4.22	4.00	5.5	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab File ID: RC03BFB.D BFB Injection Date: 03/03/2017

Instrument ID: MR BFB Injection Time: 10:46

Analysis Batch No.: 8988

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.6	
75	30.0 - 60.0 % of mass 95	47.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	94.0	
175	5.0 - 9.0 % of mass 174	6.7	(7.1) 1
176	95.0 - 101.0 % of mass 174	90.6	(96.3) 1
177	5.0 - 9.0 % of mass 176	5.9	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-8988/2	RC03CCV.D	03/03/2017	11:17
	LCS 140-8988/1002	RC03CCV-LCS.d	03/03/2017	11:17
	MB 140-8988/4	RC03BLK.D	03/03/2017	13:33
IA-033-B-22	140-7294-1	RC03P101.D	03/03/2017	14:20
IA-100-B-22	140-7294-2	RC03P102.D	03/03/2017	15:07
IA-101-B-22	140-7294-3	RC03P103.D	03/03/2017	15:54
IA-001-C-22	140-7294-4	RC03P104.D	03/03/2017	16:42
IA-004-C-22	140-7294-5	RC03P105.D	03/03/2017	17:29
IA-005-C-22	140-7294-6	RC03P106.D	03/03/2017	18:17
IA-051-C-22	140-7294-7	RC03P107.D	03/03/2017	19:04
IA-060-C-22	140-7294-8	RC03P108.D	03/03/2017	19:51
IA-065-C-22	140-7294-9	RC03P109.D	03/03/2017	20:38
IA-088-C-22	140-7294-10	RC03P110.D	03/03/2017	21:25
IA-102-C-22	140-7294-11	RC03P111.D	03/03/2017	22:13
IA-113-C-22	140-7294-12	RC03P112.D	03/03/2017	23:00
IA-115-C-22	140-7294-13	RC03P113.D	03/03/2017	23:48
IA-126-C-22	140-7294-14	RC03P114.D	03/04/2017	00:35
IA-131-C-22	140-7294-15	RC03P115.D	03/04/2017	01:22
IA-153-C-22	140-7294-24	RC03P116.D	03/04/2017	02:57
IA-155-C-22	140-7294-25	RC03P201.D	03/04/2017	03:44
BCK-2-22	140-7294-27	RC03P203.D	03/04/2017	05:18
BCK-3-22	140-7294-28	RC03P204.D	03/04/2017	06:05

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab Sample ID: CCVIS 140-8988/2 Calibration Date: 03/03/2017 11:17

Instrument ID: MR Calib Start Date: 02/23/2017 22:59

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/24/2017 05:21

Lab File ID: RC03CCV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3695	0.3717		2.01	2.00	0.6	30.0
Propene	Ave	1.433	1.585		2.21	2.00	10.6	30.0
Dichlorodifluoromethane	Ave	2.686	2.506		1.87	2.00	-6.7	30.0
Chloromethane	Ave	0.4685	0.4640		1.98	2.00	-1.0	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.478	2.374		1.92	2.00	-4.2	30.0
Acetaldehyde	Ave	0.4324	0.2479		5.73	10.0	-42.7*	30.0
Vinyl chloride	Ave	1.118	0.8396		1.50	2.00	-24.9	30.0
1,3-Butadiene	Ave	0.7734	0.5074		1.31	2.00	-34.4*	30.0
Butane	Ave	1.466	0.9516		1.30	2.00	-35.1*	30.0
Bromomethane	Ave	0.8659	0.6047		1.40	2.00	-30.2*	30.0
Chloroethane	Ave	0.4131	0.2781		1.35	2.00	-32.7*	30.0
Ethanol	Ave	0.2894	0.1941		6.71	10.0	-32.9*	30.0
Vinyl bromide	Ave	0.7362	0.5636		1.53	2.00	-23.5	30.0
2-Methylbutane	Ave	0.7689	0.5378		1.40	2.00	-30.1*	30.0
Acrolein	Ave	0.2773	0.1888		1.36	2.00	-31.9*	30.0
Trichlorofluoromethane	Ave	3.269	2.604		1.59	2.00	-20.4	30.0
Acetonitrile	Ave	0.5123	0.4640		1.81	2.00	-9.4	30.0
Acetone	Ave	0.6582	0.6387		5.82	6.00	-3.0	30.0
Isopropyl alcohol	Ave	1.963	2.431		7.43	6.00	23.8	30.0
Pentane	Ave	0.2276	0.2793		2.45	2.00	22.7	30.0
Ethyl ether	Ave	1.583	1.849		2.34	2.00	16.8	30.0
1,1-Dichloroethene	Ave	1.229	1.309		2.13	2.00	6.5	30.0
Acrylonitrile	Ave	1.001	1.245		2.49	2.00	24.4	30.0
tert-Butyl alcohol	Ave	2.362	2.760		2.34	2.00	16.8	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.755	2.944		2.14	2.00	6.8	30.0
Methylene Chloride	Ave	1.248	1.279		2.05	2.00	2.5	30.0
3-Chloropropene	Ave	1.245	1.383		2.22	2.00	11.1	30.0
Carbon disulfide	Ave	3.545	3.866		2.18	2.00	9.1	30.0
trans-1,2-Dichloroethene	Ave	1.260	1.361		2.16	2.00	8.0	30.0
2-Methylpentane	Ave	2.995	3.988		2.66	2.00	33.2*	30.0
Methyl tert-butyl ether	Ave	3.209	3.755		2.34	2.00	17.0	30.0
1,1-Dichloroethane	Ave	2.483	2.837		2.29	2.00	14.3	30.0
Vinyl acetate	Ave	3.559	4.647		2.61	2.00	30.6*	30.0
2-Butanone (MEK)	Ave	0.6013	0.7035		2.34	2.00	17.0	30.0
Hexane	Ave	1.120	1.292		2.31	2.00	15.3	30.0
Isopropyl ether	Ave	4.844	5.691		2.35	2.00	17.5	30.0
cis-1,2-Dichloroethene	Ave	1.311	1.467		2.24	2.00	11.9	30.0
Ethyl acetate	Ave	3.080	3.743		2.43	2.00	21.5	30.0
Chloroform	Ave	2.688	2.972		2.21	2.00	10.5	30.0
Tert-butyl ethyl ether	Ave	3.778	4.904		2.60	2.00	29.8	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab Sample ID: CCVIS 140-8988/2 Calibration Date: 03/03/2017 11:17

Instrument ID: MR Calib Start Date: 02/23/2017 22:59

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/24/2017 05:21

Lab File ID: RC03CCV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.646	1.984		2.41	2.00	20.6	30.0
1,1,1-Trichloroethane	Ave	2.551	2.859		2.24	2.00	12.1	30.0
1,2-Dichloroethane	Ave	0.3718	0.4040		2.17	2.00	8.7	30.0
1-Butanol	Ave	0.1094	0.1413		2.58	2.00	29.2	30.0
Benzene	Ave	0.7244	0.8303		2.29	2.00	14.6	30.0
Cyclohexane	Ave	0.1154	0.1407		2.44	2.00	21.9	30.0
Carbon tetrachloride	Ave	0.5497	0.6254		2.28	2.00	13.8	30.0
2,3-Dimethylpentane	Ave	0.1710	0.1872		2.19	2.00	9.4	30.0
Thiophene	Ave	0.4346	0.5136		2.36	2.00	18.2	30.0
Tert-amyl methyl ether	Ave	0.6787	0.8502		2.51	2.00	25.3	30.0
2,2,4-Trimethylpentane	Ave	1.330	1.655		2.49	2.00	24.5	30.0
1,2-Dichloropropane	Ave	0.3106	0.3686		2.37	2.00	18.7	30.0
Heptane	Ave	0.2559	0.3183		2.49	2.00	24.4	30.0
Trichloroethene	Ave	0.3544	0.3753		2.12	2.00	5.9	30.0
Dibromomethane	Ave	0.3182	0.3544		2.23	2.00	11.4	30.0
1,4-Dioxane	Ave	0.1077	0.1248		2.32	2.00	15.8	30.0
Bromodichloromethane	Ave	0.5213	0.6052		2.32	2.00	16.1	30.0
Methyl methacrylate	Ave	0.3546	0.4428		2.50	2.00	24.9	30.0
Methylcyclohexane	Ave	0.5329	0.5114		1.92	2.00	-4.0	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.6501	0.8178		2.52	2.00	25.8	30.0
cis-1,3-Dichloropropene	Ave	0.4066	0.5077		2.50	2.00	24.9	30.0
trans-1,3-Dichloropropene	Ave	0.4433	0.5625		2.54	2.00	26.9	30.0
Toluene	Ave	1.086	1.322		2.44	2.00	21.8	30.0
1,1,2-Trichloroethane	Ave	0.3302	0.3811		2.31	2.00	15.4	30.0
2-Methylthiophene	Ave	0.8511	1.068		2.51	2.00	25.5	30.0
3-Methylthiophene	Ave	0.8346	1.090		2.61	2.00	30.5*	30.0
2-Hexanone	Ave	0.3801	0.4877		2.57	2.00	28.3	30.0
Dibromochloromethane	Ave	0.5963	0.7252		2.43	2.00	21.6	30.0
Octane	Ave	0.3153	0.4084		2.59	2.00	29.6	30.0
1,2-Dibromoethane (EDB)	Ave	0.5593	0.6566		2.35	2.00	17.4	30.0
Tetrachloroethene	Ave	0.3974	0.4502		2.27	2.00	13.3	30.0
Chlorobenzene	Ave	0.9194	1.011		2.20	2.00	9.9	30.0
2,3-Dimethylheptane	Ave	1.055	1.381		2.62	2.00	31.0*	30.0
Ethylbenzene	Ave	1.371	1.594		2.32	2.00	16.2	30.0
2-Ethylthiophene	Ave	0.9674	1.132		2.34	2.00	17.1	30.0
m-Xylene & p-Xylene	Ave	1.042	1.239		4.75	4.00	18.8	30.0
Bromoform	Ave	0.6894	0.7069		2.05	2.00	2.6	30.0
Styrene	Ave	0.6900	0.8811		2.55	2.00	27.7	30.0
Nonane	Ave	0.7036	0.9226		2.62	2.00	31.1*	30.0
o-Xylene	Ave	1.101	1.221		2.22	2.00	10.9	30.0
1,1,2,2-Tetrachloroethane	Ave	0.8096	0.9549		2.36	2.00	17.9	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab Sample ID: CCVIS 140-8988/2 Calibration Date: 03/03/2017 11:17

Instrument ID: MR Calib Start Date: 02/23/2017 22:59

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/24/2017 05:21

Lab File ID: RC03CCV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2316	0.2629		2.27	2.00	13.5	30.0
Isopropylbenzene	Ave	1.525	1.662		2.18	2.00	9.0	30.0
Propylbenzene	Ave	0.4054	0.4719		2.33	2.00	16.4	30.0
2-Chlorotoluene	Ave	0.3954	0.4202		2.13	2.00	6.3	30.0
4-Ethyltoluene	Ave	1.504	1.731		2.30	2.00	15.1	30.0
1,3,5-Trimethylbenzene	Ave	0.6917	0.8142		2.35	2.00	17.7	30.0
Alpha Methyl Styrene	Ave	0.5727	0.7327		2.56	2.00	27.9	30.0
Decane	Ave	0.9298	1.371		2.95	2.00	47.4*	30.0
tert-Butylbenzene	Ave	1.369	1.689		2.47	2.00	23.4	30.0
1,2,4-Trimethylbenzene	Ave	1.287	1.607		2.50	2.00	24.8	30.0
1,3-Dichlorobenzene	Ave	1.039	1.179		2.27	2.00	13.5	30.0
sec-Butylbenzene	Ave	1.916	2.446		2.55	2.00	27.6	30.0
Benzyl chloride	Ave	1.125	1.545		2.75	2.00	37.3*	30.0
1,4-Dichlorobenzene	Ave	1.064	1.192		2.24	2.00	12.1	30.0
4-Isopropyltoluene	Ave	1.584	2.012		2.54	2.00	27.0	30.0
1,2,3-Trimethylbenzene	Ave	1.033	1.365		2.64	2.00	32.1*	30.0
Butylcyclohexane	Ave	1.062	1.337		2.52	2.00	26.0	30.0
1,2-Dichlorobenzene	Ave	1.016	1.193		2.35	2.00	17.5	30.0
Indane	Ave	1.180	1.320		2.24	2.00	11.8	30.0
Indene	Ave	0.8646	1.455		3.37	2.00	68.3*	30.0
Butylbenzene	Ave	1.700	2.219		2.61	2.00	30.5*	30.0
Undecane	Ave	1.072	1.556		2.90	2.00	45.1*	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	1.288	1.930		3.00	2.00	49.9*	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.4403	0.4597		2.09	2.00	4.4	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.462	2.024		2.77	2.00	38.5*	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.9276	1.274		2.75	2.00	37.4*	30.0
1,2,3,4-Tetramethylbenzene	Ave	1.248	1.637		2.62	2.00	31.2*	30.0
Dodecane	Ave	1.107	1.627		2.94	2.00	46.9*	30.0
1,2,4-Trichlorobenzene	Ave	1.090	1.312		2.41	2.00	20.4	30.0
Naphthalene	Ave	1.914	2.378		2.48	2.00	24.2	30.0
Benzo(b)thiophene	Ave	1.142	1.438		2.52	2.00	25.8	30.0
Hexachlorobutadiene	Ave	1.103	1.234		2.24	2.00	11.9	30.0
1,2,3-Trichlorobenzene	Ave	1.077	1.264		2.35	2.00	17.4	30.0
2-Methylnaphthalene	Ave	0.1675	0.1864		6.96	6.25	11.3	50.0
1-Methylnaphthalene	Ave	0.1240	0.1912		9.64	6.25	54.2*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6982	0.7082		4.06	4.00	1.4	30.0

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab File ID: GMB500C03.D Lab Sample ID: MB 140-9098/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MG Date Analyzed: 03/03/2017 11:16

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-9098/1002	GCCVC03-LCS.d	03/03/2017 09:33
IA-135-C-22	140-7294-16	GC03P114.D	03/03/2017 23:57
IA-142-C-22	140-7294-17	GC03P115.D	03/04/2017 00:38
IA-144-C-22	140-7294-18	GC03P116.D	03/04/2017 01:19
IA-146-C-22	140-7294-20	GC03P201.D	03/04/2017 01:59
IA-149-C-22	140-7294-21	GC03P202.D	03/04/2017 02:40
IA-152-C-22	140-7294-23	GC03P204.D	03/04/2017 04:02

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-9098/4

Matrix: Air Lab File ID: GMB500C03.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/03/2017 11:16

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9098 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-9098/4

Matrix: Air Lab File ID: GMB500C03.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/03/2017 11:16

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9098 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Matrix: Air Level: Low Lab File ID: GCCVC03-LCS.d

Lab ID: LCS 140-9098/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.19	109	70-130	
Carbon tetrachloride	2.00	2.27	114	70-130	
Chlorodifluoromethane	2.00	2.04	102	60-140	
Chloroform	2.00	2.12	106	70-130	
cis-1,2-Dichloroethene	2.00	2.09	104	70-130	
Dichlorodifluoromethane	2.00	2.17	108	60-140	
1,1-Dichloroethane	2.00	2.09	105	70-130	
1,2-Dichloroethane	2.00	2.18	109	70-130	
1,1-Dichloroethene	2.00	2.17	108	70-130	
Ethylbenzene	2.00	2.25	112	70-130	
Methylene Chloride	2.00	1.90	95	70-130	
Methyl tert-butyl ether	2.00	2.22	111	60-140	
Naphthalene	2.00	2.30	115	60-140	
Tetrachloroethene	2.00	2.20	110	70-130	
Toluene	2.00	2.18	109	70-130	
trans-1,2-Dichloroethene	2.00	2.07	104	70-130	
1,2,4-Trichlorobenzene	2.00	2.36	118	60-140	
1,1,1-Trichloroethane	2.00	2.14	107	70-130	
1,1,2-Trichloroethane	2.00	2.05	102	70-130	
Trichloroethene	2.00	2.14	107	70-130	
1,2,3-Trimethylbenzene	2.00	2.50	125	70-130	
1,2,4-Trimethylbenzene	2.00	2.37	118	70-130	
1,3,5-Trimethylbenzene	2.00	2.36	118	70-130	
Vinyl chloride	2.00	2.12	106	70-130	
Xylenes, Total	6.00	6.91	115	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab File ID: J200BC06.D Lab Sample ID: MB 140-9074/9

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MJ Date Analyzed: 03/06/2017 14:03

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-9074/1006	JCCVC06A-LCS.d	03/06/2017 11:45
IA-126-C-22 DL	140-7294-14 DL	JC06P108.D	03/06/2017 21:19
IA-145-C-22	140-7294-19	JC06P109.D	03/06/2017 22:04
IA-149-C-22 DL	140-7294-21 DL	JC06P110.D	03/06/2017 22:49
IA-150-C-22	140-7294-22	JC06P111.D	03/06/2017 23:34
BCK-1-22	140-7294-26	JC06P112.D	03/07/2017 00:18
BCK-4-22	140-7294-29	JC06P113.D	03/07/2017 01:04

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-9074/9

Matrix: Air Lab File ID: J200BC06.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/06/2017 14:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9074 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	84		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-9074/9

Matrix: Air Lab File ID: J200BC06.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/06/2017 14:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9074 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	84		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Matrix: Air Level: Low Lab File ID: JCCVC06A-LCS.d

Lab ID: LCS 140-9074/1006 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.71	86	70-130	
Carbon tetrachloride	2.00	2.00	100	70-130	
Chlorodifluoromethane	2.00	1.55	78	60-140	
Chloroform	2.00	1.73	87	70-130	
cis-1,2-Dichloroethene	2.00	1.88	94	70-130	
Dichlorodifluoromethane	2.00	1.76	88	60-140	
1,1-Dichloroethane	2.00	1.81	91	70-130	
1,2-Dichloroethane	2.00	1.69	84	70-130	
1,1-Dichloroethene	2.00	1.82	91	70-130	
Ethylbenzene	2.00	1.54	77	70-130	
Methylene Chloride	2.00	1.78	89	70-130	
Methyl tert-butyl ether	2.00	1.45	72	60-140	
Naphthalene	2.00	1.71	85	60-140	
Tetrachloroethene	2.00	1.77	88	70-130	
Toluene	2.00	1.56	78	70-130	
trans-1,2-Dichloroethene	2.00	1.86	93	70-130	
1,2,4-Trichlorobenzene	2.00	2.07	103	60-140	
1,1,1-Trichloroethane	2.00	1.84	92	70-130	
1,1,2-Trichloroethane	2.00	1.53	77	70-130	
Trichloroethene	2.00	2.28	114	70-130	
1,2,3-Trimethylbenzene	2.00	1.60	80	70-130	
1,2,4-Trimethylbenzene	2.00	1.62	81	70-130	
1,3,5-Trimethylbenzene	2.00	1.70	85	70-130	
Vinyl chloride	2.00	1.75	87	70-130	
Xylenes, Total	6.00	4.62	77	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Lab File ID: RC03BLK.D Lab Sample ID: MB 140-8988/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MR Date Analyzed: 03/03/2017 13:33

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-8988/1002	RC03CCV-LCS.d	03/03/2017 11:17
IA-033-B-22	140-7294-1	RC03P101.D	03/03/2017 14:20
IA-100-B-22	140-7294-2	RC03P102.D	03/03/2017 15:07
IA-101-B-22	140-7294-3	RC03P103.D	03/03/2017 15:54
IA-001-C-22	140-7294-4	RC03P104.D	03/03/2017 16:42
IA-004-C-22	140-7294-5	RC03P105.D	03/03/2017 17:29
IA-005-C-22	140-7294-6	RC03P106.D	03/03/2017 18:17
IA-051-C-22	140-7294-7	RC03P107.D	03/03/2017 19:04
IA-060-C-22	140-7294-8	RC03P108.D	03/03/2017 19:51
IA-065-C-22	140-7294-9	RC03P109.D	03/03/2017 20:38
IA-088-C-22	140-7294-10	RC03P110.D	03/03/2017 21:25
IA-102-C-22	140-7294-11	RC03P111.D	03/03/2017 22:13
IA-113-C-22	140-7294-12	RC03P112.D	03/03/2017 23:00
IA-115-C-22	140-7294-13	RC03P113.D	03/03/2017 23:48
IA-126-C-22	140-7294-14	RC03P114.D	03/04/2017 00:35
IA-131-C-22	140-7294-15	RC03P115.D	03/04/2017 01:22
IA-153-C-22	140-7294-24	RC03P116.D	03/04/2017 02:57
IA-155-C-22	140-7294-25	RC03P201.D	03/04/2017 03:44
BCK-2-22	140-7294-27	RC03P203.D	03/04/2017 05:18
BCK-3-22	140-7294-28	RC03P204.D	03/04/2017 06:05

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-8988/4

Matrix: Air Lab File ID: RC03BLK.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/03/2017 13:33

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-8988/4

Matrix: Air Lab File ID: RC03BLK.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/03/2017 13:33

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Matrix: Air Level: Low Lab File ID: RC03CCV-LCS.d

Lab ID: LCS 140-8988/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.29	115	70-130	
Carbon tetrachloride	2.00	2.28	114	70-130	
Chlorodifluoromethane	2.00	2.01	101	60-140	
Chloroform	2.00	2.21	111	70-130	
cis-1,2-Dichloroethene	2.00	2.24	112	70-130	
Dichlorodifluoromethane	2.00	1.87	93	60-140	
1,1-Dichloroethane	2.00	2.29	114	70-130	
1,2-Dichloroethane	2.00	2.17	109	70-130	
1,1-Dichloroethene	2.00	2.13	107	70-130	
Ethylbenzene	2.00	2.32	116	70-130	
Methylene Chloride	2.00	2.05	103	70-130	
Methyl tert-butyl ether	2.00	2.34	117	60-140	
Naphthalene	2.00	2.48	124	60-140	
Tetrachloroethene	2.00	2.27	113	70-130	
Toluene	2.00	2.44	122	70-130	
trans-1,2-Dichloroethene	2.00	2.16	108	70-130	
1,2,4-Trichlorobenzene	2.00	2.41	120	60-140	
1,1,1-Trichloroethane	2.00	2.24	112	70-130	
1,1,2-Trichloroethane	2.00	2.31	115	70-130	
Trichloroethene	2.00	2.12	106	70-130	
1,2,3-Trimethylbenzene	2.00	2.64	132	70-130	*
1,2,4-Trimethylbenzene	2.00	2.50	125	70-130	
1,3,5-Trimethylbenzene	2.00	2.35	118	70-130	
Vinyl chloride	2.00	1.50	75	70-130	
Xylenes, Total	6.00	6.97	116	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
IA-033-B-22	140-7294-1	101
IA-100-B-22	140-7294-2	102
IA-101-B-22	140-7294-3	101
IA-001-C-22	140-7294-4	103
IA-004-C-22	140-7294-5	101
IA-005-C-22	140-7294-6	99
IA-051-C-22	140-7294-7	101
IA-060-C-22	140-7294-8	101
IA-065-C-22	140-7294-9	99
IA-088-C-22	140-7294-10	103
IA-102-C-22	140-7294-11	102
IA-113-C-22	140-7294-12	102
IA-115-C-22	140-7294-13	100
IA-126-C-22	140-7294-14	99
IA-126-C-22 DL	140-7294-14 DL	70
IA-131-C-22	140-7294-15	104
IA-135-C-22	140-7294-16	100
IA-142-C-22	140-7294-17	103
IA-144-C-22	140-7294-18	101
IA-145-C-22	140-7294-19	83
IA-146-C-22	140-7294-20	100
IA-149-C-22	140-7294-21	99
IA-149-C-22 DL	140-7294-21 DL	69
IA-150-C-22	140-7294-22	82
IA-152-C-22	140-7294-23	101
IA-153-C-22	140-7294-24	101
IA-155-C-22	140-7294-25	100
BCK-1-22	140-7294-26	74
BCK-2-22	140-7294-27	101
BCK-3-22	140-7294-28	103
BCK-4-22	140-7294-29	78
	MB 140-8988/4	103
	MB 140-9074/9	84
	MB 140-9098/4	101

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
	LCS 140-8988/1002	101
	LCS 140-9074/1006	90
	LCS 140-9098/1002	102

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Sample No.: ICIS 140-9079/8 Date Analyzed: 03/02/2017 17:02

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): GC02IC06.D Heated Purge: (Y/N) N

Calibration ID: 934

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		397020	8.01	1995357	10.18	2047691	15.04
UPPER LIMIT		555828	8.34	2793500	10.51	2866767	15.37
LOWER LIMIT		238212	7.68	1197214	9.85	1228615	14.71
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-9079/15		386596	8.01	1963711	10.18	2019239	15.04

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Sample No.: CCVIS 140-9098/2 Date Analyzed: 03/03/2017 09:33

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): GCCVC03.D Heated Purge: (Y/N) N

Calibration ID: 934

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		327275	8.01	1684420	10.18	1698738	15.04
UPPER LIMIT		458185	8.34	2358188	10.51	2378233	15.37
LOWER LIMIT		196365	7.68	1010652	9.85	1019243	14.71
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-9098/1002		327275	8.01	1684420	10.18	1698738	15.04
MB 140-9098/4		347722	8.01	1749130	10.18	1752203	15.04
140-7294-16	IA-135-C-22	354344	8.00	1777954	10.16	1810673	15.04
140-7294-17	IA-142-C-22	353865	8.00	1787142	10.16	1771630	15.04
140-7294-18	IA-144-C-22	365521	8.00	1855369	10.17	1827901	15.04
140-7294-20	IA-146-C-22	352103	8.00	1799952	10.17	1823324	15.04
140-7294-21	IA-149-C-22	328424	8.02	1715508	10.18	1783097	15.04
140-7294-23	IA-152-C-22	359046	8.00	1819070	10.17	1845331	15.04

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Sample No.: ICIS 140-7241/7 Date Analyzed: 11/25/2016 23:17

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JK25IC06X.D Heated Purge: (Y/N) N

Calibration ID: 790

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		356777	8.64	1567971	10.84	1332891	15.61
UPPER LIMIT		499488	8.97	2195159	11.17	1866047	15.94
LOWER LIMIT		214066	8.31	940783	10.51	799735	15.28
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-7241/23		319485	8.63	1407958	10.83	1180826	15.61

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Sample No.: CCVIS 140-9074/6 Date Analyzed: 03/06/2017 11:45

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JCCVC06A.D Heated Purge: (Y/N) N

Calibration ID: 790

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		338199	8.56	1425501	10.76	1222862	15.54
UPPER LIMIT		473479	8.89	1995701	11.09	1712007	15.87
LOWER LIMIT		202919	8.23	855301	10.43	733717	15.21
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-9074/1006		338199	8.56	1425501	10.76	1222862	15.54
MB 140-9074/9		333208	8.56	1487094	10.76	1263043	15.54
140-7294-14 DL	IA-126-C-22 DL	262014	8.56	1194538	10.76	982175	15.54
140-7294-19	IA-145-C-22	271855	8.56	1245883	10.76	1053826	15.54
140-7294-21 DL	IA-149-C-22 DL	267002	8.56	1247847	10.76	991023	15.54
140-7294-22	IA-150-C-22	272808	8.56	1263846	10.76	1049576	15.54
140-7294-26	BCK-1-22	256897	8.56	1186619	10.76	934893	15.54
140-7294-29	BCK-4-22	270862	8.56	1246110	10.76	1025845	15.54

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Sample No.: ICIS 140-8740/8 Date Analyzed: 02/24/2017 02:57

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RB23IC06.D Heated Purge: (Y/N) N

Calibration ID: 919

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		415087	8.23	2028116	10.39	1643754	15.28
UPPER LIMIT		581122	8.56	2839362	10.72	2301256	15.61
LOWER LIMIT		249052	7.90	1216870	10.06	986252	14.95
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-8740/17		429501	8.23	2158241	10.39	1765346	15.28

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Sample No.: CCVIS 140-8988/2 Date Analyzed: 03/03/2017 11:17

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RC03CCV.D Heated Purge: (Y/N) N

Calibration ID: 919

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		454277	8.22	2252268	10.38	1808128	15.27
UPPER LIMIT		635988	8.55	3153175	10.71	2531379	15.60
LOWER LIMIT		272566	7.89	1351361	10.05	1084877	14.94
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-8988/1002		454277	8.22	2252268	10.38	1808128	15.27
MB 140-8988/4		451896	8.20	2195935	10.37	1718748	15.27
140-7294-1	IA-033-B-22	417379	8.24	2022255	10.39	1619366	15.27
140-7294-2	IA-100-B-22	437507	8.24	2134392	10.38	1677176	15.27
140-7294-3	IA-101-B-22	440278	8.25	2117783	10.39	1732561	15.27
140-7294-4	IA-001-C-22	433138	8.20	2088150	10.37	1696548	15.27
140-7294-5	IA-004-C-22	419090	8.21	2029387	10.37	1646761	15.27
140-7294-6	IA-005-C-22	412322	8.22	2000754	10.37	1626547	15.27
140-7294-7	IA-051-C-22	418632	8.20	2046766	10.37	1643281	15.27
140-7294-8	IA-060-C-22	406795	8.22	1992460	10.38	1582588	15.27
140-7294-9	IA-065-C-22	408395	8.21	1987645	10.37	1568459	15.27
140-7294-10	IA-088-C-22	412085	8.22	2022982	10.38	1625012	15.27
140-7294-11	IA-102-C-22	406571	8.21	1964008	10.38	1562783	15.27
140-7294-12	IA-113-C-22	416440	8.21	2024922	10.37	1601735	15.27
140-7294-13	IA-115-C-22	408939	8.22	1996944	10.38	1590512	15.27
140-7294-14	IA-126-C-22	433844	8.23	2077757	10.38	1696004	15.27
140-7294-15	IA-131-C-22	430919	8.20	2092070	10.37	1645023	15.27
140-7294-24	IA-153-C-22	407329	8.22	1969952	10.38	1539370	15.27
140-7294-25	IA-155-C-22	395687	8.22	1915508	10.38	1530671	15.27
140-7294-27	BCK-2-22	398961	8.21	1953611	10.38	1535880	15.27
140-7294-28	BCK-3-22	402855	8.22	1977055	10.38	1555241	15.27

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

LOCKHEED MARTIN CORPORATION (LMC) - MIDDLE RIVER COMPLEX (MRC)
SDG 140-7294-1

SAMPLE IDENTIFICATION	IA-101-B-22		
COMPOUND	TRICHLOROETHENE	MW=	131.39
		GAS CONSTANT =	24.45
COMPOUND AREA	4193		
INTERNAL STANDARD AMOUNT (ppbv)	4		
CALIBRATION VOLUME (mL)	500		
DILUTION FACTOR	1		
INTERNAL STANDARD AREA	2117783		
AVERAGE RRF	0.3544		
SAMPLE VOLUME (mL)	100		
			0.02234651

0.1117 ppbv
0.60 µg/m³

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1

SDG No.:

Client Sample ID: IA-101-B-22 Lab Sample ID: 140-7294-3

Matrix: Air Lab File ID: RC03P103.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:18

Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 15:54

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8988 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.22	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.65		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.65		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.78	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	18		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.11	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1
SDG No.:
Client Sample ID: IA-101-B-22 Lab Sample ID: 140-7294-3
Matrix: Air Lab File ID: RC03P103.D
Analysis Method: TO 15 LL Date Collected: 02/28/2017 16:18
Sample wt/vol: 100(mL) Date Analyzed: 03/03/2017 15:54
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 8988 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.71	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.3		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	67		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.60	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	15		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

Sample Calculation - Page 4

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170228-4172.b\RC03P103.D
Lims ID: 140-7294-A-3
Client ID: IA-101-B-22
Sample Type: Client
Inject. Date: 03-Mar-2017 15:54:30 ALS Bottle#: 3 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004172-007
Misc. Info.: 140-7294-a-3
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170228-4172.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Mar-2017 16:30:39 Calib Date: 24-Feb-2017 05:21:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170220-4095.b\RB23IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: tajh Date: 03-Mar-2017 16:30:39

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.247	8.215	0.032	99	440278	4.00	
* 2 1,4-Difluorobenzene	114	10.393	10.383	0.010	96	2117783	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.274	15.274	0.000	89	1732561	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.961	16.967	-0.006	97	1217457	4.03	
6 Chlorodifluoromethane	67	3.723	3.701	0.022	95	5326	0.1310	
8 Dichlorodifluoromethane	85	3.777	3.755	0.022	98	22844	0.0773	
31 Methylene Chloride	84	5.955	5.912	0.043	99	21432	0.1561	
50 Benzene	78	9.827	9.811	0.016	94	16983	0.0443	
59 Trichloroethene	130	11.127	11.116	0.011	93	4193	0.0223	✓
68 Toluene	91	13.246	13.246	0.000	93	1680531	3.57	
79 Ethylbenzene	91	15.640	15.640	0.000	99	77683	0.1308	
81 m-Xylene & p-Xylene	91	15.807	15.813	-0.006	100	237469	0.5260	
85 o-Xylene	91	16.336	16.341	-0.005	98	70829	0.1485	
S 124 Xylenes, Total	100				0		0.6745	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7294-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Heptane	0.2353 0.2908	0.2275 0.2815	0.2590 0.2612	0.2641 0.2024	0.2816	Ave		0.2559				11.3		30.0			
Trichloroethene	0.3763 0.3567	0.3817 0.3432	0.3529 0.3456	0.3658 0.3092	0.3578	Ave		0.3544				6.0		30.0			
Dibromomethane	0.3368 0.3240	0.3340 0.3255	0.3070 0.3261	0.3038 0.2958	0.3106	Ave		0.3182				4.5		30.0			
Bromodichloromethane	0.4663 0.5746	0.4798 0.5800	0.4513 0.5835	0.4868 0.5396	0.5299	Ave		0.5213				9.9		30.0			
1,4-Dioxane	0.0955 0.1208	0.0973 0.1162	0.1080 0.1119	0.1081 0.0937	0.1180	Ave		0.1077				9.4		30.0			
Methyl methacrylate	0.2948 0.4155	0.2926 0.4018	0.3019 0.3943	0.3382 0.3639	0.3887	Ave		0.3546				13.8		30.0			
Methylcyclohexane	0.5249 0.5800	0.4823 0.5724	0.5045 0.5475	0.5416 0.4768	0.5664	Ave		0.5329				7.2		30.0			
4-Methyl-2-pentanone (MIBK)	0.5451 0.7612	0.5831 0.7193	0.5890 0.6786	0.6733 0.5958	0.7057	Ave		0.6501				11.4		30.0			
cis-1,3-Dichloropropene	0.3325 0.4545	0.3580 0.4588	0.3691 0.4524	0.3881 0.4296	0.4163	Ave		0.4066				11.4		30.0			
trans-1,3-Dichloropropene	0.3439 0.4969	0.3713 0.5120	0.3700 0.5423	0.3990 0.5042	0.4502	Ave		0.4433				16.6		30.0			
Toluene	0.9897 1.1563	1.1262 1.1350	1.0484 1.1215	1.0868 0.9730	1.1353	Ave		1.0858				6.2		30.0			
1,1,2-Trichloroethane	0.3385 0.3438	0.3467 0.3365	0.3263 0.3306	0.3332 0.2836	0.3327	Ave		0.3302				5.6		30.0			
2-Methylthiophene	0.7648 0.9175	0.8124 0.9073	0.8091 0.9013	0.8550 0.7986	0.8939	Ave		0.8511				6.6		30.0			
3-Methylthiophene	0.7410 0.9150	0.7956 0.8949	0.7731 0.8873	0.8464 0.7837	0.8746	Ave		0.8346				7.5		30.0			
2-Hexanone	+++++ 0.4413	+++++ 0.4193	0.2939 0.4095	0.3464 0.3479	0.4025	Ave		0.3801				13.7		30.0			
Dibromochloromethane	0.4539 0.7002	0.4589 0.7087	0.5439 0.6920	0.5767 0.5676	0.6651	Ave		0.5963				16.8		30.0			
Octane	0.3050 0.3634	0.2812 0.3499	0.3062 0.3175	0.3226 0.2334	0.3580	Ave		0.3153				13.0		30.0			
1,2-Dibromoethane (EDB)	0.5025 0.6052	0.5348 0.6004	0.5271 0.6043	0.5526 0.5347	0.5718	Ave		0.5593				6.8		30.0			
Tetrachloroethene	0.4127 0.4118	0.4281 0.3977	0.4170 0.3891	0.3858 0.3259	0.4085	Ave		0.3974				7.6		30.0			
Chlorobenzene	1.0317 0.9145	0.9878 0.8942	0.9702 0.8663	0.9165 0.7600	0.9332	Ave		0.9194				8.5		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

TETRA TECH

INTERNAL CORRESPONDENCE

TO: **S. BRENNER** **DATE:** **APRIL 24, 2017**

FROM: **LEIGH A. CIOFANI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
LOCKHEED MARTIN CORPORATION (LMC) – MIDDLE RIVER COMPLEX (MRC)
SAMPLE DELIVERY GROUP (SDG) 140-7324-1

SAMPLES: 24 / Air / VOC

IA-015-A-22	IA-018-A-22	IA-021-A-22
IA-075-A-22	IA-076-A-22	IA-078-A-22
IA-079-A-22	IA-081-A-22	IA-093-A-22
IA-097-A-22	IA-117-A-22	IA-118-A-22
IA-136-A-22	IA-138-A-22	IA-139-A-22
IA-168-A-22	IA-DUP01-C-22	IA-DUP02-C-22
IA-DUP03-A-22	IA-DUP04-A-22	SV-093-A-22
SV-DUP01-C-22	SV-DUP02-C-22	SV-DUP03-A-22

OVERVIEW

The sample set for LMC – MRC, SDG 140-7324-1, consists of twenty-four (24) indoor air/soil vapor environmental samples. All samples were analyzed for select volatile organic compounds (VOC). Seven (7) field duplicate sample pairs have one or more samples included in this SDG:

- IA-131-C-22 (original – not in this SDG) / IA-DUP01-C-22 (duplicate),
- IA-153-C-22 (original – not in this SDG) / IA-DUP02-C-22 (duplicate),
- IA-015-A-22 (original) / IA-DUP03-A-22 (duplicate),
- IA-079-A-22 (original) / IA-DUP04-A-22 (duplicate),
- SV-131-C-22 (original – not in this SDG) / SV-DUP01-C-22 (duplicate),
- SV-153-C-22 (original – not in this SDG) / SV-DUP02-C-22 (duplicate),
- SV-015-A-22 (original – not in this SDG) / SV-DUP03-A-22 (duplicate).

The samples were collected by Tetra Tech, Inc. on February 28 and March 01 and 03, 2017 and analyzed by TestAmerica, Inc. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank results, surrogate spike recoveries, laboratory control sample results, internal standard areas, chromatographic resolution, compound identification, compound quantitation, field duplicate precision, and detection limits. Areas of concern are listed below.

MAJOR PROBLEMS

- None.

MINOR PROBLEMS

- The initial calibration performed on 11/25/16 on instrument MJ had a percent relative standard deviation (%RSD) for naphthalene that was greater than the 30% quality control limit. Samples IA-DUP01-C-22, IA-DUP02-C-22, IA-DUP03-A-22, IA-DUP04-A-22, SV-DUP01-C-22, IA-139-A-22, and SV-DUP02-C-22 were associated with this calibration. Detected and non-detected

naphthalene results were qualified as estimated (J and UJ, respectively) in the associated samples.

- The continuing calibration performed on 03/06/17 at 13:34 on instrument MR had a percent difference (%D) for vinyl chloride that was greater than the 30% quality control limit. Samples IA-015-A-22, IA-018-A-22, IA-021-A-22, IA-075-A-22, IA-076-A-22, IA-078-A-22, IA-079-A-22, IA-081-A-22, IA-093-A-22, IA-168-A-22, IA-097-A-22, IA-117-A-22, IA-118-A-22, IA-136-A-22, IA-138-A-22, SV-DUP03-A-22, and SV-093-A-22 were associated with this calibration. Non-detected results for vinyl chloride were qualified as estimated (UJ) in the associated samples.

- The laboratory control sample (LCS) 140-9101/1008 associated with preparation batch 140-9101 had a percent recovery (%R) for vinyl chloride that was less than the laboratory quality control limits. Samples IA-015-A-22, IA-018-A-22, IA-021-A-22, IA-075-A-22, IA-076-A-22, IA-078-A-22, IA-079-A-22, IA-081-A-22, IA-093-A-22, IA-168-A-22, IA-097-A-22, IA-117-A-22, IA-118-A-22, IA-136-A-22, IA-138-A-22, SV-DUP03-A-22, and SV-093-A-22 were associated with this LCS. Non-detected results for vinyl chloride were qualified as estimated (UJ) in the associated samples.

- The field duplicate pair samples IA-015-A-22 / IA-DUP03-A-22 had a %D for trichloroethene that was greater than the quality control limit of 2x the reporting limit (RL). The detected and non-detected results for trichloroethene were qualified as estimated (J and UJ, respectively) in samples IA-015-A-22 and IA-DUP03-A-22.

- The field duplicate pair samples IA-153-C-22 / IA-DUP02-C-22 had a %D for chlorodifluoromethane that was greater than the quality control limit of 2x the RL. The detected and non-detected results for chlorodifluoromethane were qualified as estimated (J and UJ, respectively) in samples IA-153-C-22 and IA-DUP02-C-22.

- The field duplicate pair samples SV-131-C-22 / SV-DUP01-C-22 had a relative percent difference (RPD) for naphthalene that was greater than the quality control limit of 50%. The detected results for naphthalene were qualified as estimated (J) in samples SV-131-C-22 and SV-DUP01-C-22.

- Detections of methylene chloride were qualified as estimated, (J), because these detections were considered suspected laboratory contamination despite the absence of methylene chloride in laboratory method blanks.

- Detected results reported below the RL limit but above the method detection limit (MDL) were qualified as estimated (J).

NOTES

Sample SV-DUP04-A-22 was listed on the chain of custody, but this sample was not included in the laboratory data package or the database. The laboratory case narrative indicates that this sample was received with the canister valve in the open position at ambient pressure (approximately 0 psi). The laboratory cancelled the analysis for this sample as per instruction from the client.

Twenty-five VOC target compounds were reported for the TO-15 analysis of the samples.

Non-detected results were reported to the MDL.

Sample IA-DUP02-C-22 was analyzed at a dilution factor of 1.53.

The laboratory case narrative report suggests that sample SV-DUP03-A-22 was analyzed at a dilution factor greater than 1; however, the laboratory Form 1 for this sample and the database indicate that this sample was

analyzed at a dilution factor of 1.

EXECUTIVE SUMMARY

Laboratory Performance: Some detected and non-detected results were qualified due to calibration noncompliance. Non-detected results for one analyte were qualified due to LCS noncompliance. Methylene chloride was detected in many samples and was qualified as a suspected laboratory contaminant.

Other Factors Affecting Data Quality: Several detected and non-detected results were qualified for field duplicate imprecision. Results above the MDL but below the RL were qualified as estimated.

The data for these analyses were reviewed with reference to the USEPA "National Functional Guidelines for Organic Superfund Methods Data Review" (January 2017) and USEPA Method TO-15 analytical and reporting protocols. The text of this report has been formulated to address only those areas affecting data quality.

Leigh A. Ciofani

Tetra Tech, Inc.
Leigh A. Ciofani
Environmental Scientist/Data Validator

Joseph A. Samchuck

Tetra Tech, Inc.
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted method detection limit for sample and method.
J	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 07671	NSAMPLE	IA-015-A-22			IA-018-A-22			IA-021-A-22			IA-075-A-22		
SDG: 140-7324-1	LAB_ID	140-7324-1			140-7324-2			140-7324-3			140-7324-4		
FRACTION: OV-M3	SAMP_DATE	3/1/2017			3/1/2017			3/1/2017			3/1/2017		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		0.33	U		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.82	J	P	0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		0.61	U		0.61	U		0.61	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.5	J	P	0.76	J	P	0.57	J	P	0.56	J	P
CARBON TETRACHLORIDE		0.47	U		0.58	J	P	0.47	U		0.47	U	
CHLORODIFLUOROMETHANE		4.9			9.6			2.4			2		
CHLOROFORM		0.37	J	P	0.71	J	P	0.41	J	P	0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		1.8	J	P	2			1.7	J	P	1.6	J	P
ETHYLBENZENE		0.59	U		0.59	U		0.99	J	P	1.8		
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		2.3	U		3.2	J	AP	2.3	U		2.5	J	AP
NAPHTHALENE		1	U		3.3			1	U		1	U	
TETRACHLOROETHENE		0.54	U		0.54	U		0.54	U		0.54	U	
TOLUENE		3			5			6.6			15		
TOTAL XYLENES		1.4	J	P	2.4	J	P	4.9			7.5		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	UJ	G	8			0.65	J	P	0.38	U	
VINYL CHLORIDE		0.37	UJ	CE	0.37	UJ	CE	0.37	UJ	CE	0.37	UJ	CE

PROJ_NO: 07671	NSAMPLE	IA-076-A-22			IA-078-A-22			IA-079-A-22			IA-081-A-22		
SDG: 140-7324-1	LAB_ID	140-7324-5			140-7324-6			140-7324-7			140-7324-8		
FRACTION: OV-M3	SAMP_DATE	3/1/2017			3/1/2017			3/1/2017			3/1/2017		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		0.33	U		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		0.61	U		0.61	U		0.97	J	P
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.54	J	P	0.51	J	P	0.52	J	P	0.54	J	P
CARBON TETRACHLORIDE		0.47	U		0.47	U		0.47	U		0.47	U	
CHLORODIFLUOROMETHANE		2			2.4			2.7			13		
CHLOROFORM		0.37	U		0.37	U		0.37	U		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		1.9	J	P	1.6	J	P	2			2		
ETHYLBENZENE		1.4	J	P	6.8			1.2	J	P	3.2		
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		2.3	U		2.3	U		2.3	U		2.6	J	AP
NAPHTHALENE		1	U		1	U		1	U		1	U	
TETRACHLOROETHENE		0.54	U		0.54	U		0.54	U		0.54	U	
TOLUENE		4.8			3.3			7.2			130		
TOTAL XYLENES		6.8			28			6.1			19		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		1	J	P	0.83	J	P	0.38	U		0.43	J	P
VINYL CHLORIDE		0.37	UJ	CE	0.37	UJ	CE	0.37	UJ	CE	0.37	UJ	CE

PROJ_NO: 07671	NSAMPLE	IA-093-A-22			IA-097-A-22			IA-117-A-22			IA-118-A-22		
SDG: 140-7324-1	LAB_ID	140-7324-9			140-7324-11			140-7324-12			140-7324-13		
FRACTION: OV-M3	SAMP_DATE	3/1/2017			3/1/2017			3/1/2017			3/1/2017		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		0.33	U		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		0.61	U		0.61	U		0.61	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.53	J	P	0.37	U		0.56	J	P	0.52	J	P
CARBON TETRACHLORIDE		0.51	J	P	0.47	U		0.47	U		0.47	U	
CHLORODIFLUOROMETHANE		9.8			2.5			3			4		
CHLOROFORM		0.37	U		0.37	U		0.37	U		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2.1			2.3			2			1.9	J	P
ETHYLBENZENE		0.59	U		0.83	J	P	1.9			0.61	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		2.3	U		2.4	J	AP	2.3	J	AP	2.3	U	
NAPHTHALENE		1	U		1	U		1	U		1	U	
TETRACHLOROETHENE		0.54	U		0.54	U		0.54	U		0.54	U	
TOLUENE		2.3	U		8.2			3.5			4.1		
TOTAL XYLENES		0.52	U		4.1			10			3.4	J	P
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		1.8			0.38	U		0.38	U		0.61	J	P
VINYL CHLORIDE		0.37	UJ	CE	0.37	UJ	CE	0.37	UJ	CE	0.37	UJ	CE

PROJ_NO: 07671	NSAMPLE	IA-136-A-22			IA-138-A-22			IA-139-A-22			IA-168-A-22		
SDG: 140-7324-1	LAB_ID	140-7324-14			140-7324-15			140-7324-23			140-7324-10		
FRACTION: OV-M3	SAMP_DATE	3/1/2017			3/1/2017			3/1/2017			3/1/2017		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		0.33	U		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.56	J	P	0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		0.61	U		0.61	U		0.61	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.52	J	P	0.7	J	P	0.46	J	P	0.54	J	P
CARBON TETRACHLORIDE		0.5	J	P	0.61	J	P	0.47	U		0.47	U	
CHLORODIFLUOROMETHANE		2.3			9.3			1.6			2.1		
CHLOROFORM		0.37	U		0.37	U		0.37	U		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		1.9	J	P	1.9	J	P	2			1.8	J	P
ETHYLBENZENE		1.8			0.59	U		0.59	U		1.2	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		2.3	U		2.3	U		2.3	U		2.5	J	AP
NAPHTHALENE		1	U		1	U		1	UJ	C	1	U	
TETRACHLOROETHENE		0.54	U		3.2			1.1	J	P	0.57	J	P
TOLUENE		7.5			2.3	U		4			4.1		
TOTAL XYLENES		9.3			0.52	U		3.3	J	P	6.1		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.59	J	P	11			0.48	J	P	0.99	J	P
VINYL CHLORIDE		0.37	UJ	CE	0.37	UJ	CE	0.37	U		0.37	UJ	CE

PROJ_NO: 07671	NSAMPLE	IA-DUP01-C-22			IA-DUP02-C-22			IA-DUP03-A-22			IA-DUP04-A-22		
SDG: 140-7324-1	LAB_ID	140-7324-16			140-7324-17			140-7324-18			140-7324-19		
FRACTION: OV-M3	SAMP_DATE	2/28/2017			2/28/2017			3/1/2017			3/1/2017		
MEDIA: AIR	QC_TYPE	FD			FD			FD			FD		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF	IA-131-C-22			IA-153-C-22			IA-015-A-22			IA-079-A-22		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		0.33	U		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.65	J	P	0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		0.61	U		0.61	U		0.61	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.48	J	P	0.49	J	P	0.65	J	P	0.41	J	P
CARBON TETRACHLORIDE		0.47	U		0.47	U		0.53	J	P	0.47	U	
CHLORODIFLUOROMETHANE		2.5			0.27	UJ	G	5.6			2.1		
CHLOROFORM		0.37	U		0.37	U		0.68	J	P	0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2.1			1.9	J	P	2.1			2.1		
ETHYLBENZENE		0.59	U		0.59	U		0.59	U		0.83	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		2.3	U		2.3	U		2.3	U		2.3	U	
NAPHTHALENE		1	UJ	C	1	UJ	C	2.1	J	C	1	UJ	C
TETRACHLOROETHENE		0.54	U		0.54	U		0.54	U		0.54	U	
TOLUENE		2.6			2.8			2.3	U		6.3		
TOTAL XYLENES		3	J	P	1.3	J	P	0.52	U		4.2		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.38	U		8.7	J	G	0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	SV-093-A-22			SV-DUP01-C-22			SV-DUP02-C-22			SV-DUP03-A-22		
SDG: 140-7324-1	LAB_ID	140-7324-25			140-7324-20			140-7324-21			140-7324-22		
FRACTION: OV-M3	SAMP_DATE	3/3/2017			2/28/2017			2/28/2017			3/1/2017		
MEDIA: AIR	QC_TYPE	NM			FD			FD			FD		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF				SV-131-C-22			SV-153-C-22			SV-015-A-22		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		0.33	U		3.9	J	P
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		5.7	U	
1,1-DICHLOROETHANE		0.5	J	P	0.2	U		0.2	U		4.1	J	P
1,1-DICHLOROETHENE		0.3	J	P	0.28	U		0.28	U		13	J	P
1,2,3-TRIMETHYLBENZENE		0.84	U		3.1			0.84	U		8.4	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		14	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		1.8	J	P	0.63	J	P	6.1	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		3.8	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		1.5	J	P	0.64	U		6.4	U	
BENZENE		0.58	J	P	0.37	U		0.37	U		3.7	U	
CARBON TETRACHLORIDE		0.47	U		0.47	U		0.47	U		4.7	U	
CHLORODIFLUOROMETHANE		1.7			2.3			3.9			8.7	J	P
CHLOROFORM		0.37	U		0.37	U		0.37	U		3.7	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		4.8	U	
DICHLORODIFLUOROMETHANE		1.9	J	P	2			2.3			6.7	U	
ETHYLBENZENE		0.59	U		1.2	J	P	0.59	U		5.9	U	
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		12	U	
METHYLENE CHLORIDE		2.3	J	AP	2.5	J	AP	3.6	J	A	23	U	
NAPHTHALENE		1	U		2.1	J	CG	1	UJ	C	10	U	
TETRACHLOROETHENE		0.54	U		0.54	U		0.58	J	P	5.4	U	
TOLUENE		2.3	U		2.3	U		2.3	U		23	U	
TOTAL XYLENES		0.52	U		8.3			2.3	J	P	5.2	U	
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		4	U	
TRICHLOROETHENE		2.2			0.38	U		5.3			3.8	U	
VINYL CHLORIDE		0.37	UJ	CE	0.37	U		0.37	U		3.7	UJ	CE

Appendix B

Results as Reported by the Laboratory

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-015-A-22 | Lab Sample ID: 140-7324-1

Matrix: Air | Lab File ID: RC06P101.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:26

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 16:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.4		0.40	0.075
67-66-3	Chloroform	119.38	0.077	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.36	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.81		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.32	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-015-A-22 | Lab Sample ID: 140-7324-1

Matrix: Air | Lab File ID: RC06P101.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:26

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 16:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.50	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.9		1.4	0.27
67-66-3	Chloroform	119.38	0.37	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.8	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.4	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-018-A-22 | Lab Sample ID: 140-7324-2

Matrix: Air | Lab File ID: RC06P102.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:23

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 17:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.24	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.092	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.7		0.40	0.075
67-66-3	Chloroform	119.38	0.15	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.21	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.92	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.64		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.5		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.56	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-018-A-22 | Lab Sample ID: 140-7324-2

Matrix: Air | Lab File ID: RC06P102.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:23

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 17:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.76	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.58	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	9.6		1.4	0.27
67-66-3	Chloroform	119.38	0.71	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.82	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	3.3		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	8.0		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.4	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-021-A-22 | Lab Sample ID: 140-7324-3

Matrix: Air | Lab File ID: RC06P103.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:47

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 18:15

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.68		0.40	0.075
67-66-3	Chloroform	119.38	0.084	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.34	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.23	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.12	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-021-A-22 | Lab Sample ID: 140-7324-3

Matrix: Air | Lab File ID: RC06P103.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:47

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 18:15

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.57	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.4		1.4	0.27
67-66-3	Chloroform	119.38	0.41	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.7	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.99	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.6		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.65	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-075-A-22 | Lab Sample ID: 140-7324-4

Matrix: Air | Lab File ID: RC06P104.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:43

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 19:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.58		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.33	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.41		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.72	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	4.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-075-A-22 | Lab Sample ID: 140-7324-4

Matrix: Air | Lab File ID: RC06P104.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:43

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 19:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.56	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.0		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.6	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	15		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-076-A-22 | Lab Sample ID: 140-7324-5

Matrix: Air | Lab File ID: RC06P105.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:41

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 19:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.57		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.32	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.19	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.6		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-076-A-22 | Lab Sample ID: 140-7324-5

Matrix: Air | Lab File ID: RC06P105.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:41

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 19:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.0		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.4	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.0	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.8		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-078-A-22 | Lab Sample ID: 140-7324-6

Matrix: Air | Lab File ID: RC06P106.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:49

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 20:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.68		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.33	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.6		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.86		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.15	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	6.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-078-A-22 Lab Sample ID: 140-7324-6

Matrix: Air Lab File ID: RC06P106.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 16:49

Sample wt/vol: 100(mL) Date Analyzed: 03/06/2017 20:37

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9101 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.51	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.4		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.6	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	6.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.83	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	28		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-079-A-22 Lab Sample ID: 140-7324-7

Matrix: Air Lab File ID: RC06P107.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 16:28

Sample wt/vol: 100(mL) Date Analyzed: 03/06/2017 21:24

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9101 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.77		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.27	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.9		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-079-A-22 Lab Sample ID: 140-7324-7

Matrix: Air Lab File ID: RC06P107.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 16:28

Sample wt/vol: 100(mL) Date Analyzed: 03/06/2017 21:24

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9101 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.52	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.2	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	7.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.1		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-081-A-22 | Lab Sample ID: 140-7324-8

Matrix: Air | Lab File ID: RC06P108.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:31

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 22:11

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	3.6		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.74		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.75	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	35		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.080	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.20	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	4.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-081-A-22 | Lab Sample ID: 140-7324-8

Matrix: Air | Lab File ID: RC06P108.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:31

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 22:11

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	13		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.2		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.6	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	130		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.43	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.97	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	19		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-093-A-22 | Lab Sample ID: 140-7324-9

Matrix: Air | Lab File ID: RC06P109.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:21

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 22:58

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.8		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.42		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.33		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-093-A-22 | Lab Sample ID: 140-7324-9

Matrix: Air | Lab File ID: RC06P109.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:21

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 22:58

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.53	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	9.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.8		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-097-A-22 | Lab Sample ID: 140-7324-11

Matrix: Air | Lab File ID: RC06P111.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:30

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 00:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.69		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.19	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.70	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.94		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-097-A-22 Lab Sample ID: 140-7324-11

Matrix: Air Lab File ID: RC06P111.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 16:30

Sample wt/vol: 100(mL) Date Analyzed: 03/07/2017 00:33

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9101 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.83	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	8.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.1		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-117-A-22 | Lab Sample ID: 140-7324-12

Matrix: Air | Lab File ID: RC06P112.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:38

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 01:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.84		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.43		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.65	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.92		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-117-A-22 | Lab Sample ID: 140-7324-12

Matrix: Air | Lab File ID: RC06P112.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:38

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 01:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.56	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.0		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.9		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	10		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-118-A-22 | Lab Sample ID: 140-7324-13

Matrix: Air | Lab File ID: RC06P113.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:25

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 02:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.1		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.14	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.11	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.79	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-118-A-22 | Lab Sample ID: 140-7324-13

Matrix: Air | Lab File ID: RC06P113.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:25

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 02:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.52	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.0		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.61	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.61	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.4	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-136-A-22 | Lab Sample ID: 140-7324-14

Matrix: Air | Lab File ID: RC06P114.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:40

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 02:55

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.079	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.66		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.42		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.11	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-136-A-22 | Lab Sample ID: 140-7324-14

Matrix: Air | Lab File ID: RC06P114.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:40

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 02:55

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.52	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.50	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.3		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	7.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.59	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	9.3		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-138-A-22 | Lab Sample ID: 140-7324-15

Matrix: Air | Lab File ID: RC06P115.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:22

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 03:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.22	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.097	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.6		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.14	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.48		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	2.1		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-138-A-22 | Lab Sample ID: 140-7324-15

Matrix: Air | Lab File ID: RC06P115.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:22

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 03:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.70	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.61	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	9.3		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.56	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	3.2		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	11		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-139-A-22 | Lab Sample ID: 140-7324-23

Matrix: Air | Lab File ID: JC06P107.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:37

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 20:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9074 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.46		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.16	J	0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.090	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.76	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	83		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-139-A-22 | Lab Sample ID: 140-7324-23

Matrix: Air | Lab File ID: JC06P107.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:37

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 20:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9074 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.46	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.1	J	2.7	0.54
108-88-3	Toluene	92.14	4.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.48	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	83		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-168-A-22 | Lab Sample ID: 140-7324-10

Matrix: Air | Lab File ID: RC06P110.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:45

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 23:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.60		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.36	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.27	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.72	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.084	J	0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.18	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-168-A-22 | Lab Sample ID: 140-7324-10

Matrix: Air | Lab File ID: RC06P110.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 16:45

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 23:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.1		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.8	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.2	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.57	J	2.7	0.54
108-88-3	Toluene	92.14	4.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.99	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.1		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-DUP01-C-22 | Lab Sample ID: 140-7324-16

Matrix: Air | Lab File ID: JC06P101.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 16:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9074 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.70		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.42		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.70		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.69	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	79		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-DUP01-C-22 | Lab Sample ID: 140-7324-16

Matrix: Air | Lab File ID: JC06P101.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 16:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9074 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.48	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.6		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.0	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	79		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-DUP02-C-22 Lab Sample ID: 140-7324-17

Matrix: Air Lab File ID: JC06P102.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 00:00

Sample wt/vol: 153(mL) Date Analyzed: 03/06/2017 16:48

Soil Aliquot Vol: Dilution Factor: 1.53

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9074 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	ND		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.75		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.29	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	84		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-DUP02-C-22 | Lab Sample ID: 140-7324-17

Matrix: Air | Lab File ID: JC06P102.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 00:00

Sample wt/vol: 153(mL) | Date Analyzed: 03/06/2017 16:48

Soil Aliquot Vol: | Dilution Factor: 1.53

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9074 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.49	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	ND		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	84		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-DUP03-A-22 | Lab Sample ID: 140-7324-18

Matrix: Air | Lab File ID: JC06P103.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 17:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9074 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.084	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.6		0.40	0.075
67-66-3	Chloroform	119.38	0.14	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.43		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.16	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.40		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.6		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-DUP03-A-22 | Lab Sample ID: 140-7324-18

Matrix: Air | Lab File ID: JC06P103.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 17:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9074 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.65	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.53	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.6		1.4	0.27
67-66-3	Chloroform	119.38	0.68	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.65	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	2.1		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	8.7		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-DUP04-A-22 | Lab Sample ID: 140-7324-19

Matrix: Air | Lab File ID: JC06P104.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 18:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9074 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.59		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.43		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.19	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.97		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-DUP04-A-22 Lab Sample ID: 140-7324-19

Matrix: Air Lab File ID: JC06P104.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 00:00

Sample wt/vol: 100(mL) Date Analyzed: 03/06/2017 18:18

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9074 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.41	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.1		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.83	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: SV-093-A-22 | Lab Sample ID: 140-7324-25

Matrix: Air | Lab File ID: RC06P201.D

Analysis Method: TO 15 LL | Date Collected: 03/03/2017 11:12

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 06:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.47		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.38	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.12	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.076	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.67	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.41		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: SV-093-A-22 | Lab Sample ID: 140-7324-25

Matrix: Air | Lab File ID: RC06P201.D

Analysis Method: TO 15 LL | Date Collected: 03/03/2017 11:12

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 06:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.58	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.50	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.30	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.2		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Client Sample ID: SV-DUP01-C-22 Lab Sample ID: 140-7324-20

Matrix: Air Lab File ID: JC06P105.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 00:00

Sample wt/vol: 100(mL) Date Analyzed: 03/06/2017 19:04

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9074 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.64		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.29	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.71	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.41		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.63		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.36	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.31	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.9		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: SV-DUP01-C-22 | Lab Sample ID: 140-7324-20

Matrix: Air | Lab File ID: JC06P105.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 03/06/2017 19:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9074 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.3		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.2	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	2.1		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	3.1		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.8	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.5	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.3		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: SV-DUP02-C-22 | Lab Sample ID: 140-7324-21

Matrix: Air | Lab File ID: JC06P106R.D

Analysis Method: TO 15 LL | Date Collected: 02/28/2017 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 03/07/2017 09:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9074 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.1		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.085	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.98		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.53	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	86		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Client Sample ID: SV-DUP02-C-22 Lab Sample ID: 140-7324-21

Matrix: Air Lab File ID: JC06P106R.D

Analysis Method: TO 15 LL Date Collected: 02/28/2017 00:00

Sample wt/vol: 100(mL) Date Analyzed: 03/07/2017 09:37

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9074 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.6		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.58	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	5.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.63	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	86		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Client Sample ID: SV-DUP03-A-22 Lab Sample ID: 140-7324-22

Matrix: Air Lab File ID: RC06P116.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 00:00

Sample wt/vol: 10(mL) Date Analyzed: 03/07/2017 05:16

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9101 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		4.0	1.2
56-23-5	Carbon tetrachloride	153.81	ND		4.0	0.75
75-45-6	Chlorodifluoromethane	86.47	2.5	J	4.0	0.75
67-66-3	Chloroform	119.38	ND		4.0	0.75
156-59-2	cis-1,2-Dichloroethene	96.94	ND		4.0	1.2
75-71-8	Dichlorodifluoromethane	120.91	ND		4.0	1.4
75-34-3	1,1-Dichloroethane	98.96	1.0	J	4.0	0.50
107-06-2	1,2-Dichloroethane	98.96	ND		4.0	0.95
75-35-4	1,1-Dichloroethene	96.94	3.4	J	4.0	0.70
100-41-4	Ethylbenzene	106.17	ND		4.0	1.4
75-09-2	Methylene Chloride	84.93	ND		10	6.5
1634-04-4	Methyl tert-butyl ether	88.15	ND		20	3.4
91-20-3	Naphthalene	128.17	ND		2.0	2.0
127-18-4	Tetrachloroethene	165.83	ND		4.0	0.80
108-88-3	Toluene	92.14	ND		6.0	6.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		4.0	1.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		4.0	2.0
71-55-6	1,1,1-Trichloroethane	133.41	0.72	J	4.0	0.60
79-00-5	1,1,2-Trichloroethane	133.41	ND		4.0	1.1
79-01-6	Trichloroethene	131.39	ND		2.0	0.70
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		4.0	1.7
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		4.0	1.3
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		4.0	1.3
75-01-4	Vinyl chloride	62.50	ND	*	2.0	1.5
1330-20-7	Xylenes, Total	106.17	ND		8.0	1.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: SV-DUP03-A-22 | Lab Sample ID: 140-7324-22

Matrix: Air | Lab File ID: RC06P116.D

Analysis Method: TO 15 LL | Date Collected: 03/01/2017 00:00

Sample wt/vol: 10(mL) | Date Analyzed: 03/07/2017 05:16

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		13	3.7
56-23-5	Carbon tetrachloride	153.81	ND		25	4.7
75-45-6	Chlorodifluoromethane	86.47	8.7	J	14	2.7
67-66-3	Chloroform	119.38	ND		20	3.7
156-59-2	cis-1,2-Dichloroethene	96.94	ND		16	4.8
75-71-8	Dichlorodifluoromethane	120.91	ND		20	6.7
75-34-3	1,1-Dichloroethane	98.96	4.1	J	16	2.0
107-06-2	1,2-Dichloroethane	98.96	ND		16	3.8
75-35-4	1,1-Dichloroethene	96.94	13	J	16	2.8
100-41-4	Ethylbenzene	106.17	ND		17	5.9
75-09-2	Methylene Chloride	84.93	ND		35	23
1634-04-4	Methyl tert-butyl ether	88.15	ND		72	12
91-20-3	Naphthalene	128.17	ND		10	10
127-18-4	Tetrachloroethene	165.83	ND		27	5.4
108-88-3	Toluene	92.14	ND		23	23
156-60-5	trans-1,2-Dichloroethene	96.94	ND		16	4.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		30	14
71-55-6	1,1,1-Trichloroethane	133.41	3.9	J	22	3.3
79-00-5	1,1,2-Trichloroethane	133.41	ND		22	5.7
79-01-6	Trichloroethene	131.39	ND		11	3.8
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		20	8.4
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		20	6.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		20	6.4
75-01-4	Vinyl chloride	62.50	ND	*	5.1	3.7
1330-20-7	Xylenes, Total	106.17	ND		35	5.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

Appendix C

Support Documentation

Job Narrative
140-7324-1

Receipt
The samples were received on 3/4/2017 at 9:15 AM. The samples arrived in good condition and properly preserved.

Receipt Exceptions
Sample SV-DUP04-A-22 (140-7324-24) was received with the canister valve in the open position: The sample was at ambient pressure (approximately 0 psi). The client was contacted and the laboratory was instructed to cancel analysis.

Air - GC/MS VOA
Methods TO 15 LL, TO-14A, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

Method TO 15 LL: Sample SV-DUP03-A-22 (140-7324-22) was diluted due to the abundance of non-target analytes. Elevated reporting limits (RLs) are provided.

Method(s) TO 15 LL: The continuing calibration verification (CCV) associated with batch 140-9101 exhibited % difference of > 30% for vinyl chloride; however, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

Method TO 15 LL: Vinyl chloride recovered outside control limits for the LCS associated with analytical batch 140-9101. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments
No additional comments.

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Tetra Tech, Inc.
Project/Site: Feb 2017 MRC IA-SV

TestAmerica Job ID: 140-7324-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: Feb 2017 MRC IA-SV

TestAmerica Job ID: 140-7324-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-7324-1	IA-015-A-22	Air	03/01/17 16:26	03/04/17 09:15
140-7324-2	IA-018-A-22	Air	03/01/17 16:23	03/04/17 09:15
140-7324-3	IA-021-A-22	Air	03/01/17 16:47	03/04/17 09:15
140-7324-4	IA-075-A-22	Air	03/01/17 16:43	03/04/17 09:15
140-7324-5	IA-076-A-22	Air	03/01/17 16:41	03/04/17 09:15
140-7324-6	IA-078-A-22	Air	03/01/17 16:49	03/04/17 09:15
140-7324-7	IA-079-A-22	Air	03/01/17 16:28	03/04/17 09:15
140-7324-8	IA-081-A-22	Air	03/01/17 16:31	03/04/17 09:15
140-7324-9	IA-093-A-22	Air	03/01/17 16:21	03/04/17 09:15
140-7324-10	IA-168-A-22	Air	03/01/17 16:45	03/04/17 09:15
140-7324-11	IA-097-A-22	Air	03/01/17 16:30	03/04/17 09:15
140-7324-12	IA-117-A-22	Air	03/01/17 16:38	03/04/17 09:15
140-7324-13	IA-118-A-22	Air	03/01/17 16:25	03/04/17 09:15
140-7324-14	IA-136-A-22	Air	03/01/17 16:40	03/04/17 09:15
140-7324-15	IA-138-A-22	Air	03/01/17 16:22	03/04/17 09:15
140-7324-16	IA-DUP01-C-22	Air	02/28/17 00:00	03/04/17 09:15
140-7324-17	IA-DUP02-C-22	Air	02/28/17 00:00	03/04/17 09:15
140-7324-18	IA-DUP03-A-22	Air	03/01/17 00:00	03/04/17 09:15
140-7324-19	IA-DUP04-A-22	Air	03/01/17 00:00	03/04/17 09:15
140-7324-20	SV-DUP01-C-22	Air	02/28/17 00:00	03/04/17 09:15
140-7324-21	SV-DUP02-C-22	Air	02/28/17 00:00	03/04/17 09:15
140-7324-22	SV-DUP03-A-22	Air	03/01/17 00:00	03/04/17 09:15
140-7324-23	IA-139-A-22	Air	03/01/17 16:37	03/04/17 09:15
140-7324-25	SV-093-A-22	Air	03/03/17 11:12	03/04/17 09:15

Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Tony Apanavage	Site Contact: Tony Apanavage	Date:	COC No:
Tetra Tech	Tel/Fax: 301-233-8230	Lab Contact:	Carrier: Fedex	1 of 2 COCs
20251 Century Blvd, Suite 200				Job No.
Germantown, MD 20874				
301-233-8230 Phone				SDG No.
301-528-3000 FAX				
Project Name: Feb 2017 MRC IA-SV				Sampler:
Site: Middle River, MD				
P O #				

Analysis Turnaround Time
Calendar (C) or Work Days (W) _____
TAT if different from Below _____
☐ 2 weeks
☐ 1 week
☐ 2 days
☐ 1 day

140-7324 Chain of Custody

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	Sample Specific Notes:
IA-015-A-22	3/1/2017	0745	1626	-30	0	8609	10339	x	
IA-018-A-22	3/1/2017	0739	1623	-30	-3	8624	11254	x	
IA-021-A-22	3/1/2017	0833	1647	-30	0	8461	10346	x	
IA-075-A-22	3/1/2017	0830	1643	-30	0	11261	09810	x	
IA-076-A-22	3/1/2017	0828	1641	-30	0	8620	10837	x	
IA-078-A-22	3/1/2017	0819	1649	-29	0	7402	10745	x	
IA-079-A-22	3/1/2017	0806	1628	-30	-1	10360	10523	x	
IA-081-A-22	3/1/2017	0750	1631	-30	0	09656	09577	x	
IA-093-A-22	3/1/2017	0743	1621	-30	0	09650	11126	x	
IA-168-A-22	3/1/2017	0840	1645	-29	0	09648	10919	x	IA-168-A-22
IA-097-A-22	3/1/2017	0810	1630	-30	-1	09652	10340	x	Received @ ambient, 3 boxes
IA-117-A-22	3/1/2017	0816	1638	-29	0	09702	11122	x	trk# 7785 7914 6555
IA-118-A-22	3/1/2017	0802	1625	-30	0	7283	09664	x	FedEx PO: " " 5099
IA-136-A-22	3/1/2017	0825	1640	-30	0	7602	10960	x	" " 5386
IA-138-A-22	3/1/2017	0741	1622	-30	0	7029	09797	x	No Custody seal KL 3/4/17

Special Instructions/QC Requirements & Comments: **Contracted Analyte List**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Tetra Tech	3/3/17			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TA	3/3/17 1547			
Relinquished by: Callico/Cates	Company: Fedex	Date/Time: 3/3/17 1855	Received by:	Company: TA	Date/Time: 3/4/17 0915

Form No. CA-C-WI-002, Rev. 2, dated 03/06/2012

21 flows 27 cans

180325

Knoxville
5815 Middlebrook Pike

Knoxville, TN 37921
phone 865.291.3000 fax 865.584.4315

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Tony Apanavage	Site Contact: Tony Apanavage	Date:	COC No:
Tetra Tech	Tel/Fax: 301-233-8230	Lab Contact:	Carrier: Fedex	2 of 2 COCs
20251 Century Blvd, Suite 200	Analysis Turnaround Time			Job No.
Germantown, MD 20874	Calendar (C) or Work Days (W) _____			
301-233-8230 Phone	TAT if different from Below _____			SDG No.
301-528-3000 FAX	☐ 2 weeks			
Project Name: Feb 2017 MRC IA-SV	☐ 1 week			Sampler:
Site: Middle River, MD	☐ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Time Start	Time Stop	Canister Volume in Field "Hg (Start)	Canister Volume in Field "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	Sample Specific Notes:
IA-DUP01-C-22	2/28/2017	0000	0000	-30	-2	9665	11541	X	
IA-DUP02-C-22	2/28/2017	0000	0000	-30	0	8547	9589	X	
IA-DUP03-A-22	3/1/2017	0000	0000	-30	-5	8570	10970	X	
IA-DUP04-A-22	3/1/2017	0000	0000	-30	0	8599	09833	X	
SV-DUP01-C-22	2/28/2017	0000	0000	-30	0	10647	10835	X	
SV-DUP02-C-22	2/28/2017	0000	0000	-30	-2	9712	11108	X	
SV-DUP03-A-22	3/1/2017	0000	0000	-30	-2	10049	11255	X	
TA/W.P [redacted]									
IA-139-A-22	3/1/2017	0759	1637	-30	-1	10921	10921	X	
SV-DUP04-A-22	3/1/17	0000	0000	-30	0	11243	10740	X	
SV-093-A-22	3/3/17	0952	1112	-30	0	09704	10917	X	

Special Instructions/QC Requirements & Comments: **Contracted Analyte List**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Tetra Tech	3/3/17			
[signature]	TA	3/3/17 1557			
[signature]	TA	3/3/17 1658			

Form No. CA-C-WI-002, Rev. 2, dated 03/06/2012

03/15/2017

Loc: 140
7324

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	/			☐ **Containers, Broken**
2. Were ambient air containers received intact?			/	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			/	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			/	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	/			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	/			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	/			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	/			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	/			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?		/		☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	/			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	/			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	/			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	/			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	/			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			/	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			/	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			/	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			/	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			/	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: 1400295 PM Instructions:

Sample Receiving Associate: Date: 3/4/17

QA026R30.doc, 080916

FIELD DUPLICATE PRECISION - IA-015-A-22 / IA-DUP03-A-22							
ANALYTE	**IA-015-A-22**	**QUAL**	**IA-DUP03-A-22**	**QUAL**	**RPD**	**DIFFERENCE**	**RL**
1,1-DICHLOROETHENE	0.28	U	0.65	J	79.57	0.37	1.6
BENZENE	0.5	J	0.65	J	26.09	0.15	1.3
CARBON TETRACHLORIDE	0.47	U	0.53	J	12.00	0.06	2.5
CHLORODIFLUOROMETHANE	4.9		5.6		13.33	0.7	1.4
CHLOROFORM	0.37	J	0.68	J	59.05	0.31	2
DICHLORODIFLUOROMETHANE	1.8	J	2.1		15.38	0.3	2
NAPHTHALENE	1	U	2.1	J	70.97	1.1	1
TOLUENE	3		2.3	U	26.42	0.7	2.3
TOTAL XYLENES	1.4	J	0.52	U	91.67	0.88	3.5
TRICHLOROETHENE	0.38	U	8.7		183.26	8.32	1.1

FIELD DUPLICATE PRECISION - IA-079-A-22 / IA-DUP04-A-22							
ANALYTE	**IA-079-A-22**	**QUAL**	**IA-DUP04-A-22**	**QUAL**	**RPD**	**DIFFERENCE**	**RL**
BENZENE	0.52	J	0.41	J	23.66	0.11	1.3
CHLORODIFLUOROMETHANE	2.7		2.1		25.00	0.6	1.4
DICHLORODIFLUOROMETHANE	2		2.1		4.88	0.1	2
ETHYLBENZENE	1.2	J	0.83	J	36.45	0.37	1.7

FIELD DUPLICATE PRECISION - IA-131-C-22 / IA-DUP01-C-22							
ANALYTE	**IA-131-C-22**	**QUAL**	**IA-DUP01-C-22**	**QUAL**	**RPD**	**DIFFERENCE**	**RL**
BENZENE	0.7	J	0.48	J	37.29	0.22	1.3
CHLORODIFLUOROMETHANE	2.8		2.5		11.32	0.3	1.4
DICHLORODIFLUOROMETHANE	1.9	J	2.1		10.00	0.2	2
ETHYLBENZENE	0.64	J	0.59	U	8.13	0.05	1.7
METHYLENE CHLORIDE	2.7	J	2.3	U	16.00	0.4	3.5
TOLUENE	3.7		2.6		34.92	1.1	2.3
TOTAL XYLENES	3.6		3	J	18.18	0.6	3.5

FIELD DUPLICATE PRECISION - IA-153-C-22 / IA-DUP02-C-22							
ANALYTE	**IA-153-C-22**	**QUAL**	**IA-DUP02-C-22**	**QUAL**	**RPD**	**DIFFERENCE**	**RL**
BENZENE	0.54	J	0.49	J	9.71	0.05	1.3
CHLORODIFLUOROMETHANE	3.4		0.27	U	170.57	3.13	1.4
DICHLORODIFLUOROMETHANE	2.2		1.9	J	14.63	0.3	2
METHYLENE CHLORIDE	2.3	J	2.3	U	0.00	0	3.5
TOLUENE	3		2.8		6.90	0.2	2.3
TOTAL XYLENES	1.9	J	1.3	J	37.50	0.6	3.5

FIELD DUPLICATE PRECISION - SV-131-C-22 / SV-DUP01-C-22							
ANALYTE	**SV-131-C-22**	**QUAL**	**SV-DUP01-C-22**	**QUAL**	**RPD**	**DIFFERENCE**	**RL**
1,2,3-TRIMETHYLBENZENE	4.5		3.1		36.84	~~1.4~~	2
1,2,4-TRIMETHYLBENZENE	2.3		1.8	J	~~24.39~~	0.5	2
1,3,5-TRIMETHYLBENZENE	2		1.5	J	~~28.57~~	0.5	2
CHLORODIFLUOROMETHANE	1.9		2.3		19.05	~~0.4~~	1.4
DICHLORODIFLUOROMETHANE	1.9	J	2		~~5.13~~	0.1	2
ETHYLBENZENE	1.4	J	1.2	J	~~15.38~~	0.2	1.7
METHYLENE CHLORIDE	3.3	J	2.5	J	~~27.59~~	0.8	3.5
NAPHTHALENE	4.1	J	2.1	J	64.52	~~2~~	1
TOTAL XYLENES	9.2		8.3		10.29	0.9	3.5

FIELD DUPLICATE PRECISION - SV-153-C-22 / SV-DUP02-C-22							
ANALYTE	**SV-153-C-22**	**QUAL**	**SV-DUP02-C-22**	**QUAL**	**RPD**	**DIFFERENCE**	**RL**
1,2,4-TRIMETHYLBENZENE	0.64	J	0.63	J	~~1.57~~	0.01	2
CHLORODIFLUOROMETHANE	3.8		3.9		2.60	~~0.1~~	1.4
DICHLORODIFLUOROMETHANE	1.9	J	2.3		~~19.05~~	0.4	2
METHYLENE CHLORIDE	2.7	J	3.6		~~28.57~~	0.9	3.5
TETRACHLOROETHENE	0.54	U	0.58	J	~~7.14~~	0.04	2.7
TOLUENE	2.6		2.3	U	~~12.24~~	0.3	2.3
TOTAL XYLENES	1.9	J	2.3	J	~~19.05~~	0.4	3.5
TRICHLOROETHENE	5.7		5.3		7.27	~~0.4~~	1.1

FIELD DUPLICATE PRECISION - SV-015-A-22 / SV-DUP03-A-22							
ANALYTE	**SV-015-A-22**	**QUAL**	**SV-DUP03-A-22**	**QUAL**	**RPD**	**DIFFERENCE**	**RL**
1,1,1-TRICHLOROETHANE	2.1	J	3.9	J	~~60.00~~	1.8	22
1,1-DICHLOROETHANE	2		4.1	J	~~68.85~~	2.1	16
1,1-DICHLOROETHENE	6		13	J	~~73.68~~	7	16
BENZENE	1.2	J	3.7	U	~~102.04~~	2.5	13
CHLORODIFLUOROMETHANE	6.1		8.7	J	~~35.14~~	2.6	14
CHLOROFORM	0.58	J	3.7	U	~~145.79~~	3.12	20
CIS-1,2-DICHLOROETHENE	0.73	J	4.8	U	~~147.20~~	4.07	16
DICHLORODIFLUOROMETHANE	2.1		6.7	U	~~104.55~~	4.6	20
METHYLENE CHLORIDE	3.2	J	23	U	~~151.15~~	19.8	35
TOLUENE	4.2		23	U	~~138.24~~	18.8	23
TOTAL XYLENES	2.4	J	5.2	U	~~73.68~~	2.8	35
TRICHLOROETHENE	2.3		3.8	U	~~49.18~~	1.5	11

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Lab File ID: JBFBK25X.D BFB Injection Date: 11/25/2016

Instrument ID: MJ BFB Injection Time: 18:19

Analysis Batch No.: 7241

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	23.8	
75	30.0 - 60.0 % of mass 95	45.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	98.9	
175	5.0 - 9.0 % of mass 174	7.8	(7.9) 1
176	95.0 - 101.0 % of mass 174	97.9	(99.0) 1
177	5.0 - 9.0 % of mass 176	6.5	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-7241/2	JK25IC01X.D	11/25/2016	18:47
	IC 140-7241/3	JK25IC02X.D	11/25/2016	19:41
	IC 140-7241/4	JK25IC03X.D	11/25/2016	20:34
	IC 140-7241/5	JK25IC04X.D	11/25/2016	21:29
	IC 140-7241/6	JK25IC05X.D	11/25/2016	22:23
	ICIS 140-7241/7	JK25IC06X.D	11/25/2016	23:17
	IC 140-7241/8	JK25IC07X.D	11/26/2016	00:11
	IC 140-7241/9	JK25IC08X.D	11/26/2016	01:05
	IC 140-7241/10	JK25IC09X.D	11/26/2016	01:58
	ICV 140-7241/23	JK25ICVX.D	11/26/2016	12:43

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-7241/2	JK25IC01X.D
Level 2	IC 140-7241/3	JK25IC02X.D
Level 3	IC 140-7241/4	JK25IC03X.D
Level 4	IC 140-7241/5	JK25IC04X.D
Level 5	IC 140-7241/6	JK25IC05X.D
Level 6	ICIS 140-7241/7	JK25IC06X.D
Level 7	IC 140-7241/8	JK25IC07X.D
Level 8	IC 140-7241/9	JK25IC08X.D
Level 9	IC 140-7241/10	JK25IC09X.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.3279	0.5209 0.3424	0.3376 0.3408	0.3209 0.3492	0.3466	Ave		0.3608				18.1		30.0			
Propene	+++++ 1.1758	+++++ 1.1993	1.3594 1.2672	1.2515 1.2587	1.2062	Ave		1.2455				4.9		30.0			
Dichlorodifluoromethane	3.8475 3.0537	3.3487 3.2136	3.1580 3.1835	2.9958 3.2159	3.1307	Ave		3.2386				7.7		30.0			
Chloromethane	+++++ 0.4359	0.5252 0.4576	0.4677 0.4580	0.4181 0.4804	0.4514	Ave		0.4618				6.9		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++ 2.0718	1.8918 1.6896	1.9626 1.5936	1.6292 1.6718	1.8086	Ave		1.7899				9.6		30.0			
Acetaldehyde	+++++ 0.4566	+++++ 0.4368	0.6805 0.4719	0.4532 0.5131	0.4805	Ave		0.4989				16.8		30.0			
Vinyl chloride	1.5299 1.3297	1.4001 1.3957	1.3464 1.3972	1.2586 1.4297	1.3793	Ave		1.3852				5.4		30.0			
Butane	2.9735 2.2299	2.5054 2.3309	2.3789 2.3726	2.1780 2.4282	2.3273	Ave		2.4138				9.6		30.0			
1,3-Butadiene	+++++ 1.0536	1.1806 1.1114	1.1186 1.1221	1.0201 1.1708	1.1152	Ave		1.1116				4.8		30.0			
Bromomethane	+++++ 1.1936	1.2661 1.2491	1.2107 1.2599	1.1307 1.2876	1.2587	Ave		1.2320				4.1		30.0			
Chloroethane	+++++ 0.6554	0.7015 0.6546	0.6348 0.6662	0.6137 0.6695	0.6603	Ave		0.6570				3.9		30.0			
Ethanol	0.5705 0.5223	0.5667 0.5053	0.5919 0.4982	0.4772 0.4781	0.5432	Ave		0.5282				8.0		30.0			
Vinyl bromide	1.3456 1.1540	1.2167 1.2054	1.1654 1.2260	1.0712 1.2467	1.2246	Ave		1.2062				6.2		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	2.0288 1.6960	1.8143 1.7503	1.6822 1.7808	1.5836 1.8155	1.7549	Ave		1.7674				6.9		30.0			
Trichlorofluoromethane	3.6024 3.2281	3.3180 3.3173	3.1843 3.3742	2.9197 3.3969	3.3115	Ave		3.2947				5.6		30.0			
Acrolein	+++++ 0.3517	+++++ 0.3409	0.5264 0.3539	0.3333 0.4239	0.3839	Ave		0.3877				17.7		30.0			
Acetonitrile	+++++ 0.4656	+++++ 0.4481	0.5197 0.4687	0.4059 0.5215	0.5094	Ave		0.4770				9.0		30.0			
Acetone	+++++ 0.4196	+++++ 0.3917	+++++ 0.3945	0.4202 0.4174	0.4431	Ave		0.4144				4.6		30.0			
Isopropyl alcohol	2.1209 1.9104	1.9735 1.9294	1.9325 1.9239	1.6981 1.9040	1.9590	Ave		1.9280				5.6		30.0			
Pentane	+++++ 0.1846	+++++ 0.1866	0.1863 0.1929	0.1616 0.1996	0.1846	Ave		0.1852				6.3		30.0			
Ethyl ether	+++++ 1.3268	1.4955 1.2979	1.4011 1.3235	1.1595 1.4364	1.4228	Ave		1.3579				7.7		30.0			
1,1-Dichloroethene	1.4517 1.1478	1.2123 1.1795	1.1371 1.2067	1.0798 1.2269	1.1937	Ave		1.2040				8.6		30.0			
Acrylonitrile	0.9001 0.7158	0.7984 0.7022	0.8029 0.7410	0.6242 0.8371	0.7564	Ave		0.7642				10.6		30.0			
tert-Butyl alcohol	1.8439 1.9956	1.9418 2.0218	1.9150 2.0374	1.7291 1.9964	2.0129	Ave		1.9438				5.2		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	2.8738 2.6185	2.7163 2.6279	2.5695 2.7290	2.4107 2.8100	2.6551	Ave		2.6679				5.1		30.0			
Methylene Chloride	+++++ 1.0931	+++++ 1.0697	1.5404 1.0991	1.1635 1.1074	1.1789	Ave		1.1789				13.9		30.0			
3-Chloropropene	+++++ 1.3409	1.4536 1.3288	1.5147 1.3596	1.2743 1.4217	1.4115	Ave		1.3881				5.5		30.0			
Carbon disulfide	3.9115 3.3893	3.7671 3.4592	3.4541 3.5389	3.2558 3.5681	3.5744	Ave		3.5465				5.5		30.0			
trans-1,2-Dichloroethene	1.3787 1.1690	1.2657 1.1718	1.1799 1.2095	1.0788 1.2275	1.2113	Ave		1.2102				6.7		30.0			
2-Methylpentane	3.5552 3.0451	3.2099 3.0193	3.0439 3.1532	2.7866 3.2386	3.1086	Ave		3.1289				6.6		30.0			
Methyl tert-butyl ether	2.8993 2.3272	2.8445 2.2839	2.5815 2.3429	2.0927 2.4349	2.4571	Ave		2.4738				10.6		30.0			
1,1-Dichloroethane	2.6041 2.2322	2.4643 2.1350	2.2671 2.2124	2.1642 2.3110	2.3145	Ave		2.3005				6.5		30.0			
Vinyl acetate	2.9851 2.7422	3.0101 2.6575	2.9743 2.7570	2.3823 3.0708	2.9180	Ave		2.8330				7.8		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.3708	0.3334 0.3586	0.3892 0.3677	0.3327 0.3798	0.3687	Ave		0.3626				5.6		30.0			
Hexane	+++++ 1.0259	1.2313 0.9943	1.0969 1.0492	0.9671 1.1068	1.0490	Ave		1.0651				7.7		30.0			
Isopropyl ether	4.0607 3.6638	3.7881 3.6242	3.9354 3.7695	3.2767 3.8864	3.9218	Ave		3.7696				6.1		30.0			
cis-1,2-Dichloroethene	1.4783 1.1314	1.2330 1.0794	1.1960 1.1235	1.1085 1.1935	1.1910	Ave		1.1928				9.9		30.0			
Ethyl acetate	2.4761 2.0850	2.2471 2.0350	2.1376 2.0630	1.7887 2.1294	2.0820	Ave		2.1160				8.6		30.0			
Chloroform	3.0247 2.3882	2.7668 2.2280	2.6010 2.3049	2.3218 2.4506	2.4911	Ave		2.5086				10.1		30.0			
Tert-butyl ethyl ether	2.7965 2.8749	3.0587 2.8302	3.0183 2.9494	2.4991 3.0294	3.0020	Ave		2.8954				6.1		30.0			
Tetrahydrofuran	+++++ 1.1460	1.3809 1.0826	1.2631 1.1127	1.0323 1.2144	1.1865	Ave		1.1773				9.4		30.0			
1,1,1-Trichloroethane	3.1145 2.5058	2.7531 2.3548	2.6301 2.4015	2.4118 2.5385	2.5942	Ave		2.5894				9.0		30.0			
1,2-Dichloroethane	0.4336 0.3666	0.3727 0.3311	0.3707 0.3547	0.3467 0.4034	0.3755	Ave		0.3728				8.2		30.0			
1-Butanol	+++++ 0.1215	0.1246 0.1211	0.1092 0.1266	0.0991 0.1337	0.1196	Ave		0.1194				9.0		30.0			
Cyclohexane	+++++ 0.1293	+++++ 0.1205	0.1569 0.1244	0.1230 0.1388	0.1342	Ave		0.1325				9.5		30.0			
Benzene	0.9199 0.6870	0.7288 0.6372	0.7252 0.6816	0.6544 0.7950	0.7103	Ave		0.7266				11.8		30.0			
Carbon tetrachloride	0.7660 0.6506	0.6614 0.6021	0.6423 0.5137	0.5728 0.6916	0.6637	Ave		0.6405				11.3		30.0			
2,3-Dimethylpentane	+++++ 0.1639	0.1817 0.1498	0.1699 0.1601	0.1592 0.1819	0.1674	Ave		0.1667				6.6		30.0			
Thiophene	0.5058 0.3990	0.4152 0.3696	0.4238 0.3916	0.3745 0.4451	0.4135	Ave		0.4153				10.0		30.0			
Tert-amyl methyl ether	+++++ 0.6604	0.5982 0.6006	0.5926 0.6188	0.5386 0.6438	0.7224	Ave		0.6219				8.8		30.0			
2,2,4-Trimethylpentane	+++++ 1.3383	1.5785 1.2186	1.4409 1.2948	1.2908 1.4822	1.3763	Ave		1.3776				8.5		30.0			
Heptane	0.3156 0.2383	0.2763 0.2197	0.2614 0.2336	0.2274 0.2722	0.2470	Ave		0.2546				11.8		30.0			
1,2-Dichloropropane	0.3317 0.2850	0.2964 0.2668	0.2887 0.2829	0.2636 0.3323	0.3019	Ave		0.2944				8.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.4047 0.3224	0.3508 0.3009	0.3621 0.3176	0.3154 0.3719	0.3318	Ave		0.3420				9.7		30.0			
Dibromomethane	0.4152 0.3099	0.3258 0.2848	0.3210 0.3000	0.3016 0.3484	0.3163	Ave		0.3248				11.8		30.0			
Bromodichloromethane	0.7155 0.5386	0.5955 0.4942	0.5617 0.5262	0.4941 0.6104	0.5528	Ave		0.5654				12.2		30.0			
1,4-Dioxane	0.0760 0.0803	0.0765 0.0791	0.0708 0.0817	0.0636 0.0846	0.0805	Ave		0.0770				8.3		30.0			
Methyl methacrylate	+++++ 0.2758	0.2781 0.2750	0.2691 0.2947	0.2314 0.3249	0.2784	Ave		0.2784				9.4		30.0			
Methylcyclohexane	+++++ 0.5470	0.6129 0.4948	0.5612 0.5246	0.5222 0.5970	0.5628	Ave		0.5528				7.1		30.0			
4-Methyl-2-pentanone (MIBK)	0.6044 0.5456	0.5569 0.5396	0.5362 0.5676	0.4620 0.6066	0.5373	Ave		0.5507				7.8		30.0			
cis-1,3-Dichloropropene	0.4472 0.3699	0.3541 0.3619	0.3536 0.3931	0.3411 0.4436	0.3748	Ave		0.3821				10.1		30.0			
trans-1,3-Dichloropropene	0.4678 0.3274	0.3618 0.3204	0.2858 0.3429	0.2743 0.3961	0.3224	Ave		0.3443				17.2		30.0			
Toluene Range	2.9852 2.1585	2.2448 2.0285	2.1821 2.1704	1.8063 2.4356	2.2621	Ave		2.2526				14.4		30.0			
Toluene	+++++ 0.8479	0.8984 0.7936	0.8894 0.8539	0.7495 0.9595	0.8883	Ave		0.8601				7.6		30.0			
1,1,2-Trichloroethane	0.3435 0.2646	0.2696 0.2425	0.2602 0.2572	0.2323 0.2883	0.2753	Ave		0.2704				11.9		30.0			
2-Methylthiophene	+++++ 0.7403	0.7593 0.6716	0.6686 0.7239	0.6483 0.8025	0.7594	Ave		0.7217				7.5		30.0			
3-Methylthiophene	+++++ 0.6788	0.7328 0.6493	0.6904 0.6885	0.6001 0.7729	0.6991	Ave		0.6890				7.5		30.0			
2-Hexanone	+++++ 0.2614	0.2290 0.2734	0.2173 0.2785	0.1991 0.2986	0.2517	Ave		0.2511				13.4		30.0			
C8 Range	+++++ 3.1096	+++++ 2.8109	3.2020 2.9646	2.7739 3.3358	3.2719	Ave		3.0670				7.2		30.0			
Octane	0.3590 0.2789	0.3147 0.2536	0.2752 0.2683	0.2446 0.3054	0.2923	Ave		0.2880				12.1		30.0			
Dibromochloromethane	0.7263 0.6428	0.6250 0.5873	0.5865 0.6267	0.5131 0.7138	0.6522	Ave		0.6304				10.4		30.0			
1,2-Dibromoethane (EDB)	0.5581 0.4501	0.4574 0.4226	0.4244 0.4524	0.3554 0.5175	0.4565	Ave		0.4549				12.6		30.0			
Tetrachloroethene	0.4997 0.3580	0.4044 0.3239	0.3567 0.3458	0.3374 0.3924	0.3731	Ave		0.3768				14.0		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorobenzene	0.8119 0.6651	0.6711 0.6266	0.6199 0.6745	0.5616 0.7759	0.6719	Ave		0.6754				11.4		30.0			
2,3-Dimethylheptane	1.1660 1.0785	1.1670 0.9808	1.0695 1.0153	0.9629 1.1134	1.1327	Ave		1.0762				7.1		30.0			
Ethylbenzene	1.3653 0.9774	1.0019 0.9174	0.9920 0.9981	0.7905 1.1242	1.0145	Ave		1.0201				15.4		30.0			
2-Ethylthiophene	0.9035 0.7469	0.7527 0.7105	0.7245 0.7758	0.6125 0.8812	0.7573	Ave		0.7628				11.5		30.0			
m-Xylene & p-Xylene	0.9161 0.7347	0.7271 0.6977	0.7185 0.7666	0.5864 0.8663	0.7608	Ave		0.7527				12.7		30.0			
Nonane	0.7785 0.6367	0.6093 0.6067	0.6044 0.6540	0.5024 0.7504	0.6488	Ave		0.6435				12.7		30.0			
Bromoform	0.6867 0.5981	0.5302 0.5880	0.5387 0.6519	0.4509 0.8044	0.5555	Ave		0.6005				17.2		30.0			
Styrene	0.6616 0.5192	0.4669 0.5187	0.4666 0.5854	0.3764 0.6988	0.5235	Ave		0.5352				18.7		30.0			
o-Xylene	1.0374 0.7741	0.8121 0.7268	0.8252 0.7878	0.6459 0.8841	0.8122	Ave		0.8117				13.3		30.0			
1,1,2,2-Tetrachloroethane	0.7578 0.5860	0.5524 0.5636	0.5036 0.6170	0.4597 0.6778	0.5995	Ave		0.5908				15.1		30.0			
1,2,3-Trichloropropane	+++++ 0.1362	0.1351 0.1310	0.1263 0.1469	0.1017 0.1656	0.1423	Ave		0.1356				13.5		30.0			
Isopropylbenzene	1.4300 1.0460	1.1107 0.9870	1.0783 1.0790	0.8534 1.2030	1.0952	Ave		1.0980				14.3		30.0			
Propylbenzene	0.3117 0.2615	0.2150 0.2492	0.2338 0.2793	0.1871 0.3270	0.2606	Ave		0.2584				17.1		30.0			
2-Chlorotoluene	0.3232 0.2648	0.2511 0.2595	0.2653 0.2876	0.2101 0.3338	0.2744	Ave		0.2744				13.6		30.0			
4-Ethyltoluene	1.1777 0.9153	0.7877 0.8908	0.8034 0.9987	0.6479 1.1417	0.9015	Ave		0.9183				18.4		30.0			
1,3,5-Trimethylbenzene	0.5614 0.4580	0.4000 0.4385	0.4540 0.4896	0.3436 0.5642	0.4574	Ave		0.4630				15.2		30.0			
Alpha Methyl Styrene	0.4217 0.3608	0.2786 0.3630	0.2794 0.4253	0.2366 0.5040	0.3478	Ave		0.3575				23.7		30.0			
Decane	+++++ 0.6528	0.6013 0.6570	0.5953 0.7392	0.4586 0.8575	0.6448	Ave		0.6508				17.7		30.0			
tert-Butylbenzene	1.1493 0.9074	0.8557 0.8661	0.9100 0.9720	0.7027 1.1125	0.9329	Ave		0.9343				14.4		30.0			
1,2,4-Trimethylbenzene	0.9974 0.7933	0.6954 0.7726	0.7121 0.8661	0.5683 0.9996	0.7846	Ave		0.7988				17.5		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	1.5378 1.1932	1.0946 1.1562	1.1832 1.2867	0.8961 1.4520	1.2291	Ave		1.2254				15.4		30.0			
1,3-Dichlorobenzene	0.5550 0.4199	0.3703 0.4402	0.3233 0.5410	0.2865 0.6876	0.4043	Ave		0.4476				28.3		30.0			
Benzyl chloride	+++++ 0.4344	0.3207 0.4606	0.2811 0.5817	0.2549 +++++	0.3836	Ave		0.3881				29.5		30.0			
1,4-Dichlorobenzene	0.4368 0.3614	0.2948 0.3825	0.2705 0.4825	0.2323 +++++	0.3308	Ave		0.3490				24.2		30.0			
4-Isopropyltoluene	1.2247 0.9539	0.8120 0.9215	0.8627 1.0355	0.6793 1.1549	0.9553	Ave		0.9555				17.6		30.0			
1,2,3-Trimethylbenzene	0.7389 0.5904	0.5559 0.5663	0.5748 0.6310	0.4445 0.7050	0.5967	Ave		0.6004				14.3		30.0			
Butylcyclohexane	0.9939 0.7487	0.6964 0.7290	0.7343 0.8014	0.5920 0.8884	0.7723	Ave		0.7729				14.9		30.0			
Indane	0.8395 0.6893	0.5975 0.6764	0.6142 0.7856	0.4850 0.9222	0.6825	Ave		0.6991				19.0		30.0			
1,2-Dichlorobenzene	0.5313 0.4395	0.3695 0.4481	0.3510 0.5483	0.2920 0.6744	0.4257	Ave		0.4533				25.7		30.0			
Indene	0.5216 0.4348	0.3300 0.4414	0.3234 0.5337	0.2717 0.6454	0.4085	Ave		0.4345				27.3		30.0			
Butylbenzene	1.0320 0.8033	0.6580 0.8001	0.6470 0.9309	0.5248 1.0536	0.7655	Ave		0.8017				22.3		30.0			
Undecane	+++++ 0.5973	0.5390 0.5900	0.4922 0.6843	0.4020 0.8030	0.5661	Ave		0.5842				20.7		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 0.6180	0.5048 0.6086	0.5006 0.6944	0.4163 0.7766	0.5937	Ave		0.5891				19.5		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.1739	0.1315 0.1811	0.1242 0.2201	0.1052 +++++	0.1558	Ave		0.1560				25.2		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 0.7255	0.5992 0.7149	0.6031 0.8093	0.4817 0.8971	0.6875	Ave		0.6898				18.8		30.0			
1,2,3,5-Tetramethylbenzene	+++++ 0.4432	0.3662 0.4420	0.3835 0.4915	0.2965 0.5445	0.4246	Ave		0.4240				18.1		30.0			
1,2,3,4-Tetramethylbenzene	+++++ 0.5580	0.5018 0.5469	0.4684 0.6231	0.3685 0.6869	0.5361	Ave		0.5362				17.9		30.0			
Dodecane	+++++ 0.5103	0.4533 0.4838	0.4122 0.5557	0.3131 0.6262	0.5110	Ave		0.4832				19.5		30.0			
1,2,4-Trichlorobenzene	0.1681 0.1556	0.1028 0.1706	0.0957 +++++	0.0776 +++++	0.1423	Ave		0.1304				29.0		30.0			
Naphthalene	0.4947 0.3598	0.2746 0.3910	0.2282 0.5046	0.2037 +++++	0.3360	Ave		0.3491				32.3	*	30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	+++++ 0.1503	0.1107 0.1611	0.0905 0.2166	0.0836 +++++	0.1388	Ave		0.1359				34.0	*	30.0			
Hexachlorobutadiene	0.6292 0.4815	0.4595 0.4700	0.4647 0.5481	0.3282 0.6640	0.4975	Ave		0.5047				19.7		30.0			
1,2,3-Trichlorobenzene	0.1979 0.1824	0.1457 0.1937	0.1256 0.2459	0.0937 +++++	0.1794	Ave		0.1705				27.8		30.0			
2-Methylnaphthalene	+++++ 0.0376	0.0294 0.0397	0.0240 0.0458	0.0144 0.0500	0.0333	Ave		0.0343				33.9		50.0			
1-Methylnaphthalene	+++++ 0.0439	0.0354 0.0453	0.0295 0.0483	0.0162 0.0466	0.0401	Ave		0.0381				28.5		50.0			
4-Bromofluorobenzene (Surr)	0.5598 0.6420	0.6032 0.6644	0.6008 0.6801	0.6245 0.7022	0.6235	Ave		0.6334				7.0		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-7241/2	JK25IC01X.D
Level 2	IC 140-7241/3	JK25IC02X.D
Level 3	IC 140-7241/4	JK25IC03X.D
Level 4	IC 140-7241/5	JK25IC04X.D
Level 5	IC 140-7241/6	JK25IC05X.D
Level 6	ICIS 140-7241/7	JK25IC06X.D
Level 7	IC 140-7241/8	JK25IC07X.D
Level 8	IC 140-7241/9	JK25IC08X.D
Level 9	IC 140-7241/10	JK25IC09X.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 58411	3817 118844	5092 235313	11982 484336	30842	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propene	CBM	Ave	+++++ 209464	+++++ 416325	20501 875090	46736 1745617	107343	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	13281 544024	24537 1115556	47625 2198367	111873 4459893	278609	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	+++++ 77658	3848 158851	7053 316299	15615 666251	40173	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	+++++ 369090	13862 586542	29597 1100458	60841 2318437	160950	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 406708	+++++ 758197	51314 1629284	84629 3557537	213784	+++++ 9.99	+++++ 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl chloride	CBM	Ave	5281 236881	10259 484487	20305 964833	47000 1982759	122746	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butane	CBM	Ave	10264 397262	18358 809131	35876 1638360	81334 3367418	207118	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	+++++ 187703	8651 385793	16869 774881	38093 1623732	99249	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	+++++ 212632	9277 433625	18258 870033	42225 1785611	112019	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	+++++ 116765	5140 227227	9573 460075	22919 928476	58761	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	9847 465217	20763 876962	44631 1720033	89104 3315415	241723	0.196 9.99	0.392 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl bromide	CBM	Ave	4645 205590	8915 418434	17575 846638	40004 1728904	108983	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	7003 302142	13294 607591	25369 1229715	59137 2517794	156174	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Trichlorofluoromethane	CBM	Ave	12435 575081	24312 1151548	48022 2330072	109033 4710858	294702	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrolein	CBM	Ave	+++++ 62656	+++++ 118346	7938 244387	12447 587930	34165	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 82955	+++++ 155542	7837 323650	15157 723270	45336	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 224276	+++++ 407996	+++++ 817306	47081 1736723	118305	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.01
Isopropyl alcohol	CBM	Ave	21965 1021108	43385 2009448	87437 3985916	190258 7921894	523062	0.118 5.99	0.235 12.0	0.476 24.0	1.20 48.0	3.01
Pentane	CBM	Ave	+++++ 32889	+++++ 64760	2810 133194	6036 276851	16429	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl ether	CBM	Ave	+++++ 236371	10958 450555	21130 913954	43301 1992033	126616	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	5011 204488	8883 409463	17148 833287	40325 1701547	106234	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	3107 127525	5850 243769	12108 511675	23310 1160939	67317	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butyl alcohol	CBM	Ave	6365 355509	14228 701844	28880 1406893	64571 2768624	179135	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroetha ne	CBM	Ave	9920 466491	19903 912233	38750 1884507	90023 3896999	236287	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 194734	+++++ 371333	23231 758999	43448 1535696	104918	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	+++++ 238874	10651 461294	22843 938863	47589 1971589	125613	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	13502 603813	27603 1200814	52091 2443791	121583 4948271	318098	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	4759 208258	9274 406768	17794 835250	40286 1702361	107797	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylpentane	CBM	Ave	12272 542486	23520 1048110	45905 2177430	104062 4491353	276646	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	10008 414593	20843 792821	38931 1617852	78151 3376773	218669	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	8989 397664	18057 741147	34190 1527772	80819 3204866	205971	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	10304 488532	22056 922514	44854 1903842	88963 4258617	259685	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Butanone (MEK)	CBM	Ave	+++++ 66052	2443 124487	5869 253927	12424 526678	32810	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Hexane	CBM	Ave	+++++ 182768	9022 345145	16542 724504	36117 1534885	93351	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isopropyl ether	CBM	Ave	14017 652700	27757 1258094	59349 2603004	122364 5389640	349017	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	5103 201554	9035 374711	18037 775858	41397 1655099	105995	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	8547 371439	16465 706434	32237 1424609	66797 2953037	185284	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroform	CBM	Ave	10441 425460	20273 773414	39225 1591650	86703 3398489	221690	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	9653 512166	22412 982477	45518 2036709	93325 4201218	267158	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	+++++ 204152	10118 375805	19048 768341	38550 1684106	105594	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	10751 446406	20173 817437	39664 1658324	90067 3520443	230864	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFBZ	Ave	6047 287059	12345 518857	25128 1078779	58242 2324578	148871	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1-Butanol	DFBZ	Ave	+++++ 95163	4128 189813	7404 385011	16643 770202	47398	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Cyclohexane	DFBZ	Ave	+++++ 101218	+++++ 188882	10636 378419	20665 799986	53224	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Benzene	DFBZ	Ave	12828 537887	24141 998620	49152 2072736	109926 4580943	281600	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFBZ	Ave	10682 509407	21907 943611	43534 1562157	96221 3985428	263147	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylpentane	DFBZ	Ave	+++++ 128303	6018 234828	11513 486787	26735 1047976	66382	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Thiophene	DFBZ	Ave	7053 312374	13753 579159	28726 1190849	62914 2564706	163933	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-amyl methyl ether	CBZd5	Ave	+++++ 439550	16558 826406	34262 1687255	78058 3478703	238993	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 1047845	52286 1909813	97663 3937619	216817 8541251	545679	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Heptane	DFBZ	Ave	4401 186596	9153 344303	17720 710384	38197 1568743	97916	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFBZ	Ave	4626 223106	9817 418060	19570 860195	44282 1914762	119711	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Trichloroethene	DFBZ	Ave	5644 252436	11621 471497	24542 965984	52984 2143254	131547	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromomethane	DFBZ	Ave	5790 242664	10791 446341	21756 912301	50658 2007775	125422	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromodichloromethane	DFBZ	Ave	9978 421714	19726 774474	38075 1600155	83001 3517359	219152	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DFBZ	Ave	1060 62903	2535 123907	4802 248451	10682 487655	31913	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl methacrylate	DFBZ	Ave	+++++ 215926	9213 430899	18239 896296	38866 1872520	110367	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylcyclohexane	DFBZ	Ave	+++++ 428267	20303 775502	38039 1595324	87709 3440508	223142	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	8429 427163	18448 845642	36347 1726160	77604 3495706	213021	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFBZ	Ave	6237 289600	11728 567162	23969 1195443	57296 2556154	148579	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZd 5	Ave	4949 217897	10015 440824	16526 934863	39757 2140300	106665	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene Range	CBZd 5	Ave	31580 1436613	62136 2791156	126167 5917756	261800 13161341	748324	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene	CBZd 5	Ave	+++++ 564299	24869 1091996	51423 2328051	108634 5184820	293852	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZd 5	Ave	3634 176087	7462 333675	15047 701197	33667 1557835	91074	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylthiophene	CBZd 5	Ave	+++++ 492684	21017 924136	38657 1973707	93967 4336537	251216	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
3-Methylthiophene	CBZd 5	Ave	+++++ 451800	20285 893344	39921 1877320	86973 4176696	231259	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Hexanone	CBZd 5	Ave	+++++ 173958	6340 376223	12562 759406	28857 1613389	83279	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
C8 Range	CBZd 5	Ave	+++++ 2069587	+++++ 3867680	185140 8082975	402043 18025464	1082393	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Octane	CBZd 5	Ave	3798 185643	8712 348881	15913 731653	35453 1650234	96708	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZd 5	Ave	7683 427846	17301 808128	33912 1708750	74369 3856951	215761	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	5904 299565	12660 581436	24538 1233456	51514 2796441	151021	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZd 5	Ave	5286 238290	11194 445648	20627 942886	48901 2120157	123410	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chlorobenzene	CBZd 5	Ave	8589 442675	18576 862198	35843 1839152	81389 4192705	222281	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylheptane	CBZd 5	Ave	12335 717787	32304 1349555	61836 2768264	139554 6016570	374711	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethylbenzene	CBZd 5	Ave	14443 650505	27733 1262362	57358 2721372	114570 6074677	335611	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Ethylthiophene	CBZd 5	Ave	9558 497116	20835 977657	41893 2115122	88766 4761553	250527	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m-Xylene & p-Xylene	CBZd 5	Ave	19383 978007	40253 1919976	83085 4180493	169976 9362617	503389	0.0784 3.99	0.157 8.00	0.317 16.0	0.800 32.0	2.00
Nonane	CBZd 5	Ave	8236 423733	16865 834807	34945 1783024	72811 4054710	214636	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromoform	CBZd 5	Ave	7264 398085	14675 809091	31148 1777546	65347 4346492	183780	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Styrene	CBZd 5	Ave	6999 345579	12925 713753	26979 1596019	54555 3775896	173185	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
o-Xylene	CBZd 5	Ave	10974 515214	22480 1000055	47711 2147893	93610 4777380	268703	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	8017 389997	15290 775460	29118 1682135	66629 3662446	198338	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZd 5	Ave	+++++ 90650	3741 180195	7300 400421	14733 894821	47060	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Isopropylbenzene	CBZd 5	Ave	15128 696162	30745 1358053	62346 2941806	123682 6500407	362291	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propylbenzene	CBZd 5	Ave	3297 174024	5951 342915	13516 761562	27120 1767252	86216	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZd 5	Ave	3419 176214	6950 357053	15341 784198	30458 1803940	90776	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZd 5	Ave	12458 609217	21804 1225761	46453 2722956	93901 6169617	298239	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZd 5	Ave	5939 304811	11072 603355	26253 1334976	49807 3048962	151317	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZd 5	Ave	4461 240130	7712 499500	16153 1159461	34288 2723428	115072	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Decane	CBZd 5	Ave	+++++ 434454	16645 903971	34420 2015482	66474 4633466	213303	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butylbenzene	CBZd 5	Ave	12158 603936	23687 1191702	52616 2650102	101841 6011355	308625	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZd 5	Ave	10551 527968	19250 1063039	41173 2361494	82370 5401392	259545	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZd 5	Ave	16268 794110	30298 1590827	68410 3508321	129882 7846256	406602	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Dichlorobenzene	CBZd 5	Ave	5871 279497	10249 605637	18695 1475008	41517 3715351	133752	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzyl chloride	CBZd 5	Ave	+++++ 289147	8876 633760	16254 1586115	36944 +++++	126892	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
1,4-Dichlorobenzene	CBZd 5	Ave	4621 240547	8160 526340	15642 1315653	33672 +++++	109444	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
4-Isopropyltoluene	CBZd 5	Ave	12956 634861	22476 1267933	49882 2823302	98451 6240921	316041	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZd5	Ave	7817 392961	15387 779253	33236 1720307	64421 3809531	197400	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylcyclohexane	CBZd5	Ave	10514 498300	19278 1003008	42456 2185035	85795 4800601	255485	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indane	CBZd5	Ave	8881 458736	16540 930740	35512 2141880	70292 4983494	225790	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorobenzene	CBZd5	Ave	5620 292486	10229 616546	20295 1494867	42321 3643973	140823	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indene	CBZd5	Ave	5518 289355	9134 607320	18700 1455216	39379 3487774	135133	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylbenzene	CBZd5	Ave	10917 534655	18213 1100830	37412 2538094	76064 5693195	253234	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Undecane	CBZd5	Ave	+++++ 397504	14919 811824	28458 1865694	58268 4338903	187279	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZd5	Ave	+++++ 411342	13973 837435	28944 1893275	60335 4196638	196408	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZd5	Ave	+++++ 115728	3641 249204	7180 600110	15249 +++++	51540	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
1,2,4,5-Tetramethylbenzene	CBZd5	Ave	+++++ 482854	16586 983706	34869 2206639	69812 4847664	227428	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,5-Tetramethylbenzene	CBZd5	Ave	+++++ 294960	10137 608119	22173 1340133	42970 2942221	140477	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZd5	Ave	+++++ 371381	13891 752440	27081 1698919	53410 3711528	177361	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dodecane	CBZd5	Ave	+++++ 339664	12548 665748	23834 1515010	45381 3383807	169033	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZd5	Ave	1778 103584	2846 234735	5532 +++++	11248 +++++	47080	0.0392 2.00	0.0784 4.00	0.159 +++++	0.400 +++++	1.00
Naphthalene	CBZd5	Ave	5233 239465	7601 538060	13194 1375773	29521 +++++	111140	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
Benzo(b)thiophene	CBZd5	Ave	+++++ 100021	3065 221729	5231 590694	12110 +++++	45901	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
Hexachlorobutadiene	CBZd5	Ave	6656 320484	12720 646694	26869 1494370	47565 3588165	164579	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZd5	Ave	2094 121404	4032 266581	7260 670480	13575 +++++	59332	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
2-Methylnaphthalene	CBZd5	Ave	+++++ 78199	2539 170697	4331 389989	6537 844376	34373	+++++ 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
1-Methylnaphthalene	CBZd5	Ave	+++++ 91252	3063 194863	5326 411293	7334 786213	41424	+++++ 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
4-Bromofluorobenzene (Surr)	CBZd5	Ave	604280 855705	851872 914153	875722 927094	905137 948626	823670	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

Curve Type Legend:
Ave = Average ISTD

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Lab Sample ID: ICV 140-7241/23 Calibration Date: 11/26/2016 12:43

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JK25ICVX.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3608	0.3705		5.14	5.00	2.7	35.0
Propene	Ave	1.245	1.241		4.99	5.00	-0.3	35.0
Dichlorodifluoromethane	Ave	3.239	3.419		5.28	5.00	5.6	35.0
Chloromethane	Ave	0.4618	0.4743		5.14	5.00	2.7	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	1.790	1.884		5.27	5.00	5.3	35.0
Acetaldehyde	Ave	0.4989	0.3583		18.0	25.0	-28.2	35.0
Vinyl chloride	Ave	1.385	1.509		5.45	5.00	8.9	35.0
1,3-Butadiene	Ave	1.112	1.176		5.29	5.00	5.8	35.0
Butane	Ave	2.414	2.507		5.20	5.00	3.9	35.0
Bromomethane	Ave	1.232	1.311		5.32	5.00	6.4	35.0
Chloroethane	Ave	0.6570	0.7069		5.38	5.00	7.6	35.0
Ethanol	Ave	0.5282	0.5157		24.4	25.0	-2.4	35.0
Vinyl bromide	Ave	1.206	1.358		5.63	5.00	12.6	35.0
2-Methylbutane	Ave	1.767	1.965		5.56	5.00	11.2	35.0
Trichlorofluoromethane	Ave	3.295	3.456		5.25	5.00	4.9	35.0
Acrolein	Ave	0.3877	0.2724		3.52	5.00	-29.7	35.0
Acetonitrile	Ave	0.4770	0.4058		4.26	5.00	-14.9	35.0
Acetone	Ave	0.4144	0.3857		14.0	15.0	-6.9	35.0
Isopropyl alcohol	Ave	1.928	1.788		13.9	15.0	-7.3	35.0
Pentane	Ave	0.1852	0.2026		5.47	5.00	9.4	35.0
Ethyl ether	Ave	1.358	1.081		3.98	5.00	-20.4	35.0
1,1-Dichloroethene	Ave	1.204	1.241		5.16	5.00	3.1	35.0
tert-Butyl alcohol	Ave	1.944	2.069		5.32	5.00	6.4	35.0
Acrylonitrile	Ave	0.7642	0.5954		3.90	5.00	-22.1	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.668	2.817		5.28	5.00	5.6	35.0
Methylene Chloride	Ave	1.179	1.175		4.98	5.00	-0.4	35.0
3-Chloropropene	Ave	1.388	1.376		4.96	5.00	-0.8	35.0
Carbon disulfide	Ave	3.546	3.662		5.17	5.00	3.2	35.0
trans-1,2-Dichloroethene	Ave	1.210	1.236		5.11	5.00	2.1	35.0
2-Methylpentane	Ave	3.129	3.555		5.68	5.00	13.6	35.0
Methyl tert-butyl ether	Ave	2.474	2.133		4.31	5.00	-13.8	35.0
1,1-Dichloroethane	Ave	2.301	2.250		4.89	5.00	-2.2	35.0
Vinyl acetate	Ave	2.833	2.267		4.00	5.00	-20.0	35.0
2-Butanone (MEK)	Ave	0.3626	0.3534		4.88	5.00	-2.5	35.0
Hexane	Ave	1.065	1.065		5.00	5.00	0.0	35.0
Isopropyl ether	Ave	3.770	3.246		4.31	5.00	-13.9	35.0
cis-1,2-Dichloroethene	Ave	1.193	1.143		4.79	5.00	-4.2	35.0
Ethyl acetate	Ave	2.116	1.904		4.50	5.00	-10.0	35.0
Chloroform	Ave	2.509	2.224		4.44	5.00	-11.3	35.0
Tert-butyl ethyl ether	Ave	2.895	2.951		5.10	5.00	1.9	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Lab Sample ID: ICV 140-7241/23 Calibration Date: 11/26/2016 12:43

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JK25ICVX.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.177	1.029		4.37	5.00	-12.6	35.0
1,1,1-Trichloroethane	Ave	2.589	2.431		4.70	5.00	-6.1	35.0
1,2-Dichloroethane	Ave	0.3728	0.3331		4.47	5.00	-10.6	35.0
1-Butanol	Ave	0.1194	0.1320		5.53	5.00	10.5	35.0
Benzene	Ave	0.7266	0.6472		4.46	5.00	-10.9	35.0
Cyclohexane	Ave	0.1325	0.1354		5.11	5.00	2.2	35.0
Carbon tetrachloride	Ave	0.6405	0.5383		4.20	5.00	-16.0	35.0
2,3-Dimethylpentane	Ave	0.1667	0.1469		4.41	5.00	-11.9	35.0
Thiophene	Ave	0.4153	0.3865		4.66	5.00	-6.9	35.0
Tert-amyl methyl ether	Ave	0.6219	0.6301		5.07	5.00	1.3	35.0
2,2,4-Trimethylpentane	Ave	1.378	1.272		4.62	5.00	-7.7	35.0
Heptane	Ave	0.2546	0.2203		4.33	5.00	-13.5	35.0
1,2-Dichloropropane	Ave	0.2944	0.2593		4.41	5.00	-11.9	35.0
Trichloroethene	Ave	0.3420	0.3070		4.49	5.00	-10.2	35.0
Dibromomethane	Ave	0.3248	0.2893		4.46	5.00	-10.9	35.0
Bromodichloromethane	Ave	0.5654	0.4828		4.27	5.00	-14.6	35.0
1,4-Dioxane	Ave	0.0770	0.0788		5.12	5.00	2.3	35.0
Methyl methacrylate	Ave	0.2784	0.2524		4.53	5.00	-9.4	35.0
Methylcyclohexane	Ave	0.5528	0.4249		3.84	5.00	-23.1	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5507	0.5440		4.94	5.00	-1.2	35.0
cis-1,3-Dichloropropene	Ave	0.3821	0.3480		4.56	5.00	-8.9	35.0
trans-1,3-Dichloropropene	Ave	0.3443	0.2824		4.10	5.00	-18.0	35.0
Toluene	Ave	0.8601	0.7365		4.28	5.00	-14.4	35.0
1,1,2-Trichloroethane	Ave	0.2704	0.2321		4.29	5.00	-14.1	35.0
2-Methylthiophene	Ave	0.7217	0.6585		4.56	5.00	-8.8	35.0
3-Methylthiophene	Ave	0.6890	0.6262		4.55	5.00	-9.1	35.0
2-Hexanone	Ave	0.2511	0.2749		5.48	5.00	9.5	35.0
Octane	Ave	0.2880	0.2562		4.45	5.00	-11.0	35.0
Dibromochloromethane	Ave	0.6304	0.5684		4.51	5.00	-9.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.4549	0.4014		4.41	5.00	-11.8	35.0
Tetrachloroethene	Ave	0.3768	0.3388		4.50	5.00	-10.1	35.0
Chlorobenzene	Ave	0.6754	0.5874		4.35	5.00	-13.0	35.0
2,3-Dimethylheptane	Ave	1.076	1.001		4.66	5.00	-6.9	35.0
Ethylbenzene	Ave	1.020	0.8619		4.23	5.00	-15.5	35.0
2-Ethylthiophene	Ave	0.7628	0.6393		4.19	5.00	-16.2	35.0
m-Xylene & p-Xylene	Ave	0.7527	0.6661		8.85	10.0	-11.5	35.0
Nonane	Ave	0.6435	0.5289		4.11	5.00	-17.8	35.0
Bromoform	Ave	0.6005	0.4851		4.04	5.00	-19.2	35.0
Styrene	Ave	0.5352	0.4649		4.35	5.00	-13.1	35.0
o-Xylene	Ave	0.8117	0.6937		4.28	5.00	-14.5	35.0
1,1,2,2-Tetrachloroethane	Ave	0.5908	0.5430		4.60	5.00	-8.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Lab Sample ID: ICV 140-7241/23 Calibration Date: 11/26/2016 12:43

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JK25ICVX.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1356	0.1254		4.63	5.00	-7.5	35.0
Isopropylbenzene	Ave	1.098	0.9755		4.44	5.00	-11.2	35.0
Propylbenzene	Ave	0.2584	0.2385		4.62	5.00	-7.7	35.0
2-Chlorotoluene	Ave	0.2744	0.2388		4.35	5.00	-13.0	35.0
4-Ethyltoluene	Ave	0.9183	0.8030		4.37	5.00	-12.6	35.0
1,3,5-Trimethylbenzene	Ave	0.4630	0.4348		4.70	5.00	-6.1	35.0
Alpha Methyl Styrene	Ave	0.3575	0.3290		4.60	5.00	-8.0	35.0
Decane	Ave	0.6508	0.5684		4.37	5.00	-12.7	35.0
tert-Butylbenzene	Ave	0.9343	0.8580		4.59	5.00	-8.2	35.0
1,2,4-Trimethylbenzene	Ave	0.7988	0.7413		4.64	5.00	-7.2	35.0
sec-Butylbenzene	Ave	1.225	1.102		4.50	5.00	-10.1	35.0
1,3-Dichlorobenzene	Ave	0.4476	0.3966		4.43	5.00	-11.4	35.0
Benzyl chloride	Ave	0.3881	0.4276		5.51	5.00	10.2	35.0
1,4-Dichlorobenzene	Ave	0.3490	0.3506		5.03	5.00	0.5	35.0
4-Isopropyltoluene	Ave	0.9555	0.8776		4.59	5.00	-8.2	35.0
1,2,3-Trimethylbenzene	Ave	0.6004	0.6092		5.08	5.00	1.5	35.0
Butylcyclohexane	Ave	0.7729	0.6164		3.99	5.00	-20.2	35.0
1,2-Dichlorobenzene	Ave	0.4533	0.4131		4.56	5.00	-8.9	35.0
Indane	Ave	0.6991	0.6137		4.39	5.00	-12.2	35.0
Indene	Ave	0.4345	0.5118		5.89	5.00	17.8	35.0
Butylbenzene	Ave	0.8017	0.7838		4.89	5.00	-2.2	35.0
Undecane	Ave	0.5842	0.6440		5.51	5.00	10.2	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.5891	0.7608		6.46	5.00	29.1	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.1560	0.1383		4.44	5.00	-11.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	0.6898	0.8152		5.91	5.00	18.2	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.4240	0.5148		6.07	5.00	21.4	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.5362	0.6309		5.89	5.00	17.7	35.0
Dodecane	Ave	0.4832	0.5920		6.13	5.00	22.5	35.0
1,2,4-Trichlorobenzene	Ave	0.1304	0.1647		6.32	5.00	26.3	35.0
Naphthalene	Ave	0.3491	0.3828		5.49	5.00	9.7	35.0
Benzo(b)thiophene	Ave	0.1359	0.1714		6.31	5.00	26.1	35.0
Hexachlorobutadiene	Ave	0.5047	0.4629		4.59	5.00	-8.3	35.0
1,2,3-Trichlorobenzene	Ave	0.1705	0.1957		5.74	5.00	14.7	35.0
2-Methylnaphthalene	Ave	0.0343	0.0305		13.9	15.6	-11.1	50.0
1-Methylnaphthalene	Ave	0.0381	0.0373		15.3	15.6	-2.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6334	0.6342		10.0	10.0	0.1	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Lab File ID: JBFBC06A.D BFB Injection Date: 03/06/2017

Instrument ID: MJ BFB Injection Time: 11:18

Analysis Batch No.: 9074

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	26.5	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	109.3	
175	5.0 - 9.0 % of mass 174	8.3	(7.6) 1
176	95.0 - 101.0 % of mass 174	110.1	(100.8) 1
177	5.0 - 9.0 % of mass 176	7.2	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-9074/6	JCCVC06A.D	03/06/2017	11:45
	LCS 140-9074/1006	JCCVC06A-LCS .d	03/06/2017	11:45
	MB 140-9074/9	J200BC06.D	03/06/2017	14:03
IA-DUP01-C-22	140-7324-16	JC06P101.D	03/06/2017	16:03
IA-DUP02-C-22	140-7324-17	JC06P102.D	03/06/2017	16:48
IA-DUP03-A-22	140-7324-18	JC06P103.D	03/06/2017	17:33
IA-DUP04-A-22	140-7324-19	JC06P104.D	03/06/2017	18:18
SV-DUP01-C-22	140-7324-20	JC06P105.D	03/06/2017	19:04
IA-139-A-22	140-7324-23	JC06P107.D	03/06/2017	20:34
SV-DUP02-C-22	140-7324-21	JC06P106R.D	03/07/2017	09:37

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Lab Sample ID: CCVIS 140-9074/6 Calibration Date: 03/06/2017 11:45

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JCCVC06A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3608	0.2802		1.55	2.00	-22.3	30.0
Propene	Ave	1.245	1.182		1.90	2.00	-5.1	30.0
Dichlorodifluoromethane	Ave	3.239	2.844		1.76	2.00	-12.2	30.0
Chloromethane	Ave	0.4618	0.4293		1.86	2.00	-7.0	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	1.790	2.013		2.25	2.00	12.5	30.0
Acetaldehyde	Ave	0.4989	0.3781		7.58	10.0	-24.2	30.0
Vinyl chloride	Ave	1.385	1.209		1.75	2.00	-12.7	30.0
1,3-Butadiene	Ave	1.112	0.9913		1.78	2.00	-10.8	30.0
Butane	Ave	2.414	2.099		1.74	2.00	-13.1	30.0
Bromomethane	Ave	1.232	1.062		1.73	2.00	-13.8	30.0
Chloroethane	Ave	0.6570	0.5472		1.67	2.00	-16.7	30.0
Ethanol	Ave	0.5282	0.4182		7.92	10.0	-20.8	30.0
Vinyl bromide	Ave	1.206	1.009		1.67	2.00	-16.3	30.0
2-Methylbutane	Ave	1.767	1.558		1.76	2.00	-11.9	30.0
Trichlorofluoromethane	Ave	3.295	2.946		1.79	2.00	-10.6	30.0
Acrolein	Ave	0.3877	0.2368		1.22	2.00	-38.9*	30.0
Acetonitrile	Ave	0.4770	0.3939		1.65	2.00	-17.4	30.0
Acetone	Ave	0.4144	0.3808		5.52	6.00	-8.1	30.0
Isopropyl alcohol	Ave	1.928	1.553		4.84	6.00	-19.4	30.0
Pentane	Ave	0.1852	0.1588		1.72	2.00	-14.3	30.0
Ethyl ether	Ave	1.358	0.9211		1.36	2.00	-32.2*	30.0
1,1-Dichloroethene	Ave	1.204	1.094		1.82	2.00	-9.1	30.0
tert-Butyl alcohol	Ave	1.944	1.708		1.76	2.00	-12.1	30.0
Acrylonitrile	Ave	0.7642	0.5699		1.49	2.00	-25.4	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.668	2.504		1.88	2.00	-6.1	30.0
Methylene Chloride	Ave	1.179	1.051		1.78	2.00	-10.8	30.0
3-Chloropropene	Ave	1.388	1.131		1.63	2.00	-18.5	30.0
Carbon disulfide	Ave	3.546	3.057		1.72	2.00	-13.8	30.0
trans-1,2-Dichloroethene	Ave	1.210	1.125		1.86	2.00	-7.0	30.0
2-Methylpentane	Ave	3.129	3.005		1.92	2.00	-4.0	30.0
Methyl tert-butyl ether	Ave	2.474	1.787		1.45	2.00	-27.8	30.0
1,1-Dichloroethane	Ave	2.301	2.084		1.81	2.00	-9.4	30.0
Vinyl acetate	Ave	2.833	2.052		1.45	2.00	-27.6	30.0
2-Butanone (MEK)	Ave	0.3626	0.3236		1.79	2.00	-10.8	30.0
Hexane	Ave	1.065	1.006		1.89	2.00	-5.6	30.0
Isopropyl ether	Ave	3.770	3.122		1.66	2.00	-17.2	30.0
cis-1,2-Dichloroethene	Ave	1.193	1.119		1.88	2.00	-6.2	30.0
Ethyl acetate	Ave	2.116	1.816		1.72	2.00	-14.2	30.0
Chloroform	Ave	2.509	2.174		1.73	2.00	-13.4	30.0
Tert-butyl ethyl ether	Ave	2.895	2.325		1.61	2.00	-19.7	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Lab Sample ID: CCVIS 140-9074/6 Calibration Date: 03/06/2017 11:45

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JCCVC06A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.177	0.9694		1.65	2.00	-17.7	30.0
1,1,1-Trichloroethane	Ave	2.589	2.377		1.84	2.00	-8.2	30.0
1,2-Dichloroethane	Ave	0.3728	0.3140		1.69	2.00	-15.8	30.0
1-Butanol	Ave	0.1194	0.0973		1.63	2.00	-18.6	30.0
Cyclohexane	Ave	0.1325	0.1169		1.77	2.00	-11.8	30.0
Benzene	Ave	0.7266	0.6224		1.71	2.00	-14.3	30.0
Carbon tetrachloride	Ave	0.6405	0.6396		2.00	2.00	-0.1	30.0
2,3-Dimethylpentane	Ave	0.1667	0.1577		1.89	2.00	-5.4	30.0
Thiophene	Ave	0.4153	0.3813		1.84	2.00	-8.2	30.0
Tert-amyl methyl ether	Ave	0.6219	0.5290		1.70	2.00	-14.9	30.0
2,2,4-Trimethylpentane	Ave	1.378	1.364		1.98	2.00	-1.0	30.0
Heptane	Ave	0.2546	0.2205		1.73	2.00	-13.4	30.0
1,2-Dichloropropane	Ave	0.2944	0.2386		1.62	2.00	-18.9	30.0
Trichloroethene	Ave	0.3420	0.3890		2.28	2.00	13.7	30.0
Dibromomethane	Ave	0.3248	0.2854		1.76	2.00	-12.1	30.0
Bromodichloromethane	Ave	0.5654	0.4601		1.63	2.00	-18.6	30.0
1,4-Dioxane	Ave	0.0770	0.0790		2.05	2.00	2.6	30.0
Methyl methacrylate	Ave	0.2784	0.2330		1.67	2.00	-16.3	30.0
Methylcyclohexane	Ave	0.5528	0.5397		1.95	2.00	-2.4	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5507	0.4797		1.74	2.00	-12.9	30.0
cis-1,3-Dichloropropene	Ave	0.3821	0.2834		1.48	2.00	-25.8	30.0
trans-1,3-Dichloropropene	Ave	0.3443	0.2486		1.44	2.00	-27.8	30.0
Toluene	Ave	0.8601	0.6704		1.56	2.00	-22.0	30.0
1,1,2-Trichloroethane	Ave	0.2704	0.2069		1.53	2.00	-23.5	30.0
2-Methylthiophene	Ave	0.7217	0.5803		1.61	2.00	-19.6	30.0
3-Methylthiophene	Ave	0.6890	0.5467		1.59	2.00	-20.7	30.0
2-Hexanone	Ave	0.2511	0.2210		1.76	2.00	-12.0	30.0
Octane	Ave	0.2880	0.2246		1.56	2.00	-22.0	30.0
Dibromochloromethane	Ave	0.6304	0.5271		1.67	2.00	-16.4	30.0
1,2-Dibromoethane (EDB)	Ave	0.4549	0.3625		1.59	2.00	-20.3	30.0
Tetrachloroethene	Ave	0.3768	0.3332		1.77	2.00	-11.6	30.0
Chlorobenzene	Ave	0.6754	0.5376		1.59	2.00	-20.4	30.0
2,3-Dimethylheptane	Ave	1.076	0.8563		1.59	2.00	-20.4	30.0
Ethylbenzene	Ave	1.020	0.7862		1.54	2.00	-22.9	30.0
2-Ethylthiophene	Ave	0.7628	0.5911		1.55	2.00	-22.5	30.0
m-Xylene & p-Xylene	Ave	0.7527	0.5826		3.10	4.00	-22.6	30.0
Nonane	Ave	0.6435	0.4669		1.45	2.00	-27.4	30.0
Bromoform	Ave	0.6005	0.4682		1.56	2.00	-22.0	30.0
Styrene	Ave	0.5352	0.4085		1.53	2.00	-23.7	30.0
o-Xylene	Ave	0.8117	0.6169		1.52	2.00	-24.0	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5908	0.3995		1.35	2.00	-32.4*	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Lab Sample ID: CCVIS 140-9074/6 Calibration Date: 03/06/2017 11:45

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JCCVC06A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1356	0.1110		1.64	2.00	-18.1	30.0
Isopropylbenzene	Ave	1.098	0.8585		1.56	2.00	-21.8	30.0
Propylbenzene	Ave	0.2584	0.2167		1.68	2.00	-16.1	30.0
2-Chlorotoluene	Ave	0.2744	0.2245		1.64	2.00	-18.2	30.0
4-Ethyltoluene	Ave	0.9183	0.7510		1.64	2.00	-18.2	30.0
1,3,5-Trimethylbenzene	Ave	0.4630	0.3926		1.70	2.00	-15.2	30.0
Alpha Methyl Styrene	Ave	0.3575	0.2723		1.52	2.00	-23.8	30.0
Decane	Ave	0.6508	0.4888		1.50	2.00	-24.9	30.0
tert-Butylbenzene	Ave	0.9343	0.7588		1.63	2.00	-18.8	30.0
1,2,4-Trimethylbenzene	Ave	0.7988	0.6452		1.62	2.00	-19.2	30.0
sec-Butylbenzene	Ave	1.225	0.9850		1.61	2.00	-19.6	30.0
1,3-Dichlorobenzene	Ave	0.4476	0.3529		1.58	2.00	-21.2	30.0
Benzyl chloride	Ave	0.3881	0.3247		1.67	2.00	-16.3	30.0
1,4-Dichlorobenzene	Ave	0.3490	0.3053		1.75	2.00	-12.5	30.0
4-Isopropyltoluene	Ave	0.9555	0.7901		1.65	2.00	-17.3	30.0
1,2,3-Trimethylbenzene	Ave	0.6004	0.4797		1.60	2.00	-20.1	30.0
Butylcyclohexane	Ave	0.7729	0.5345		1.38	2.00	-30.8*	30.0
1,2-Dichlorobenzene	Ave	0.4533	0.3576		1.58	2.00	-21.1	30.0
Indane	Ave	0.6991	0.5584		1.60	2.00	-20.1	30.0
Indene	Ave	0.4345	0.3301		1.52	2.00	-24.0	30.0
Butylbenzene	Ave	0.8017	0.6053		1.51	2.00	-24.5	30.0
Undecane	Ave	0.5842	0.4770		1.63	2.00	-18.4	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.5891	0.4722		1.60	2.00	-19.9	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.1560	0.1389		1.78	2.00	-11.0	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.6898	0.5538		1.61	2.00	-19.7	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.4240	0.3460		1.63	2.00	-18.4	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.5362	0.4342		1.62	2.00	-19.0	30.0
Dodecane	Ave	0.4832	0.4228		1.75	2.00	-12.5	30.0
1,2,4-Trichlorobenzene	Ave	0.1304	0.1347		2.07	2.00	3.3	30.0
Naphthalene	Ave	0.3491	0.2983		1.71	2.00	-14.5	30.0
Benzo(b)thiophene	Ave	0.1359	0.1313		1.93	2.00	-3.4	30.0
Hexachlorobutadiene	Ave	0.5047	0.4387		1.74	2.00	-13.1	30.0
1,2,3-Trichlorobenzene	Ave	0.1705	0.1602		1.88	2.00	-6.1	30.0
2-Methylnaphthalene	Ave	0.0343	0.0219		4.00	6.25	-36.1	50.0
1-Methylnaphthalene	Ave	0.0381	0.0213		3.48	6.25	-44.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6334	0.5680		3.59	4.00	-10.3	30.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Lab File ID: RXBFBB23.D BFB Injection Date: 02/23/2017

Instrument ID: MR BFB Injection Time: 21:41

Analysis Batch No.: 8740

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	23.3	
75	30.0 - 60.0 % of mass 95	48.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.7	(0.7) 1
174	50.0 - 120.00 % of mass 95	101.5	
175	5.0 - 9.0 % of mass 174	6.8	(6.7) 1
176	95.0 - 101.0 % of mass 174	98.2	(96.8) 1
177	5.0 - 9.0 % of mass 176	6.2	(6.3) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-8740/3	RB23IC01.D	02/23/2017	22:59
	IC 140-8740/4	RB23IC02.D	02/23/2017	23:47
	IC 140-8740/5	RB23IC03.D	02/24/2017	00:35
	IC 140-8740/6	RB23IC04.D	02/24/2017	01:23
	IC 140-8740/7	RB23IC05.D	02/24/2017	02:09
	ICIS 140-8740/8	RB23IC06.D	02/24/2017	02:57
	IC 140-8740/9	RB23IC07.D	02/24/2017	03:45
	IC 140-8740/10	RB23IC08.D	02/24/2017	04:33
	IC 140-8740/11	RB23IC09.D	02/24/2017	05:21
	ICV 140-8740/17	RB23LCS.D	02/24/2017	09:49

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-8740/3	RB23IC01.D
Level 2	IC 140-8740/4	RB23IC02.D
Level 3	IC 140-8740/5	RB23IC03.D
Level 4	IC 140-8740/6	RB23IC04.D
Level 5	IC 140-8740/7	RB23IC05.D
Level 6	ICIS 140-8740/8	RB23IC06.D
Level 7	IC 140-8740/9	RB23IC07.D
Level 8	IC 140-8740/10	RB23IC08.D
Level 9	IC 140-8740/11	RB23IC09.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.3731	0.4091 0.3493	0.4038 0.3392	0.3740 0.3252	0.3822	Ave		0.3695				8.1		30.0			
Propene	+++++ 1.4939	1.6505 1.3071	1.6486 1.1638	1.5907 0.9824	1.6280	Ave		1.4331				17.7		30.0			
Dichlorodifluoromethane	3.3153 2.5992	2.5695 2.5447	2.5866 2.3376	2.6872 2.2279	3.3047	Ave		2.6859				14.2		30.0			
Chloromethane	+++++ 0.4562	0.5841 0.4094	0.6056 0.3794	0.5001 0.2916	0.5215	Ave		0.4685				22.7		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.7709 2.5520	2.6468 2.3328	2.6263 2.1374	2.7330 1.7039	2.8020	Ave		2.4783				14.6		30.0			
Acetaldehyde	+++++ 0.4021	+++++ 0.3107	+++++ 0.2687	0.7078 +++++	0.4726	Ave		0.4324				40.1	*	30.0			
Vinyl chloride	1.3668 1.0785	1.3820 0.8848	1.3775 0.8111	1.3056 0.6239	1.2312	Ave		1.1179				25.3		30.0			
1,3-Butadiene	+++++ 0.7631	0.9021 0.6328	0.9670 0.5940	0.9524 0.4984	0.8770	Ave		0.7734				23.2		30.0			
Butane	+++++ 1.4504	+++++ 1.1789	1.9631 1.1039	1.9363 0.9239	1.7034	Ave		1.4657				28.3		30.0			
Bromomethane	+++++ 0.8480	1.1425 0.7185	0.9606 0.6806	1.0053 0.6224	0.9491	Ave		0.8659				20.8		30.0			
Chloroethane	+++++ 0.3882	0.5582 0.3295	0.5338 0.3136	0.4775 0.2839	0.4198	Ave		0.4131				24.9		30.0			
Ethanol	+++++ 0.2824	+++++ 0.2364	0.3994 0.2237	0.3653 0.2031	0.3152	Ave		0.2894				25.7		30.0			
Vinyl bromide	+++++ 0.7125	0.9464 0.6138	0.8840 0.5944	0.8169 0.5515	0.7703	Ave		0.7362				19.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	+++++ 0.7229	+++++ 0.6328	1.1227 0.5891	0.9620 0.5495	0.8035	Ave		0.7689				27.3		30.0			
Acrolein	+++++ 0.2337	+++++ 0.2024	0.3972 +++++	0.2995 +++++	0.2535	Ave		0.2773				27.3		30.0			
Trichlorofluoromethane	3.7727 3.3109	3.5870 2.9703	3.4577 2.7814	3.4301 2.6431	3.4661	Ave		3.2688				11.7		30.0			
Acetonitrile	+++++ 0.5601	+++++ 0.4595	0.5548 0.4566	0.5670 0.4318	0.5563	Ave		0.5123				11.7		30.0			
Acetone	+++++ 0.6891	+++++ 0.6100	+++++ 0.5479	0.9304 0.4731	0.6987	Ave		0.6582				24.1		30.0			
Isopropyl alcohol	2.0365 2.1774	2.0902 1.9787	1.8661 1.8292	2.0186 1.4913	2.1810	Ave		1.9632				10.9		30.0			
Pentane	+++++ 0.2466	0.2477 0.2301	0.2220 0.2224	0.2222 0.1809	0.2489	Ave		0.2276				9.8		30.0			
Ethyl ether	1.6986 1.6959	1.7047 1.5009	1.5476 1.4067	1.6629 1.2258	1.7996	Ave		1.5825				11.4		30.0			
1,1-Dichloroethene	1.4051 1.2300	1.1956 1.2026	1.2127 1.2091	1.2152 1.1369	1.2559	Ave		1.2292				6.0		30.0			
Acrylonitrile	0.9742 1.0713	0.9216 1.0539	0.9746 1.0145	0.9745 0.9434	1.0785	Ave		1.0007				5.7		30.0			
tert-Butyl alcohol	2.1405 2.5828	2.1175 2.5381	2.2687 2.5154	2.2453 2.3793	2.4745	Ave		2.3624				7.4		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	2.8376 2.8263	2.9466 2.7276	2.8116 2.6690	2.8228 2.3461	2.8118	Ave		2.7555				6.2		30.0			
Methylene Chloride	+++++ 1.1952	+++++ 1.1350	1.7271 1.1024	1.3318 1.0021	1.2402	Ave		1.2477				18.9		30.0			
3-Chloropropene	+++++ 1.3189	1.5749 1.2376	1.0781 1.2079	1.1901 1.0799	1.2746	Ave		1.2452				12.7		30.0			
Carbon disulfide	3.6082 3.6305	3.6924 3.5624	3.4319 3.6504	3.5064 3.2914	3.5295	Ave		3.5448				3.5		30.0			
trans-1,2-Dichloroethene	1.2864 1.2837	1.2843 1.2506	1.2582 1.2680	1.2616 1.1723	1.2745	Ave		1.2600				2.8		30.0			
2-Methylpentane	3.1533 3.3038	2.9791 3.1230	2.8260 2.8727	3.0247 2.4396	3.2328	Ave		2.9950				8.7		30.0			
Methyl tert-butyl ether	2.9110 3.4617	2.9543 3.4884	2.9249 3.4882	3.0697 3.3070	3.2717	Ave		3.2085				7.7		30.0			
1,1-Dichloroethane	2.5277 2.6346	2.4435 2.5592	2.4124 2.5425	2.3753 2.3524	2.5012	Ave		2.4832				3.8		30.0			
Vinyl acetate	3.1388 4.1432	3.0315 3.9944	3.0241 3.8132	3.4033 3.5830	3.8989	Ave		3.5589				12.1		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.6313	0.5037 0.6247	0.6060 0.6235	0.6358 0.5916	0.5936	Ave		0.6013				7.1		30.0			
Hexane	1.2896 1.1683	1.1399 1.1294	1.0987 1.0857	1.0910 0.9551	1.1223	Ave		1.1200				7.8		30.0			
C6 Range	+++++ 2.0878	+++++ 1.9611	+++++ 1.8682	2.1313 1.6629	2.0464	Ave		1.9596				8.8		30.0			
Isopropyl ether	4.5315 5.4158	4.7751 5.1267	4.6868 4.7769	4.8896 4.1039	5.2884	Ave		4.8439				8.3		30.0			
cis-1,2-Dichloroethene	1.3415 1.3298	1.2774 1.3177	1.3418 1.3213	1.2750 1.2489	1.3413	Ave		1.3105				2.6		30.0			
Ethyl acetate	2.6219 3.5342	2.7766 3.3771	2.7499 3.2686	3.0384 2.9813	3.3703	Ave		3.0798				10.5		30.0			
Chloroform	2.7715 2.7684	2.7246 2.7497	2.6092 2.7447	2.5716 2.6040	2.6519	Ave		2.6884				2.9		30.0			
Tert-butyl ethyl ether	3.2647 4.2125	3.3053 4.1861	3.4728 4.1247	3.6325 3.7770	4.0277	Ave		3.7782				10.0		30.0			
Tetrahydrofuran	1.5920 1.7503	1.7103 1.6627	1.6474 1.6069	1.6372 1.4737	1.7291	Ave		1.6455				5.1		30.0			
1,1,1-Trichloroethane	2.4293 2.6928	2.4732 2.7127	2.2640 2.8175	2.3283 2.7180	2.5221	Ave		2.5509				7.6		30.0			
1,2-Dichloroethane	0.3558 0.3932	0.3650 0.3944	0.3378 0.3982	0.3419 0.3961	0.3638	Ave		0.3718				6.5		30.0			
1-Butanol	+++++ 0.1252	0.1086 0.1178	0.0913 0.1187	0.0955 0.1052	0.1130	Ave		0.1094				10.7		30.0			
Benzene	0.8259 0.7479	0.7754 0.7306	0.7230 0.6847	0.7352 0.5718	0.7253	Ave		0.7244				9.6		30.0			
Cyclohexane	0.1253 0.1286	0.1107 0.1243	0.1069 0.1124	0.1219 0.0876	0.1207	Ave		0.1154				11.0		30.0			
Carbon tetrachloride	0.5423 0.5884	0.5313 0.5941	0.5048 0.6016	0.4669 0.5646	0.5529	Ave		0.5497				8.0		30.0			
2,3-Dimethylpentane	0.1485 0.1869	0.1726 0.1828	0.1653 0.1776	0.1676 0.1609	0.1772	Ave		0.1710				6.9		30.0			
Thiophene	0.4231 0.4504	0.4291 0.4501	0.4202 0.4455	0.4348 0.4213	0.4364	Ave		0.4346				2.8		30.0			
Tert-amyl methyl ether	+++++ 0.7605	0.4378 0.7463	0.6877 0.7357	0.6536 0.6874	0.7204	Ave		0.6787				15.3		30.0			
2,2,4-Trimethylpentane	1.3172 1.4654	1.2566 1.4282	1.2953 1.3338	1.3473 1.1219	1.3998	Ave		1.3295				7.7		30.0			
1,2-Dichloropropane	0.3473 0.3318	0.3326 0.3229	0.3005 0.2904	0.3169 0.2248	0.3284	Ave		0.3106				11.8		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Heptane	0.2353 0.2908	0.2275 0.2815	0.2590 0.2612	0.2641 0.2024	0.2816	Ave		0.2559				11.3		30.0			
Trichloroethene	0.3763 0.3567	0.3817 0.3432	0.3529 0.3456	0.3658 0.3092	0.3578	Ave		0.3544				6.0		30.0			
Dibromomethane	0.3368 0.3240	0.3340 0.3255	0.3070 0.3261	0.3038 0.2958	0.3106	Ave		0.3182				4.5		30.0			
Bromodichloromethane	0.4663 0.5746	0.4798 0.5800	0.4513 0.5835	0.4868 0.5396	0.5299	Ave		0.5213				9.9		30.0			
1,4-Dioxane	0.0955 0.1208	0.0973 0.1162	0.1080 0.1119	0.1081 0.0937	0.1180	Ave		0.1077				9.4		30.0			
Methyl methacrylate	0.2948 0.4155	0.2926 0.4018	0.3019 0.3943	0.3382 0.3639	0.3887	Ave		0.3546				13.8		30.0			
Methylcyclohexane	0.5249 0.5800	0.4823 0.5724	0.5045 0.5475	0.5416 0.4768	0.5664	Ave		0.5329				7.2		30.0			
4-Methyl-2-pentanone (MIBK)	0.5451 0.7612	0.5831 0.7193	0.5890 0.6786	0.6733 0.5958	0.7057	Ave		0.6501				11.4		30.0			
cis-1,3-Dichloropropene	0.3325 0.4545	0.3580 0.4588	0.3691 0.4524	0.3881 0.4296	0.4163	Ave		0.4066				11.4		30.0			
trans-1,3-Dichloropropene	0.3439 0.4969	0.3713 0.5120	0.3700 0.5423	0.3990 0.5042	0.4502	Ave		0.4433				16.6		30.0			
Toluene	0.9897 1.1563	1.1262 1.1350	1.0484 1.1215	1.0868 0.9730	1.1353	Ave		1.0858				6.2		30.0			
1,1,2-Trichloroethane	0.3385 0.3438	0.3467 0.3365	0.3263 0.3306	0.3332 0.2836	0.3327	Ave		0.3302				5.6		30.0			
2-Methylthiophene	0.7648 0.9175	0.8124 0.9073	0.8091 0.9013	0.8550 0.7986	0.8939	Ave		0.8511				6.6		30.0			
3-Methylthiophene	0.7410 0.9150	0.7956 0.8949	0.7731 0.8873	0.8464 0.7837	0.8746	Ave		0.8346				7.5		30.0			
2-Hexanone	+++++ 0.4413	+++++ 0.4193	0.2939 0.4095	0.3464 0.3479	0.4025	Ave		0.3801				13.7		30.0			
Dibromochloromethane	0.4539 0.7002	0.4589 0.7087	0.5439 0.6920	0.5767 0.5676	0.6651	Ave		0.5963				16.8		30.0			
Octane	0.3050 0.3634	0.2812 0.3499	0.3062 0.3175	0.3226 0.2334	0.3580	Ave		0.3153				13.0		30.0			
1,2-Dibromoethane (EDB)	0.5025 0.6052	0.5348 0.6004	0.5271 0.6043	0.5526 0.5347	0.5718	Ave		0.5593				6.8		30.0			
Tetrachloroethene	0.4127 0.4118	0.4281 0.3977	0.4170 0.3891	0.3858 0.3259	0.4085	Ave		0.3974				7.6		30.0			
Chlorobenzene	1.0317 0.9145	0.9878 0.8942	0.9702 0.8663	0.9165 0.7600	0.9332	Ave		0.9194				8.5		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2,3-Dimethylheptane	1.0501 1.1998	1.0390 1.0884	1.0703 0.9834	1.1262 0.7362	1.1983	Ave		1.0546				13.2		30.0			
Ethylbenzene	1.3063 1.4538	1.4337 1.4187	1.3764 1.3421	1.3796 1.1735	1.4565	Ave		1.3712				6.5		30.0			
2-Ethylthiophene	0.8479 1.0639	0.9131 1.0422	0.9199 0.9980	0.9869 0.8991	1.0353	Ave		0.9674				7.8		30.0			
m-Xylene & p-Xylene	1.0164 1.1258	1.0833 1.0712	1.0855 0.9735	1.0961 0.7951	1.1333	Ave		1.0422				10.1		30.0			
Bromoform	+++++ 0.8185	0.2970 0.8349	0.6137 0.8051	0.6358 0.7265	0.7832	Ave		0.6894				25.9		30.0			
Styrene	0.5197 0.8003	0.5721 0.7785	0.6375 0.7450	0.7086 0.6553	0.7932	Ave		0.6900				14.6		30.0			
Nonane	0.6514 0.8033	0.6809 0.7192	0.7464 0.6330	0.8049 0.4629	0.8308	Ave		0.7036				16.3		30.0			
o-Xylene	1.1138 1.1413	1.1521 1.0964	1.1730 1.0251	1.1231 0.9159	1.1726	Ave		1.1015				7.5		30.0			
1,1,2,2-Tetrachloroethane	0.7878 0.8665	0.8367 0.8111	0.8501 0.7454	0.8438 0.6464	0.8988	Ave		0.8096				9.4		30.0			
1,2,3-Trichloropropane	0.2101 0.2375	0.2380 0.2278	0.2280 0.2197	0.2501 0.2101	0.2629	Ave		0.2316				7.6		30.0			
Isopropylbenzene	1.7492 1.5241	1.6875 1.4170	1.6330 1.3116	1.6163 1.1480	1.6399	Ave		1.5252				12.9		30.0			
Propylbenzene	0.3854 0.4272	0.4069 0.3895	0.4415 0.3553	0.4673 0.3080	0.4679	Ave		0.4054				13.0		30.0			
2-Chlorotoluene	0.4071 0.3909	0.4381 0.3650	0.4586 0.3350	0.4318 0.2943	0.4377	Ave		0.3954				13.8		30.0			
4-Ethyltoluene	1.3243 1.6298	1.4805 1.5104	1.5694 1.3764	1.6643 1.2214	1.7621	Ave		1.5043				11.5		30.0			
1,3,5-Trimethylbenzene	0.6749 0.7298	0.7066 0.6700	0.7458 0.6055	0.7784 0.5234	0.7913	Ave		0.6917				12.4		30.0			
Alpha Methyl Styrene	+++++ 0.6295	+++++ 0.5986	0.4980 0.5681	0.5540 0.5108	0.6499	Ave		0.5727				10.0		30.0			
Decane	0.6968 1.1564	0.8474 1.0233	0.9402 0.8697	1.0437 0.6547	1.1355	Ave		0.9298				19.2		30.0			
tert-Butylbenzene	1.2446 1.5225	1.4333 1.3789	1.4639 1.2312	1.5038 0.9844	1.5594	Ave		1.3691				13.5		30.0			
1,2,4-Trimethylbenzene	1.1996 1.4308	1.3154 1.2656	1.4107 1.0769	1.4603 0.8842	1.5433	Ave		1.2874				16.2		30.0			
1,3-Dichlorobenzene	1.1048 1.1072	1.1311 0.9704	1.1523 0.8363	1.1608 0.6809	1.2098	Ave		1.0393				17.0		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	1.8928 2.1829	1.9981 1.9160	1.9998 1.6284	2.1158 1.2558	2.2549	Ave		1.9161				16.1		30.0			
Benzyl chloride	+++++ 1.3549	0.9601 1.2520	0.9968 1.0577	1.1384 0.9364	1.3053	Ave		1.1252				14.5		30.0			
1,4-Dichlorobenzene	1.0766 1.1344	1.1599 0.9981	1.2010 0.8772	1.1747 0.7272	1.2284	Ave		1.0642				15.8		30.0			
4-Isopropyltoluene	1.4213 1.8407	1.5183 1.6610	1.6092 1.4559	1.7329 1.1632	1.8549	Ave		1.5842				14.0		30.0			
1,2,3-Trimethylbenzene	0.9732 1.1275	1.0118 1.0054	1.0688 0.9363	1.1322 0.8419	1.2012	Ave		1.0331				10.8		30.0			
Butylcyclohexane	0.9768 1.2131	1.0934 1.0887	1.0648 0.9689	1.1463 0.7608	1.2414	Ave		1.0616				13.8		30.0			
1,2-Dichlorobenzene	1.0234 1.1072	1.1221 0.9562	1.1167 0.8161	1.1528 0.6482	1.2005	Ave		1.0159				17.8		30.0			
Indane	1.2597 1.2576	1.2475 1.0987	1.2966 0.9372	1.3573 0.7525	1.4129	Ave		1.1800				18.1		30.0			
Indene	0.7109 1.0002	0.7763 0.9097	0.8300 0.8432	0.9159 0.7456	1.0499	Ave		0.8646				13.2		30.0			
Butylbenzene	1.5501 1.9872	1.6901 1.8259	1.7162 1.5829	1.7850 1.1976	1.9632	Ave		1.6998				14.2		30.0			
Undecane	0.8599 1.3923	0.9699 1.1925	1.0813 0.9635	1.1463 0.6664	1.3802	Ave		1.0725				22.1		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 1.4479	1.1654 1.3042	1.2700 1.0860	1.3013 +++++	1.4397	Ave		1.2878				10.3		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.5566	0.1595 0.5399	0.4032 0.5054	0.4088 0.4185	0.5302	Ave		0.4403				29.4		30.0			
1,2,4,5-Tetramethylbenzene	1.1956 1.7148	1.3327 1.6373	1.4080 1.5448	1.4358 1.1937	1.6947	Ave		1.4619				13.7		30.0			
1,2,3,5-Tetramethylbenzene	0.8256 1.0520	0.8320 1.0055	0.8607 0.9909	0.9064 0.8315	1.0442	Ave		0.9276				10.3		30.0			
1,2,3,4-Tetramethylbenzene	1.0921 1.4380	1.0723 1.3827	1.2008 1.3367	1.1955 1.0885	1.4212	Ave		1.2475				11.9		30.0			
Dodecane	+++++ 1.4735	0.7856 1.3165	1.0259 1.1351	0.9522 0.8207	1.3481	Ave		1.1072				23.0		30.0			
1,2,4-Trichlorobenzene	0.8581 1.3099	0.9338 1.2394	1.0791 1.1805	0.9985 0.9729	1.2415	Ave		1.0904				14.6		30.0			
Naphthalene	1.4479 2.3089	1.6362 2.2091	1.9175 2.0993	1.7509 1.6619	2.1982	Ave		1.9144				15.9		30.0			
Benzo(b)thiophene	+++++ 1.3129	0.8478 1.3020	1.0151 1.3124	0.9632 1.1588	1.2274	Ave		1.1425				15.7		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Hexachlorobutadiene	0.9831 1.2409	1.0290 1.1724	1.0951 1.1316	1.0316 1.0023	1.2395	Ave		1.1028				9.0		30.0			
1,2,3-Trichlorobenzene	0.9323 1.2522	0.9595 1.1927	1.0971 1.1249	0.9545 0.9587	1.2242	Ave		1.0773				11.9		30.0			
2-Methylnaphthalene	+++++ 0.1873	+++++ 0.2045	+++++ 0.2124	0.0469 0.2253	0.1287	Ave		0.1675				40.6		50.0			
1-Methylnaphthalene	+++++ 0.1549	+++++ 0.1697	0.0449 0.1697	0.0432 0.1782	0.1073	Ave		0.1240				47.9		50.0			
4-Bromofluorobenzene (Surr)	0.7152 0.7166	0.7077 0.7098	0.7161 0.6627	0.7225 0.5943	0.7386	Ave		0.6982				6.3		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-8740/3	RB23IC01.D
Level 2	IC 140-8740/4	RB23IC02.D
Level 3	IC 140-8740/5	RB23IC03.D
Level 4	IC 140-8740/6	RB23IC04.D
Level 5	IC 140-8740/7	RB23IC05.D
Level 6	ICIS 140-8740/8	RB23IC06.D
Level 7	IC 140-8740/9	RB23IC07.D
Level 8	IC 140-8740/10	RB23IC08.D
Level 9	IC 140-8740/11	RB23IC09.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 77337	2717 164616	5714 341742	13525 701702	36029	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Propene	CBM	Ave	+++++ 309645	10961 616102	23326 1172387	57519 2119514	153453	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Dichlorodifluoromethane	CBM	Ave	10481 538735	17064 1199423	36597 2354948	97168 4806853	311496	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Chloromethane	CBM	Ave	+++++ 94563	3879 192950	8569 382249	18083 629051	49158	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	8760 528953	17577 1099525	37159 2153188	98824 3676373	264107	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Acetaldehyde	CBM	Ave	+++++ 416688	+++++ 732315	+++++ 1353530	127965 +++++	222712	+++++ 9.99	+++++ 20.0	+++++ 40.0	2.00 +++++	4.99
Vinyl chloride	CBM	Ave	4321 223530	9178 417030	19490 817062	47210 1346176	116046	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,3-Butadiene	CBM	Ave	+++++ 158175	5991 298274	13682 598358	34439 1075330	82666	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Butane	CBM	Ave	+++++ 300625	+++++ 555644	27776 1112031	70015 1993462	160556	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
Bromomethane	CBM	Ave	+++++ 175754	7587 338670	13592 685673	36351 1342819	89463	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Chloroethane	CBM	Ave	+++++ 80451	3707 155307	7552 315958	17265 612586	39574	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Ethanol	CBM	Ave	+++++ 292636	+++++ 557068	28254 1126938	66047 2190820	148558	+++++ 9.99	+++++ 20.0	0.793 40.0	2.00 80.0	4.99
Vinyl bromide	CBM	Ave	+++++ 147675	6285 289326	12508 598787	29539 1189919	72610	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2-Methylbutane	CBM	Ave	+++++ 149838	+++++ 298288	15885 593509	34784 1185662	75735	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Acrolein	CBM	Ave	+++++ 48441	+++++ 95411	5620 +++++	10830 +++++	23899	+++++ 2.00	+++++ 4.00	0.159 +++++	0.400 +++++	0.999
Trichlorofluoromethane	CBM	Ave	11927 686235	23821 1400003	48923 2801983	124033 5702636	326703	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Acetonitrile	CBM	Ave	+++++ 116089	+++++ 216580	7850 460029	20501 931637	52436	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
Acetone	CBM	Ave	+++++ 428503	+++++ 862681	+++++ 1656093	100931 3062269	197602	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.00
Isopropyl alcohol	CBM	Ave	19316 1354035	41645 2798169	79216 5528721	218989 9653805	616764	0.118 5.99	0.235 12.0	0.476 24.0	1.20 48.0	3.00
Pentane	CBM	Ave	+++++ 51117	1645 108438	3141 224005	8034 390407	23465	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Ethyl ether	CBM	Ave	5370 351514	11321 707415	21897 1417102	60129 2644820	169629	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,1-Dichloroethene	CBM	Ave	4442 254943	7940 566831	17158 1218064	43941 2452857	118379	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Acrylonitrile	CBM	Ave	3080 222055	6120 496743	13790 1022056	35238 2035476	101655	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
tert-Butyl alcohol	CBM	Ave	6767 535332	14062 1196301	32099 2533997	81188 5133511	233237	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	8971 585806	19568 1285623	39781 2688728	102072 5061965	265033	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Methylene Chloride	CBM	Ave	+++++ 247716	+++++ 534995	24437 1110586	48158 2162136	116898	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
3-Chloropropene	CBM	Ave	+++++ 273367	10459 583311	15254 1216806	43032 2329963	120145	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Carbon disulfide	CBM	Ave	11407 752486	24521 1679091	48557 3677457	126789 7101466	332680	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
trans-1,2-Dichloroethene	CBM	Ave	4067 266070	8529 589438	17802 1277383	45618 2529264	120134	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2-Methylpentane	CBM	Ave	9969 684768	19784 1472011	39985 2893931	109374 5263706	304717	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Methyl tert-butyl ether	CBM	Ave	9203 717493	19619 1644239	41384 3514051	110998 7135130	308385	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,1-Dichloroethane	CBM	Ave	7991 546060	16227 1206246	34133 2561351	85892 5075426	235756	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Vinyl acetate	CBM	Ave	9923 858751	20132 1882713	42788 3841494	123061 7730530	367502	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2-Butanone (MEK)	CBM	Ave	+++++ 130850	3345 294463	8574 628092	22992 1276403	55955	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Hexane	CBM	Ave	4077 242145	7570 532333	15546 1093784	39451 2060711	105783	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
C6 Range	DFBZ	Ave	+++++ 2114371	+++++ 4501964	+++++ 9178276	369743 17203049	946720	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	0.999
Isopropyl ether	CBM	Ave	14326 1122507	31711 2416434	66313 4812302	176808 8854520	498469	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
cis-1,2-Dichloroethene	CBM	Ave	4241 275633	8483 621102	18985 1331136	46105 2694692	126425	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Ethyl acetate	CBM	Ave	8289 732523	18439 1591786	38908 3292786	109869 6432390	317674	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Chloroform	CBM	Ave	8762 573807	18094 1296029	36917 2765081	92987 5618386	249964	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Tert-butyl ethyl ether	CBM	Ave	10321 873119	21950 1973104	49137 4155244	131350 8149213	379641	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Tetrahydrofuran	CBM	Ave	5033 362782	11358 783690	23309 1618818	59200 3179689	162980	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,1,1-Trichloroethane	CBM	Ave	7680 558131	16424 1278599	32033 2838322	84191 5864283	237728	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dichloroethane	DFBZ	Ave	5395 398175	11614 905386	22850 1956139	59318 4097974	168285	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1-Butanol	DFBZ	Ave	+++++ 126841	3455 270509	6173 583174	16572 1087852	52295	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Benzene	DFBZ	Ave	12524 757353	24674 1677250	48907 3363998	127540 5915532	335562	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Cyclohexane	DFBZ	Ave	1900 130260	3521 285427	7234 552190	21140 906562	55861	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Carbon tetrachloride	DFBZ	Ave	8224 595862	16905 1363863	34144 2955600	81002 5840819	255790	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2,3-Dimethylpentane	DFBZ	Ave	2252 189272	5491 419595	11183 872362	29068 1664608	81981	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Thiophene	DFBZ	Ave	6417 456153	13654 1033269	28426 2188596	75422 4358587	201904	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Tert-amyl methyl ether	DFBZ	Ave	+++++ 770144	13931 1713213	46518 3614164	113391 7110699	333304	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2,2,4-Trimethylpentane	DFBZ	Ave	19975 1483986	39986 3278689	87619 6552928	233738 11606245	647577	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dichloropropane	DFBZ	Ave	5267 335988	10585 741321	20327 1426473	54978 2325405	151945	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Heptane	DFBZ	Ave	3569 294527	7240 646231	17517 1283209	45810 2094048	130261	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Trichloroethene	DFBZ	Ave	5706 361242	12147 787921	23873 1697706	63467 3199084	165540	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Dibromomethane	DFBZ	Ave	5107 328140	10628 747292	20765 1602016	52696 3060446	143675	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Bromodichloromethane	DFBZ	Ave	7071 581937	15268 1331396	30527 2866521	84444 5582595	245143	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,4-Dioxane	DFBZ	Ave	1448 122338	3097 266658	7308 549623	18752 969543	54586	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Methyl methacrylate	DFBZ	Ave	4470 420770	9311 922438	20422 1936917	58677 3764789	179826	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Methylcyclohexane	DFBZ	Ave	7960 587324	15346 1314112	34127 2689602	93957 4932261	262049	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	8267 770834	18554 1651361	39845 3334023	116812 6163255	326469	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
cis-1,3-Dichloropropene	DFBZ	Ave	5043 460289	11393 1053282	24970 2222764	67326 4444447	192581	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
trans-1,3-Dichloropropene	CBZd 5	Ave	4190 407884	9323 961977	20070 2116906	55793 4314889	168680	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Toluene	CBZd 5	Ave	12057 949069	28273 2132262	56866 4377764	151950 8326940	425356	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,1,2-Trichloroethane	CBZd 5	Ave	4124 282164	8704 632212	17701 1290344	46587 2427275	124669	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2-Methylthiophene	CBZd 5	Ave	9317 753080	20397 1704543	43887 3518170	119545 6834736	334934	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
3-Methylthiophene	CBZd 5	Ave	9027 751011	19973 1681316	41936 3463489	118345 6707253	327679	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2-Hexanone	CBZd 5	Ave	+++++ 362209	+++++ 787724	15939 1598395	48432 2977612	150804	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
Dibromochloromethane	CBZd 5	Ave	5530 574706	11521 1331407	29500 2701236	80628 4857610	249214	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Octane	CBZd 5	Ave	3716 298259	7061 657401	16610 1239163	45104 1997649	134151	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dibromoethane (EDB)	CBZd 5	Ave	6121 496771	13427 1127971	28588 2358773	77258 4575751	214254	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Tetrachloroethene	CBZd 5	Ave	5027 338008	10747 747185	22616 1518756	53937 2789077	153057	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Chlorobenzene	CBZd 5	Ave	12568 750598	24800 1679949	52626 3381719	128145 6504560	349650	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2,3-Dimethylheptane	CBZd 5	Ave	12792 984747	26084 2044712	58055 3838726	157463 6300729	448957	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Ethylbenzene	CBZd 5	Ave	15913 1193234	35993 2665373	74659 5238775	192894 10042970	545725	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2-Ethylthiophene	CBZd 5	Ave	10329 873189	22924 1958038	49896 3895698	137984 7694998	387899	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
m-Xylene & p-Xylene	CBZd 5	Ave	24763 1848010	54395 4024786	117759 7600175	306509 13609680	849245	0.0784 3.99	0.157 8.00	0.317 16.0	0.800 32.0	2.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Bromoform	CBZd 5	Ave	+++++ 671801	7456 1568536	33288 3142805	88903 6217969	293454	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Styrene	CBZd 5	Ave	6331 656912	14364 1462535	34579 2907897	99070 5608457	297206	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Nonane	CBZd 5	Ave	7935 659323	17094 1351079	40483 2470879	112542 3961418	311279	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
o-Xylene	CBZd 5	Ave	13569 936796	28924 2059774	63625 4001349	157032 7838829	439347	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	9597 711168	21006 1523825	46111 2909802	117978 5531960	336748	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2,3-Trichloropropane	CBZd 5	Ave	2560 194922	5974 428051	12366 857552	34975 1797695	98499	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Isopropylbenzene	CBZd 5	Ave	21309 1250923	42366 2662166	88577 5119668	225985 9824520	614427	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Propylbenzene	CBZd 5	Ave	4695 350675	10216 731805	23946 1386895	65333 2635592	175311	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2-Chlorotoluene	CBZd 5	Ave	4959 320862	10999 685774	24877 1307704	60368 2518415	164005	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
4-Ethyltoluene	CBZd 5	Ave	16133 1337683	37169 2837542	85126 5372799	232695 10452735	660235	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,3,5-Trimethylbenzene	CBZd 5	Ave	8222 598983	17741 1258645	40452 2363652	108841 4479062	296486	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Alpha Methyl Styrene	CBZd 5	Ave	+++++ 516658	+++++ 1124551	27013 2217522	77461 4371974	243487	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
Decane	CBZd 5	Ave	8489 949126	21274 1922503	50999 3394674	145932 5603231	425460	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
tert-Butylbenzene	CBZd 5	Ave	15162 1249656	35984 2590545	79403 4805951	210262 8424853	584282	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2,4-Trimethylbenzene	CBZd 5	Ave	14614 1174348	33025 2377769	76518 4203802	204178 7566924	578234	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,3-Dichlorobenzene	CBZd 5	Ave	13459 908799	28396 1823090	62501 3264552	162298 5827565	453278	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
sec-Butylbenzene	CBZd 5	Ave	23058 1791681	50165 3599528	108474 6356290	295827 10747733	844875	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Benzyl chloride	CBZd 5	Ave	+++++ 1112104	24103 2352128	54066 4128671	159172 8014177	489081	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,4-Dichlorobenzene	CBZd 5	Ave	13115 931133	29121 1875178	65142 3424013	164245 6223742	460249	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
4-Isopropyltoluene	CBZd 5	Ave	17315 1510793	38119 3120571	87284 5683045	242297 9955102	694973	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2,3-Trimethylbenzene	CBZd 5	Ave	11856 925394	25401 1888807	57972 3654635	158300 7205534	450050	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Butylcyclohexane	CBZd 5	Ave	11900 995717	27451 2045438	57754 3782240	160274 6510976	465131	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dichlorobenzene	CBZd 5	Ave	12467 908758	28172 1796455	60572 3185630	161183 5547661	449782	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Indane	CBZd 5	Ave	15346 1032175	31320 2064201	70331 3658240	189774 6439833	529393	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Indene	CBZd 5	Ave	8660 820907	19489 1709131	45019 3291239	128054 6380743	393389	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Butylbenzene	CBZd 5	Ave	18884 1631072	42432 3430316	93087 6178847	249573 10249297	735562	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Undecane	CBZd 5	Ave	10476 1142764	24349 2240401	58652 3760994	160272 5703184	517142	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	Ave	+++++ 1188411	29259 2450287	68884 4239183	181950 +++++	539412	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	0.999
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	+++++ 456821	4005 1014303	21869 1973001	57159 3581933	198649	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	14565 1407460	33459 3075927	76370 6030209	200754 10215880	634976	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	10058 863457	20887 1889050	46686 3867833	126732 7116459	391237	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	13304 1180268	26921 2597679	65134 5217806	167151 9315480	532497	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Dodecane	CBZd 5	Ave	+++++ 1209447	19723 2473317	55647 4430925	133130 7023895	505118	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2,4-Trichlorobenzene	CBZd 5	Ave	10453 1075136	23444 2328403	58530 4608196	139606 8326267	465148	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Naphthalene	CBZd 5	Ave	17639 1895111	41077 4150285	104007 8194497	244813 14223211	823611	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Benzo(b)thiophene	CBZd 5	Ave	+++++ 1077615	21284 2446149	55059 5123070	134679 9916966	459875	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
Hexachlorobutadiene	CBZd 5	Ave	11976 1018485	25833 2202550	59398 4417255	144240 8577746	464424	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
1,2,3-Trichlorobenzene	CBZd 5	Ave	11357 1027789	24088 2240673	59506 4390985	133457 8204831	458690	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	0.999
2-Methylnaphthalene	CBZd 5	Ave	+++++ 480479	+++++ 1200547	+++++ 2590764	20471 6023991	150695	+++++ 6.24	+++++ 12.5	+++++ 25.0	1.25 50.0	3.12
1-Methylnaphthalene	CBZd 5	Ave	+++++ 397397	+++++ 996171	7607 2070086	18889 4765773	125607	+++++ 6.24	+++++ 12.5	0.496 25.0	1.25 50.0	3.12
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	889007 1177919	906481 1333550	979197 1293417	1010124 1271651	1108358	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

Curve Type Legend:
Ave = Average ISTD

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Lab Sample ID: ICV 140-8740/17 Calibration Date: 02/24/2017 09:49

Instrument ID: MR Calib Start Date: 02/23/2017 22:59

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/24/2017 05:21

Lab File ID: RB23LCS.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3695	0.3555		1.92	2.00	-3.8	35.0
Propene	Ave	1.433	1.488		2.08	2.00	3.8	35.0
Dichlorodifluoromethane	Ave	2.686	3.091		2.30	2.00	15.1	35.0
Chloromethane	Ave	0.4685	0.4454		1.90	2.00	-4.9	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.478	2.523		2.04	2.00	1.8	35.0
Acetaldehyde	Ave	0.4324	0.3634		8.41	10.0	-15.9	35.0
Vinyl chloride	Ave	1.118	1.072		1.92	2.00	-4.1	35.0
1,3-Butadiene	Ave	0.7734	0.7341		1.90	2.00	-5.1	35.0
Butane	Ave	1.466	1.472		2.01	2.00	0.4	35.0
Bromomethane	Ave	0.8659	0.8083		1.87	2.00	-6.6	35.0
Chloroethane	Ave	0.4131	0.3819		1.85	2.00	-7.5	35.0
Ethanol	Ave	0.2894	0.2755		9.52	10.0	-4.8	35.0
Vinyl bromide	Ave	0.7362	0.7130		1.94	2.00	-3.2	35.0
2-Methylbutane	Ave	0.7689	0.7311		1.90	2.00	-4.9	35.0
Acrolein	Ave	0.2773	0.2235		1.61	2.00	-19.4	35.0
Trichlorofluoromethane	Ave	3.269	2.983		1.83	2.00	-8.7	35.0
Acetonitrile	Ave	0.5123	0.5710		2.23	2.00	11.5	35.0
Acetone	Ave	0.6582	0.6347		5.79	6.00	-3.6	35.0
Isopropyl alcohol	Ave	1.963	2.164		6.61	6.00	10.2	35.0
Pentane	Ave	0.2276	0.2477		2.18	2.00	8.8	35.0
Ethyl ether	Ave	1.583	1.716		2.17	2.00	8.4	35.0
1,1-Dichloroethene	Ave	1.229	1.183		1.92	2.00	-3.8	35.0
Acrylonitrile	Ave	1.001	1.090		2.18	2.00	8.9	35.0
tert-Butyl alcohol	Ave	2.362	2.403		2.03	2.00	1.7	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.755	2.690		1.95	2.00	-2.4	35.0
Methylene Chloride	Ave	1.248	1.145		1.84	2.00	-8.2	35.0
3-Chloropropene	Ave	1.245	1.236		1.99	2.00	-0.7	35.0
Carbon disulfide	Ave	3.545	3.496		1.97	2.00	-1.4	35.0
trans-1,2-Dichloroethene	Ave	1.260	1.231		1.95	2.00	-2.3	35.0
2-Methylpentane	Ave	2.995	3.496		2.33	2.00	16.7	35.0
Methyl tert-butyl ether	Ave	3.209	3.281		2.04	2.00	2.2	35.0
1,1-Dichloroethane	Ave	2.483	2.498		2.01	2.00	0.6	35.0
Vinyl acetate	Ave	3.559	3.670		2.06	2.00	3.1	35.0
2-Butanone (MEK)	Ave	0.6013	0.6036		2.01	2.00	0.4	35.0
Hexane	Ave	1.120	1.149		2.05	2.00	2.6	35.0
Isopropyl ether	Ave	4.844	5.072		2.09	2.00	4.7	35.0
cis-1,2-Dichloroethene	Ave	1.311	1.336		2.04	2.00	1.9	35.0
Ethyl acetate	Ave	3.080	3.301		2.14	2.00	7.2	35.0
Chloroform	Ave	2.688	2.669		1.99	2.00	-0.7	35.0
Tert-butyl ethyl ether	Ave	3.778	4.305		2.28	2.00	14.0	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Lab Sample ID: ICV 140-8740/17 Calibration Date: 02/24/2017 09:49

Instrument ID: MR Calib Start Date: 02/23/2017 22:59

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/24/2017 05:21

Lab File ID: RB23LCS.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.646	1.749		2.13	2.00	6.3	35.0
1,1,1-Trichloroethane	Ave	2.551	2.593		2.03	2.00	1.6	35.0
1,2-Dichloroethane	Ave	0.3718	0.3596		1.93	2.00	-3.3	35.0
1-Butanol	Ave	0.1094	0.0869		1.59	2.00	-20.6	35.0
Benzene	Ave	0.7244	0.7633		2.11	2.00	5.4	35.0
Cyclohexane	Ave	0.1154	0.1274		2.21	2.00	10.4	35.0
Carbon tetrachloride	Ave	0.5497	0.5602		2.04	2.00	1.9	35.0
2,3-Dimethylpentane	Ave	0.1710	0.1717		2.01	2.00	0.4	35.0
Thiophene	Ave	0.4346	0.4614		2.12	2.00	6.2	35.0
Tert-amyl methyl ether	Ave	0.6787	0.7580		2.23	2.00	11.7	35.0
2,2,4-Trimethylpentane	Ave	1.330	1.474		2.22	2.00	10.9	35.0
1,2-Dichloropropane	Ave	0.3106	0.3354		2.16	2.00	8.0	35.0
Heptane	Ave	0.2559	0.2888		2.26	2.00	12.8	35.0
Trichloroethene	Ave	0.3544	0.3778		2.13	2.00	6.6	35.0
Dibromomethane	Ave	0.3182	0.3226		2.03	2.00	1.4	35.0
1,4-Dioxane	Ave	0.1077	0.1115		2.07	2.00	3.5	35.0
Bromodichloromethane	Ave	0.5213	0.5518		2.12	2.00	5.8	35.0
Methyl methacrylate	Ave	0.3546	0.3841		2.17	2.00	8.3	35.0
Methylcyclohexane	Ave	0.5329	0.4682		1.76	2.00	-12.2	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.6501	0.7120		2.19	2.00	9.5	35.0
cis-1,3-Dichloropropene	Ave	0.4066	0.4492		2.21	2.00	10.5	35.0
trans-1,3-Dichloropropene	Ave	0.4433	0.4823		2.18	2.00	8.8	35.0
Toluene	Ave	1.086	1.196		2.20	2.00	10.1	35.0
1,1,2-Trichloroethane	Ave	0.3302	0.3422		2.07	2.00	3.6	35.0
2-Methylthiophene	Ave	0.8511	0.9630		2.26	2.00	13.1	35.0
3-Methylthiophene	Ave	0.8346	0.9902		2.37	2.00	18.6	35.0
2-Hexanone	Ave	0.3801	0.4004		2.11	2.00	5.3	35.0
Dibromochloromethane	Ave	0.5963	0.6766		2.27	2.00	13.5	35.0
Octane	Ave	0.3153	0.3610		2.29	2.00	14.5	35.0
1,2-Dibromoethane (EDB)	Ave	0.5593	0.5976		2.14	2.00	6.9	35.0
Tetrachloroethene	Ave	0.3974	0.4091		2.06	2.00	3.0	35.0
Chlorobenzene	Ave	0.9194	0.9416		2.05	2.00	2.4	35.0
2,3-Dimethylheptane	Ave	1.055	1.211		2.30	2.00	14.8	35.0
Ethylbenzene	Ave	1.371	1.476		2.15	2.00	7.6	35.0
2-Ethylthiophene	Ave	0.9674	1.053		2.18	2.00	8.8	35.0
m-Xylene & p-Xylene	Ave	1.042	1.158		4.44	4.00	11.1	35.0
Bromoform	Ave	0.6894	0.8066		2.34	2.00	17.0	35.0
Styrene	Ave	0.6900	0.7578		2.20	2.00	9.8	35.0
Nonane	Ave	0.7036	0.8296		2.36	2.00	17.9	35.0
o-Xylene	Ave	1.101	1.146		2.08	2.00	4.0	35.0
1,1,2,2-Tetrachloroethane	Ave	0.8096	0.8071		1.99	2.00	-0.3	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Lab Sample ID: ICV 140-8740/17 Calibration Date: 02/24/2017 09:49

Instrument ID: MR Calib Start Date: 02/23/2017 22:59

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/24/2017 05:21

Lab File ID: RB23LCS.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2316	0.2372		2.05	2.00	2.4	35.0
Isopropylbenzene	Ave	1.525	1.601		2.10	2.00	5.0	35.0
Propylbenzene	Ave	0.4054	0.4516		2.23	2.00	11.4	35.0
2-Chlorotoluene	Ave	0.3954	0.4202		2.13	2.00	6.3	35.0
4-Ethyltoluene	Ave	1.504	1.620		2.15	2.00	7.7	35.0
1,3,5-Trimethylbenzene	Ave	0.6917	0.7557		2.18	2.00	9.2	35.0
Alpha Methyl Styrene	Ave	0.5727	0.4734		1.65	2.00	-17.3	35.0
Decane	Ave	0.9298	1.177		2.53	2.00	26.6	35.0
tert-Butylbenzene	Ave	1.369	1.531		2.24	2.00	11.8	35.0
1,2,4-Trimethylbenzene	Ave	1.287	1.462		2.27	2.00	13.6	35.0
1,3-Dichlorobenzene	Ave	1.039	1.115		2.15	2.00	7.3	35.0
sec-Butylbenzene	Ave	1.916	2.192		2.29	2.00	14.4	35.0
Benzyl chloride	Ave	1.125	1.142		2.03	2.00	1.5	35.0
1,4-Dichlorobenzene	Ave	1.064	1.134		2.13	2.00	6.5	35.0
4-Isopropyltoluene	Ave	1.584	1.805		2.28	2.00	13.9	35.0
1,2,3-Trimethylbenzene	Ave	1.033	1.249		2.42	2.00	20.9	35.0
Butylcyclohexane	Ave	1.062	1.199		2.26	2.00	13.0	35.0
1,2-Dichlorobenzene	Ave	1.016	1.109		2.18	2.00	9.2	35.0
Indane	Ave	1.180	1.239		2.10	2.00	5.0	35.0
Indene	Ave	0.8646	1.067		2.47	2.00	23.4	35.0
Butylbenzene	Ave	1.700	1.919		2.26	2.00	12.9	35.0
Undecane	Ave	1.072	1.283		2.39	2.00	19.7	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	1.288	1.659		2.58	2.00	28.8	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.4403	0.4387		1.99	2.00	-0.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.462	1.721		2.35	2.00	17.7	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.9276	1.071		2.31	2.00	15.4	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.248	1.381		2.21	2.00	10.7	35.0
Dodecane	Ave	1.107	1.027		1.85	2.00	-7.3	35.0
1,2,4-Trichlorobenzene	Ave	1.090	1.130		2.07	2.00	3.6	35.0
Naphthalene	Ave	1.914	1.912		2.00	2.00	-0.1	35.0
Benzo(b)thiophene	Ave	1.142	1.092		1.91	2.00	-4.4	35.0
Hexachlorobutadiene	Ave	1.103	1.093		1.98	2.00	-0.9	35.0
1,2,3-Trichlorobenzene	Ave	1.077	1.019		1.89	2.00	-5.4	35.0
2-Methylnaphthalene	Ave	0.1675	0.0445		1.66	6.25	-73.5*	50.0
1-Methylnaphthalene	Ave	0.1240	0.0477		2.40	6.25	-61.5*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6982	0.7365		4.22	4.00	5.5	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Lab File ID: RC06BFBB.D BFB Injection Date: 03/06/2017

Instrument ID: MR BFB Injection Time: 13:01

Analysis Batch No.: 9101

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.0	
75	30.0 - 60.0 % of mass 95	48.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	92.7	
175	5.0 - 9.0 % of mass 174	6.2	(6.7) 1
176	95.0 - 101.0 % of mass 174	88.7	(95.7) 1
177	5.0 - 9.0 % of mass 176	5.5	(6.2) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-9101/8	RC06CCVB.D	03/06/2017	13:34
	LCS 140-9101/1008	RC06CCVB-LCS .d	03/06/2017	13:34
	MB 140-9101/10	RC06BLK.D	03/06/2017	15:53
IA-015-A-22	140-7324-1	RC06P101.D	03/06/2017	16:40
IA-018-A-22	140-7324-2	RC06P102.D	03/06/2017	17:27
IA-021-A-22	140-7324-3	RC06P103.D	03/06/2017	18:15
IA-075-A-22	140-7324-4	RC06P104.D	03/06/2017	19:03
IA-076-A-22	140-7324-5	RC06P105.D	03/06/2017	19:50
IA-078-A-22	140-7324-6	RC06P106.D	03/06/2017	20:37
IA-079-A-22	140-7324-7	RC06P107.D	03/06/2017	21:24
IA-081-A-22	140-7324-8	RC06P108.D	03/06/2017	22:11
IA-093-A-22	140-7324-9	RC06P109.D	03/06/2017	22:58
IA-168-A-22	140-7324-10	RC06P110.D	03/06/2017	23:46
IA-097-A-22	140-7324-11	RC06P111.D	03/07/2017	00:33
IA-117-A-22	140-7324-12	RC06P112.D	03/07/2017	01:20
IA-118-A-22	140-7324-13	RC06P113.D	03/07/2017	02:08
IA-136-A-22	140-7324-14	RC06P114.D	03/07/2017	02:55
IA-138-A-22	140-7324-15	RC06P115.D	03/07/2017	03:42
SV-DUP03-A-22	140-7324-22	RC06P116.D	03/07/2017	05:16
SV-093-A-22	140-7324-25	RC06P201.D	03/07/2017	06:04

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Lab Sample ID: CCVIS 140-9101/8 Calibration Date: 03/06/2017 13:34

Instrument ID: MR Calib Start Date: 02/23/2017 22:59

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/24/2017 05:21

Lab File ID: RC06CCVB.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3695	0.3969		2.15	2.00	7.4	30.0
Propene	Ave	1.433	1.486		2.07	2.00	3.7	30.0
Dichlorodifluoromethane	Ave	2.686	2.256		1.68	2.00	-16.0	30.0
Chloromethane	Ave	0.4685	0.3750		1.60	2.00	-20.0	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.478	2.125		1.72	2.00	-14.3	30.0
Acetaldehyde	Ave	0.4324	0.2191		5.07	10.0	-49.3*	30.0
Vinyl chloride	Ave	1.118	0.7003		1.25	2.00	-37.4*	30.0
1,3-Butadiene	Ave	0.7734	0.4802		1.24	2.00	-37.9*	30.0
Butane	Ave	1.466	0.8622		1.18	2.00	-41.2*	30.0
Bromomethane	Ave	0.8659	0.5791		1.34	2.00	-33.1*	30.0
Chloroethane	Ave	0.4131	0.2597		1.26	2.00	-37.1*	30.0
Ethanol	Ave	0.2894	0.1761		6.09	10.0	-39.1*	30.0
Vinyl bromide	Ave	0.7362	0.5378		1.46	2.00	-27.0	30.0
2-Methylbutane	Ave	0.7689	0.5114		1.33	2.00	-33.5*	30.0
Acrolein	Ave	0.2773	0.1513		1.09	2.00	-45.4*	30.0
Trichlorofluoromethane	Ave	3.269	2.892		1.77	2.00	-11.5	30.0
Acetonitrile	Ave	0.5123	0.4687		1.83	2.00	-8.5	30.0
Acetone	Ave	0.6582	0.6804		6.21	6.00	3.4	30.0
Isopropyl alcohol	Ave	1.963	2.261		6.91	6.00	15.2	30.0
Pentane	Ave	0.2276	0.2683		2.36	2.00	17.9	30.0
Ethyl ether	Ave	1.583	1.790		2.26	2.00	13.1	30.0
1,1-Dichloroethene	Ave	1.229	1.355		2.21	2.00	10.3	30.0
Acrylonitrile	Ave	1.001	1.209		2.42	2.00	20.8	30.0
tert-Butyl alcohol	Ave	2.362	2.768		2.34	2.00	17.2	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.755	3.095		2.25	2.00	12.3	30.0
Methylene Chloride	Ave	1.248	1.319		2.12	2.00	5.7	30.0
3-Chloropropene	Ave	1.245	1.366		2.19	2.00	9.7	30.0
Carbon disulfide	Ave	3.545	4.094		2.31	2.00	15.5	30.0
trans-1,2-Dichloroethene	Ave	1.260	1.425		2.26	2.00	13.1	30.0
2-Methylpentane	Ave	2.995	3.679		2.46	2.00	22.8	30.0
Methyl tert-butyl ether	Ave	3.209	3.934		2.45	2.00	22.6	30.0
1,1-Dichloroethane	Ave	2.483	2.919		2.35	2.00	17.6	30.0
Vinyl acetate	Ave	3.559	4.573		2.57	2.00	28.5	30.0
2-Butanone (MEK)	Ave	0.6013	0.6950		2.31	2.00	15.6	30.0
Hexane	Ave	1.120	1.312		2.34	2.00	17.1	30.0
Isopropyl ether	Ave	4.844	6.067		2.51	2.00	25.2	30.0
cis-1,2-Dichloroethene	Ave	1.311	1.484		2.27	2.00	13.2	30.0
Ethyl acetate	Ave	3.080	3.887		2.53	2.00	26.2	30.0
Chloroform	Ave	2.688	3.114		2.32	2.00	15.8	30.0
Tert-butyl ethyl ether	Ave	3.778	4.811		2.55	2.00	27.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Lab Sample ID: CCVIS 140-9101/8 Calibration Date: 03/06/2017 13:34

Instrument ID: MR Calib Start Date: 02/23/2017 22:59

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/24/2017 05:21

Lab File ID: RC06CCVB.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.646	1.997		2.43	2.00	21.4	30.0
1,1,1-Trichloroethane	Ave	2.551	3.047		2.39	2.00	19.4	30.0
1,2-Dichloroethane	Ave	0.3718	0.4368		2.35	2.00	17.5	30.0
1-Butanol	Ave	0.1094	0.1226		2.24	2.00	12.0	30.0
Benzene	Ave	0.7244	0.8343		2.30	2.00	15.2	30.0
Cyclohexane	Ave	0.1154	0.1459		2.53	2.00	26.5	30.0
Carbon tetrachloride	Ave	0.5497	0.6387		2.33	2.00	16.2	30.0
2,3-Dimethylpentane	Ave	0.1710	0.2092		2.45	2.00	22.3	30.0
Thiophene	Ave	0.4346	0.5091		2.34	2.00	17.2	30.0
Tert-amyl methyl ether	Ave	0.6787	0.8645		2.55	2.00	27.4	30.0
2,2,4-Trimethylpentane	Ave	1.330	1.660		2.50	2.00	24.9	30.0
1,2-Dichloropropane	Ave	0.3106	0.3728		2.40	2.00	20.0	30.0
Heptane	Ave	0.2559	0.3264		2.55	2.00	27.5	30.0
Trichloroethene	Ave	0.3544	0.3856		2.18	2.00	8.8	30.0
Dibromomethane	Ave	0.3182	0.3670		2.31	2.00	15.4	30.0
1,4-Dioxane	Ave	0.1077	0.1213		2.25	2.00	12.6	30.0
Bromodichloromethane	Ave	0.5213	0.6331		2.43	2.00	21.5	30.0
Methyl methacrylate	Ave	0.3546	0.4622		2.61	2.00	30.3*	30.0
Methylcyclohexane	Ave	0.5329	0.6525		2.45	2.00	22.4	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.6501	0.8534		2.63	2.00	31.3*	30.0
cis-1,3-Dichloropropene	Ave	0.4066	0.5139		2.53	2.00	26.4	30.0
trans-1,3-Dichloropropene	Ave	0.4433	0.5795		2.62	2.00	30.7*	30.0
Toluene	Ave	1.086	1.325		2.44	2.00	22.0	30.0
1,1,2-Trichloroethane	Ave	0.3302	0.3887		2.36	2.00	17.7	30.0
2-Methylthiophene	Ave	0.8511	1.033		2.43	2.00	21.4	30.0
3-Methylthiophene	Ave	0.8346	1.026		2.46	2.00	22.9	30.0
2-Hexanone	Ave	0.3801	0.5049		2.66	2.00	32.8*	30.0
Dibromochloromethane	Ave	0.5963	0.7653		2.57	2.00	28.3	30.0
Octane	Ave	0.3153	0.4159		2.64	2.00	31.9*	30.0
1,2-Dibromoethane (EDB)	Ave	0.5593	0.6745		2.41	2.00	20.6	30.0
Tetrachloroethene	Ave	0.3974	0.4645		2.34	2.00	16.9	30.0
Chlorobenzene	Ave	0.9194	1.006		2.19	2.00	9.4	30.0
2,3-Dimethylheptane	Ave	1.055	1.356		2.57	2.00	28.6	30.0
Ethylbenzene	Ave	1.371	1.630		2.38	2.00	18.9	30.0
2-Ethylthiophene	Ave	0.9674	1.175		2.43	2.00	21.5	30.0
m-Xylene & p-Xylene	Ave	1.042	1.262		4.85	4.00	21.1	30.0
Bromoform	Ave	0.6894	0.7777		2.26	2.00	12.8	30.0
Styrene	Ave	0.6900	0.8926		2.59	2.00	29.4	30.0
Nonane	Ave	0.7036	0.9494		2.70	2.00	34.9*	30.0
o-Xylene	Ave	1.101	1.267		2.30	2.00	15.0	30.0
1,1,2,2-Tetrachloroethane	Ave	0.8096	0.9816		2.43	2.00	21.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Lab Sample ID: CCVIS 140-9101/8 Calibration Date: 03/06/2017 13:34

Instrument ID: MR Calib Start Date: 02/23/2017 22:59

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/24/2017 05:21

Lab File ID: RC06CCVB.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2316	0.2676		2.31	2.00	15.5	30.0
Isopropylbenzene	Ave	1.525	1.672		2.19	2.00	9.6	30.0
Propylbenzene	Ave	0.4054	0.4646		2.29	2.00	14.6	30.0
2-Chlorotoluene	Ave	0.3954	0.4198		2.12	2.00	6.2	30.0
4-Ethyltoluene	Ave	1.504	1.843		2.45	2.00	22.5	30.0
1,3,5-Trimethylbenzene	Ave	0.6917	0.8137		2.35	2.00	17.6	30.0
Alpha Methyl Styrene	Ave	0.5727	0.7350		2.57	2.00	28.3	30.0
Decane	Ave	0.9298	1.350		2.91	2.00	45.2*	30.0
tert-Butylbenzene	Ave	1.369	1.697		2.48	2.00	23.9	30.0
1,2,4-Trimethylbenzene	Ave	1.287	1.620		2.52	2.00	25.8	30.0
1,3-Dichlorobenzene	Ave	1.039	1.194		2.30	2.00	14.9	30.0
sec-Butylbenzene	Ave	1.916	2.444		2.55	2.00	27.5	30.0
Benzyl chloride	Ave	1.125	1.491		2.65	2.00	32.5*	30.0
1,4-Dichlorobenzene	Ave	1.064	1.230		2.31	2.00	15.6	30.0
4-Isopropyltoluene	Ave	1.584	2.072		2.62	2.00	30.8*	30.0
1,2,3-Trimethylbenzene	Ave	1.033	1.282		2.48	2.00	24.1	30.0
Butylcyclohexane	Ave	1.062	1.367		2.58	2.00	28.7	30.0
1,2-Dichlorobenzene	Ave	1.016	1.202		2.37	2.00	18.3	30.0
Indane	Ave	1.180	1.394		2.36	2.00	18.1	30.0
Indene	Ave	0.8646	1.132		2.62	2.00	30.9*	30.0
Butylbenzene	Ave	1.700	2.223		2.62	2.00	30.8*	30.0
Undecane	Ave	1.072	1.554		2.90	2.00	44.9*	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	1.288	1.562		2.43	2.00	21.3	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.4403	0.5380		2.45	2.00	22.2	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.462	1.842		2.52	2.00	26.0	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.9276	1.130		2.44	2.00	21.8	30.0
1,2,3,4-Tetramethylbenzene	Ave	1.248	1.515		2.43	2.00	21.5	30.0
Dodecane	Ave	1.107	1.482		2.68	2.00	33.9*	30.0
1,2,4-Trichlorobenzene	Ave	1.090	1.251		2.30	2.00	14.7	30.0
Naphthalene	Ave	1.914	2.270		2.37	2.00	18.6	30.0
Benzo(b)thiophene	Ave	1.142	1.272		2.23	2.00	11.4	30.0
Hexachlorobutadiene	Ave	1.103	1.232		2.24	2.00	11.7	30.0
1,2,3-Trichlorobenzene	Ave	1.077	1.166		2.17	2.00	8.2	30.0
2-Methylnaphthalene	Ave	0.1675	0.1121		4.18	6.25	-33.1	50.0
1-Methylnaphthalene	Ave	0.1240	0.0943		4.75	6.25	-24.0	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6982	0.7055		4.04	4.00	1.1	30.0

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Lab File ID: J200BC06.D Lab Sample ID: MB 140-9074/9

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MJ Date Analyzed: 03/06/2017 14:03

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-9074/1006	JCCVC06A-LCS.d	03/06/2017 11:45
IA-DUP01-C-22	140-7324-16	JC06P101.D	03/06/2017 16:03
IA-DUP02-C-22	140-7324-17	JC06P102.D	03/06/2017 16:48
IA-DUP03-A-22	140-7324-18	JC06P103.D	03/06/2017 17:33
IA-DUP04-A-22	140-7324-19	JC06P104.D	03/06/2017 18:18
SV-DUP01-C-22	140-7324-20	JC06P105.D	03/06/2017 19:04
IA-139-A-22	140-7324-23	JC06P107.D	03/06/2017 20:34
SV-DUP02-C-22	140-7324-21	JC06P106R.D	03/07/2017 09:37

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-9074/9

Matrix: Air | Lab File ID: J200BC06.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 03/06/2017 14:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9074 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	84		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-9074/9

Matrix: Air Lab File ID: J200BC06.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/06/2017 14:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9074 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	84		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Matrix: Air Level: Low Lab File ID: JCCVC06A-LCS.d

Lab ID: LCS 140-9074/1006 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.71	86	70-130	
Carbon tetrachloride	2.00	2.00	100	70-130	
Chlorodifluoromethane	2.00	1.55	78	60-140	
Chloroform	2.00	1.73	87	70-130	
cis-1,2-Dichloroethene	2.00	1.88	94	70-130	
Dichlorodifluoromethane	2.00	1.76	88	60-140	
1,1-Dichloroethane	2.00	1.81	91	70-130	
1,2-Dichloroethane	2.00	1.69	84	70-130	
1,1-Dichloroethene	2.00	1.82	91	70-130	
Ethylbenzene	2.00	1.54	77	70-130	
Methylene Chloride	2.00	1.78	89	70-130	
Methyl tert-butyl ether	2.00	1.45	72	60-140	
Naphthalene	2.00	1.71	85	60-140	
Tetrachloroethene	2.00	1.77	88	70-130	
Toluene	2.00	1.56	78	70-130	
trans-1,2-Dichloroethene	2.00	1.86	93	70-130	
1,2,4-Trichlorobenzene	2.00	2.07	103	60-140	
1,1,1-Trichloroethane	2.00	1.84	92	70-130	
1,1,2-Trichloroethane	2.00	1.53	77	70-130	
Trichloroethene	2.00	2.28	114	70-130	
1,2,3-Trimethylbenzene	2.00	1.60	80	70-130	
1,2,4-Trimethylbenzene	2.00	1.62	81	70-130	
1,3,5-Trimethylbenzene	2.00	1.70	85	70-130	
Vinyl chloride	2.00	1.75	87	70-130	
Xylenes, Total	6.00	4.62	77	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Lab File ID: RC06BLK.D Lab Sample ID: MB 140-9101/10

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MR Date Analyzed: 03/06/2017 15:53

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-9101/1008	RC06CCVB-LCS.d	03/06/2017 13:34
IA-015-A-22	140-7324-1	RC06P101.D	03/06/2017 16:40
IA-018-A-22	140-7324-2	RC06P102.D	03/06/2017 17:27
IA-021-A-22	140-7324-3	RC06P103.D	03/06/2017 18:15
IA-075-A-22	140-7324-4	RC06P104.D	03/06/2017 19:03
IA-076-A-22	140-7324-5	RC06P105.D	03/06/2017 19:50
IA-078-A-22	140-7324-6	RC06P106.D	03/06/2017 20:37
IA-079-A-22	140-7324-7	RC06P107.D	03/06/2017 21:24
IA-081-A-22	140-7324-8	RC06P108.D	03/06/2017 22:11
IA-093-A-22	140-7324-9	RC06P109.D	03/06/2017 22:58
IA-168-A-22	140-7324-10	RC06P110.D	03/06/2017 23:46
IA-097-A-22	140-7324-11	RC06P111.D	03/07/2017 00:33
IA-117-A-22	140-7324-12	RC06P112.D	03/07/2017 01:20
IA-118-A-22	140-7324-13	RC06P113.D	03/07/2017 02:08
IA-136-A-22	140-7324-14	RC06P114.D	03/07/2017 02:55
IA-138-A-22	140-7324-15	RC06P115.D	03/07/2017 03:42
SV-DUP03-A-22	140-7324-22	RC06P116.D	03/07/2017 05:16
SV-093-A-22	140-7324-25	RC06P201.D	03/07/2017 06:04

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-9101/10

Matrix: Air | Lab File ID: RC06BLK.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 03/06/2017 15:53

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7324-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-9101/10

Matrix: Air | Lab File ID: RC06BLK.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 03/06/2017 15:53

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9101 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Matrix: Air Level: Low Lab File ID: RC06CCVB-LCS.d

Lab ID: LCS 140-9101/1008 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.30	115	70-130	
Carbon tetrachloride	2.00	2.33	116	70-130	
Chlorodifluoromethane	2.00	2.15	107	60-140	
Chloroform	2.00	2.32	116	70-130	
cis-1,2-Dichloroethene	2.00	2.27	113	70-130	
Dichlorodifluoromethane	2.00	1.68	84	60-140	
1,1-Dichloroethane	2.00	2.35	118	70-130	
1,2-Dichloroethane	2.00	2.35	117	70-130	
1,1-Dichloroethene	2.00	2.21	110	70-130	
Ethylbenzene	2.00	2.38	119	70-130	
Methylene Chloride	2.00	2.12	106	70-130	
Methyl tert-butyl ether	2.00	2.45	123	60-140	
Naphthalene	2.00	2.37	119	60-140	
Tetrachloroethene	2.00	2.34	117	70-130	
Toluene	2.00	2.44	122	70-130	
trans-1,2-Dichloroethene	2.00	2.26	113	70-130	
1,2,4-Trichlorobenzene	2.00	2.30	115	60-140	
1,1,1-Trichloroethane	2.00	2.39	119	70-130	
1,1,2-Trichloroethane	2.00	2.36	118	70-130	
Trichloroethene	2.00	2.18	109	70-130	
1,2,3-Trimethylbenzene	2.00	2.48	124	70-130	
1,2,4-Trimethylbenzene	2.00	2.52	126	70-130	
1,3,5-Trimethylbenzene	2.00	2.35	118	70-130	
Vinyl chloride	2.00	1.25	63	70-130	*
Xylenes, Total	6.00	7.15	119	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
IA-015-A-22	140-7324-1	105
IA-018-A-22	140-7324-2	102
IA-021-A-22	140-7324-3	100
IA-075-A-22	140-7324-4	98
IA-076-A-22	140-7324-5	102
IA-078-A-22	140-7324-6	101
IA-079-A-22	140-7324-7	99
IA-081-A-22	140-7324-8	101
IA-093-A-22	140-7324-9	102
IA-168-A-22	140-7324-10	100
IA-097-A-22	140-7324-11	100
IA-117-A-22	140-7324-12	101
IA-118-A-22	140-7324-13	100
IA-136-A-22	140-7324-14	99
IA-138-A-22	140-7324-15	101
IA-DUP01-C-22	140-7324-16	79
IA-DUP02-C-22	140-7324-17	84
IA-DUP03-A-22	140-7324-18	82
IA-DUP04-A-22	140-7324-19	85
SV-DUP01-C-22	140-7324-20	85
SV-DUP02-C-22	140-7324-21	86
SV-DUP03-A-22	140-7324-22	99
IA-139-A-22	140-7324-23	83
SV-093-A-22	140-7324-25	101
	MB 140-9074/9	84
	MB 140-9101/10	105
	LCS 140-9074/1006	90
	LCS 140-9101/1008	101

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Sample No.: ICIS 140-7241/7 Date Analyzed: 11/25/2016 23:17

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JK25IC06X.D Heated Purge: (Y/N) N

Calibration ID: 790

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		356777	8.64	1567971	10.84	1332891	15.61
UPPER LIMIT		499488	8.97	2195159	11.17	1866047	15.94
LOWER LIMIT		214066	8.31	940783	10.51	799735	15.28
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-7241/23		319485	8.63	1407958	10.83	1180826	15.61

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Sample No.: CCVIS 140-9074/6 Date Analyzed: 03/06/2017 11:45

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JCCVC06A.D Heated Purge: (Y/N) N

Calibration ID: 790

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		338199	8.56	1425501	10.76	1222862	15.54
UPPER LIMIT		473479	8.89	1995701	11.09	1712007	15.87
LOWER LIMIT		202919	8.23	855301	10.43	733717	15.21
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-9074/1006		338199	8.56	1425501	10.76	1222862	15.54
MB 140-9074/9		333208	8.56	1487094	10.76	1263043	15.54
140-7324-16	IA-DUP01-C-22	292322	8.56	1296304	10.76	1002411	15.54
140-7324-17	IA-DUP02-C-22	321196	8.56	1452176	10.76	1154294	15.54
140-7324-18	IA-DUP03-A-22	281680	8.56	1292891	10.76	1073384	15.54
140-7324-19	IA-DUP04-A-22	288473	8.57	1310152	10.76	1082761	15.54
140-7324-20	SV-DUP01-C-22	281978	8.56	1275499	10.76	1084439	15.54
140-7324-23	IA-139-A-22	282884	8.56	1240724	10.76	993196	15.54
140-7324-21	SV-DUP02-C-22	264546	8.55	1178739	10.75	949642	15.54

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Sample No.: ICIS 140-8740/8 Date Analyzed: 02/24/2017 02:57

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RB23IC06.D Heated Purge: (Y/N) N

Calibration ID: 919

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		415087	8.23	2028116	10.39	1643754	15.28
UPPER LIMIT		581122	8.56	2839362	10.72	2301256	15.61
LOWER LIMIT		249052	7.90	1216870	10.06	986252	14.95
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-8740/17		429501	8.23	2158241	10.39	1765346	15.28

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Sample No.: CCVIS 140-9101/8 Date Analyzed: 03/06/2017 13:34

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RC06CCVB.D Heated Purge: (Y/N) N

Calibration ID: 919

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		442601	8.22	2171742	10.38	1714814	15.27
UPPER LIMIT		619641	8.55	3040439	10.71	2400740	15.60
LOWER LIMIT		265561	7.89	1303045	10.05	1028888	14.94
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-9101/1008		442601	8.22	2171742	10.38	1714814	15.27
MB 140-9101/10		453668	8.22	2218730	10.38	1726636	15.27
140-7324-1	IA-015-A-22	414507	8.24	2021584	10.39	1582705	15.27
140-7324-2	IA-018-A-22	413989	8.22	2013021	10.38	1613778	15.27
140-7324-3	IA-021-A-22	429252	8.25	2042619	10.39	1629750	15.27
140-7324-4	IA-075-A-22	433191	8.25	2045998	10.40	1612201	15.27
140-7324-5	IA-076-A-22	436543	8.24	2082837	10.39	1667154	15.27
140-7324-6	IA-078-A-22	433485	8.24	2088962	10.39	1645713	15.27
140-7324-7	IA-079-A-22	420866	8.23	2043972	10.38	1620638	15.27
140-7324-8	IA-081-A-22	415188	8.23	2009493	10.38	1608304	15.27
140-7324-9	IA-093-A-22	410970	8.21	1997618	10.38	1597216	15.27
140-7324-10	IA-168-A-22	413668	8.24	1999303	10.39	1592983	15.27
140-7324-11	IA-097-A-22	412135	8.22	1996942	10.38	1594679	15.27
140-7324-12	IA-117-A-22	403371	8.22	1944368	10.38	1545586	15.27
140-7324-13	IA-118-A-22	405087	8.23	1949721	10.38	1552710	15.27
140-7324-14	IA-136-A-22	416954	8.25	2004855	10.39	1593469	15.27
140-7324-15	IA-138-A-22	401352	8.21	1962759	10.37	1545847	15.27
140-7324-22	SV-DUP03-A-22	399183	8.23	1903363	10.38	1570300	15.27
140-7324-25	SV-093-A-22	389649	8.20	1860263	10.37	1513344	15.27

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

LOCKHEED MARTIN CORPORATION (LMC) - MIDDLE RIVER COMPLEX (MRC)
SDG 140-7324-1

SAMPLE IDENTIFICATION	IA-018-A-22		
COMPOUND	TRICHLOROETHENE	MW=	131.39
		GAS CONSTANT =	24.45
COMPOUND AREA	52859		
INTERNAL STANDARD AMOUNT (ppbv)	4		
CALIBRATION VOLUME (mL)	500		
DILUTION FACTOR	1		
INTERNAL STANDARD AREA	2013021		
AVERAGE RRF	0.3544		
SAMPLE VOLUME (mL)	100		

1.4819 ppbv
7.96 µg/m³

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-018-A-22 Lab Sample ID: 140-7324-2

Matrix: Air Lab File ID: RC06P102.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 16:23

Sample wt/vol: 100(mL) Date Analyzed: 03/06/2017 17:27

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9101 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.24	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.092	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.7		0.40	0.075
67-66-3	Chloroform	119.38	0.15	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.21	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.92	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.64		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.5		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND	*	0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.56	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1

SDG No.:

Client Sample ID: IA-018-A-22 Lab Sample ID: 140-7324-2

Matrix: Air Lab File ID: RC06P102.D

Analysis Method: TO 15 LL Date Collected: 03/01/2017 16:23

Sample wt/vol: 100(mL) Date Analyzed: 03/06/2017 17:27

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9101 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.76	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.58	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	9.6		1.4	0.27
67-66-3	Chloroform	119.38	0.71	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.82	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	3.3		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	8.0	✓	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND	*	0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.4	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

Report Date: 07-Mar-2017 09:57:13 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170303-4206.b\RC06P102.D				
Lims ID:	140-7324-A-2				
Client ID:	IA-018-A-22				
Sample Type:	Client				
Inject. Date:	06-Mar-2017 17:27:30	ALS Bottle#:	2	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004206-012				
Misc. Info.:	140-7324-a-2				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170303-4206.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	07-Mar-2017 09:56:58	Calib Date:	24-Feb-2017 05:21:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170220-4095.b\RB23IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK023				
First Level Reviewer: tajh		Date:	07-Mar-2017 09:50:04		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.215	8.220	-0.005	99	413989	4.00	
* 2 1,4-Difluorobenzene	114	10.377	10.383	-0.006	96	2013021	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.274	15.274	0.000	90	1613778	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.961	16.962	-0.001	95	1154708	4.10	
6 Chlorodifluoromethane	67	3.723	3.712	0.011	96	20868	0.5457	
8 Dichlorodifluoromethane	85	3.777	3.772	0.005	98	22115	0.0796	
27 1,1-Dichloroethene	96	5.621	5.627	-0.006	95	5293	0.0416	
31 Methylene Chloride	84	5.912	5.918	-0.006	97	23708	0.1836	
44 Chloroform	83	8.242	8.253	-0.011	80	8145	0.0293	
50 Benzene	78	9.811	9.817	-0.006	95	17291	0.0474	
52 Carbon tetrachloride	117	9.849	9.849	0.000	50	5091	0.0184	
59 Trichloroethene	130	11.111	11.116	-0.005	96	52859	0.2964	
68 Toluene	91	13.246	13.246	0.000	93	117128	0.2674	
81 m-Xylene & p-Xylene	91	15.802	15.813	-0.011	99	34123	0.0812	
85 o-Xylene	91	16.341	16.341	0.000	98	13026	0.0293	
116 Naphthalene	128	20.903	20.909	-0.006	99	98189	0.1271	
S 124 Xylenes, Total	100				0		0.1105	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7324-1 Analy Batch No.: 8740

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/23/2017 22:59 Calibration End Date: 02/24/2017 05:21 Calibration ID: 919

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Heptane	0.2353 0.2908	0.2275 0.2815	0.2590 0.2612	0.2641 0.2024	0.2816	Ave		0.2559				11.3		30.0			
Trichloroethene	0.3763 0.3567	0.3817 0.3432	0.3529 0.3456	0.3658 0.3092	0.3578	Ave		0.3544				6.0		30.0			
Dibromomethane	0.3368 0.3240	0.3340 0.3255	0.3070 0.3261	0.3038 0.2958	0.3106	Ave		0.3182				4.5		30.0			
Bromodichloromethane	0.4663 0.5746	0.4798 0.5800	0.4513 0.5835	0.4868 0.5396	0.5299	Ave		0.5213				9.9		30.0			
1,4-Dioxane	0.0955 0.1208	0.0973 0.1162	0.1080 0.1119	0.1081 0.0937	0.1180	Ave		0.1077				9.4		30.0			
Methyl methacrylate	0.2948 0.4155	0.2926 0.4018	0.3019 0.3943	0.3382 0.3639	0.3887	Ave		0.3546				13.8		30.0			
Methylcyclohexane	0.5249 0.5800	0.4823 0.5724	0.5045 0.5475	0.5416 0.4768	0.5664	Ave		0.5329				7.2		30.0			
4-Methyl-2-pentanone (MIBK)	0.5451 0.7612	0.5831 0.7193	0.5890 0.6786	0.6733 0.5958	0.7057	Ave		0.6501				11.4		30.0			
cis-1,3-Dichloropropene	0.3325 0.4545	0.3580 0.4588	0.3691 0.4524	0.3881 0.4296	0.4163	Ave		0.4066				11.4		30.0			
trans-1,3-Dichloropropene	0.3439 0.4969	0.3713 0.5120	0.3700 0.5423	0.3990 0.5042	0.4502	Ave		0.4433				16.6		30.0			
Toluene	0.9897 1.1563	1.1262 1.1350	1.0484 1.1215	1.0868 0.9730	1.1353	Ave		1.0858				6.2		30.0			
1,1,2-Trichloroethane	0.3385 0.3438	0.3467 0.3365	0.3263 0.3306	0.3332 0.2836	0.3327	Ave		0.3302				5.6		30.0			
2-Methylthiophene	0.7648 0.9175	0.8124 0.9073	0.8091 0.9013	0.8550 0.7986	0.8939	Ave		0.8511				6.6		30.0			
3-Methylthiophene	0.7410 0.9150	0.7956 0.8949	0.7731 0.8873	0.8464 0.7837	0.8746	Ave		0.8346				7.5		30.0			
2-Hexanone	+++++ 0.4413	+++++ 0.4193	0.2939 0.4095	0.3464 0.3479	0.4025	Ave		0.3801				13.7		30.0			
Dibromochloromethane	0.4539 0.7002	0.4589 0.7087	0.5439 0.6920	0.5767 0.5676	0.6651	Ave		0.5963				16.8		30.0			
Octane	0.3050 0.3634	0.2812 0.3499	0.3062 0.3175	0.3226 0.2334	0.3580	Ave		0.3153				13.0		30.0			
1,2-Dibromoethane (EDB)	0.5025 0.6052	0.5348 0.6004	0.5271 0.6043	0.5526 0.5347	0.5718	Ave		0.5593				6.8		30.0			
Tetrachloroethene	0.4127 0.4118	0.4281 0.3977	0.4170 0.3891	0.3858 0.3259	0.4085	Ave		0.3974				7.6		30.0			
Chlorobenzene	1.0317 0.9145	0.9878 0.8942	0.9702 0.8663	0.9165 0.7600	0.9332	Ave		0.9194				8.5		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

TETRA TECH

INTERNAL CORRESPONDENCE

TO: **S. BRENNER** **DATE:** **APRIL 4, 2017**

FROM: **LEIGH A. CIOFANI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
LOCKHEED MARTIN CORPORATION (LMC) – MIDDLE RIVER COMPLEX (MRC)
SAMPLE DELIVERY GROUP (SDG) 140-7360-1

SAMPLES: 10 / Air / VOC

SV-001-C-22	SV-169-A-22	SV-170-A-22
SV-171-A-22	SV-172-A-22	SV-173-A-22
SV-174-A-22	SV-175-A-22	SV-176-A-22
SV-177-A-22		

OVERVIEW

The sample set for LMC – MRC, SDG 140-7360-1, consists of ten (10) soil vapor environmental samples. All samples were analyzed for select volatile organic compounds (VOC). No field duplicate pair samples are included in this SDG.

The samples were collected by Tetra Tech, Inc. on March 8, 2017 and analyzed by TestAmerica, Inc. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank results, surrogate spike recoveries, laboratory control sample results, internal standard areas, chromatographic resolution, compound identification, compound quantitation, and detection limits. Areas of concern are listed below.

MAJOR PROBLEMS

- None.

MINOR PROBLEMS

- Detected results reported below the reporting limit (RL) limit but above the method detection limit (MDL) were qualified as estimated (J).

NOTES

Twenty-five VOC target compounds were reported for the TO-15 analysis of the samples.

Non-detected results were reported to the MDL.

The laboratory case narrative report states that the asset number for sample SV-171-A-22 did not match the information listed on the chain of custody; the asset number is 10270, but the chain of custody listed 10220.

The following samples were analyzed at a dilution factor greater than 1:

Sample	Dilution Factor
SV-170-A-22	3.18
SV-171-A-22	3.29
SV-173-A-22	10.52
SV-175-A-22	358.2

The following analyte was detected in the method blanks at the following maximum concentration:

Analyte	Maximum Concentration
1,1,1-Trichloroethane	0.0852 ug/m^3 (1)

1 – Maximum concentration detected in method blank associated with preparation batch 140-9483 affecting samples SV-169-A-22, SV-170-A-22, SV-171-A-22, SV-172-A-22, SV-173-A-22, SV-174-A-22, SV-175-A-22, SV-177-A-22, and SV-001-C-22.

An action level of the maximum concentration was used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were considered in evaluating for blank contamination. No action was necessary, as the detected results for 1,1,1-trichloroethane in the affected samples were greater than the action level.

EXECUTIVE SUMMARY

Laboratory Performance: None.

Other Factors Affecting Data Quality: Results above the MDL but below the RL were qualified as estimated.

The data for these analyses were reviewed with reference to the USEPA "National Functional Guidelines for Organic Superfund Methods Data Review" (January 2017) and USEPA Method TO-15 analytical and reporting protocols. The text of this report has been formulated to address only those areas affecting data quality.

Leigh A. Ciofani

Tetra Tech, Inc.
Leigh A. Ciofani
Environmental Scientist/Data Validator

Joseph A. Samchuck

Tetra Tech, Inc.
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted method detection limit for sample and method.
J	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 07671	NSAMPLE	SV-001-C-22			SV-169-A-22			SV-170-A-22			SV-171-A-22		
SDG: 140-7360-1	LAB_ID	140-7360-10			140-7360-1			140-7360-2			140-7360-3		
FRACTION: OV-M3	SAMP_DATE	3/8/2017			3/8/2017			3/8/2017			3/8/2017		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.65	U		0.33	U		14	J	P	9.8	U	
1,1,2-TRICHLOROETHANE		1.1	U		0.57	U		9.1	U		17	U	
1,1-DICHLOROETHANE		0.4	U		0.2	U		23	J	P	22	J	P
1,1-DICHLOROETHENE		0.56	U		1.3	J	P	160			1400		
1,2,3-TRIMETHYLBENZENE		1.7	U		0.84	U		13	U		25	U	
1,2,4-TRICHLOROBENZENE		2.9	U		1.4	U		23	U		43	U	
1,2,4-TRIMETHYLBENZENE		1.2	U		0.61	U		9.8	U		18	U	
1,2-DICHLOROETHANE		0.77	U		0.38	U		6.1	U		12	U	
1,3,5-TRIMETHYLBENZENE		1.3	U		0.64	U		10	U		19	U	
BENZENE		0.73	U		0.38	J	P	5.8	U		11	U	
CARBON TETRACHLORIDE		0.94	U		0.47	U		7.5	U		14	U	
CHLORODIFLUOROMETHANE		2.1	J	P	1.5			4.2	U		7.9	U	
CHLOROFORM		4.7			0.38	J	P	7.9	J	P	11	U	
CIS-1,2-DICHLOROETHENE		74			0.48	U		280			94		
DICHLORODIFLUOROMETHANE		2.2	J	P	2.2			11	U		20	U	
ETHYLBENZENE		1.2	U		0.59	U		9.3	U		18	U	
METHYL TERT-BUTYL ETHER		2.5	U		1.2	U		19	U		37	U	
METHYLENE CHLORIDE		4.5	U		2.8	J	P	36	U		68	U	
NAPHTHALENE		2.1	U		1	U		17	U		31	U	
TETRACHLOROETHENE		4.1	J	P	0.54	U		8.6	U		16	U	
TOLUENE		4.5	U		2.3	U		36	U		68	U	
TOTAL XYLENES		1	U		2.3	J	P	8.3	U		16	U	
TRANS-1,2-DICHLOROETHENE		20			0.4	U		6.3	U		12	U	
TRICHLOROETHENE		200			3.9			2000			4100		
VINYL CHLORIDE		0.74	U		0.37	U		5.9	U		11	U	

PROJ_NO: 07671	NSAMPLE	SV-172-A-22			SV-173-A-22			SV-174-A-22			SV-175-A-22		
SDG: 140-7360-1	LAB_ID	140-7360-4			140-7360-5			140-7360-6			140-7360-7		
FRACTION: OV-M3	SAMP_DATE	3/8/2017			3/8/2017			3/8/2017			3/8/2017		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		17	U		15			1100	U	
1,1,2-TRICHLOROETHANE		0.57	U		30	U		2.9	U		1900	U	
1,1-DICHLOROETHANE		0.2	U		51	J	P	8.4			1500	J	P
1,1-DICHLOROETHENE		1.1	J	P	660			72			48000		
1,2,3-TRIMETHYLBENZENE		0.84	U		44	U		4.2	U		2700	U	
1,2,4-TRICHLOROBENZENE		1.4	U		76	U		7.2	U		4700	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		32	U		3.1	U		2000	U	
1,2-DICHLOROETHANE		0.38	U		20	U		1.9	U		1300	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		34	U		3.2	U		2100	U	
BENZENE		0.47	J	P	19	U		1.8	U		1200	U	
CARBON TETRACHLORIDE		0.47	U		25	U		2.4	U		1500	U	
CHLORODIFLUOROMETHANE		3.1			14	U		1.5	J	P	860	U	
CHLOROFORM		0.37	U		19	U		3.8	J	P	1200	U	
CIS-1,2-DICHLOROETHENE		0.66	J	P	250			29			9400		
DICHLORODIFLUOROMETHANE		2.3			35	U		3.3	U		2200	U	
ETHYLBENZENE		0.59	U		31	U		2.9	U		1900	U	
METHYL TERT-BUTYL ETHER		1.2	U		64	U		6.1	U		4000	U	
METHYLENE CHLORIDE		7.4			120	U		11	U		7400	U	
NAPHTHALENE		1	U		55	U		5.2	U		3400	U	
TETRACHLOROETHENE		0.54	U		29	U		2.7	U		1800	U	
TOLUENE		2.3	U		120	U		11	U		7400	U	
TOTAL XYLENES		0.52	U		27	U		2.6	U		1700	U	
TRANS-1,2-DICHLOROETHENE		0.4	U		21	U		2	U		4300	J	P
TRICHLOROETHENE		14			7900			920			650000		
VINYL CHLORIDE		0.37	U		19	U		1.9	U		1200	U	

PROJ_NO: 07671	NSAMPLE	SV-176-A-22			SV-177-A-22		
SDG: 140-7360-1	LAB_ID	140-7360-8			140-7360-9		
FRACTION: OV-M3	SAMP_DATE	3/8/2017			3/8/2017		
MEDIA: AIR	QC_TYPE	NM			NM		
	UNITS	UG/M3			UG/M3		
	PCT_SOLIDS						
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.38	J	P	0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		0.61	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U	
BENZENE		0.63	J	P	0.37	U	
CARBON TETRACHLORIDE		0.47	U		0.47	U	
CHLORODIFLUOROMETHANE		1.5			1.3	J	P
CHLOROFORM		0.37	U		0.82	J	P
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2.3			2.2		
ETHYLBENZENE		0.59	U		0.59	U	
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U	
METHYLENE CHLORIDE		2.8	J	P	2.8	J	P
NAPHTHALENE		1	U		1	U	
TETRACHLOROETHENE		0.54	U		0.73	J	P
TOLUENE		2.3			3.1		
TOTAL XYLENES		1.3	J	P	2.2	J	P
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U	
TRICHLOROETHENE		5.4			2.9		
VINYL CHLORIDE		0.37	U		0.37	U	

Appendix B

Results as Reported by the Laboratory

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-001-C-22 | Lab Sample ID: 140-7360-10

Matrix: Air | Lab File ID: GC16P204.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 12:36

Sample wt/vol: 50(mL) | Date Analyzed: 03/17/2017 02:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9483 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.80	0.23
56-23-5	Carbon tetrachloride	153.81	ND		0.80	0.15
75-45-6	Chlorodifluoromethane	86.47	0.58	J	0.80	0.15
67-66-3	Chloroform	119.38	0.96		0.80	0.15
156-59-2	cis-1,2-Dichloroethene	96.94	19		0.80	0.24
75-71-8	Dichlorodifluoromethane	120.91	0.44	J	0.80	0.27
75-34-3	1,1-Dichloroethane	98.96	ND		0.80	0.10
107-06-2	1,2-Dichloroethane	98.96	ND		0.80	0.19
75-35-4	1,1-Dichloroethene	96.94	ND		0.80	0.14
100-41-4	Ethylbenzene	106.17	ND		0.80	0.27
75-09-2	Methylene Chloride	84.93	ND		2.0	1.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		4.0	0.68
91-20-3	Naphthalene	128.17	ND		0.40	0.40
127-18-4	Tetrachloroethene	165.83	0.60	J	0.80	0.16
108-88-3	Toluene	92.14	ND		1.2	1.2
156-60-5	trans-1,2-Dichloroethene	96.94	4.9		0.80	0.20
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.80	0.39
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.80	0.12
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.80	0.21
79-01-6	Trichloroethene	131.39	37		0.40	0.14
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.80	0.34
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.80	0.25
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.80	0.26
75-01-4	Vinyl chloride	62.50	ND		0.40	0.29
1330-20-7	Xylenes, Total	106.17	ND		1.6	0.24

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-001-C-22 | Lab Sample ID: 140-7360-10

Matrix: Air | Lab File ID: GC16P204.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 12:36

Sample wt/vol: 50(mL) | Date Analyzed: 03/17/2017 02:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9483 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		2.6	0.73
56-23-5	Carbon tetrachloride	153.81	ND		5.0	0.94
75-45-6	Chlorodifluoromethane	86.47	2.1	J	2.8	0.53
67-66-3	Chloroform	119.38	4.7		3.9	0.73
156-59-2	cis-1,2-Dichloroethene	96.94	74		3.2	0.95
75-71-8	Dichlorodifluoromethane	120.91	2.2	J	4.0	1.3
75-34-3	1,1-Dichloroethane	98.96	ND		3.2	0.40
107-06-2	1,2-Dichloroethane	98.96	ND		3.2	0.77
75-35-4	1,1-Dichloroethene	96.94	ND		3.2	0.56
100-41-4	Ethylbenzene	106.17	ND		3.5	1.2
75-09-2	Methylene Chloride	84.93	ND		6.9	4.5
1634-04-4	Methyl tert-butyl ether	88.15	ND		14	2.5
91-20-3	Naphthalene	128.17	ND		2.1	2.1
127-18-4	Tetrachloroethene	165.83	4.1	J	5.4	1.1
108-88-3	Toluene	92.14	ND		4.5	4.5
156-60-5	trans-1,2-Dichloroethene	96.94	20		3.2	0.79
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		5.9	2.9
71-55-6	1,1,1-Trichloroethane	133.41	ND		4.4	0.65
79-00-5	1,1,2-Trichloroethane	133.41	ND		4.4	1.1
79-01-6	Trichloroethene	131.39	200		2.1	0.75
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		3.9	1.7
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		3.9	1.2
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		3.9	1.3
75-01-4	Vinyl chloride	62.50	ND		1.0	0.74
1330-20-7	Xylenes, Total	106.17	ND		6.9	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-169-A-22 Lab Sample ID: 140-7360-1

Matrix: Air Lab File ID: GC16P110.D

Analysis Method: TO 15 LL Date Collected: 03/08/2017 11:18

Sample wt/vol: 100(mL) Date Analyzed: 03/16/2017 19:13

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9483 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.42		0.40	0.075
67-66-3	Chloroform	119.38	0.078	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.44		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.33	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.80	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.73		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.52	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-169-A-22 Lab Sample ID: 140-7360-1

Matrix: Air Lab File ID: GC16P110.D

Analysis Method: TO 15 LL Date Collected: 03/08/2017 11:18

Sample wt/vol: 100(mL) Date Analyzed: 03/16/2017 19:13

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9483 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.38	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	0.38	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.3	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	3.9		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-170-A-22 | Lab Sample ID: 140-7360-2

Matrix: Air | Lab File ID: GC16P111.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 10:50

Sample wt/vol: 20(mL) | Date Analyzed: 03/16/2017 19:56

Soil Aliquot Vol: | Dilution Factor: 3.18

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9483 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		6.4	1.2
75-45-6	Chlorodifluoromethane	86.47	ND		6.4	1.2
67-66-3	Chloroform	119.38	1.6	J	6.4	1.2
156-59-2	cis-1,2-Dichloroethene	96.94	71		6.4	1.9
75-71-8	Dichlorodifluoromethane	120.91	ND		6.4	2.1
75-34-3	1,1-Dichloroethane	98.96	5.6	J	6.4	0.80
107-06-2	1,2-Dichloroethane	98.96	ND		6.4	1.5
75-35-4	1,1-Dichloroethene	96.94	40		6.4	1.1
100-41-4	Ethylbenzene	106.17	ND		6.4	2.1
75-09-2	Methylene Chloride	84.93	ND		16	10
1634-04-4	Methyl tert-butyl ether	88.15	ND		32	5.4
91-20-3	Naphthalene	128.17	ND		3.2	3.2
127-18-4	Tetrachloroethene	165.83	ND		6.4	1.3
108-88-3	Toluene	92.14	ND		9.5	9.5
156-60-5	trans-1,2-Dichloroethene	96.94	ND		6.4	1.6
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		6.4	3.1
71-55-6	1,1,1-Trichloroethane	133.41	2.6	J B	6.4	0.95
79-00-5	1,1,2-Trichloroethane	133.41	ND		6.4	1.7
79-01-6	Trichloroethene	131.39	380		3.2	1.1
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		6.4	2.7
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		6.4	2.0
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		6.4	2.1
75-01-4	Vinyl chloride	62.50	ND		3.2	2.3
1330-20-7	Xylenes, Total	106.17	ND		13	1.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-170-A-22 | Lab Sample ID: 140-7360-2

Matrix: Air | Lab File ID: GC16P111.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 10:50

Sample wt/vol: 20(mL) | Date Analyzed: 03/16/2017 19:56

Soil Aliquot Vol: | Dilution Factor: 3.18

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9483 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		20	5.8
56-23-5	Carbon tetrachloride	153.81	ND		40	7.5
75-45-6	Chlorodifluoromethane	86.47	ND		22	4.2
67-66-3	Chloroform	119.38	7.9	J	31	5.8
156-59-2	cis-1,2-Dichloroethene	96.94	280		25	7.6
75-71-8	Dichlorodifluoromethane	120.91	ND		31	11
75-34-3	1,1-Dichloroethane	98.96	23	J	26	3.2
107-06-2	1,2-Dichloroethane	98.96	ND		26	6.1
75-35-4	1,1-Dichloroethene	96.94	160		25	4.4
100-41-4	Ethylbenzene	106.17	ND		28	9.3
75-09-2	Methylene Chloride	84.93	ND		55	36
1634-04-4	Methyl tert-butyl ether	88.15	ND		110	19
91-20-3	Naphthalene	128.17	ND		17	17
127-18-4	Tetrachloroethene	165.83	ND		43	8.6
108-88-3	Toluene	92.14	ND		36	36
156-60-5	trans-1,2-Dichloroethene	96.94	ND		25	6.3
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		47	23
71-55-6	1,1,1-Trichloroethane	133.41	14	J B	35	5.2
79-00-5	1,1,2-Trichloroethane	133.41	ND		35	9.1
79-01-6	Trichloroethene	131.39	2000		17	6.0
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		31	13
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		31	9.8
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		31	10
75-01-4	Vinyl chloride	62.50	ND		8.1	5.9
1330-20-7	Xylenes, Total	106.17	ND		55	8.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-171-A-22 Lab Sample ID: 140-7360-3

Matrix: Air Lab File ID: GC16P112.D

Analysis Method: TO 15 LL Date Collected: 03/08/2017 10:39

Sample wt/vol: 11(mL) Date Analyzed: 03/16/2017 20:38

Soil Aliquot Vol: Dilution Factor: 3.29

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9483 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		12	3.4
56-23-5	Carbon tetrachloride	153.81	ND		12	2.2
75-45-6	Chlorodifluoromethane	86.47	ND		12	2.2
67-66-3	Chloroform	119.38	ND		12	2.2
156-59-2	cis-1,2-Dichloroethene	96.94	24		12	3.6
75-71-8	Dichlorodifluoromethane	120.91	ND		12	4.0
75-34-3	1,1-Dichloroethane	98.96	5.5	J	12	1.5
107-06-2	1,2-Dichloroethane	98.96	ND		12	2.8
75-35-4	1,1-Dichloroethene	96.94	350		12	2.1
100-41-4	Ethylbenzene	106.17	ND		12	4.0
75-09-2	Methylene Chloride	84.93	ND		30	19
1634-04-4	Methyl tert-butyl ether	88.15	ND		60	10
91-20-3	Naphthalene	128.17	ND		6.0	6.0
127-18-4	Tetrachloroethene	165.83	ND		12	2.4
108-88-3	Toluene	92.14	ND		18	18
156-60-5	trans-1,2-Dichloroethene	96.94	ND		12	3.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		12	5.8
71-55-6	1,1,1-Trichloroethane	133.41	ND		12	1.8
79-00-5	1,1,2-Trichloroethane	133.41	ND		12	3.1
79-01-6	Trichloroethene	131.39	760		6.0	2.1
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		12	5.1
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		12	3.7
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		12	3.9
75-01-4	Vinyl chloride	62.50	ND		6.0	4.3
1330-20-7	Xylenes, Total	106.17	ND		24	3.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-171-A-22 Lab Sample ID: 140-7360-3

Matrix: Air Lab File ID: GC16P112.D

Analysis Method: TO 15 LL Date Collected: 03/08/2017 10:39

Sample wt/vol: 11(mL) Date Analyzed: 03/16/2017 20:38

Soil Aliquot Vol: Dilution Factor: 3.29

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9483 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		38	11
56-23-5	Carbon tetrachloride	153.81	ND		75	14
75-45-6	Chlorodifluoromethane	86.47	ND		42	7.9
67-66-3	Chloroform	119.38	ND		58	11
156-59-2	cis-1,2-Dichloroethene	96.94	94		47	14
75-71-8	Dichlorodifluoromethane	120.91	ND		59	20
75-34-3	1,1-Dichloroethane	98.96	22	J	48	6.1
107-06-2	1,2-Dichloroethane	98.96	ND		48	12
75-35-4	1,1-Dichloroethene	96.94	1400		47	8.3
100-41-4	Ethylbenzene	106.17	ND		52	18
75-09-2	Methylene Chloride	84.93	ND		100	68
1634-04-4	Methyl tert-butyl ether	88.15	ND		220	37
91-20-3	Naphthalene	128.17	ND		31	31
127-18-4	Tetrachloroethene	165.83	ND		81	16
108-88-3	Toluene	92.14	ND		68	68
156-60-5	trans-1,2-Dichloroethene	96.94	ND		47	12
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		89	43
71-55-6	1,1,1-Trichloroethane	133.41	ND		65	9.8
79-00-5	1,1,2-Trichloroethane	133.41	ND		65	17
79-01-6	Trichloroethene	131.39	4100		32	11
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		59	25
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		59	18
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		59	19
75-01-4	Vinyl chloride	62.50	ND		15	11
1330-20-7	Xylenes, Total	106.17	ND		100	16

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-172-A-22 | Lab Sample ID: 140-7360-4

Matrix: Air | Lab File ID: GC16P113.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 10:51

Sample wt/vol: 100(mL) | Date Analyzed: 03/16/2017 21:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9483 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.88		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.17	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.27	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	2.6		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-172-A-22 Lab Sample ID: 140-7360-4

Matrix: Air Lab File ID: GC16P113.D

Analysis Method: TO 15 LL Date Collected: 03/08/2017 10:51

Sample wt/vol: 100(mL) Date Analyzed: 03/16/2017 21:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9483 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.47	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.1		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.66	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.1	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	7.4		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	14		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-173-A-22 | Lab Sample ID: 140-7360-5

Matrix: Air | Lab File ID: GC16P114.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 10:42

Sample wt/vol: 20(mL) | Date Analyzed: 03/16/2017 22:02

Soil Aliquot Vol: | Dilution Factor: 10.52

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9483 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		21	6.0
56-23-5	Carbon tetrachloride	153.81	ND		21	3.9
75-45-6	Chlorodifluoromethane	86.47	ND		21	3.9
67-66-3	Chloroform	119.38	ND		21	3.9
156-59-2	cis-1,2-Dichloroethene	96.94	62		21	6.3
75-71-8	Dichlorodifluoromethane	120.91	ND		21	7.1
75-34-3	1,1-Dichloroethane	98.96	13	J	21	2.6
107-06-2	1,2-Dichloroethane	98.96	ND		21	5.0
75-35-4	1,1-Dichloroethene	96.94	170		21	3.7
100-41-4	Ethylbenzene	106.17	ND		21	7.1
75-09-2	Methylene Chloride	84.93	ND		53	34
1634-04-4	Methyl tert-butyl ether	88.15	ND		110	18
91-20-3	Naphthalene	128.17	ND		11	11
127-18-4	Tetrachloroethene	165.83	ND		21	4.2
108-88-3	Toluene	92.14	ND		32	32
156-60-5	trans-1,2-Dichloroethene	96.94	ND		21	5.3
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		21	10
71-55-6	1,1,1-Trichloroethane	133.41	ND		21	3.2
79-00-5	1,1,2-Trichloroethane	133.41	ND		21	5.5
79-01-6	Trichloroethene	131.39	1500		11	3.7
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		21	8.9
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		21	6.6
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		21	6.8
75-01-4	Vinyl chloride	62.50	ND		11	7.6
1330-20-7	Xylenes, Total	106.17	ND		42	6.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-173-A-22 | Lab Sample ID: 140-7360-5

Matrix: Air | Lab File ID: GC16P114.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 10:42

Sample wt/vol: 20(mL) | Date Analyzed: 03/16/2017 22:02

Soil Aliquot Vol: | Dilution Factor: 10.52

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9483 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		67	19
56-23-5	Carbon tetrachloride	153.81	ND		130	25
75-45-6	Chlorodifluoromethane	86.47	ND		74	14
67-66-3	Chloroform	119.38	ND		100	19
156-59-2	cis-1,2-Dichloroethene	96.94	250		83	25
75-71-8	Dichlorodifluoromethane	120.91	ND		100	35
75-34-3	1,1-Dichloroethane	98.96	51	J	85	11
107-06-2	1,2-Dichloroethane	98.96	ND		85	20
75-35-4	1,1-Dichloroethene	96.94	660		83	15
100-41-4	Ethylbenzene	106.17	ND		91	31
75-09-2	Methylene Chloride	84.93	ND		180	120
1634-04-4	Methyl tert-butyl ether	88.15	ND		380	64
91-20-3	Naphthalene	128.17	ND		55	55
127-18-4	Tetrachloroethene	165.83	ND		140	29
108-88-3	Toluene	92.14	ND		120	120
156-60-5	trans-1,2-Dichloroethene	96.94	ND		83	21
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		160	76
71-55-6	1,1,1-Trichloroethane	133.41	ND		110	17
79-00-5	1,1,2-Trichloroethane	133.41	ND		110	30
79-01-6	Trichloroethene	131.39	7900		57	20
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		100	44
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		100	32
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		100	34
75-01-4	Vinyl chloride	62.50	ND		27	19
1330-20-7	Xylenes, Total	106.17	ND		180	27

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-174-A-22 | Lab Sample ID: 140-7360-6

Matrix: Air | Lab File ID: GC16P115.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 10:36

Sample wt/vol: 20(mL) | Date Analyzed: 03/16/2017 22:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9483 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		2.0	0.58
56-23-5	Carbon tetrachloride	153.81	ND		2.0	0.38
75-45-6	Chlorodifluoromethane	86.47	0.42	J	2.0	0.38
67-66-3	Chloroform	119.38	0.79	J	2.0	0.38
156-59-2	cis-1,2-Dichloroethene	96.94	7.4		2.0	0.60
75-71-8	Dichlorodifluoromethane	120.91	ND		2.0	0.68
75-34-3	1,1-Dichloroethane	98.96	2.1		2.0	0.25
107-06-2	1,2-Dichloroethane	98.96	ND		2.0	0.48
75-35-4	1,1-Dichloroethene	96.94	18		2.0	0.35
100-41-4	Ethylbenzene	106.17	ND		2.0	0.68
75-09-2	Methylene Chloride	84.93	ND		5.0	3.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		10	1.7
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.0	0.40
108-88-3	Toluene	92.14	ND		3.0	3.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		2.0	0.50
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		2.0	0.98
71-55-6	1,1,1-Trichloroethane	133.41	2.7	B	2.0	0.30
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.0	0.53
79-01-6	Trichloroethene	131.39	170		1.0	0.35
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.85
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.63
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.65
75-01-4	Vinyl chloride	62.50	ND		1.0	0.73
1330-20-7	Xylenes, Total	106.17	ND		4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-174-A-22 | Lab Sample ID: 140-7360-6

Matrix: Air | Lab File ID: GC16P115.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 10:36

Sample wt/vol: 20(mL) | Date Analyzed: 03/16/2017 22:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9483 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		13	2.4
75-45-6	Chlorodifluoromethane	86.47	1.5	J	7.1	1.3
67-66-3	Chloroform	119.38	3.8	J	9.8	1.8
156-59-2	cis-1,2-Dichloroethene	96.94	29		7.9	2.4
75-71-8	Dichlorodifluoromethane	120.91	ND		9.9	3.3
75-34-3	1,1-Dichloroethane	98.96	8.4		8.1	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.1	1.9
75-35-4	1,1-Dichloroethene	96.94	72		7.9	1.4
100-41-4	Ethylbenzene	106.17	ND		8.7	2.9
75-09-2	Methylene Chloride	84.93	ND		17	11
1634-04-4	Methyl tert-butyl ether	88.15	ND		36	6.1
91-20-3	Naphthalene	128.17	ND		5.2	5.2
127-18-4	Tetrachloroethene	165.83	ND		14	2.7
108-88-3	Toluene	92.14	ND		11	11
156-60-5	trans-1,2-Dichloroethene	96.94	ND		7.9	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		15	7.2
71-55-6	1,1,1-Trichloroethane	133.41	15	B	11	1.6
79-00-5	1,1,2-Trichloroethane	133.41	ND		11	2.9
79-01-6	Trichloroethene	131.39	920		5.4	1.9
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		9.8	4.2
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		9.8	3.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		9.8	3.2
75-01-4	Vinyl chloride	62.50	ND		2.6	1.9
1330-20-7	Xylenes, Total	106.17	ND		17	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-175-A-22 | Lab Sample ID: 140-7360-7

Matrix: Air | Lab File ID: GC16P116.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 10:43

Sample wt/vol: 11(mL) | Date Analyzed: 03/16/2017 23:25

Soil Aliquot Vol: | Dilution Factor: 358.2

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9483 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1300	370
56-23-5	Carbon tetrachloride	153.81	ND		1300	240
75-45-6	Chlorodifluoromethane	86.47	ND		1300	240
67-66-3	Chloroform	119.38	ND		1300	240
156-59-2	cis-1,2-Dichloroethene	96.94	2400		1300	390
75-71-8	Dichlorodifluoromethane	120.91	ND		1300	440
75-34-3	1,1-Dichloroethane	98.96	380	J	1300	160
107-06-2	1,2-Dichloroethane	98.96	ND		1300	310
75-35-4	1,1-Dichloroethene	96.94	12000		1300	230
100-41-4	Ethylbenzene	106.17	ND		1300	440
75-09-2	Methylene Chloride	84.93	ND		3300	2100
1634-04-4	Methyl tert-butyl ether	88.15	ND		6500	1100
91-20-3	Naphthalene	128.17	ND		650	650
127-18-4	Tetrachloroethene	165.83	ND		1300	260
108-88-3	Toluene	92.14	ND		2000	2000
156-60-5	trans-1,2-Dichloroethene	96.94	1100	J	1300	330
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		1300	630
71-55-6	1,1,1-Trichloroethane	133.41	ND		1300	200
79-00-5	1,1,2-Trichloroethane	133.41	ND		1300	340
79-01-6	Trichloroethene	131.39	120000		650	230
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		1300	550
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		1300	410
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		1300	420
75-01-4	Vinyl chloride	62.50	ND		650	470
1330-20-7	Xylenes, Total	106.17	ND		2600	390

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-175-A-22 | Lab Sample ID: 140-7360-7

Matrix: Air | Lab File ID: GC16P116.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 10:43

Sample wt/vol: 11(mL) | Date Analyzed: 03/16/2017 23:25

Soil Aliquot Vol: | Dilution Factor: 358.2

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9483 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		4200	1200
56-23-5	Carbon tetrachloride	153.81	ND		8200	1500
75-45-6	Chlorodifluoromethane	86.47	ND		4600	860
67-66-3	Chloroform	119.38	ND		6400	1200
156-59-2	cis-1,2-Dichloroethene	96.94	9400		5200	1500
75-71-8	Dichlorodifluoromethane	120.91	ND		6400	2200
75-34-3	1,1-Dichloroethane	98.96	1500	J	5300	660
107-06-2	1,2-Dichloroethane	98.96	ND		5300	1300
75-35-4	1,1-Dichloroethene	96.94	48000		5200	900
100-41-4	Ethylbenzene	106.17	ND		5700	1900
75-09-2	Methylene Chloride	84.93	ND		11000	7400
1634-04-4	Methyl tert-butyl ether	88.15	ND		23000	4000
91-20-3	Naphthalene	128.17	ND		3400	3400
127-18-4	Tetrachloroethene	165.83	ND		8800	1800
108-88-3	Toluene	92.14	ND		7400	7400
156-60-5	trans-1,2-Dichloroethene	96.94	4300	J	5200	1300
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		9700	4700
71-55-6	1,1,1-Trichloroethane	133.41	ND		7100	1100
79-00-5	1,1,2-Trichloroethane	133.41	ND		7100	1900
79-01-6	Trichloroethene	131.39	650000		3500	1200
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		6400	2700
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		6400	2000
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		6400	2100
75-01-4	Vinyl chloride	62.50	ND		1700	1200
1330-20-7	Xylenes, Total	106.17	ND		11000	1700

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-176-A-22 | Lab Sample ID: 140-7360-8

Matrix: Air | Lab File ID: GC17p113.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 10:34

Sample wt/vol: 100(mL) | Date Analyzed: 03/18/2017 01:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9484 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.41		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.097	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.82	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.61		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.0		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.29	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-176-A-22 Lab Sample ID: 140-7360-8

Matrix: Air Lab File ID: GC17p113.D

Analysis Method: TO 15 LL Date Collected: 03/08/2017 10:34

Sample wt/vol: 100(mL) Date Analyzed: 03/18/2017 01:12

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9484 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.63	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.38	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	5.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-177-A-22 | Lab Sample ID: 140-7360-9

Matrix: Air | Lab File ID: GC16P202.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 10:46

Sample wt/vol: 100(mL) | Date Analyzed: 03/17/2017 00:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9483 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.36	J	0.40	0.075
67-66-3	Chloroform	119.38	0.17	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.80	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.11	J	0.40	0.080
108-88-3	Toluene	92.14	0.81		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.53		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.51	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-177-A-22 | Lab Sample ID: 140-7360-9

Matrix: Air | Lab File ID: GC16P202.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 10:46

Sample wt/vol: 100(mL) | Date Analyzed: 03/17/2017 00:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9483 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	0.82	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.73	J	2.7	0.54
108-88-3	Toluene	92.14	3.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.9		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

Appendix C

Support Documentation

Job Narrative
140-7360-1

Receipt
The samples were received on 3/9/2017 at 10:00 AM. The samples arrived in good condition and properly preserved.

Receipt Exceptions
The asset number for sample SV-171-A-22 (140-7360-3) did not match the information listed on the Chain-of-Custody (COC). The asset number is 10270, while the COC listed 10220.

Air - GC/MS VOA
Methods TO 15 LL, TO-14A, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments
No additional comments.

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Tetra Tech, Inc.
Project/Site: MRC SV/IAQ

TestAmerica Job ID: 140-7360-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC SV/IAQ

TestAmerica Job ID: 140-7360-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-7360-1	SV-169-A-22	Air	03/08/17 11:18	03/09/17 10:00
140-7360-2	SV-170-A-22	Air	03/08/17 10:50	03/09/17 10:00
140-7360-3	SV-171-A-22	Air	03/08/17 10:39	03/09/17 10:00
140-7360-4	SV-172-A-22	Air	03/08/17 10:51	03/09/17 10:00
140-7360-5	SV-173-A-22	Air	03/08/17 10:42	03/09/17 10:00
140-7360-6	SV-174-A-22	Air	03/08/17 10:36	03/09/17 10:00
140-7360-7	SV-175-A-22	Air	03/08/17 10:43	03/09/17 10:00
140-7360-8	SV-176-A-22	Air	03/08/17 10:34	03/09/17 10:00
140-7360-9	SV-177-A-22	Air	03/08/17 10:46	03/09/17 10:00
140-7360-10	SV-001-C-22	Air	03/08/17 12:36	03/09/17 10:00

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Manager: T. APANAVAGE	Sampled By: T. APANAVAGE	1 of 2 COCs
Company: TETRA TECH	Phone: 3012338230		
Address: 20251 Century Blvd Ste 205	Site Contact:		
City/State/Zip Germantown, MD 20874	TAL Contact:		
Phone: 3012338230			
FAX:			
Project Name: MRC SV/IAQ	Analysis Turnaround Time		
Site/location:	Standard (Specify)		
PO # 112IE07671	Rush (Specify)		

140-7360 Chain of Custody

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SV-169-A-22	3/8/17	1009	1118	-30	-2	10845	11577	✓											
SV-170-A-22		0937	1050	-29	0	10242	09787	✓											
SV-171-A-22		0933	1039	-30	-2	11513	11220	✓											
SV-172-A-22		0936	1051	-30	0	10196	10795	✓											
SV-173-A-22		0934	1042	-30	-2	09658	11570	✓											
SV-174-A-22	↓	0932	1036	-30	0	11308	09743	✓											

Sampled by : T. APANAVAGE

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Received @ ambient, 1 box
FedEx Po, trk# 7858 4931 9122
No custody seal, KW 3/9/17

Special Instructions/QC Requirements & Comments:

CONTRACTED ANALYTE LIST

Canisters Shipped by:	Date/Time: 3/8/17 1525	Canisters Received by:	3/9/17 1000
Samples Relinquished by:	Date/Time:	Received by:	
Relinquished by:	Date/Time:	Received by:	

10 cans
10 flows

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	**Project Manager:** T. APANAVAGE	**Sampled By:**	2 of 2 COCs
Company: TERRATECH	**Phone:** 3012338230		
Address:	**Site Contact:**		
City/State/Zip	**TAL Contact:**		
Phone:			
FAX:			
Project Name: MRC SV/IAQ	**Analysis Turnaround Time**		
Site/location:	Standard (Specify)		
PO # 112IC07671	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SV-175-A-22	3/8/17	0931	1043	-30	-1	10668	11574	✓											
SV-176-A-22	↓	0930	1034	-28	0	11243	11162	✓											
SV-177-A-22	↓	0929	1046	-30	0	10658	11578	✓											
SV-001-C-22	3/8/17	1129	1236	-30	-2	09952	11576	✓											

Sampled by :

Temperature (Fahrenheit)			
	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)			
	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

CONTRACTED ANALYTE LIST

Canisters Shipped by:	Date/Time: 3/8/17 1525	Canisters Received by:	3/9/17 1000
Samples Relinquished by:	Date/Time:	Received by:	
Relinquished by:	Date/Time:	Received by:	

Loc: 140
7360

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST **Log In Number:**

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	/			☐ **Containers, Broken**
2. Were ambient air containers received intact?			/	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?			/	☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			/	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	/			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	/			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	/			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	/			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	/			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	/			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	/			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	/			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	/			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	/			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	/			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			/	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			/	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			/	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			/	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			/	☐ Project missing info

Comments/Actions Taken

- Sample SV-171-A-22 is in canister 11270.

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: 1400 2945 PM Instructions: _____

Sample Receiving Associate: K LR Date: 3/9/17

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Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Lab File ID: GBFBC15.D BFB Injection Date: 03/15/2017

Instrument ID: MG BFB Injection Time: 14:04

Analysis Batch No.: 9482

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.5	
75	30.0 - 60.0 % of mass 95	57.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.5	(0.6) 1
174	50.0 - 120.00 % of mass 95	88.1	
175	5.0 - 9.0 % of mass 174	6.1	(6.9) 1
176	95.0 - 101.0 % of mass 174	85.3	(96.8) 1
177	5.0 - 9.0 % of mass 176	5.3	(6.3) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-9482/3	GC15IC01.D	03/15/2017	14:36
	IC 140-9482/4	GC15IC02.D	03/15/2017	15:20
	IC 140-9482/5	GC15IC03.D	03/15/2017	16:02
	IC 140-9482/6	GC15IC04.D	03/15/2017	16:45
	IC 140-9482/7	GC15IC05.D	03/15/2017	17:29
	ICIS 140-9482/8	GC15IC06.D	03/15/2017	18:13
	IC 140-9482/9	GC15IC07.D	03/15/2017	18:56
	IC 140-9482/10	GC15IC08.D	03/15/2017	19:39
	IC 140-9482/11	GC15IC09.D	03/15/2017	20:21
	ICV 140-9482/13	GICVC15.D	03/15/2017	21:46

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1 Analy Batch No.: 9482

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/15/2017 14:36 Calibration End Date: 03/15/2017 20:21 Calibration ID: 962

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-9482/3	GC15IC01.D
Level 2	IC 140-9482/4	GC15IC02.D
Level 3	IC 140-9482/5	GC15IC03.D
Level 4	IC 140-9482/6	GC15IC04.D
Level 5	IC 140-9482/7	GC15IC05.D
Level 6	ICIS 140-9482/8	GC15IC06.D
Level 7	IC 140-9482/9	GC15IC07.D
Level 8	IC 140-9482/10	GC15IC08.D
Level 9	IC 140-9482/11	GC15IC09.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.4492	0.5243 0.4243	0.4768 0.3958	0.4692 0.3664	0.4517	Ave		0.4447				11.1		30.0			
Propene	1.2559 1.0478	1.2382 0.9657	1.1468 0.8917	1.1084 0.7546	1.1130	Ave		1.0580				15.4		30.0			
Dichlorodifluoromethane	4.8320 4.2127	4.6343 3.9990	4.3917 3.8216	4.2891 3.5675	4.3531	Ave		4.2334				9.3		30.0			
Chloromethane	+++++ 0.2919	+++++ 0.2699	0.3511 0.2437	0.3157 0.2157	0.3055	Ave		0.2848				16.0		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.6647 2.4528	2.7171 2.4377	2.5660 2.4240	2.4867 2.4540	2.4764	Ave		2.5199				4.2		30.0			
Acetaldehyde	+++++ 0.3520	+++++ 0.3138	+++++ 0.2823	0.4204 0.2466	0.3916	Ave		0.3344				19.8		30.0			
Vinyl chloride	1.3581 1.1850	1.3052 1.0914	1.2835 1.0073	1.2092 0.8963	1.1952	Ave		1.1701				12.7		30.0			
1,3-Butadiene	0.8307 0.8039	0.8697 0.7476	0.8308 0.6849	0.8235 0.6065	0.8156	Ave		0.7793				10.8		30.0			
Butane	2.0474 1.6504	1.8888 1.5358	1.8200 1.3619	1.7380 1.1943	1.6862	Ave		1.6581				15.9		30.0			
Bromomethane	1.2729 1.1473	1.2685 1.1211	1.1982 1.0600	1.1615 1.0020	1.1747	Ave		1.1562				7.7		30.0			
Chloroethane	0.6202 0.5523	0.6462 0.5375	0.5992 0.5102	0.5796 0.4698	0.5813	Ave		0.5663				9.7		30.0			
Ethanol	0.4667 0.3882	0.4764 0.3730	0.4356 0.3514	0.4071 0.3093	0.4143	Ave		0.4025				13.4		30.0			
Vinyl bromide	1.1369 1.0936	1.2219 1.0624	1.1482 1.0193	1.1018 0.9772	1.1008	Ave		1.0958				6.6		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1 Analy Batch No.: 9482

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/15/2017 14:36 Calibration End Date: 03/15/2017 20:21 Calibration ID: 962

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	1.2979 1.1019	1.3019 1.0531	1.1814 0.9805	1.1311 0.9018	1.1319	Ave		1.1202				11.8		30.0			
Acrolein	+++++ 0.1689	+++++ 0.1838	0.1515 0.1664	0.1415 0.1869	0.1478	Ave		0.1638				10.8		30.0			
Trichlorofluoromethane	4.8982 4.1780	4.5033 4.0365	4.2099 3.8886	4.2004 3.7805	4.2513	Ave		4.2163				7.9		30.0			
Acetonitrile	+++++ 0.3455	+++++ 0.3253	+++++ 0.3091	0.3670 0.2962	0.3713	Ave		0.3357				9.2		30.0			
Acetone	+++++ 0.3988	+++++ 0.3747	+++++ 0.3572	0.4582 0.3327	0.4350	Ave		0.3928				12.1		30.0			
Pentane	+++++ 0.2081	0.2306 0.1963	0.2111 0.1889	0.2019 0.1831	0.2097	Ave		0.2037				7.3		30.0			
Isopropyl alcohol	+++++ 1.3318	+++++ 1.2860	1.4634 1.2076	1.5818 1.2506	1.3883	Ave		1.3585				9.6		30.0			
Ethyl ether	0.9382 0.9126	1.0226 0.8738	0.9338 0.8382	0.9342 0.8824	0.9813	Ave		0.9241				6.1		30.0			
1,1-Dichloroethene	1.1997 1.0521	1.1238 1.0202	1.0793 0.9944	1.0590 1.0026	1.0636	Ave		1.0661				6.0		30.0			
Acrylonitrile	+++++ 0.4755	0.5548 0.4637	0.5320 0.4448	0.4820 0.4378	0.4985	Ave		0.4861				8.4		30.0			
tert-Butyl alcohol	1.7335 1.5954	1.6954 1.6067	1.7782 1.5471	1.6014 1.4137	1.6439	Ave		1.6239				6.6		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	2.7462 2.4294	2.5716 2.3469	2.4578 2.3134	2.4601 2.3195	2.4878	Ave		2.4592				5.6		30.0			
Methylene Chloride	+++++ 0.8898	+++++ 0.8426	1.3997 0.8059	1.0494 0.7857	0.9603	Ave		0.9619				22.2		30.0			
3-Chloropropene	1.3230 1.0002	1.1895 0.9454	1.0528 0.8875	1.0053 0.8637	1.0378	Ave		1.0339				14.0		30.0			
Carbon disulfide	3.1830 2.6914	2.9030 2.5798	2.7447 2.4737	2.6742 2.4755	2.7200	Ave		2.7161				8.1		30.0			
trans-1,2-Dichloroethene	1.1520 1.0243	1.0869 1.0160	1.0319 1.0020	1.0004 1.0168	1.0512	Ave		1.0424				4.7		30.0			
2-Methylpentane	2.4442 2.0107	2.2935 1.8810	2.1617 1.7802	2.0757 1.6497	2.1100	Ave		2.0452				12.2		30.0			
Methyl tert-butyl ether	3.2716 3.0742	3.3148 2.9891	3.1854 2.8934	3.0695 2.8251	3.2425	Ave		3.0962				5.5		30.0			
1,1-Dichloroethane	2.4649 1.9932	2.1933 1.9091	2.0960 1.8234	2.0124 1.7705	2.0509	Ave		2.0349				10.2		30.0			
Vinyl acetate	2.3537 2.3986	2.4371 2.3555	2.3018 2.2353	2.3117 2.1757	2.4624	Ave		2.3369				4.0		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1 Analy Batch No.: 9482

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/15/2017 14:36 Calibration End Date: 03/15/2017 20:21 Calibration ID: 962

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.4477	0.5290 0.4398	0.4791 0.4291	0.4391 0.4150	0.4626	Ave		0.4552				7.8		30.0			
Hexane	0.9272 0.7802	0.8897 0.7413	0.8149 0.6991	0.8020 0.6548	0.7995	Ave		0.7899				10.8		30.0			
C6 Range	+++++ 1.5533	+++++ 1.4918	+++++ 1.4753	1.5507 +++++	1.5868	Ave		1.5316				3.0		30.0			
Isopropyl ether	2.9696 2.9568	3.0846 2.8425	3.0439 2.6777	2.9405 2.5359	3.1080	Ave		2.9066				6.6		30.0			
cis-1,2-Dichloroethene	1.1807 1.1054	1.2051 1.0733	1.1183 1.0545	1.0720 1.0570	1.0986	Ave		1.1072				4.8		30.0			
Ethyl acetate	1.9826 1.9470	2.0492 1.8805	1.9970 1.8074	1.9306 1.7180	2.0347	Ave		1.9274				5.7		30.0			
Chloroform	3.1680 2.7810	3.0658 2.6656	2.7927 2.5757	2.7886 2.5332	2.8816	Ave		2.8058				7.5		30.0			
Tert-butyl ethyl ether	3.1533 2.9551	3.0716 2.8268	2.9525 2.7461	2.8883 2.6238	3.0788	Ave		2.9218				5.8		30.0			
Tetrahydrofuran	1.1323 0.9962	1.1580 0.9617	1.0365 0.9258	1.0347 0.8837	1.0616	Ave		1.0212				8.8		30.0			
1,1,1-Trichloroethane	3.6366 3.1948	3.4605 3.1195	3.2415 3.0594	3.1658 3.0511	3.2818	Ave		3.2457				5.9		30.0			
1,2-Dichloroethane	0.4453 0.4146	0.4341 0.3909	0.4133 0.3759	0.3926 0.3665	0.4014	Ave		0.4038				6.4		30.0			
Benzene	0.8565 0.6763	0.7234 0.6426	0.6692 0.6290	0.6431 0.6244	0.6512	Ave		0.6795				10.7		30.0			
Cyclohexane	0.1266 0.1179	0.1269 0.1115	0.1114 0.1058	0.1140 0.1025	0.1128	Ave		0.1144				7.3		30.0			
1-Butanol	+++++ 0.0749	+++++ 0.0748	0.0782 0.0711	0.0719 0.0702	0.0681	Ave		0.0727				4.7		30.0			
Carbon tetrachloride	0.7406 0.7383	0.6978 0.7281	0.6474 0.7266	0.6648 0.7560	0.6919	Ave		0.7102				5.2		30.0			
2,3-Dimethylpentane	0.1613 0.1609	0.1727 0.1546	0.1548 0.1480	0.1546 0.1433	0.1578	Ave		0.1564				5.4		30.0			
Thiophene	0.3984 0.3926	0.3997 0.3758	0.3824 0.3643	0.3701 0.3561	0.3777	Ave		0.3797				4.0		30.0			
Tert-amyl methyl ether	+++++ 0.6573	0.6040 0.6339	0.5913 0.6224	0.6275 0.6000	0.6476	Ave		0.6230				3.7		30.0			
2,2,4-Trimethylpentane	1.1319 1.0337	1.0910 0.9745	1.0171 0.9296	1.0057 0.8832	1.0118	Ave		1.0087				7.5		30.0			
Heptane	0.2793 0.2604	0.2754 0.2466	0.2504 0.2381	0.2394 0.2297	0.2480	Ave		0.2519				6.7		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1 Analy Batch No.: 9482

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/15/2017 14:36 Calibration End Date: 03/15/2017 20:21 Calibration ID: 962

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,2-Dichloropropane	0.2369 0.2379	0.2592 0.2239	0.2423 0.2138	0.2307 0.2044	0.2282	Ave		0.2308				7.0		30.0			
Trichloroethene	0.3913 0.3732	0.3778 0.3641	0.3535 0.3793	0.3420 0.3811	0.3505	Ave		0.3681				4.5		30.0			
Dibromomethane	0.3543 0.3167	0.3067 0.3050	0.2852 0.3044	0.2873 0.3024	0.2986	Ave		0.3067				6.6		30.0			
Bromodichloromethane	0.6086 0.6261	0.5498 0.6149	0.5387 0.6089	0.5577 0.6031	0.5917	Ave		0.5888				5.4		30.0			
1,4-Dioxane	0.0864 0.0991	0.0977 0.0939	0.0920 0.0920	0.0895 0.0845	0.0928	Ave		0.0920				5.2		30.0			
Methyl methacrylate	0.2506 0.2719	0.2669 0.2669	0.2455 0.2567	0.2369 0.2462	0.2534	Ave		0.2550				4.6		30.0			
Methylcyclohexane	0.5429 0.5509	0.5520 0.5254	0.5273 0.5144	0.5134 0.5090	0.5296	Ave		0.5294				3.0		30.0			
4-Methyl-2-pentanone (MIBK)	0.3776 0.4117	0.3958 0.4017	0.3967 0.3926	0.3789 0.3610	0.3969	Ave		0.3903				3.9		30.0			
cis-1,3-Dichloropropene	0.4475 0.4489	0.4392 0.4328	0.4056 0.4255	0.4041 0.4132	0.4296	Ave		0.4274				3.9		30.0			
trans-1,3-Dichloropropene	0.4385 0.4472	0.4225 0.4317	0.4283 0.4230	0.4164 0.4211	0.4273	Ave		0.4284				2.2		30.0			
Toluene Range	+++++ 2.0153	+++++ 1.9295	+++++ 1.8763	1.8534 1.8846	1.9262	Ave		1.9142				3.0		30.0			
Toluene	0.8395 0.8093	0.8491 0.7770	0.7936 0.7642	0.7738 0.7773	0.7881	Ave		0.7969				3.8		30.0			
1,1,2-Trichloroethane	0.2473 0.2468	0.2582 0.2332	0.2411 0.2289	0.2313 0.2284	0.2347	Ave		0.2389				4.3		30.0			
2-Methylthiophene	0.6786 0.6945	0.6915 0.6634	0.6567 0.6465	0.6589 0.6593	0.6702	Ave		0.6689				2.4		30.0			
3-Methylthiophene	0.6861 0.6844	0.6815 0.6575	0.6391 0.6481	0.6408 0.6536	0.6684	Ave		0.6622				2.8		30.0			
2-Hexanone	0.1705 0.2083	0.1899 0.2042	0.1871 0.1978	0.1825 0.1879	0.1884	Ave		0.1907				6.0		30.0			
Octane	0.3046 0.2983	0.2938 0.2856	0.2875 0.2800	0.2759 0.2759	0.2901	Ave		0.2880				3.4		30.0			
Dibromochloromethane	0.5147 0.6391	0.4976 0.6658	0.5002 0.6985	0.5208 0.7314	0.5960	Ave		0.5960				15.3		30.0			
1,2-Dibromoethane (EDB)	0.4514 0.4987	0.4414 0.4873	0.4271 0.4908	0.4418 0.4998	0.4725	Ave		0.4679				6.0		30.0			
Tetrachloroethene	0.3686 0.3715	0.3773 0.3614	0.3461 0.3710	0.3339 0.3954	0.3554	Ave		0.3645				4.9		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1 Analy Batch No.: 9482

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/15/2017 14:36 Calibration End Date: 03/15/2017 20:21 Calibration ID: 962

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorobenzene	0.6950 0.6883	0.6894 0.6657	0.6599 0.6734	0.6471 0.6950	0.6559	Ave		0.6744				2.7		30.0			
2,3-Dimethylheptane	0.7899 0.6914	0.7827 0.6350	0.7170 0.5879	0.6997 0.5398	0.6966	Ave		0.6822				12.1		30.0			
Ethylbenzene	1.1434 1.1417	1.1377 1.1050	1.1069 1.0902	1.0700 1.1099	1.1134	Ave		1.1131				2.2		30.0			
2-Ethylthiophene	0.8499 0.9248	0.8830 0.8941	0.8364 0.8781	0.8529 0.8854	0.8866	Ave		0.8768				3.1		30.0			
m-Xylene & p-Xylene	0.9244 0.9307	0.9041 0.8929	0.8801 0.8889	0.8676 0.9026	0.8999	Ave		0.8990				2.2		30.0			
Bromoform	0.4414 0.6021	0.4305 0.7122	0.4383 0.7997	0.4732 0.8940	0.5776	Ave		0.5594				24.9		30.0			
Styrene	0.4659 0.6631	0.4995 0.6610	0.5075 0.6798	0.5351 0.7078	0.6183	Ave		0.5931				15.4		30.0			
Nonane	0.5320 0.5077	0.5212 0.4643	0.5212 0.4376	0.4918 0.4085	0.5133	Ave		0.4886				8.7		30.0			
o-Xylene	0.9666 0.9452	0.9743 0.9037	0.9096 0.8874	0.8846 0.8870	0.9138	Ave		0.9191				3.8		30.0			
1,1,2,2-Tetrachloroethane	0.5455 0.6248	0.5869 0.6002	0.5295 0.5769	0.5547 0.5835	0.6125	Ave		0.5794				5.4		30.0			
1,2,3-Trichloropropane	0.2174 0.2205	0.2166 0.2110	0.2058 0.2107	0.2000 0.2121	0.2139	Ave		0.2120				2.9		30.0			
Isopropylbenzene	1.4295 1.3572	1.3734 1.3141	1.3130 1.3091	1.2638 1.3243	1.3304	Ave		1.3350				3.5		30.0			
Propylbenzene	0.3206 0.3696	0.3283 0.3614	0.3301 0.3700	0.3300 0.3908	0.3507	Ave		0.3502				6.9		30.0			
2-Chlorotoluene	+++++ 0.3340	0.3335 0.3298	0.3098 0.3343	0.3015 0.3477	0.3231	Ave		0.3267				4.5		30.0			
4-Ethyltoluene	1.1970 1.3224	1.2319 1.2896	1.1897 1.3003	1.1796 1.3269	1.2762	Ave		1.2571				4.6		30.0			
1,3,5-Trimethylbenzene	0.5469 0.6243	0.5674 0.6109	0.5327 0.6231	0.5477 0.6499	0.6024	Ave		0.5895				7.1		30.0			
Alpha Methyl Styrene	0.3332 0.5207	0.3639 0.5401	0.3656 0.5610	0.3863 0.5861	0.4774	Ave		0.4751				19.2		30.0			
Decane	0.5864 0.6383	0.6469 0.5959	0.6103 0.5500	0.6147 0.5048	0.6447	Ave		0.5991				7.9		30.0			
tert-Butylbenzene	1.1155 1.3026	1.2200 1.2873	1.1544 1.3340	1.1382 1.3748	1.2508	Ave		1.2420				7.4		30.0			
1,2,4-Trimethylbenzene	1.0567 1.1887	1.0858 1.1674	1.0572 1.1857	1.0569 1.2179	1.1475	Ave		1.1293				5.8		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1 Analy Batch No.: 9482

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/15/2017 14:36 Calibration End Date: 03/15/2017 20:21 Calibration ID: 962

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	1.4575 1.6940	1.5550 1.6784	1.4797 1.7510	1.4842 +++++	1.6224	Ave		1.5903				7.0		30.0			
1,3-Dichlorobenzene	0.7839 0.8746	0.7680 0.9113	0.7371 1.0012	0.7327 1.0431	0.8146	Ave		0.8518				13.3		30.0			
Benzyl chloride	0.9913 1.1502	0.9509 1.1420	0.9751 1.1585	0.9861 1.1519	1.0824	Ave		1.0654				8.3		30.0			
1,4-Dichlorobenzene	0.7832 0.8555	0.7728 0.8624	0.7394 0.9397	0.7367 0.9958	0.8073	Ave		0.8325				10.7		30.0			
4-Isopropyltoluene	1.2787 1.5072	1.3728 1.4704	1.3354 1.5104	1.3072 +++++	1.4520	Ave		1.4043				6.6		30.0			
1,2,3-Trimethylbenzene	0.7980 0.8970	0.8575 0.8524	0.8145 0.8449	0.7986 0.8469	0.8775	Ave		0.8430				4.0		30.0			
Butylcyclohexane	0.8269 0.8735	0.8430 0.8279	0.8368 0.8147	0.8222 0.7686	0.8741	Ave		0.8320				3.8		30.0			
1,2-Dichlorobenzene	0.7339 0.8390	0.7467 0.8639	0.7024 0.9401	0.7046 0.9877	0.7869	Ave		0.8117				12.7		30.0			
Indane	0.8988 1.0874	0.9453 1.0871	0.9346 1.1500	0.9155 1.2030	1.0376	Ave		1.0288				10.7		30.0			
Indene	+++++ 0.8020	0.6602 0.8044	0.6375 0.8255	0.6603 0.8617	0.7619	Ave		0.7517				11.5		30.0			
Butylbenzene	1.3043 1.3941	1.2970 1.3165	1.2882 1.3191	1.2631 1.2590	1.3725	Ave		1.3127				3.5		30.0			
Undecane	0.7087 0.7450	0.7870 0.6698	0.7061 0.6436	0.7148 0.5617	0.7894	Ave		0.7029				10.2		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 1.1145	0.9799 1.0683	0.9582 1.1101	0.9631 1.0986	1.0937	Ave		1.0483				6.6		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.3626	0.2848 0.3888	0.2556 0.4208	0.2832 0.4321	0.3569	Ave		0.3481				19.1		30.0			
1,2,4,5-Tetramethylbenzene	1.1280 1.3892	1.1793 1.3109	1.1313 1.4313	1.1592 +++++	1.3455	Ave		1.2593				9.8		30.0			
1,2,3,5-Tetramethylbenzene	0.7014 0.8228	0.7621 0.7627	0.6772 0.8072	0.6958 0.7761	0.8138	Ave		0.7577				7.2		30.0			
1,2,3,4-Tetramethylbenzene	0.9370 1.1438	0.9768 1.0541	0.9292 1.1581	0.9384 1.0472	1.1276	Ave		1.0347				9.0		30.0			
Dodecane	0.6092 0.6657	0.7288 0.5555	0.6338 0.6382	0.6127 0.3833	0.7850	Ave		0.6236				18.1		30.0			
1,2,4-Trichlorobenzene	0.6272 0.8005	0.6639 0.7430	0.5713 0.9298	0.5791 0.7414	0.7733	Ave		0.7144				16.2		30.0			
Naphthalene	1.3527 1.6696	1.4676 1.5877	1.2582 1.7071	1.2708 +++++	1.6598	Ave		1.4967				12.3		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1 Analy Batch No.: 9482

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/15/2017 14:36 Calibration End Date: 03/15/2017 20:21 Calibration ID: 962

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	0.7926 0.9824	0.8643 0.9431	0.7434 0.9932	0.7548 0.7832	0.9779	Ave		0.8706				12.0		30.0			
Hexachlorobutadiene	0.6444 0.7667	0.6789 0.7046	0.6040 0.8911	0.6006 0.6659	0.7840	Ave		0.7045				13.4		30.0			
1,2,3-Trichlorobenzene	0.6779 0.7664	0.7017 0.6913	0.5616 0.8404	0.5574 0.5093	0.7607	Ave		0.6741				16.4		30.0			
2-Methylnaphthalene	+++++ 0.3374	0.2697 0.3653	0.2434 0.4468	0.2127 +++++	0.3001	Ave		0.3108				25.7		50.0			
1-Methylnaphthalene	+++++ 0.3303	0.2976 0.3653	0.2352 0.4362	0.2020 +++++	0.2997	Ave		0.3095				25.3		50.0			
4-Bromofluorobenzene (Surr)	0.7862 0.7838	0.7836 0.7899	0.7710 0.8014	0.7914 0.8000	0.8071	Ave		0.7905				1.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1 Analy Batch No.: 9482

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/15/2017 14:36 Calibration End Date: 03/15/2017 20:21 Calibration ID: 962

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-9482/3	GC15IC01.D
Level 2	IC 140-9482/4	GC15IC02.D
Level 3	IC 140-9482/5	GC15IC03.D
Level 4	IC 140-9482/6	GC15IC04.D
Level 5	IC 140-9482/7	GC15IC05.D
Level 6	ICIS 140-9482/8	GC15IC06.D
Level 7	IC 140-9482/9	GC15IC07.D
Level 8	IC 140-9482/10	GC15IC08.D
Level 9	IC 140-9482/11	GC15IC09.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 79923	3314 161083	6330 317499	16118 648102	38106	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propene	CBM	Ave	3760 186431	7827 366636	15226 715294	38073 1334692	93889	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	14467 749517	29295 1518249	58308 3065573	147329 6309639	367220	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	+++++ 51943	+++++ 102473	4662 195522	10845 381523	25770	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	7978 436402	17176 925480	34069 1944481	85416 4340354	208904	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 313096	+++++ 595674	+++++ 1132144	72210 2180620	165163	+++++ 9.99	+++++ 20.0	+++++ 40.0	2.00 80.0	5.01
Vinyl chloride	CBM	Ave	4066 210834	8251 414360	17041 808059	41537 1585259	100829	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	2487 143038	5498 283835	11030 549398	28287 1072769	68804	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butane	CBM	Ave	6130 293638	11940 583059	24164 1092508	59701 2112304	142250	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	3811 204127	8019 425627	15909 850291	39896 1772157	99093	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	1857 98257	4085 204064	7956 409306	19908 830849	49038	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	6987 345378	15059 707984	28920 1409489	69923 2735400	174754	0.196 9.99	0.392 20.0	0.794 40.0	2.00 80.0	5.01
Vinyl bromide	CBM	Ave	3404 194576	7724 403357	15245 817628	37848 1728343	92859	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	3886 196053	8230 399830	15685 786537	38853 1595022	95489	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1 Analy Batch No.: 9482

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/15/2017 14:36 Calibration End Date: 03/15/2017 20:21 Calibration ID: 962

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Acrolein	CBM	Ave	+++++ 30056	+++++ 69764	2011 133516	4862 330540	12471	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Trichlorofluoromethane	CBM	Ave	14665 743344	28467 1532462	55895 3119354	144284 6686372	358635	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 61466	+++++ 123503	+++++ 247919	12605 523809	31325	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 208378	+++++ 417742	+++++ 841477	46214 1728119	107750	+++++ 5.87	+++++ 11.7	+++++ 23.5	1.17 47.0	2.94
Pentane	CBM	Ave	+++++ 37027	1458 74522	2803 151563	6934 323924	17688	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Isopropyl alcohol	CBM	Ave	+++++ 695832	+++++ 1433726	57055 2844607	159557 6495368	343901	+++++ 5.87	+++++ 11.7	0.466 23.5	1.17 47.0	2.94
Ethyl ether	CBM	Ave	2809 162376	6464 331731	12398 672373	32090 1560739	82779	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	3592 187192	7104 387339	14330 797692	36376 1773303	89728	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	+++++ 84597	3507 176062	7063 356803	16558 774315	42053	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butyl alcohol	CBM	Ave	5190 283850	10717 610004	23609 1241041	55009 2500383	138675	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	8222 432242	16256 891000	32632 1855781	84505 4102363	209870	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 158311	+++++ 319885	18584 646443	36046 1389569	81013	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	3961 177955	7519 358922	13978 711970	34533 1527575	87550	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	9530 478845	18351 979418	36441 1984338	91859 4378380	229458	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	3449 182249	6871 385716	13700 803766	34363 1798426	88680	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylpentane	CBM	Ave	7318 357751	14498 714141	28701 1428051	71301 2917758	177996	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	9795 546952	20954 1134810	42292 2321003	105435 4996692	273536	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	7380 354630	13865 724800	27828 1462691	69127 3131504	173008	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	7047 426758	15406 894260	30561 1793080	79405 3848118	207726	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Butanone (MEK)	CBM	Ave	+++++ 79660	3344 166968	6361 344230	15082 734059	39027	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Hexane	CBM	Ave	2776 138819	5624 281421	10820 560820	27547 1158063	67446	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1 Analy Batch No.: 9482

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/15/2017 14:36 Calibration End Date: 03/15/2017 20:21 Calibration ID: 962

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
C6 Range	DFBZ	Ave	+++++ 1313930	+++++ 2723811	+++++ 5679805	265311 +++++	680124	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 +++++	1.00
Isopropyl ether	CBM	Ave	8891 526080	19499 1079183	40414 2148000	101005 4485105	262185	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	3535 196676	7618 407485	14847 845905	36823 1869513	92674	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	5936 346406	12954 713928	26514 1449886	66315 3038641	171642	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroform	CBM	Ave	9485 494799	19380 1012011	37079 2066202	95787 4480470	243090	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	9441 525778	19417 1073194	39200 2202848	99212 4640558	259723	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	3390 177245	7320 365105	13762 742637	35542 1562956	89552	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	10888 568413	21875 1184348	43037 2454172	108746 5396460	276845	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFBZ	Ave	6535 350677	13373 713806	27277 1447194	67175 3085614	172041	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzene	DFBZ	Ave	12569 572098	22286 1173319	44171 2421461	110029 5257486	279122	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Cyclohexane	DFBZ	Ave	1858 99763	3909 203651	7351 407285	19497 863041	48328	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1-Butanol	DFBZ	Ave	+++++ 63344	+++++ 136613	5160 273762	12296 591245	29171	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFBZ	Ave	10868 624502	21497 1329349	42733 2797102	113747 6365119	296576	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylpentane	DFBZ	Ave	2367 136123	5321 282206	10219 569652	26444 1206293	67650	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Thiophene	DFBZ	Ave	5847 332092	12315 686171	25238 1402526	63320 2998594	161878	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-amyl methyl ether	DFBZ	Ave	+++++ 556050	18607 1157370	39025 2396229	107357 5052003	277565	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFBZ	Ave	16611 874389	33610 1779183	67131 3578687	172066 7435991	433667	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Heptane	DFBZ	Ave	4099 220272	8485 450272	16529 916791	40968 1934212	106290	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFBZ	Ave	3477 201269	7985 408812	15995 823056	39466 1721134	97796	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Trichloroethene	DFBZ	Ave	5743 315722	11638 664844	23332 1460218	58508 3208650	150217	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromomethane	DFBZ	Ave	5200 267885	9448 556851	18824 1171750	49152 2546424	127996	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1 Analy Batch No.: 9482

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/15/2017 14:36 Calibration End Date: 03/15/2017 20:21 Calibration ID: 962

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Bromodichloromethane	DFBZ	Ave	8931 529608	16938 1122661	35557 2343991	95415 5078012	253630	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,4-Dioxane	DFBZ	Ave	1268 83850	3011 171415	6069 354151	15307 711143	39782	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl methacrylate	DFBZ	Ave	3677 229984	8221 487379	16201 988227	40539 2072888	108599	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylcyclohexane	DFBZ	Ave	7968 465979	17005 959276	34804 1980430	87846 4285973	227011	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	5542 348265	12195 733481	26186 1511574	64835 3039224	170118	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFBZ	Ave	6567 379694	13530 790238	26770 1637962	69133 3479031	184126	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZd 5	Ave	6192 373664	12488 789307	26814 1645268	68241 3558024	178625	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene Range	DFBZ	Ave	+++++ 1704710	+++++ 3522873	+++++ 7223375	317115 15867496	825588	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Toluene	CBZd 5	Ave	11856 676247	25094 1420544	49691 2972164	126815 6568341	329471	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZd 5	Ave	3493 206257	7631 426290	15096 890354	37911 1930179	98117	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylthiophene	CBZd 5	Ave	9584 580302	20438 1212899	41117 2514496	107989 5571008	280205	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
3-Methylthiophene	CBZd 5	Ave	9689 571930	20142 1202168	40017 2520669	105015 5522937	279432	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Hexanone	CBZd 5	Ave	2408 174060	5612 373275	11715 769096	29914 1588026	78752	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Octane	CBZd 5	Ave	4302 249240	8683 522104	18002 1089002	45217 2331636	121262	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZd 5	Ave	7269 534023	14707 1217195	31316 2716554	85348 6180157	249183	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	6375 416730	13045 890944	26740 1908708	72403 4223710	197523	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZd 5	Ave	5206 310406	11152 660677	21668 1442699	54718 3341461	148601	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chlorobenzene	CBZd 5	Ave	9815 575122	20374 1217110	41319 2618941	106057 5872788	274196	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylheptane	CBZd 5	Ave	11155 577752	23134 1160951	44892 2286470	114675 4561552	291234	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethylbenzene	CBZd 5	Ave	16148 954045	33624 2020166	69301 4239909	175356 9378439	465478	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Ethylthiophene	CBZd 5	Ave	12002 772778	26097 1634721	52367 3415104	139782 7482070	370649	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1 Analy Batch No.: 9482

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/15/2017 14:36 Calibration End Date: 03/15/2017 20:21 Calibration ID: 962

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m-Xylene & p-Xylene	CBZd 5	Ave	26110 1555433	53439 3265060	110203 6914176	284366 15254685	752459	0.0784 4.00	0.157 8.00	0.317 16.0	0.800 32.0	2.00
Bromoform	CBZd 5	Ave	6234 503085	12722 1302027	27441 3110131	77559 7554567	241462	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Styrene	CBZd 5	Ave	6579 554081	14764 1208558	31773 2643863	87701 5980940	258497	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Nonane	CBZd 5	Ave	7513 424281	15404 848900	32630 1702072	80602 3451826	214597	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
o-Xylene	CBZd 5	Ave	13651 789853	28796 1652204	56948 3451230	144970 7495466	382052	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	7704 522069	17347 1097235	33152 2243454	90906 4930342	256086	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZd 5	Ave	3070 184265	6401 385852	12888 819612	32782 1792574	89439	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Isopropylbenzene	CBZd 5	Ave	20188 1134088	40591 2402575	82210 5091349	207127 11190142	556209	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propylbenzene	CBZd 5	Ave	4528 308856	9702 660707	20666 1438960	54076 3302547	146598	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZd 5	Ave	+++++ 279105	9858 602879	19395 1300045	49412 2937732	135063	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZd 5	Ave	16904 1105029	36409 2357742	74487 5056909	193325 11212261	533550	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZd 5	Ave	7724 521704	16770 1116920	33353 2423508	89762 5491943	251859	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZd 5	Ave	4705 435119	10756 987378	22891 2181723	63304 4952983	199600	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Decane	CBZd 5	Ave	8281 533364	19120 1089510	38214 2139210	100736 4265576	269524	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butylbenzene	CBZd 5	Ave	15754 1088441	36058 2353545	72279 5188127	186533 11616984	522916	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZd 5	Ave	14923 993298	32090 2134348	66195 4611406	173218 10291549	479730	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZd 5	Ave	20583 1415485	45958 3068495	92643 6810067	243244 +++++	678287	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
1,3-Dichlorobenzene	CBZd 5	Ave	11070 730798	22698 1666142	46148 3893907	120087 8814211	340580	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzyl chloride	CBZd 5	Ave	14000 961111	28105 2087808	61054 4505667	161617 9733935	452529	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,4-Dichlorobenzene	CBZd 5	Ave	11061 714901	22839 1576716	46292 3654606	120739 8414582	337505	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Isopropyltoluene	CBZd 5	Ave	18058 1259395	40574 2688329	83608 5874319	214236 +++++	607035	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1 Analy Batch No.: 9482

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/15/2017 14:36 Calibration End Date: 03/15/2017 20:21 Calibration ID: 962

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZd 5	Ave	11269 749546	25342 1558491	50998 3285785	130876 7156186	366844	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylcyclohexane	CBZd 5	Ave	11678 729918	24915 1513686	52392 3168620	134750 6495136	365451	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorobenzene	CBZd 5	Ave	10364 701112	22069 1579523	43975 3656010	115468 8346220	328983	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indane	CBZd 5	Ave	12693 908631	27938 1987507	58519 4472405	150042 10165330	433789	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indene	CBZd 5	Ave	+++++ 670154	19511 1470712	39915 3210332	108215 7281318	318543	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylbenzene	CBZd 5	Ave	18420 1164905	38334 2406878	80658 5130283	207014 10638853	573821	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Undecane	CBZd 5	Ave	10009 622503	23261 1224656	44209 2502915	117141 4746027	330016	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	Ave	+++++ 931315	28961 1953205	59995 4317337	157840 9283464	457261	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	+++++ 302962	8417 710910	16001 1636568	46413 3651422	149226	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	15930 1160795	34855 2396674	70829 5566375	189973 +++++	562520	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	9905 687501	22523 1394400	42400 3139429	114039 6557823	340236	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	13233 955751	28869 1927205	58175 4503997	153792 8848915	471400	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dodecane	CBZd 5	Ave	8604 556303	21541 1015546	39684 2482191	100417 3238859	328197	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZd 5	Ave	8857 668939	19622 1358330	35767 3616219	94904 6264846	323309	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Naphthalene	CBZd 5	Ave	19103 1395111	43374 2902807	78779 6639288	208260 +++++	693914	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
Benzo(b)thiophene	CBZd 5	Ave	11193 820908	25544 1724284	46547 3862788	123697 6618484	408835	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Hexachlorobutadiene	CBZd 5	Ave	9101 640650	20064 1288187	37819 3465632	98425 5626941	327761	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZd 5	Ave	9574 640410	20740 1263910	35163 3268537	91350 4303288	318023	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylnaphthalene	CBZd 5	Ave	+++++ 852913	24114 2020346	46113 5256646	105461 +++++	379553	+++++ 6.04	0.237 12.1	0.480 24.2	1.21 +++++	3.03
1-Methylnaphthalene	CBZd 5	Ave	+++++ 834902	26609 2020334	44542 5132440	100155 +++++	379039	+++++ 6.04	0.237 12.1	0.480 24.2	1.21 +++++	3.03
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1132701 1311298	1181326 1443792	1216766 1558022	1296737 1689695	1347272	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1 Analy Batch No.: 9482

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/15/2017 14:36 Calibration End Date: 03/15/2017 20:21 Calibration ID: 962

Curve Type Legend:
Ave = Average ISTD

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Lab Sample ID: ICV 140-9482/13 Calibration Date: 03/15/2017 21:46

Instrument ID: MG Calib Start Date: 03/15/2017 14:36

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/15/2017 20:21

Lab File ID: GICVC15.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4447	0.4195		1.89	2.00	-5.7	35.0
Propene	Ave	1.058	0.9888		1.87	2.00	-6.5	35.0
Dichlorodifluoromethane	Ave	4.233	4.005		1.89	2.00	-5.4	35.0
Chloromethane	Ave	0.2848	0.2718		1.91	2.00	-4.6	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.520	2.459		1.95	2.00	-2.4	35.0
Acetaldehyde	Ave	0.3344	0.2828		8.46	10.0	-15.4	35.0
Vinyl chloride	Ave	1.170	1.152		1.97	2.00	-1.6	35.0
1,3-Butadiene	Ave	0.7793	0.7583		1.95	2.00	-2.7	35.0
Butane	Ave	1.658	1.586		1.91	2.00	-4.3	35.0
Bromomethane	Ave	1.156	1.113		1.92	2.00	-3.8	35.0
Chloroethane	Ave	0.5663	0.5570		1.97	2.00	-1.6	35.0
Ethanol	Ave	0.4025	0.3613		8.98	10.0	-10.2	35.0
Vinyl bromide	Ave	1.096	1.145		2.09	2.00	4.5	35.0
2-Methylbutane	Ave	1.120	1.090		1.95	2.00	-2.7	35.0
Acrolein	Ave	0.1638	0.1720		2.10	2.00	5.0	35.0
Trichlorofluoromethane	Ave	4.216	3.908		1.85	2.00	-7.3	35.0
Acetonitrile	Ave	0.3357	0.2765		1.65	2.00	-17.6	35.0
Acetone	Ave	0.3928	0.2866		4.38	6.00	-27.0	35.0
Isopropyl alcohol	Ave	1.359	0.9130		4.03	6.00	-32.8	35.0
Pentane	Ave	0.2037	0.2013		1.98	2.00	-1.2	35.0
Ethyl ether	Ave	0.9241	0.7238		1.57	2.00	-21.7	35.0
1,1-Dichloroethene	Ave	1.066	1.018		1.91	2.00	-4.5	35.0
Acrylonitrile	Ave	0.4861	0.4093		1.68	2.00	-15.8	35.0
tert-Butyl alcohol	Ave	1.624	1.441		1.77	2.00	-11.3	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.459	2.373		1.93	2.00	-3.5	35.0
Methylene Chloride	Ave	0.9619	0.8705		1.81	2.00	-9.5	35.0
3-Chloropropene	Ave	1.034	0.9533		1.84	2.00	-7.8	35.0
Carbon disulfide	Ave	2.716	2.579		1.90	2.00	-5.1	35.0
trans-1,2-Dichloroethene	Ave	1.042	1.038		1.99	2.00	-0.4	35.0
2-Methylpentane	Ave	2.045	2.174		2.13	2.00	6.3	35.0
Methyl tert-butyl ether	Ave	3.096	2.652		1.71	2.00	-14.3	35.0
1,1-Dichloroethane	Ave	2.035	1.947		1.91	2.00	-4.3	35.0
Vinyl acetate	Ave	2.337	2.078		1.78	2.00	-11.1	35.0
2-Butanone (MEK)	Ave	0.4552	0.3871		1.70	2.00	-15.0	35.0
Hexane	Ave	0.7899	0.7696		1.95	2.00	-2.6	35.0
Isopropyl ether	Ave	2.907	2.543		1.75	2.00	-12.5	35.0
cis-1,2-Dichloroethene	Ave	1.107	1.110		2.00	2.00	0.2	35.0
Ethyl acetate	Ave	1.927	1.556		1.61	2.00	-19.3	35.0
Chloroform	Ave	2.806	2.675		1.91	2.00	-4.7	35.0
Tert-butyl ethyl ether	Ave	2.922	2.660		1.82	2.00	-9.0	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Lab Sample ID: ICV 140-9482/13 Calibration Date: 03/15/2017 21:46

Instrument ID: MG Calib Start Date: 03/15/2017 14:36

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/15/2017 20:21

Lab File ID: GICVC15.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.021	0.8506		1.67	2.00	-16.7	35.0
1,1,1-Trichloroethane	Ave	3.246	3.062		1.89	2.00	-5.7	35.0
1,2-Dichloroethane	Ave	0.4038	0.3835		1.90	2.00	-5.0	35.0
Benzene	Ave	0.6795	0.6694		1.97	2.00	-1.5	35.0
1-Butanol	Ave	0.0727	0.0709		1.95	2.00	-2.5	35.0
Cyclohexane	Ave	0.1144	0.1156		2.02	2.00	1.0	35.0
Carbon tetrachloride	Ave	0.7102	0.6979		1.97	2.00	-1.7	35.0
2,3-Dimethylpentane	Ave	0.1564	0.1474		1.88	2.00	-5.8	35.0
Thiophene	Ave	0.3797	0.4001		2.11	2.00	5.4	35.0
Tert-amyl methyl ether	Ave	0.6230	0.5616		1.80	2.00	-9.9	35.0
2,2,4-Trimethylpentane	Ave	1.009	1.009		2.00	2.00	0.0	35.0
Heptane	Ave	0.2519	0.2479		1.97	2.00	-1.6	35.0
1,2-Dichloropropane	Ave	0.2308	0.2192		1.90	2.00	-5.0	35.0
Trichloroethene	Ave	0.3681	0.3977		2.16	2.00	8.0	35.0
Dibromomethane	Ave	0.3067	0.3038		1.98	2.00	-1.0	35.0
Bromodichloromethane	Ave	0.5888	0.5946		2.02	2.00	1.0	35.0
1,4-Dioxane	Ave	0.0920	0.0826		1.80	2.00	-10.2	35.0
Methyl methacrylate	Ave	0.2550	0.2190		1.72	2.00	-14.1	35.0
Methylcyclohexane	Ave	0.5294	0.4319		1.63	2.00	-18.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3903	0.3266		1.67	2.00	-16.3	35.0
cis-1,3-Dichloropropene	Ave	0.4274	0.4321		2.02	2.00	1.1	35.0
trans-1,3-Dichloropropene	Ave	0.4284	0.4207		1.96	2.00	-1.8	35.0
Toluene	Ave	0.7969	0.7662		1.92	2.00	-3.9	35.0
1,1,2-Trichloroethane	Ave	0.2389	0.2248		1.88	2.00	-5.9	35.0
2-Methylthiophene	Ave	0.6689	0.6855		2.05	2.00	2.5	35.0
3-Methylthiophene	Ave	0.6622	0.7015		2.12	2.00	5.9	35.0
2-Hexanone	Ave	0.1907	0.1692		1.77	2.00	-11.3	35.0
Octane	Ave	0.2880	0.2951		2.05	2.00	2.5	35.0
Dibromochloromethane	Ave	0.5960	0.6258		2.10	2.00	5.0	35.0
1,2-Dibromoethane (EDB)	Ave	0.4679	0.4673		2.00	2.00	-0.1	35.0
Tetrachloroethene	Ave	0.3645	0.3606		1.98	2.00	-1.1	35.0
Chlorobenzene	Ave	0.6744	0.6601		1.96	2.00	-2.1	35.0
2,3-Dimethylheptane	Ave	0.6822	0.6877		2.02	2.00	0.8	35.0
Ethylbenzene	Ave	1.113	0.9942		1.79	2.00	-10.7	35.0
2-Ethylthiophene	Ave	0.8768	0.8035		1.83	2.00	-8.4	35.0
m-Xylene & p-Xylene	Ave	0.8990	0.8022		3.57	4.00	-10.8	35.0
Bromoform	Ave	0.5594	0.6080		2.17	2.00	8.7	35.0
Nonane	Ave	0.4886	0.4940		2.02	2.00	1.1	35.0
Styrene	Ave	0.5931	0.5871		1.98	2.00	-1.0	35.0
o-Xylene	Ave	0.9191	0.8040		1.75	2.00	-12.5	35.0
1,1,2,2-Tetrachloroethane	Ave	0.5794	0.5324		1.84	2.00	-8.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Lab Sample ID: ICV 140-9482/13 Calibration Date: 03/15/2017 21:46

Instrument ID: MG Calib Start Date: 03/15/2017 14:36

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/15/2017 20:21

Lab File ID: GICVC15.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2120	0.1848		1.74	2.00	-12.9	35.0
Isopropylbenzene	Ave	1.335	1.181		1.77	2.00	-11.6	35.0
Propylbenzene	Ave	0.3502	0.3227		1.84	2.00	-7.8	35.0
2-Chlorotoluene	Ave	0.3267	0.3097		1.90	2.00	-5.2	35.0
4-Ethyltoluene	Ave	1.257	1.076		1.71	2.00	-14.4	35.0
1,3,5-Trimethylbenzene	Ave	0.5895	0.5364		1.82	2.00	-9.0	35.0
Alpha Methyl Styrene	Ave	0.4751	0.4525		1.90	2.00	-4.8	35.0
Decane	Ave	0.5991	0.5941		1.98	2.00	-0.8	35.0
tert-Butylbenzene	Ave	1.242	1.099		1.77	2.00	-11.5	35.0
1,2,4-Trimethylbenzene	Ave	1.129	1.005		1.78	2.00	-11.0	35.0
1,3-Dichlorobenzene	Ave	0.8518	0.7863		1.85	2.00	-7.7	35.0
sec-Butylbenzene	Ave	1.590	1.436		1.81	2.00	-9.7	35.0
Benzyl chloride	Ave	1.065	0.9701		1.82	2.00	-8.9	35.0
1,4-Dichlorobenzene	Ave	0.8325	0.7695		1.85	2.00	-7.6	35.0
4-Isopropyltoluene	Ave	1.404	1.253		1.78	2.00	-10.8	35.0
1,2,3-Trimethylbenzene	Ave	0.8430	0.8126		1.93	2.00	-3.6	35.0
Butylcyclohexane	Ave	0.8320	0.7981		1.92	2.00	-4.1	35.0
1,2-Dichlorobenzene	Ave	0.8117	0.7324		1.80	2.00	-9.8	35.0
Indane	Ave	1.029	0.8707		1.69	2.00	-15.4	35.0
Indene	Ave	0.7517	0.8606		2.29	2.00	14.5	35.0
Butylbenzene	Ave	1.313	1.174		1.79	2.00	-10.6	35.0
Undecane	Ave	0.7029	0.6633		1.89	2.00	-5.6	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	1.048	1.175		2.24	2.00	12.1	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.3481	0.2673		1.54	2.00	-23.2	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.259	1.269		2.02	2.00	0.8	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.7577	0.7776		2.05	2.00	2.6	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.035	1.033		2.00	2.00	-0.2	35.0
Dodecane	Ave	0.6236	0.5937		1.90	2.00	-4.8	35.0
1,2,4-Trichlorobenzene	Ave	0.7144	0.7323		2.05	2.00	2.5	35.0
Naphthalene	Ave	1.497	1.474		1.97	2.00	-1.5	35.0
Benzo(b)thiophene	Ave	0.8706	0.9324		2.14	2.00	7.1	35.0
Hexachlorobutadiene	Ave	0.7045	0.6788		1.93	2.00	-3.6	35.0
1,2,3-Trichlorobenzene	Ave	0.6741	0.7177		2.13	2.00	6.5	35.0
2-Methylnaphthalene	Ave	0.3108	0.2469		4.97	6.25	-20.6	50.0
1-Methylnaphthalene	Ave	0.3095	0.2503		5.06	6.25	-19.1	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7905	0.7720		3.91	4.00	-2.3	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Lab File ID: GBFBC16.D BFB Injection Date: 03/16/2017

Instrument ID: MG BFB Injection Time: 08:55

Analysis Batch No.: 9483

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.0	
75	30.0 - 60.0 % of mass 95	54.3	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	91.6	
175	5.0 - 9.0 % of mass 174	6.3	(6.8) 1
176	95.0 - 101.0 % of mass 174	88.5	(96.6) 1
177	5.0 - 9.0 % of mass 176	5.7	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-9483/2	GCCVC16.D	03/16/2017	09:28
	LCS 140-9483/1002	GCCVC16-Client.d	03/16/2017	09:28
	MB 140-9483/4	GMB500C16.D	03/16/2017	11:32
SV-169-A-22	140-7360-1	GC16P110.D	03/16/2017	19:13
SV-170-A-22	140-7360-2	GC16P111.D	03/16/2017	19:56
SV-171-A-22	140-7360-3	GC16P112.D	03/16/2017	20:38
SV-172-A-22	140-7360-4	GC16P113.D	03/16/2017	21:20
SV-173-A-22	140-7360-5	GC16P114.D	03/16/2017	22:02
SV-174-A-22	140-7360-6	GC16P115.D	03/16/2017	22:43
SV-175-A-22	140-7360-7	GC16P116.D	03/16/2017	23:25
SV-177-A-22	140-7360-9	GC16P202.D	03/17/2017	00:48
SV-001-C-22	140-7360-10	GC16P204.D	03/17/2017	02:12

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Lab Sample ID: CCVIS 140-9483/2 Calibration Date: 03/16/2017 09:28

Instrument ID: MG Calib Start Date: 03/15/2017 14:36

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/15/2017 20:21

Lab File ID: GCCVC16.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4447	0.4817		2.17	2.00	8.3	30.0
Propene	Ave	1.058	1.065		2.01	2.00	0.6	30.0
Dichlorodifluoromethane	Ave	4.233	4.465		2.11	2.00	5.5	30.0
Chloromethane	Ave	0.2848	0.2949		2.07	2.00	3.5	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.520	2.689		2.14	2.00	6.7	30.0
Acetaldehyde	Ave	0.3344	0.3239		9.69	10.0	-3.1	30.0
Vinyl chloride	Ave	1.170	1.242		2.12	2.00	6.2	30.0
1,3-Butadiene	Ave	0.7793	0.8186		2.10	2.00	5.0	30.0
Butane	Ave	1.658	1.747		2.11	2.00	5.4	30.0
Bromomethane	Ave	1.156	1.182		2.05	2.00	2.2	30.0
Chloroethane	Ave	0.5663	0.5824		2.06	2.00	2.8	30.0
Ethanol	Ave	0.4025	0.4155		10.3	10.0	3.2	30.0
Vinyl bromide	Ave	1.096	1.209		2.21	2.00	10.3	30.0
2-Methylbutane	Ave	1.120	1.163		2.08	2.00	3.9	30.0
Acrolein	Ave	0.1638	0.1844		2.25	2.00	12.6	30.0
Trichlorofluoromethane	Ave	4.216	4.481		2.13	2.00	6.3	30.0
Acetonitrile	Ave	0.3357	0.3591		2.14	2.00	7.0	30.0
Acetone	Ave	0.3928	0.3532		5.40	6.00	-10.1	30.0
Isopropyl alcohol	Ave	1.359	1.097		4.85	6.00	-19.3	30.0
Pentane	Ave	0.2037	0.2245		2.21	2.00	10.2	30.0
Ethyl ether	Ave	0.9241	1.007		2.18	2.00	9.0	30.0
1,1-Dichloroethene	Ave	1.066	1.113		2.09	2.00	4.4	30.0
Acrylonitrile	Ave	0.4861	0.5022		2.07	2.00	3.3	30.0
tert-Butyl alcohol	Ave	1.624	1.667		2.05	2.00	2.7	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.459	2.569		2.09	2.00	4.5	30.0
Methylene Chloride	Ave	0.9619	0.9306		1.94	2.00	-3.3	30.0
3-Chloropropene	Ave	1.034	1.050		2.03	2.00	1.6	30.0
Carbon disulfide	Ave	2.716	2.718		2.00	2.00	0.0	30.0
trans-1,2-Dichloroethene	Ave	1.042	1.045		2.01	2.00	0.3	30.0
2-Methylpentane	Ave	2.045	2.293		2.24	2.00	12.1	30.0
Methyl tert-butyl ether	Ave	3.096	3.201		2.07	2.00	3.4	30.0
1,1-Dichloroethane	Ave	2.035	2.095		2.06	2.00	2.9	30.0
Vinyl acetate	Ave	2.337	2.571		2.20	2.00	10.0	30.0
2-Butanone (MEK)	Ave	0.4552	0.4415		1.94	2.00	-3.0	30.0
Hexane	Ave	0.7899	0.8132		2.06	2.00	3.0	30.0
Isopropyl ether	Ave	2.907	3.067		2.11	2.00	5.5	30.0
cis-1,2-Dichloroethene	Ave	1.107	1.157		2.09	2.00	4.5	30.0
Ethyl acetate	Ave	1.927	1.892		1.96	2.00	-1.8	30.0
Chloroform	Ave	2.806	2.959		2.11	2.00	5.4	30.0
Tert-butyl ethyl ether	Ave	2.922	3.212		2.20	2.00	9.9	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Lab Sample ID: CCVIS 140-9483/2 Calibration Date: 03/16/2017 09:28

Instrument ID: MG Calib Start Date: 03/15/2017 14:36

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/15/2017 20:21

Lab File ID: GCCVC16.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.021	1.068		2.09	2.00	4.5	30.0
1,1,1-Trichloroethane	Ave	3.246	3.417		2.11	2.00	5.3	30.0
1,2-Dichloroethane	Ave	0.4038	0.4228		2.09	2.00	4.7	30.0
Benzene	Ave	0.6795	0.6837		2.01	2.00	0.6	30.0
Cyclohexane	Ave	0.1144	0.1168		2.04	2.00	2.1	30.0
1-Butanol	Ave	0.0727	0.0808		2.22	2.00	11.1	30.0
Carbon tetrachloride	Ave	0.7102	0.7577		2.13	2.00	6.7	30.0
2,3-Dimethylpentane	Ave	0.1564	0.1492		1.91	2.00	-4.6	30.0
Thiophene	Ave	0.3797	0.4141		2.18	2.00	9.1	30.0
Tert-amyl methyl ether	Ave	0.6230	0.6697		2.15	2.00	7.5	30.0
2,2,4-Trimethylpentane	Ave	1.009	1.066		2.12	2.00	5.7	30.0
Heptane	Ave	0.2519	0.2617		2.08	2.00	3.9	30.0
1,2-Dichloropropane	Ave	0.2308	0.2399		2.08	2.00	3.9	30.0
Trichloroethene	Ave	0.3681	0.3874		2.11	2.00	5.2	30.0
Dibromomethane	Ave	0.3067	0.3292		2.15	2.00	7.3	30.0
Bromodichloromethane	Ave	0.5888	0.6556		2.23	2.00	11.3	30.0
1,4-Dioxane	Ave	0.0920	0.0903		1.96	2.00	-1.8	30.0
Methyl methacrylate	Ave	0.2550	0.2682		2.10	2.00	5.2	30.0
Methylcyclohexane	Ave	0.5294	0.4457		1.68	2.00	-15.8	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3903	0.3899		2.00	2.00	-0.1	30.0
cis-1,3-Dichloropropene	Ave	0.4274	0.4636		2.17	2.00	8.5	30.0
trans-1,3-Dichloropropene	Ave	0.4284	0.4643		2.17	2.00	8.4	30.0
Toluene	Ave	0.7969	0.8416		2.11	2.00	5.6	30.0
1,1,2-Trichloroethane	Ave	0.2389	0.2449		2.05	2.00	2.5	30.0
2-Methylthiophene	Ave	0.6689	0.7291		2.18	2.00	9.0	30.0
3-Methylthiophene	Ave	0.6622	0.7441		2.25	2.00	12.4	30.0
2-Hexanone	Ave	0.1907	0.1910		2.00	2.00	0.2	30.0
Octane	Ave	0.2880	0.3076		2.14	2.00	6.8	30.0
Dibromochloromethane	Ave	0.5960	0.6731		2.26	2.00	12.9	30.0
1,2-Dibromoethane (EDB)	Ave	0.4679	0.4977		2.13	2.00	6.4	30.0
Tetrachloroethene	Ave	0.3645	0.3784		2.08	2.00	3.8	30.0
Chlorobenzene	Ave	0.6744	0.7046		2.09	2.00	4.5	30.0
2,3-Dimethylheptane	Ave	0.6822	0.7389		2.17	2.00	8.3	30.0
Ethylbenzene	Ave	1.113	1.175		2.11	2.00	5.5	30.0
2-Ethylthiophene	Ave	0.8768	0.9342		2.13	2.00	6.5	30.0
m-Xylene & p-Xylene	Ave	0.8990	0.9573		4.26	4.00	6.5	30.0
Bromoform	Ave	0.5594	0.6903		2.47	2.00	23.4	30.0
Styrene	Ave	0.5931	0.6865		2.32	2.00	15.7	30.0
Nonane	Ave	0.4886	0.5267		2.16	2.00	7.8	30.0
o-Xylene	Ave	0.9191	0.9570		2.08	2.00	4.1	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5794	0.6215		2.15	2.00	7.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Lab Sample ID: CCVIS 140-9483/2 Calibration Date: 03/16/2017 09:28

Instrument ID: MG Calib Start Date: 03/15/2017 14:36

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/15/2017 20:21

Lab File ID: GCCVC16.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2120	0.2217		2.09	2.00	4.6	30.0
Isopropylbenzene	Ave	1.335	1.421		2.13	2.00	6.4	30.0
Propylbenzene	Ave	0.3502	0.3775		2.16	2.00	7.8	30.0
2-Chlorotoluene	Ave	0.3267	0.3553		2.18	2.00	8.7	30.0
4-Ethyltoluene	Ave	1.257	1.272		2.02	2.00	1.2	30.0
1,3,5-Trimethylbenzene	Ave	0.5895	0.6293		2.14	2.00	6.8	30.0
Alpha Methyl Styrene	Ave	0.4751	0.5334		2.25	2.00	12.3	30.0
Decane	Ave	0.5991	0.6707		2.24	2.00	12.0	30.0
tert-Butylbenzene	Ave	1.242	1.329		2.14	2.00	7.0	30.0
1,2,4-Trimethylbenzene	Ave	1.129	1.201		2.13	2.00	6.3	30.0
1,3-Dichlorobenzene	Ave	0.8518	0.9043		2.12	2.00	6.2	30.0
sec-Butylbenzene	Ave	1.590	1.727		2.17	2.00	8.6	30.0
Benzyl chloride	Ave	1.065	1.159		2.18	2.00	8.8	30.0
1,4-Dichlorobenzene	Ave	0.8325	0.8769		2.11	2.00	5.3	30.0
4-Isopropyltoluene	Ave	1.404	1.493		2.13	2.00	6.3	30.0
1,2,3-Trimethylbenzene	Ave	0.8430	0.9666		2.29	2.00	14.7	30.0
Butylcyclohexane	Ave	0.8320	0.8768		2.11	2.00	5.4	30.0
1,2-Dichlorobenzene	Ave	0.8117	0.8496		2.09	2.00	4.7	30.0
Indane	Ave	1.029	1.035		2.01	2.00	0.6	30.0
Indene	Ave	0.7517	1.016		2.70	2.00	35.1*	30.0
Butylbenzene	Ave	1.313	1.383		2.11	2.00	5.4	30.0
Undecane	Ave	0.7029	0.7464		2.13	2.00	6.2	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	1.048	1.350		2.58	2.00	28.8	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3481	0.3093		1.78	2.00	-11.2	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.259	1.429		2.27	2.00	13.5	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.7577	0.8634		2.28	2.00	14.0	30.0
1,2,3,4-Tetramethylbenzene	Ave	1.035	1.130		2.19	2.00	9.2	30.0
Dodecane	Ave	0.6236	0.5984		1.92	2.00	-4.0	30.0
1,2,4-Trichlorobenzene	Ave	0.7144	0.7525		2.11	2.00	5.3	30.0
Naphthalene	Ave	1.497	1.519		2.03	2.00	1.5	30.0
Benzo(b)thiophene	Ave	0.8706	0.9320		2.14	2.00	7.1	30.0
Hexachlorobutadiene	Ave	0.7045	0.7452		2.12	2.00	5.8	30.0
1,2,3-Trichlorobenzene	Ave	0.6741	0.6982		2.07	2.00	3.6	30.0
2-Methylnaphthalene	Ave	0.3108	0.1396		2.81	6.25	-55.1*	50.0
1-Methylnaphthalene	Ave	0.3095	0.1266		2.56	6.25	-59.1*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7905	0.8161		4.13	4.00	3.2	30.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Lab File ID: GBFBC17.D BFB Injection Date: 03/17/2017

Instrument ID: MG BFB Injection Time: 10:10

Analysis Batch No.: 9484

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.1	
75	30.0 - 60.0 % of mass 95	56.3	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	91.9	
175	5.0 - 9.0 % of mass 174	6.5	(7.0) 1
176	95.0 - 101.0 % of mass 174	88.7	(96.5) 1
177	5.0 - 9.0 % of mass 176	5.8	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-9484/2	GCCVC17.D	03/17/2017	10:42
	LCS 140-9484/1002	GCCVC17-Client.d	03/17/2017	10:42
	MB 140-9484/5	GC17mb500.D	03/17/2017	17:55
SV-176-A-22	140-7360-8	GC17p113.D	03/18/2017	01:12

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Lab Sample ID: CCVIS 140-9484/2 Calibration Date: 03/17/2017 10:42

Instrument ID: MG Calib Start Date: 03/15/2017 14:36

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/15/2017 20:21

Lab File ID: GCCVC17.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4447	0.5334		2.40	2.00	19.9	30.0
Propene	Ave	1.058	1.126		2.13	2.00	6.4	30.0
Dichlorodifluoromethane	Ave	4.233	4.907		2.32	2.00	15.9	30.0
Chloromethane	Ave	0.2848	0.2981		2.09	2.00	4.7	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.520	2.825		2.24	2.00	12.1	30.0
Acetaldehyde	Ave	0.3344	0.3071		9.19	10.0	-8.2	30.0
Vinyl chloride	Ave	1.170	1.284		2.20	2.00	9.7	30.0
1,3-Butadiene	Ave	0.7793	0.8220		2.11	2.00	5.5	30.0
Butane	Ave	1.658	1.803		2.18	2.00	8.7	30.0
Bromomethane	Ave	1.156	1.231		2.13	2.00	6.5	30.0
Chloroethane	Ave	0.5663	0.5933		2.10	2.00	4.8	30.0
Ethanol	Ave	0.4025	0.4006		9.96	10.0	-0.5	30.0
Vinyl bromide	Ave	1.096	1.245		2.27	2.00	13.6	30.0
2-Methylbutane	Ave	1.120	1.207		2.16	2.00	7.8	30.0
Acrolein	Ave	0.1638	0.1855		2.27	2.00	13.2	30.0
Trichlorofluoromethane	Ave	4.216	4.879		2.32	2.00	15.7	30.0
Acetonitrile	Ave	0.3357	0.3245		1.93	2.00	-3.3	30.0
Acetone	Ave	0.3928	0.3376		5.16	6.00	-14.1	30.0
Isopropyl alcohol	Ave	1.359	1.059		4.68	6.00	-22.1	30.0
Pentane	Ave	0.2037	0.2344		2.30	2.00	15.1	30.0
Ethyl ether	Ave	0.9241	0.9644		2.09	2.00	4.4	30.0
1,1-Dichloroethene	Ave	1.066	1.161		2.18	2.00	8.9	30.0
Acrylonitrile	Ave	0.4861	0.4807		1.98	2.00	-1.1	30.0
tert-Butyl alcohol	Ave	1.624	1.631		2.01	2.00	0.4	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.459	2.752		2.24	2.00	11.9	30.0
Methylene Chloride	Ave	0.9619	0.9761		2.03	2.00	1.5	30.0
3-Chloropropene	Ave	1.034	1.143		2.21	2.00	10.5	30.0
Carbon disulfide	Ave	2.716	2.938		2.16	2.00	8.2	30.0
trans-1,2-Dichloroethene	Ave	1.042	1.106		2.12	2.00	6.1	30.0
2-Methylpentane	Ave	2.045	2.367		2.32	2.00	15.7	30.0
Methyl tert-butyl ether	Ave	3.096	3.065		1.98	2.00	-1.0	30.0
1,1-Dichloroethane	Ave	2.035	2.183		2.15	2.00	7.3	30.0
Vinyl acetate	Ave	2.337	2.369		2.03	2.00	1.4	30.0
2-Butanone (MEK)	Ave	0.4552	0.4197		1.84	2.00	-7.8	30.0
Hexane	Ave	0.7899	0.8294		2.10	2.00	5.0	30.0
Isopropyl ether	Ave	2.907	2.856		1.97	2.00	-1.8	30.0
cis-1,2-Dichloroethene	Ave	1.107	1.194		2.16	2.00	7.9	30.0
Ethyl acetate	Ave	1.927	1.793		1.86	2.00	-7.0	30.0
Chloroform	Ave	2.806	3.126		2.23	2.00	11.4	30.0
Tert-butyl ethyl ether	Ave	2.922	3.080		2.11	2.00	5.4	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Lab Sample ID: CCVIS 140-9484/2 Calibration Date: 03/17/2017 10:42

Instrument ID: MG Calib Start Date: 03/15/2017 14:36

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/15/2017 20:21

Lab File ID: GCCVC17.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.021	1.011		1.98	2.00	-1.0	30.0
1,1,1-Trichloroethane	Ave	3.246	3.651		2.25	2.00	12.5	30.0
1,2-Dichloroethane	Ave	0.4038	0.4414		2.19	2.00	9.3	30.0
1-Butanol	Ave	0.0727	0.0769		2.11	2.00	5.7	30.0
Benzene	Ave	0.6795	0.7033		2.07	2.00	3.5	30.0
Cyclohexane	Ave	0.1144	0.1214		2.12	2.00	6.1	30.0
Carbon tetrachloride	Ave	0.7102	0.8010		2.26	2.00	12.8	30.0
2,3-Dimethylpentane	Ave	0.1564	0.1511		1.93	2.00	-3.4	30.0
Thiophene	Ave	0.3797	0.4163		2.19	2.00	9.6	30.0
Tert-amyl methyl ether	Ave	0.6230	0.6119		1.97	2.00	-1.8	30.0
2,2,4-Trimethylpentane	Ave	1.009	1.071		2.13	2.00	6.2	30.0
Heptane	Ave	0.2519	0.2628		2.09	2.00	4.3	30.0
1,2-Dichloropropane	Ave	0.2308	0.2357		2.04	2.00	2.1	30.0
Trichloroethene	Ave	0.3681	0.4085		2.22	2.00	11.0	30.0
Dibromomethane	Ave	0.3067	0.3386		2.21	2.00	10.4	30.0
Bromodichloromethane	Ave	0.5888	0.6768		2.30	2.00	14.9	30.0
1,4-Dioxane	Ave	0.0920	0.0837		1.82	2.00	-9.0	30.0
Methyl methacrylate	Ave	0.2550	0.2492		1.96	2.00	-2.3	30.0
Methylcyclohexane	Ave	0.5294	0.4523		1.71	2.00	-14.6	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3903	0.3469		1.78	2.00	-11.1	30.0
cis-1,3-Dichloropropene	Ave	0.4274	0.4714		2.21	2.00	10.3	30.0
trans-1,3-Dichloropropene	Ave	0.4284	0.4576		2.14	2.00	6.8	30.0
Toluene	Ave	0.7969	0.7992		2.01	2.00	0.3	30.0
1,1,2-Trichloroethane	Ave	0.2389	0.2392		2.00	2.00	0.1	30.0
2-Methylthiophene	Ave	0.6689	0.7245		2.17	2.00	8.3	30.0
3-Methylthiophene	Ave	0.6622	0.7400		2.24	2.00	11.8	30.0
2-Hexanone	Ave	0.1907	0.1680		1.76	2.00	-11.9	30.0
Octane	Ave	0.2880	0.3066		2.13	2.00	6.5	30.0
Dibromochloromethane	Ave	0.5960	0.6968		2.34	2.00	16.9	30.0
1,2-Dibromoethane (EDB)	Ave	0.4679	0.5002		2.14	2.00	6.9	30.0
Tetrachloroethene	Ave	0.3645	0.3809		2.09	2.00	4.5	30.0
Chlorobenzene	Ave	0.6744	0.6889		2.04	2.00	2.1	30.0
2,3-Dimethylheptane	Ave	0.6822	0.7412		2.17	2.00	8.6	30.0
Ethylbenzene	Ave	1.113	1.070		1.92	2.00	-3.9	30.0
2-Ethylthiophene	Ave	0.8768	0.8662		1.98	2.00	-1.2	30.0
m-Xylene & p-Xylene	Ave	0.8990	0.8808		3.92	4.00	-2.0	30.0
Bromoform	Ave	0.5594	0.6827		2.44	2.00	22.1	30.0
Nonane	Ave	0.4886	0.5298		2.17	2.00	8.4	30.0
Styrene	Ave	0.5931	0.6287		2.12	2.00	6.0	30.0
o-Xylene	Ave	0.9191	0.8760		1.91	2.00	-4.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5794	0.5734		1.98	2.00	-1.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Lab Sample ID: CCVIS 140-9484/2 Calibration Date: 03/17/2017 10:42

Instrument ID: MG Calib Start Date: 03/15/2017 14:36

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/15/2017 20:21

Lab File ID: GCCVC17.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2120	0.2046		1.93	2.00	-3.5	30.0
Isopropylbenzene	Ave	1.335	1.302		1.95	2.00	-2.4	30.0
Propylbenzene	Ave	0.3502	0.3404		1.95	2.00	-2.8	30.0
2-Chlorotoluene	Ave	0.3267	0.3238		1.98	2.00	-0.9	30.0
4-Ethyltoluene	Ave	1.257	1.169		1.86	2.00	-7.0	30.0
1,3,5-Trimethylbenzene	Ave	0.5895	0.5726		1.94	2.00	-2.9	30.0
Alpha Methyl Styrene	Ave	0.4751	0.4858		2.05	2.00	2.2	30.0
Decane	Ave	0.5991	0.6317		2.11	2.00	5.4	30.0
tert-Butylbenzene	Ave	1.242	1.218		1.96	2.00	-1.9	30.0
1,2,4-Trimethylbenzene	Ave	1.129	1.106		1.96	2.00	-2.0	30.0
1,3-Dichlorobenzene	Ave	0.8518	0.8353		1.96	2.00	-1.9	30.0
sec-Butylbenzene	Ave	1.590	1.587		2.00	2.00	-0.2	30.0
Benzyl chloride	Ave	1.065	1.089		2.05	2.00	2.2	30.0
1,4-Dichlorobenzene	Ave	0.8325	0.8052		1.94	2.00	-3.3	30.0
4-Isopropyltoluene	Ave	1.404	1.370		1.95	2.00	-2.4	30.0
1,2,3-Trimethylbenzene	Ave	0.8430	0.8880		2.11	2.00	5.3	30.0
Butylcyclohexane	Ave	0.8320	0.8509		2.05	2.00	2.3	30.0
1,2-Dichlorobenzene	Ave	0.8117	0.7808		1.92	2.00	-3.8	30.0
Indane	Ave	1.029	0.9486		1.85	2.00	-7.8	30.0
Indene	Ave	0.7517	0.9216		2.45	2.00	22.6	30.0
Butylbenzene	Ave	1.313	1.288		1.96	2.00	-1.9	30.0
Undecane	Ave	0.7029	0.6950		1.98	2.00	-1.1	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	1.048	1.247		2.38	2.00	18.9	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3481	0.2820		1.62	2.00	-19.0	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.259	1.309		2.08	2.00	4.0	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.7577	0.7904		2.09	2.00	4.3	30.0
1,2,3,4-Tetramethylbenzene	Ave	1.035	1.021		1.97	2.00	-1.3	30.0
Dodecane	Ave	0.6236	0.5485		1.76	2.00	-12.0	30.0
1,2,4-Trichlorobenzene	Ave	0.7144	0.6945		1.95	2.00	-2.8	30.0
Naphthalene	Ave	1.497	1.404		1.88	2.00	-6.2	30.0
Benzo(b)thiophene	Ave	0.8706	0.8764		2.01	2.00	0.7	30.0
Hexachlorobutadiene	Ave	0.7045	0.6842		1.94	2.00	-2.9	30.0
1,2,3-Trichlorobenzene	Ave	0.6741	0.6440		1.91	2.00	-4.5	30.0
2-Methylnaphthalene	Ave	0.3108	0.1445		2.91	6.25	-53.5*	50.0
1-Methylnaphthalene	Ave	0.3095	0.1348		2.72	6.25	-56.4*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7905	0.8191		4.14	4.00	3.6	30.0

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Lab File ID: GMB500C16.D Lab Sample ID: MB 140-9483/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MG Date Analyzed: 03/16/2017 11:32

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-9483/1002	GCCVC16-Client.d	03/16/2017 09:28
SV-169-A-22	140-7360-1	GC16P110.D	03/16/2017 19:13
SV-170-A-22	140-7360-2	GC16P111.D	03/16/2017 19:56
SV-171-A-22	140-7360-3	GC16P112.D	03/16/2017 20:38
SV-172-A-22	140-7360-4	GC16P113.D	03/16/2017 21:20
SV-173-A-22	140-7360-5	GC16P114.D	03/16/2017 22:02
SV-174-A-22	140-7360-6	GC16P115.D	03/16/2017 22:43
SV-175-A-22	140-7360-7	GC16P116.D	03/16/2017 23:25
SV-177-A-22	140-7360-9	GC16P202.D	03/17/2017 00:48
SV-001-C-22	140-7360-10	GC16P204.D	03/17/2017 02:12

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-9483/4

Matrix: Air | Lab File ID: GMB500C16.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 03/16/2017 11:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9483 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	0.0156	J	0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7360-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-9483/4

Matrix: Air | Lab File ID: GMB500C16.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 03/16/2017 11:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9483 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	0.0852	J	0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Matrix: Air Level: Low Lab File ID: GCCVC16-Client.d

Lab ID: LCS 140-9483/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.01	101	70-130	
Carbon tetrachloride	2.00	2.13	107	70-130	
Chlorodifluoromethane	2.00	2.17	108	60-140	
Chloroform	2.00	2.11	105	70-130	
cis-1,2-Dichloroethene	2.00	2.09	105	70-130	
Dichlorodifluoromethane	2.00	2.11	105	60-140	
1,1-Dichloroethane	2.00	2.06	103	70-130	
1,2-Dichloroethane	2.00	2.09	105	70-130	
1,1-Dichloroethene	2.00	2.09	104	70-130	
Ethylbenzene	2.00	2.11	106	70-130	
Methylene Chloride	2.00	1.94	97	70-130	
Methyl tert-butyl ether	2.00	2.07	103	60-140	
Naphthalene	2.00	2.03	101	60-140	
Tetrachloroethene	2.00	2.08	104	70-130	
Toluene	2.00	2.11	106	70-130	
trans-1,2-Dichloroethene	2.00	2.01	100	70-130	
1,2,4-Trichlorobenzene	2.00	2.11	105	60-140	
1,1,1-Trichloroethane	2.00	2.11	105	70-130	
1,1,2-Trichloroethane	2.00	2.05	103	70-130	
Trichloroethene	2.00	2.11	105	70-130	
1,2,3-Trimethylbenzene	2.00	2.29	115	70-130	
1,2,4-Trimethylbenzene	2.00	2.13	106	70-130	
1,3,5-Trimethylbenzene	2.00	2.14	107	70-130	
Vinyl chloride	2.00	2.12	106	70-130	
Xylenes, Total	6.00	6.34	106	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Lab File ID: GC17mb500.D Lab Sample ID: MB 140-9484/5

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MG Date Analyzed: 03/17/2017 17:55

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-9484/1002	GCCVC17-Client.d	03/17/2017 10:42
SV-176-A-22	140-7360-8	GC17p113.D	03/18/2017 01:12

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-9484/5

Matrix: Air Lab File ID: GC17mb500.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/17/2017 17:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9484 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-9484/5

Matrix: Air Lab File ID: GC17mb500.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/17/2017 17:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9484 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Matrix: Air Level: Low Lab File ID: GCCVC17-Client.d

Lab ID: LCS 140-9484/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.07	103	70-130	
Carbon tetrachloride	2.00	2.26	113	70-130	
Chlorodifluoromethane	2.00	2.40	120	60-140	
Chloroform	2.00	2.23	111	70-130	
cis-1,2-Dichloroethene	2.00	2.16	108	70-130	
Dichlorodifluoromethane	2.00	2.32	116	60-140	
1,1-Dichloroethane	2.00	2.15	107	70-130	
1,2-Dichloroethane	2.00	2.19	109	70-130	
1,1-Dichloroethene	2.00	2.18	109	70-130	
Ethylbenzene	2.00	1.92	96	70-130	
Methylene Chloride	2.00	2.03	101	70-130	
Methyl tert-butyl ether	2.00	1.98	99	60-140	
Naphthalene	2.00	1.88	94	60-140	
Tetrachloroethene	2.00	2.09	105	70-130	
Toluene	2.00	2.01	100	70-130	
trans-1,2-Dichloroethene	2.00	2.12	106	70-130	
1,2,4-Trichlorobenzene	2.00	1.95	97	60-140	
1,1,1-Trichloroethane	2.00	2.25	112	70-130	
1,1,2-Trichloroethane	2.00	2.00	100	70-130	
Trichloroethene	2.00	2.22	111	70-130	
1,2,3-Trimethylbenzene	2.00	2.11	105	70-130	
1,2,4-Trimethylbenzene	2.00	1.96	98	70-130	
1,3,5-Trimethylbenzene	2.00	1.94	97	70-130	
Vinyl chloride	2.00	2.20	110	70-130	
Xylenes, Total	6.00	5.83	97	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
SV-169-A-22	140-7360-1	101
SV-170-A-22	140-7360-2	98
SV-171-A-22	140-7360-3	99
SV-172-A-22	140-7360-4	98
SV-173-A-22	140-7360-5	96
SV-174-A-22	140-7360-6	98
SV-175-A-22	140-7360-7	98
SV-176-A-22	140-7360-8	97
SV-177-A-22	140-7360-9	99
SV-001-C-22	140-7360-10	100
	MB 140-9483/4	98
	MB 140-9484/5	97
	LCS 140-9483/1002	103
	LCS 140-9484/1002	104

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Sample No.: ICIS 140-9482/8 Date Analyzed: 03/15/2017 18:13

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): GC15IC06.D Heated Purge: (Y/N) N

Calibration ID: 962

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		356237	7.99	1693700	10.16	1673092	15.03
UPPER LIMIT		498732	8.32	2371180	10.49	2342329	15.36
LOWER LIMIT		213742	7.66	1016220	9.83	1003855	14.70
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-9482/13		414852	7.99	2002906	10.16	1960813	15.03

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Sample No.: CCVIS 140-9483/2 Date Analyzed: 03/16/2017 09:28

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): GCCVC16.D Heated Purge: (Y/N) N

Calibration ID: 962

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		321211	8.00	1600355	10.16	1598730	15.03
UPPER LIMIT		449695	8.33	2240497	10.49	2238222	15.36
LOWER LIMIT		192727	7.67	960213	9.83	959238	14.70
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-9483/1002		321211	8.00	1600355	10.16	1598730	15.03
MB 140-9483/4		306213	7.98	1478859	10.15	1481126	15.03
140-7360-1	SV-169-A-22	332317	7.99	1708191	10.15	1663466	15.03
140-7360-2	SV-170-A-22	321933	7.99	1573322	10.15	1547305	15.03
140-7360-3	SV-171-A-22	320886	7.99	1504975	10.15	1466707	15.03
140-7360-4	SV-172-A-22	324930	7.99	1645545	10.15	1615606	15.03
140-7360-5	SV-173-A-22	323945	7.99	1531930	10.15	1484958	15.03
140-7360-6	SV-174-A-22	311656	7.99	1382916	10.15	1399559	15.03
140-7360-7	SV-175-A-22	322456	7.98	1508671	10.15	1456753	15.03
140-7360-9	SV-177-A-22	321652	7.99	1637219	10.15	1612303	15.03
140-7360-10	SV-001-C-22	323316	7.99	1611375	10.15	1573237	15.03

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Sample No.: CCVIS 140-9484/2 Date Analyzed: 03/17/2017 10:42

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): GCCVC17.D Heated Purge: (Y/N) N

Calibration ID: 962

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		278298	7.99	1422162	10.16	1428532	15.03
UPPER LIMIT		389617	8.32	1991027	10.49	1999945	15.36
LOWER LIMIT		166979	7.66	853297	9.83	857119	14.70
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-9484/1002		278298	7.99	1422162	10.16	1428532	15.03
MB 140-9484/5		291325	7.99	1440054	10.16	1387327	15.03
140-7360-8	SV-176-A-22	318542	7.99	1590067	10.16	1541597	15.03

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

LOCKHEED MARTIN CORPORATION (LMC) - MIDDLE RIVER COMPLEX (MRC)
SDG 140-7360-1

SAMPLE IDENTIFICATION	SV-175-A-22		
COMPOUND	TRICHLOROETHENE	MW=	131.39
		GAS CONSTANT =	24.45
COMPOUND AREA	1035107		
INTERNAL STANDARD AMOUNT (ppbv)	4		
CALIBRATION VOLUME (mL)	500		
DILUTION FACTOR	358.2		
INTERNAL STANDARD AREA	1508671		
AVERAGE RRF	0.3681		
SAMPLE VOLUME (mL)	11		
			7.4556391

121391 ppbv
652336 µg/m³

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1

SDG No.:

Client Sample ID: SV-175-A-22 Lab Sample ID: 140-7360-7

Matrix: Air Lab File ID: GC16P116.D

Analysis Method: TO 15 LL Date Collected: 03/08/2017 10:43

Sample wt/vol: 11(mL) Date Analyzed: 03/16/2017 23:25

Soil Aliquot Vol: Dilution Factor: 358.2

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9483 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1300	370
56-23-5	Carbon tetrachloride	153.81	ND		1300	240
75-45-6	Chlorodifluoromethane	86.47	ND		1300	240
67-66-3	Chloroform	119.38	ND		1300	240
156-59-2	cis-1,2-Dichloroethene	96.94	2400		1300	390
75-71-8	Dichlorodifluoromethane	120.91	ND		1300	440
75-34-3	1,1-Dichloroethane	98.96	380	J	1300	160
107-06-2	1,2-Dichloroethane	98.96	ND		1300	310
75-35-4	1,1-Dichloroethene	96.94	12000		1300	230
100-41-4	Ethylbenzene	106.17	ND		1300	440
75-09-2	Methylene Chloride	84.93	ND		3300	2100
1634-04-4	Methyl tert-butyl ether	88.15	ND		6500	1100
91-20-3	Naphthalene	128.17	ND		650	650
127-18-4	Tetrachloroethene	165.83	ND		1300	260
108-88-3	Toluene	92.14	ND		2000	2000
156-60-5	trans-1,2-Dichloroethene	96.94	1100	J	1300	330
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		1300	630
71-55-6	1,1,1-Trichloroethane	133.41	ND		1300	200
79-00-5	1,1,2-Trichloroethane	133.41	ND		1300	340
79-01-6	Trichloroethene	131.39	120000		650	230
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		1300	550
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		1300	410
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		1300	420
75-01-4	Vinyl chloride	62.50	ND		650	470
1330-20-7	Xylenes, Total	106.17	ND		2600	390

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1
SDG No.:
Client Sample ID: SV-175-A-22 Lab Sample ID: 140-7360-7
Matrix: Air Lab File ID: GC16P116.D
Analysis Method: TO 15 LL Date Collected: 03/08/2017 10:43
Sample wt/vol: 11(mL) Date Analyzed: 03/16/2017 23:25
Soil Aliquot Vol: Dilution Factor: 358.2
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 9483 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		4200	1200
56-23-5	Carbon tetrachloride	153.81	ND		8200	1500
75-45-6	Chlorodifluoromethane	86.47	ND		4600	860
67-66-3	Chloroform	119.38	ND		6400	1200
156-59-2	cis-1,2-Dichloroethene	96.94	9400		5200	1500
75-71-8	Dichlorodifluoromethane	120.91	ND		6400	2200
75-34-3	1,1-Dichloroethane	98.96	1500	J	5300	660
107-06-2	1,2-Dichloroethane	98.96	ND		5300	1300
75-35-4	1,1-Dichloroethene	96.94	48000		5200	900
100-41-4	Ethylbenzene	106.17	ND		5700	1900
75-09-2	Methylene Chloride	84.93	ND		11000	7400
1634-04-4	Methyl tert-butyl ether	88.15	ND		23000	4000
91-20-3	Naphthalene	128.17	ND		3400	3400
127-18-4	Tetrachloroethene	165.83	ND		8800	1800
108-88-3	Toluene	92.14	ND		7400	7400
156-60-5	trans-1,2-Dichloroethene	96.94	4300	J	5200	1300
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		9700	4700
71-55-6	1,1,1-Trichloroethane	133.41	ND		7100	1100
79-00-5	1,1,2-Trichloroethane	133.41	ND		7100	1900
79-01-6	Trichloroethene	131.39	650000		3500	1200
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		6400	2700
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		6400	2000
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		6400	2100
75-01-4	Vinyl chloride	62.50	ND		1700	1200
1330-20-7	Xylenes, Total	106.17	ND		11000	1700

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Sample Calculation - Page 4

Data File: \\ChromNA\Knoxville\ChromData\MG\20170315-4324.b\GC16P116.D
Lims ID: 140-7360-A-7
Client ID: SV-175-A-22
Sample Type: Client
Inject. Date: 16-Mar-2017 23:25:30 ALS Bottle#: 16 Worklist Smp#: 21
Purge Vol: 500.000 mL Dil. Factor: 358.2000
Sample Info: 140-0004324-021
Misc. Info.: 140-7360-a-7@358.20
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20170315-4324.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Mar-2017 10:46:51 Calib Date: 15-Mar-2017 20:21:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170315-4323.b\GC15IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 17-Mar-2017 10:46:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.980	7.996	-0.016	81	322456	4.00	
* 2 1,4-Difluorobenzene	114	10.153	10.164	-0.011	95	1508671	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.028	15.033	-0.005	88	1456753	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.699	16.705	-0.006	93	1129022	3.92	
27 1,1-Dichloroethene	96	5.348	5.359	-0.011	98	63291	0.7364	
31 Methylene Chloride	84	5.645	5.661	-0.016	87	6708	0.0865	
34 trans-1,2-Dichloroethene	96	6.389	6.395	-0.006	95	5619	0.0669	
37 1,1-Dichloroethane	63	6.767	6.777	-0.010	99	3780	0.0230	
42 cis-1,2-Dichloroethene	96	7.683	7.694	-0.011	96	13037	0.1461	
59 Trichloroethene	130	10.886	10.903	-0.017	96	1035107	7.46	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7360-1 Analy Batch No.: 9482

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/15/2017 14:36 Calibration End Date: 03/15/2017 20:21 Calibration ID: 962

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,2-Dichloropropane	0.2369 0.2379	0.2592 0.2239	0.2423 0.2138	0.2307 0.2044	0.2282	Ave		0.2308				7.0		30.0			
Trichloroethene	0.3913 0.3732	0.3778 0.3641	0.3535 0.3793	0.3420 0.3811	0.3505	Ave		0.3681				4.5		30.0			
Dibromomethane	0.3543 0.3167	0.3067 0.3050	0.2852 0.3044	0.2873 0.3024	0.2986	Ave		0.3067				6.6		30.0			
Bromodichloromethane	0.6086 0.6261	0.5498 0.6149	0.5387 0.6089	0.5577 0.6031	0.5917	Ave		0.5888				5.4		30.0			
1,4-Dioxane	0.0864 0.0991	0.0977 0.0939	0.0920 0.0920	0.0895 0.0845	0.0928	Ave		0.0920				5.2		30.0			
Methyl methacrylate	0.2506 0.2719	0.2669 0.2669	0.2455 0.2567	0.2369 0.2462	0.2534	Ave		0.2550				4.6		30.0			
Methylcyclohexane	0.5429 0.5509	0.5520 0.5254	0.5273 0.5144	0.5134 0.5090	0.5296	Ave		0.5294				3.0		30.0			
4-Methyl-2-pentanone (MIBK)	0.3776 0.4117	0.3958 0.4017	0.3967 0.3926	0.3789 0.3610	0.3969	Ave		0.3903				3.9		30.0			
cis-1,3-Dichloropropene	0.4475 0.4489	0.4392 0.4328	0.4056 0.4255	0.4041 0.4132	0.4296	Ave		0.4274				3.9		30.0			
trans-1,3-Dichloropropene	0.4385 0.4472	0.4225 0.4317	0.4283 0.4230	0.4164 0.4211	0.4273	Ave		0.4284				2.2		30.0			
Toluene Range	+++++ 2.0153	+++++ 1.9295	+++++ 1.8763	1.8534 1.8846	1.9262	Ave		1.9142				3.0		30.0			
Toluene	0.8395 0.8093	0.8491 0.7770	0.7936 0.7642	0.7738 0.7773	0.7881	Ave		0.7969				3.8		30.0			
1,1,2-Trichloroethane	0.2473 0.2468	0.2582 0.2332	0.2411 0.2289	0.2313 0.2284	0.2347	Ave		0.2389				4.3		30.0			
2-Methylthiophene	0.6786 0.6945	0.6915 0.6634	0.6567 0.6465	0.6589 0.6593	0.6702	Ave		0.6689				2.4		30.0			
3-Methylthiophene	0.6861 0.6844	0.6815 0.6575	0.6391 0.6481	0.6408 0.6536	0.6684	Ave		0.6622				2.8		30.0			
2-Hexanone	0.1705 0.2083	0.1899 0.2042	0.1871 0.1978	0.1825 0.1879	0.1884	Ave		0.1907				6.0		30.0			
Octane	0.3046 0.2983	0.2938 0.2856	0.2875 0.2800	0.2759 0.2759	0.2901	Ave		0.2880				3.4		30.0			
Dibromochloromethane	0.5147 0.6391	0.4976 0.6658	0.5002 0.6985	0.5208 0.7314	0.5960	Ave		0.5960				15.3		30.0			
1,2-Dibromoethane (EDB)	0.4514 0.4987	0.4414 0.4873	0.4271 0.4908	0.4418 0.4998	0.4725	Ave		0.4679				6.0		30.0			
Tetrachloroethene	0.3686 0.3715	0.3773 0.3614	0.3461 0.3710	0.3339 0.3954	0.3554	Ave		0.3645				4.9		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

APPENDIX E—*REMEDIAL ACTION PROGRESS REPORT #29: OCTOBER 1, 2016 THROUGH MARCH 31, 2017, SUB-SLAB-DEPRESSURIZATION SYSTEMS, BUILDINGS A AND C, LOCKHEED MARTIN MIDDLE RIVER COMPLEX*

Remedial Action Progress Report #29
October 1, 2016—March 31, 2017
Sub-Slab Depressurization Systems
Buildings A and C
Lockheed Martin Middle River Complex
2323 Eastern Boulevard
Middle River, Maryland

Prepared for:

Lockheed Martin Corporation

Prepared by:

Tetra Tech, Inc.

October 2017



Michael Martin, P.G.
Regional Manager



Peter Rich, P.E.
Project Manager

TABLE OF CONTENTS

Section **Page**

ACRONYMS ..... **iv**

1.0 INTRODUCTION **1-1**

1.1 SITE LOCATION AND BACKGROUND INFORMATION 1-1

1.2 DESCRIPTION OF SUB-SLAB DEPRESSURIZATION SYSTEMS 1-1

1.2.1 Building A System 1-1

1.2.2 Building C System 1-3

2.0 SITE ACTIVITIES **2-1**

2.1 BIWEEKLY SYSTEM CHECKS 2-1

2.1.1 General System Monitoring 2-2

2.1.2 Vacuum Influence Monitoring 2-3

2.1.3 Adjustments to Extraction Points 2-5

2.2 VAPOR SAMPLING 2-6

2.3 QUARTERLY SYSTEM CHECKS 2-7

2.4 NON-ROUTINE SYSTEM MAINTENANCE 2-8

2.4.1 Building A Blower Replacement 2-8

2.4.2 Other Non-Routine Maintenance 2-10

2.5 GAC AND PPZ CHANGE-OUTS 2-10

2.6 SYSTEM SHUTDOWNS 2-11

2.6.1 Operator-Controlled Shutdowns 2-11

2.6.2 Alarms and Other Shutdowns 2-11

2.6.3 System Uptime 2-12

TABLE OF CONTENTS (continued)

Section **Page**

2.7 REMEDIATION SUMMARY 2-12

2.7.1 Building A System 2-12

2.7.2 Building C System 2-13

2.7.3 Indoor Air Filters in Building A 2-14

3.0 CONCLUSIONS AND RECOMMENDATIONS 3-1

3.1 SYSTEM PERFORMANCE 3-1

3.2 CONTINUED MONITORING 3-2

3.3 FUTURE PLANS 3-3

4.0 REFERENCES 4-1

APPENDICES

APPENDIX A—BIWEEKLY AND QUARTERLY SYSTEM CHECK FORMS

APPENDIX B—ANALYTICAL REPORTS FOR SYSTEM SAMPLES

TABLE OF CONTENTS (continued)

LIST OF FIGURES

Figure 1: SSD System Locations

Figure 2: Building A SSD System Layout

Figure 3: Building A SSD System Process and Instrumentation Diagram

Figure 4: Building C SSD System Layout

Figure 5: Building C SSD System Process and Instrumentation Diagram

Figure 6: Induced Vacuum–March 2015 to March 2017–Building A SSD System– Lay-up Room and Basement

Figure 7: Induced Vacuum–April 2016 to March 2017–Building A SSD System– Eastern Area

Figure 8: Induced Vacuum–March 2015 to March 2017–Building C SSD System–Southern-basement area

Figure 9: Induced Vacuum–March 2015 to March 2017–Building C SSD System–Mid-Basement Area

Figure 10: Influence of Soil Vapor Extraction Points–Building A Lay-up Room and Basement

Figure 11: Influence of Soil Vapor Extraction Points–Building A Eastern Area

Figure 12: Influence of Soil Vapor Extraction Points–Building C Southern-basement area

Figure 13: Influence of Soil Vapor Extraction Points–Building C Mid-Basement Area

Figure 14: Building A Influent VOC Concentrations

Figure 15: Building C Influent VOC Concentrations

LIST OF TABLES

Table 1: Building A Influent Concentrations ($\mu g/m^3$)

Table 2: Building A Mid-GAC Concentrations ($\mu g/m^3$)

Table 3: Building A Effluent Concentrations ($\mu g/m^3$)

Table 4: Building C Influent Concentrations ($\mu g/m^3$)

Table 5: Building C Mid-GAC Concentrations ($\mu g/m^3$)

Table 6: Building C Effluent Concentrations ($\mu g/m^3$)

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ACRONYMS

%	Percent
°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
GAC	granular activated-carbon
HEPA	high-efficiency particulate air
lbs/day	pounds per day
MDE	Maryland Department of the Environment
OM&M	operation, maintenance, and monitoring
PPZ	potassium permanganate-impregnated zeolite
SCFM	standard cubic feet per minute
S&S	S&S Technologies, Inc.
SSD	sub-slab depressurization
TestAmerica	TestAmerica Laboratories, Inc.
TO-15	Toxic Organic Method 15
TCE	Trichloroethene
VMP	vapor monitoring point
VOC	volatile organic compound
WC	water column

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Section 1
Introduction

1.1 SITE LOCATION AND BACKGROUND INFORMATION

This report documents the monitoring activities completed from October 1, 2016 to March 31, 2017 [the 35rd and 36th quarters of operation] for the sub-slab depressurization systems operating in the Building A lay-up room (former plating shop), eastern area, and basement, and the Building C basement of the Lockheed Martin Corporation Middle River Complex in Middle River, Maryland. The locations of the systems are shown on Figure 1. These remedial systems control (by creating a vacuum) and remove volatile organic compounds from sub-slab vapor, thus preventing their migration into indoor air. The systems are operated in accordance with the operation, maintenance, and monitoring manuals for the Building A and Building C systems (Tetra Tech, Inc., 2016a and 2014, respectively).

1.2 DESCRIPTION OF SUB-SLAB DEPRESSURIZATION SYSTEMS

1.2.1 Building A System

The sub-slab depressurization system in Building A includes horizontal and vertical soil vapor extraction points: two horizontal soil vapor extraction laterals in the lay-up room (North and South), two laterals in the basement (Basement North and Basement South), and five vertical soil vapor extraction points (SSD-34-A, SSD-35-A, SSD-36-A, SSD-37-A, and SSD-38-A); see Figure 2.

The soil-vapor extraction points serve as conduits for drawing vapor from beneath the building slab, thus mitigating vapor intrusion into indoor air. Sub-slab vapors are pulled through the extraction points using a single 10-horsepower regenerative blower that is mounted on a skid along with a moisture separator, heat exchanger, filters, and vacuum, pressure, temperature, and flow gauges (collectively referred to as the "blower skid"). Following extraction, the vapors enter the moisture separator where entrained condensate droplets are removed to reduce potential

fouling of vapor lines and saturation of the vapor-phase carbon. The extracted vapors are cooled as they are pushed through the heat exchanger and are then filtered to remove volatile organic compounds using four 400-pound granular activated-carbon drums, in two-by-two configuration (two parallel trains of two drums in series)[1]. Vapors are discharged to the atmosphere via an exhaust stack that extends above the roof of the building. Figure 3 shows the process and instrumentation diagram for the Building A sub-slab depressurization system.

The Building A system is also equipped with one drain for each of the granular activated-carbon drums and three pipe sumps (PS-1-A [near SSD-37-A], PS-2-A [near SSD-34-A], and PS-3-A [in the basement]) and one exhaust stack sump. The pipe sumps are installed at low points to allow accumulation and manual drainage of condensation in the pipe.

Three IQAir® GC™ Series-GC VOC indoor-air filters also operate in the basement of Building A near vapor monitoring points (VMPs) 093-A, 093 A-X, and 138-A, in response to elevated trichloroethene (TCE) concentrations in the indoor air. The filters were installed south of the sub-slab depressurization system extraction laterals on January 9, 2015, and are continuously operated to filter 300 standard cubic feet per minute (SCFM) of air. Each filter consists of a high-efficiency particulate air pre-filter, a granular activated-carbon filter, and a post-filter sleeve (collectively referred to as "filter elements"). The pre-filter (GC™ HyperHEPA® Pre-Filter H11 [S]) weighs three pounds; it removes coarse, fine, and ultra-fine dust particles and protects subsequent filters. The granular activated-carbon filter (GC VOC filter cartridge set) removes volatile organic compounds from indoor air; it is comprised of four granular activated-carbon cartridges, collectively weighing nine pounds. The post-filter sleeve (GC™ post-filter sleeve set) is placed over the granular activated-carbon cartridges; this filter removes any remaining fine and ultra-fine particulate matter.

1.2.2 Building C System

The sub-slab depressurization system in the Building C basement consists of 11 vertical soil vapor extraction points: two in the southern-basement area (SSD-21-C and SSD-23-C) and nine

[1] Originally, vapor treatment consisted of one train of two 400-pound carbon drums; the two-by-two configuration was completed in February 2017 to decrease pressure, increase flow of the system, and better capture VOCs; details are in Section 2.4.

in the mid-basement area (SSD-26-C, SSD-27-C, SSD-28-C, SSD-29-C, SSD-30-C, SSD-31-C, SSD-32-C, SSD-33-C, and SSD-34-C); see Figure 4. These extraction points serve as conduits for drawing vapor from beneath the building slab, thus creating a vacuum under the floor slab preventing vapor intrusion into indoor air. The vapors are pulled through the extraction points using a single 7.5-horsepower regenerative blower that is mounted on a skid along with a moisture separator, heat exchanger, filters, and vacuum, pressure, temperature, and flow gauges (collectively referred to as the "blower skid"). Following extraction, the vapors enter the first moisture separator (MS-1) where entrained condensate droplets are removed to reduce fouling of the vapor lines and saturation of the granular-activated carbon. The extracted vapors are cooled as they are pushed through the heat exchanger; any remaining extracted condensate droplets are removed via a second moisture separator (MS-2) [separate from the blower skid] before being treated. The vapors are treated by passing through two 400-pound granular activated-carbon drums and one 600-pound potassium permanganate-impregnated zeolite drum (to remove residual vinyl chloride), in-series, before being discharged to the atmosphere via an exhaust stack that extends above the roof of the building (Figure 5).

The Building C system is also equipped with one drain for each granular activated-carbon and potassium permanganate-impregnated zeolite drum, five pipe sumps (PS-1 [near SSD-25-C and column N26], PS-2 [near SSD-30-C and column N26], PS-3 [near SSD-27-C and column O20], PS-4 [near SSD-32-C and column R19], and PS-5 [near SSD-29-C and column V12]), and one exhaust stack sump. The sumps are installed at low points to allow drainage of condensation in the pipe.

Sound generated by the blower and heat exchanger is controlled by a sound-deadening enclosure that surrounds the blower skid of the Building C system. This enclosure has overlapping soundproof curtains supported on a wooden frame; its plywood roof is lined with one-inch-thick foam board. A vent on the side of the enclosure and a duct extending from the heat exchanger to the ceiling of the enclosure facilitate airflow and prevent the system from overheating.

Section 2
Site Activities

2.1 BIWEEKLY SYSTEM CHECKS

Biweekly system checks were conducted to monitor the performance of the sub-slab depressurization (SSD) systems and to make necessary adjustments to optimize effectiveness. System checks were conducted between October 1 and December 31, 2016 (the 35rd quarter of operation) on the dates listed below.

- October 5, 2016
- October 21, 2016
- November 3, 2016
- November 17, 2016
- December 1, 2016
- December 12 and December 14, 2016
- December 29, 2016

Biweekly system checks were conducted between January 1 and March 31, 2017 (the 36th quarter of operation) on the following dates:

- January 12 and 13, 2017
- January 23 and 27, 2017
- February 7 and 8, 2017
- February 21, 2017
- March 8, 2017
- March 23, 2017

Biweekly system checks were conducted in accordance with the latest operation, maintenance, and monitoring (OM&M) manuals (Tetra Tech, Inc. [Tetra Tech], 2016a and 2014), and included general system monitoring, vacuum influence monitoring, and any necessary adjustments to extraction laterals and wells. Biweekly system checks forms are in Appendix A.

2.1.1 General System Monitoring

Gauge readings on the blower skid were checked, and the vacuum and velocity at each extraction lateral/well were measured. The condition of system components was also checked, and moisture separators/sumps were emptied as necessary. The following specific tasks were performed:

1. Recorded:
    a. vacuum at pre-air filter
    b. vacuum at post-air filter
    c. pressure at post-blower
    d. temperature at post-blower
    e. temperature at post-heat exchanger
    f. system flow
    g. time counter display
    h. vacuum from each extraction lateral/well
    i. velocity from each extraction lateral/well
    j. vacuum from each vapor monitoring point (VMP)
2. Checked the following for damage, leaks, and/or signs of heat stress:
    a. system components
    b. granular activated-carbon (GAC) drums
    c. potassium permanganate-impregnated zeolite (PPZ) drum (Building C only)
    d. GAC and PPZ fittings and flexible hoses
3. Checked the following for condensate, and drained, as necessary:
    a. moisture separators
    b. pipe sumps
    c. exhaust stack sumps
    d. GAC and PPZ drains
4. Confirmed that zip-ties on the GAC- and PPZ-drum cam locks were present and secure
5. Confirmed that the ambient air valve was closed
6. Confirmed that the vacuum relief valve was closed
7. Noted any adjustments to extraction laterals/wells
8. Checked that flow, pressure, and vacuum gauges fell to zero, and that temperature gauges fell, when systems were turned off
9. Checked each of the three Building A IQAir® GC™ Series-GC indoor air filters to:

a. verify filter was on
b. verify fan was running
c. check control panel for filter-life status
d. document any signs of tampering

Approximately 279 gallons of water were drained from the Building A system during the reporting period. Approximately two gallons of water were drained from the Building C exhaust stack sump during the reporting period.

2.1.2 Vacuum Influence Monitoring

The objective for the SSD systems is to maintain a vacuum of at least 0.01 inches water column (WC) in the targeted areas. The vacuum influence (differential sub-slab vapor vacuum versus indoor air) at sub-slab VMPs was monitored using a dual[2]-port manometer (Fieldpiece Instruments, Inc. model SDMN5). This instrument was used to identify sub-slab-air short-circuiting or other problems (indicated by a significant drop in vacuum at one or more VMPs), and to determine each system's area of influence. Short-circuiting was not identified at the Building A or Building C SSD systems during this reporting period.

Vacuum influence in the Building A target areas consistently[3] exceeded the vacuum influence objective (0.01 inches WC) during the reporting period in the following monitoring points:

- At seven of eight VMPs in the layup room (SSD-12-A-X, SSD-11-A-X, SSD-13-A-X, SSD-2-A-X, SSD-15-A-X, SSD-16-A-X, and SSD-3-A-X) with vacuums ranging from 0.14 to 13.83 inches WC.
- At eight of 14 VMPs in the eastern area of Building A (166-A, 167-A, 165-A, 117-A, 164-A, 136-A-S, 161-A, and 160-A) with vacuums ranging from 0.01 to 2.76 inches WC.
- At two of four VMPs in the Building A basement (SSD-21-A and SSD-22-A) with vacuums ranging from 0.01 to 0.54 inches WC. Induced vacuum has not been consistent at the other VMPs (SSD-19-A and SSD-20-A), possibly because of high groundwater levels (typically one foot or less below the slab.

Figures 6 and 7 show induced vacuum in Building A over time. Negative vacuum (pressure)

[2] Only one port is used for monitoring vacuum influence; the second port is used to measure static pressure.

[3] Exceeded vacuum monitoring objective of 0.01 inches water column at more than half of the biweekly system checks.

readings were measured at VMP 163-A in the eastern area of Building A during most biweekly system checks, indicating higher pressure in the sub-slab than in the indoor air. Induced vacuum has not been observed at 119-A, 121-B, 162-A, 136-A, or 136-A-N, possibly because of the greater distance to the nearest extraction point for 119-A and 121-B. The reason for the lack of vacuum influence at 162-A, 136-A-N, and 163-A, is not clear but could be related to subsurface preferential pathways and heterogeneity. VMP 162-A was removed on July 14, 2016 after it was found to be loose; the vapor monitoring pin was reinstalled on July 25, 2016. However, during the subsequent system check on August 12, 2016, it was observed that new facility operations in the area made VMP 162-A permanently inaccessible. It will be replaced nearby during the next quarter.

Vacuum influence in the Building C target areas consistently exceeded the vacuum influence objective (0.01 inches WC) during the reporting period in the following monitoring points:

- At four of seven VMPs in the southern-basement area (001-C, SSD-2-C, SSD-3-C, and SSD-22-C) with vacuums ranging from 0.01 to 0.98 inches WC.
- At 14 of 20 VMPs in the mid-basement area (159-C, 135-C, 113-C, 156-C, 151-C, 149-C, 127-C, 152-C, 060-C, 155-C, 133-C, 154-C, 158-C, and 153-C.) with vacuums ranging from 0.00 to 4.68 inches WC.

On October 5, 2016, during a routine system check, it was observed that VMP SSD-4-C was covered by equipment moved to that area for storage and has not been accessible since. Negative vacuum[4] (pressure) readings were measured during some of the monitoring events at SSD-2-C, SSD-25-C, SSD-3-C, and 141-C. Figures 8 and 9 show induced vacuum in Building C over time.

Vacuum Summary

Induced vacuum measurements indicate that the systems are performing as designed, except near VMP SSD-136-A in the eastern area of Building A and near extraction points SSD-29-C and SSD-34-C in the northern end of the Building C mid-basement area. The sub-slab vapor extraction laterals in the Building A lay-up room induce a vacuum influence over an

[4] Negative vacuum readings indicate higher pressure in the sub-slab than in the indoor air, which may be related to subsurface heterogeneity or preferential pathways.

approximately 3,800-square foot area, and consistently encompass five of six VMPs that had elevated volatile organic compound (VOC) concentrations before system start-up. The extraction laterals in the Building A basement induce a vacuum influence over an approximately 2,000-square foot area, and consistently encompass two of four VMPs that measure the system's induced vacuum in the basement (Figure 10). The vertical extraction points in the eastern area of Building A induce a vacuum influence over an approximately 6,100-square foot area, and consistently encompass nine of 14 VMPs (Figure 11).

In Building C, the sub-slab vapor extraction points in the southern-basement area induce a vacuum influence over an approximately 3,000-square foot area, with four of seven VMPs showing consistent influence (Figure 12). Extraction points in the mid-basement area induce a vacuum influence over an approximately 32,000-square foot area, with 13 of 20 VMPs showing consistent influence (Figure 13). Vacuum influence at the northern end of the mid-basement area has not been apparent during monitoring; possible reasons include high groundwater levels, subsurface preferential pathways, short-circuiting, and/or blockages. However, VOC concentrations at VMP 126-C, at the northern end, have decreased by approximately 85 percent (%) since the system was expanded in May 2013.

2.1.3 Adjustments to Extraction Points

Vapor flow from the sub-slab soil vapor extraction points was adjusted during the reporting period as follows:

- November 3, 2016, December 1, 2016, January 13, 2017, and March 1, 2017: Due to issues related to the Building A blower (discussed in Section 2.4), vapor flow from the extraction laterals in the lay-up room and basement (North, South, Basement North and Basement South) was reduced during the periods that the system ran using a smaller spare blower. The flow from each extraction lateral was restored to its normal operating rate on March 1, 2017.

- February 21, 2017: To gain better influence in the Building C south area, the flow valve on extraction point SSD-21-C was completely closed and the flow valve on extraction point SSD-23-C was opened 100%.

2.2 VAPOR SAMPLING

Grab vapor samples were collected monthly at Building A and every other month at Building C during the reporting period. Samples were collected from each SSD system at the influent, mid-GAC, and effluent positions of the treatment drums. Samples were collected from the Building A SSD system on October 5, 2016, November 3, 2016, and December 14, 2016, January 13, 2017, February 8, 2017, and March 8, 2017. Samples were collected from the Building C SSD system on November 3, 2016, January 12, 2017, and March 8, 2017. Samples were collected directly from each sampling port using the following steps:

- A moisture filter was connected to the sampling port on one end, and a piece of Teflon® tubing was attached to the other end.
- A clean, one-liter Summa® canister under vacuum was connected to the tubing, and the canister valve was opened until the canister gauge reached zero or stopped falling (approximately one minute).

Samples were labeled A-INFLUENT, A-MID-GAC, A-EFFLUENT, C-INFLUENT, C-MID-GAC, and C-EFFLUENT and shipped to TestAmerica Laboratories, Inc. (TestAmerica) in Knoxville, Tennessee. TestAmerica is accredited through the National Environmental Laboratory Accreditation Program and United States Department of Defense Environmental Laboratory Accreditation Program for VOC analysis by United States Environmental Protection Agency Toxic Organic Method 15 (TO-15).

Laboratory results are summarized in Tables 1 through 6; analytical reports are in Appendix B. During this reporting period, total influent VOC concentrations in Building A ranged from 1,205 micrograms per cubic meter (µg/m^3) (October 2016) to 6,656 µg/m^3 (January 2017), while VOC influent concentrations in Building C ranged from 83 µg/m^3 (March 2017) to 150 µg/m^3 (November 2016). Average influent VOC concentrations in Building A were approximately 61% higher than those observed during the previous reporting period (April 1, 2016 through September 31, 2016), while average influent concentrations for the Building C system were approximately 30% lower.

2.3 QUARTERLY SYSTEM CHECKS

Quarterly system checks were completed on December 12, 2016 and March 15, 2017. Quarterly system checks included the following tasks:

1. Inspected the condition of the:
    a. system components
    b. system piping
    c. pre-blower air filter and intake (ambient) air filter; replacing filter(s) as necessary
    d. GAC and PPZ drums
    e. GAC and PPZ drum sample ports
    f. VMP well lids, bolts, and sample tubing
2. Checked that the Building A system shuts down, the control panel alarm lights illuminate, and the auto-dialer activates upon alarms for:
    a. high temperature – post-blower
    b. high temperature – post-heat exchanger
    c. high-water level – moisture separator
    d. high pressure
    e. low vacuum
3. Checked that the Building C system shuts down, the control panel alarm lights illuminate, and the auto-dialer activates upon alarms for:
    a. high temperature – post-blower
    b. high temperature – post-heat exchanger
    c. high-water level – MS-1
    d. high-water level – MS-2
    e. high pressure
    f. low vacuum
4. Checked vacuum relief valves for proper operation
5. Recorded amperage draw on blowers
6. Checked that auto-dialers activate when power is turned off
7. Checked auto-dialer batteries and replaced, as necessary
8. Confirmed that a fire extinguisher is next to each system
9. Vacuumed the underside of the heat exchanger
10. Cleaned the systems and areas around the systems

No issues were identified for Building A or Building C during the quarterly system checks except those indicated in Section 2.4. Both systems are running within the normal operating

parameters. Quarterly system checks forms are in Appendix A.

2.4 NON-ROUTINE SYSTEM MAINTENANCE

2.4.1 Building A Blower Replacement

The Building A SSD system was found non-operational during the routine system check on October 21, 2016. Through the time counter display on the control panel, it was estimated that the system had shut down on October 19, 2016. The autodialer did not call out due to corroded and non-working batteries found on October 21, 2016. Electrical measurements from inside the system control panel revealed that two of three fuses had blown; new fuses were ordered. Initial diagnosis via teleconference with Gasho, the blower manufacturer representative and vendor, indicated possible blower failure. The blower failure and autodialer battery issues were unusual given that they had been replaced with new units earlier in the year (in April 2016 as part of the second-phase expansion of the Building A SSD system) and based on continued system operation since its installation in 2008.

On October 24, 2016, additional troubleshooting was conducted before installing the new blower fuses. This including manually rotating the blower fan blades to confirm that the blower had not seized and inspecting the condition of the wires inside the blower electrical box. The blower fan blades moved freely, and the wires in the blower electrical box showed signs of heat stress. However, they were not obviously damaged otherwise, so a re-start was attempted. The new fuses were installed and the system was restarted. Upon restart, the same two blower fuses immediately blew, allowing only the heat exchanger to run. The heat exchanger remained in operation for less than a minute and then shut down, as designed, due to a low vacuum alarm. The autodialer batteries were replaced and the autodialer was confirmed to operate properly.

On October 25, 2016, S&S Technologies, Inc., the SSD system installation contractor, inspected the system to confirm blower failure. During the inspection, the fuses were replaced again, and the system was restarted with the GAC drums offline and the dilution valve fully open (to confirm that the issue was not back-pressure). Upon restart, the same two fuses immediately blew. Electrical measurements from inside the control panel showed that the system was pulling the proper amps/voltage. Based on this information, S&S was able to confirm blower failure.

Subsequently, Gasho was contacted to initiate return of the blower to the manufacturer (Ametek) for repair.

On October 30, 2016, S&S removed the blower from the system and shipped it to the manufacturer. To expedite installation, S&S transferred a rental blower (Ametek model DR858AY72W) from Gasho in Pennsylvania to the site on November 2, 2016. To accommodate the smaller rental blower, the influent and effluent piping connecting to the blower were reduced from 4-inch to 2.5-inch diameter. The system was restarted with the rental blower on November 3, 2016. The flow at each vapor extraction point was adjusted to optimize vacuum influence and a system check was conducted. Gasho reported that an electrical issue within the failed blower motor had caused it to operate as a single-phase motor instead of the necessary three-phase motor.

The blower was repaired under the manufacturer's warranty by replacing the blower motor with a new motor. The repaired blower was installed on December 1, 2016; the rental blower was purchased and stored in Building C as a back-up blower[5]. To help ensure the autodialer for each SSD system is working properly, autodialer battery checks were added to the biweekly system checks and a call to each system twice per week (between biweekly checks) was added to the operation to confirm the systems are running.

On January 12, 2017, the system was found non-operational during a routine system check due to a recurrence of the blower motor failure. Through the time counter display on the control panel, it was determined that the system had shut down on January 10, 2017. The autodialer had not properly called out upon the shutdown. The failed blower (unit previously repaired by Ametek) was replaced with the spare blower and the system restarted on January 13, 2017.

The failed blower was shipped to the manufacturer on January 27, 2017. The manufacturer determined that the blower motor had failed potentially due to power-supply voltage fluctuations. The manufacturer replaced the motor with a new motor. The repaired blower was

[5] The spare blower will fit both the Building A and Building C SSD systems in the event of a blower failure.

re-installed in the system equipment skid and normal system operation resumed on March 1, 2017. Per discussions with Lockheed Martin, the following Building A SSD system modifications were implemented to minimize the potential for future blower motor failure:

- February 7, 2017: The vapor treatment components (including piping) were modified from a single treatment train to two parallel treatment trains (each train consisting of two 400-pound GAC drums in series) to decrease pressure on the blower, increase system flow, and to better capture VOCs.
- March 1, 2017: A voltage monitor was installed to monitor possible power fluctuations at Building A SSD system.

In addition, a second moisture separator (post-blower and post-heat exchanger) will be installed in the next quarter to remove any remaining extracted condensate droplets in the vapor stream before being treated. This will minimize pressure buildup in the GAC drums.

2.4.2 Other Non-Routine Maintenance

The following non-routine system maintenance was completed during the reporting period:

- November 17, 2016: A ball valve was installed in the system's influent flow line of each SSD system to aid in quarterly alarm testing of the vacuum relief valve. The original sample port on extraction point SSD-33-C was plugged and a new point was drilled and tapped. VMP-113-C was found to be sunken and was raised with concrete grout. The secondary containment pad for the spent air filters and drained condensate drums was moved indoors next to the Building C SSD system with facility approval to prevent rainfall accumulation in the containment pad.
- December 12, 2016: The Building C main disconnect was broken during routine quarterly checks on December 12, 2016 rendering the Building C SSDS inoperable. The main disconnect was replaced and the system restarted on December 14, 2016.

2.5 GAC AND PPZ CHANGE-OUTS

GAC change-outs were conducted for Building A on November 11, 2016, January 12, 2017, and February 7, 2017; no GAC change-outs were necessary for Building C during the reporting period. The November 11, 2016 and January 12, 2017 change-outs were conducted based on the November and December 2016 sampling results. The February 7, 2017 change-out was completed at the time the second GAC vapor treatment train was added to provide three new and one relatively unused GAC drums in the new configuration.

The change-outs were conducted by removing the lead GAC drum (the spent drum) from the

system, moving the lag GAC drum into the lead GAC position, and adding a new GAC drum to the lag GAC position. The Building C PPZ drum was not changed out during the reporting period. The spent GAC will be returned to the vendor for regeneration.

2.6 SYSTEM SHUTDOWNS

2.6.1 Operator-Controlled Shutdowns

Both systems were briefly turned off during each biweekly system check to: (1) confirm that flow, pressure, and vacuum gauges fall to zero (thereby indicating proper operation), and (2) check and drain (as necessary) condensate accumulation in the moisture separators and sumps. Both systems were also briefly turned off during the quarterly system checks to test proper operation of the fail-safe alarms. In addition, the Building A and Building C SSD systems were shut down on the following days for semi-annual sub-slab vapor and indoor air sampling events:

- February 27-28, 2017: The Building C system was shutdown for approximately 32.3 hours for the semi-annual sub-slab vapor and indoor air sampling event.
- March 7-8 2017: The Building A system was shut down for approximately 20.6 hours for a sub-slab and indoor air sampling event in the basement.

2.6.2 Alarms and Other Shutdowns

The following alarms and other shutdowns occurred during the reporting period:

- October 19-November 2, 2016: The Building A system was down for approximately 337 hours due to the blower failure discussed in Section 2.4.
- December 1, 2016: The Building A SSD system was shut down for approximately two hours to re-install the repaired blower.
- December 15, 2016: The Building C SSD system was down for approximately seven hours due to a power outage in the building.
- December 21, 2016: The Building C SSD system was down for approximately three hours due to a power outage in the building.
- January 10-15, 2017: The Building A SSD system was down for approximately 61 hours due to a recurrence of the blower motor failure on January 10, 2017. The system was restarted on January 15, 2017 after the spare blower was installed.
- January 20-23, 2017: The Building C SSD system was down for approximately 63 hours due to a power outage in the building on January 20, 2017. The system was restarted after

power was restored on January 23, 2017.

- January 27, 2017: The Building A SSD system was shut down for approximately two hours to replace the autodialer's wireless phone terminal antenna and power supply.

- February 7, 2017: The Building A system was shut down for approximately nine hours to modify the vapor treatment from one GAC treatment train to two parallel GAC treatment trains.

- February 17-18, 2017: A high water level alarm on February 17, 2017 caused the Building A system to shut down for approximately 16 hours. The system was restarted on February 18, 2017 after removing approximately 50 gallons of water.

2.6.3 System Uptime

During this reporting period, the Building A and Building C SSD systems were operational for approximately 3,865 hours (89%) and 4,190 hours (96%), respectively. Downtime does not include the brief shutdown periods for biweekly and quarterly system checks.

2.7 REMEDIATION SUMMARY

2.7.1 Building A System

Continuous operation of the SSD system in the Building A lay-up room (former plating shop) began on March 31, 2008; the SSD system was expanded on October 22, 2010 to include the basement and on April 13, 2016 to include select areas on the eastern side of the building. On February 7, 2017 the GAC drums were modified to add a second parallel treatment train (with two 400-pound GAC drums in series) to increase flow and decrease pressure on the new blower. Building A extraction points are open to allow a combined airflow rate of approximately 360 standard cubic feet per minute (SCFM). Each extraction point operates at an airflow rate of 7–85 SCFM; the system vacuum and flows are adjusted to maintain a vacuum of 0.01 inches water column (WC) or greater at each vapor monitoring point within areas where elevated concentrations of volatile organic compounds (VOCs) are in sub-slab soil.

Since system startup on March 31, 2008, total influent VOC concentrations have decreased more than 98%, from 94,310 µg/m^3 to 1,865 µg/m^3. The addition of the basement extraction laterals in October 2010 did not appear to change influent concentrations. The system expansion in April 2016 including a higher-flow blower and five new vertical extraction points resulted in an increase in Building A influent system concentration for approximately one month. The two

main chemicals of concern in Building A are 1,1,1-trichloroethane and trichloroethene (see Table 1). VOC trends for the Building A system are shown in Tables 1 through 3 and on Figure 14.

VOC mass removal rates (based on influent concentrations) in Building A ranged from 0.029 to 0.117 pounds per day (lbs/day) during this reporting period. The total VOC mass removed was approximately 11.3 pounds; total VOC removal since system startup in March 2008 is approximately 152 pounds. VOC mass removal rates are lower than the levels (20 lbs/day VOCs) that require Maryland Department of Environment (MDE) permitting.

2.7.2 Building C System

Continuous operation of the SSD system in the southern-basement area of Building C began on March 31, 2008; the system was expanded to the mid-basement area in May 2013. Extraction points were installed at locations that maximized vacuum influence (based on startup tests). The total flow rate of the Building C system is approximately 180 SCFM. Extraction well SSD-23-C in the southern-basement area was shut off after the expansion to promote higher flow rates from the new wells installed in the mid-basement area. Vacuum influence in the southern-basement area was maintained by the operation of well SSD-21-C only until February 21, 2017 when SSD-23-C was reopened and SSD-21-C was closed. Vacuum influence and flow rates in the mid-basement area have increased and stabilized since system expansion. On November 7, 2013, mid-basement wells SSD-27-C and SSD-32-C flow rates were reduced to promote higher flow rates from other extraction wells in the mid-basement area. In April 2016, flows at mid-basement extraction points SSD-26-C and SSD-30-C were also reduced to promote high flows from other extraction points. These efforts have been done in an attempt to improve vacuum influence and VOC mass removal in the northern extraction points.

From system startup on March 31, 2008 to April 8, 2013, and before the system expansion, total influent VOCs had decreased by 99%, from 31,170 µg/m^3 to 117 µg/m^3. VOC concentrations increased to 3,100 µg/m^3 after the system was expanded, but have since decreased to 85 µg/m^3 (a 97% decrease). Trichloroethene is the primary chemical of concern in Building C (see Table 4). VOC trends for the Building C system are shown in Tables 4 through 6 and on Figure 15.

Mass removal rates for VOCs in Building C during this reporting period ranged from 0.001 to

0.003 pounds per day, for a total mass of approximately 0.323 pounds. Total VOC removal since system startup in March 2008 is 11 pounds. Building C VOC removal rates are lower than levels requiring MDE permitting (20 lbs/day VOCs, 20 pounds per year vinyl chloride).

2.7.3 Indoor Air Filters in Building A

Three IQAir® GC™ Series-GC indoor air filters operate in the basement of Building A near VMPs 093-A, 093-A-X, and 138-A (south of the SSD system extraction trenches). While in operation, the filters were inspected every two weeks. The high-efficiency particulate air (HEPA) pre-filters, GAC cartridges, and post-filter sleeves were replaced on December 29, 2016 and March 15, 2017. The spent filter elements were placed in a dedicated 55–gallon drum in the designated drum storage area at the Building C SSD system. This waste drum was inspected during the biweekly system checks to ensure it was properly labeled and in good condition. Results from GAC cartridge and post-filter sleeve sampling in June 2015 and HEPA pre-filter sampling in November 2015 indicate that all spent filters can be disposed of as non-hazardous waste.

Section 3
Conclusions and Recommendations

3.1 SYSTEM PERFORMANCE

Induced vacuum measurements indicate that the sub-slab depressurization systems are performing as designed, except near SSD-136-A in the eastern area of Building A and near SSD-29-C and SSD-34-C in the northern end of the Building C mid-basement area. Soil vapor extraction points in the Building A lay-up room induce a vacuum influence over an approximately 3,800-square foot area, and consistently encompass all five vapor-monitoring points that had elevated volatile organic compound concentrations before system startup. The soil vapor extraction points in the Building A basement induce a vacuum influence over an approximately 2,000-square foot area that encompasses two of four vapor monitoring points installed to measure the system-induced vacuum in the basement (Figure 10). The soil vapor extraction points in the eastern area of Building A induce a vacuum influence over an approximately 6,100-square foot area, and consistently encompass nine of 14 VMPs used to measure the system-induced vacuum in that area (Figure 11). The soil vapor extraction points in the southern-basement area of Building C induce a vacuum influence over an approximately 3,000-square foot area, with five of seven vapor monitoring points showing influence (Figure 12). The soil-vapor extraction points in the mid-basement area of Building C induce a vacuum influence over an estimated 32,000-square foot area, with 13 of 20 vapor monitoring points showing influence (Figure 13).

The sub-slab depressurization systems have removed volatile organic compound mass, and have treated emissions with granular-activated carbon (both buildings) and potassium permanganate-impregnated zeolite (Building C only). A summary of the granular activated-carbon drums used during the lifespan of each system follows:

	Number of granular-activated-carbon drums used	
	200-pound drums	400-pound drums
Building A	23	13
Building C	17	4

The 600-pound potassium permanganate-impregnated zeolite drum in Building C has not been changed out since its installation in April 2013. The drum counts listed above do not include the granular-activated carbon drums currently attached to each system, or the potassium permanganate-impregnated zeolite drum currently attached to the Building C system.

The Building A system has used approximately 64 pounds of granular activated-carbon per pound of volatiles removed, while the Building C system has used approximately 441 pounds of granular activated-carbon per pound of volatiles removed. Note that the removal efficiency of granular-activated carbon is reduced as vapor concentrations decrease. Although influent concentrations of volatile organic compound for both systems have decreased significantly since startup (March 31, 2008), concentration fluctuations have occurred over time (see Figures 14 and 15).

3.2 CONTINUED MONITORING

The Building A and Building C systems will continue to operate during the next semi-annual reporting period (April 1, 2017 through September 30, 2017) so that the vapor migration barrier in both buildings is maintained. Operation, maintenance, and monitoring activities conducted during the next reporting period will include biweekly system checks, quarterly system checks, system maintenance, monthly vapor sampling in Building A, and bimonthly (every other month) vapor sampling in Building C. Granular activated-carbon change-outs will occur when the concentration of the sample collected at the mid-point drum reaches 50 percent of the influent concentration, or as determined based on change-out history and laboratory result trends especially TCE adsorption effectiveness trends. Change-out of the potassium permanganate-impregnated zeolite drum is not expected during the next reporting period. The next remedial action progress report will be issued in October 2017.

3.3 FUTURE PLANS

We will continue to analyze vacuum influence and concentrations to optimize operation of the Building A and Building C SSD systems. In addition, per discussions with Lockheed Martin, we are planning on the following changes at the Building A system in the first half 2017:

- Addition of a moisture separator on the pressure side of the blower (post-blower and post-heat exchanger) to prevent condensate accumulation in the carbon drums;
- Extension of the header pipe and installation of an extraction point near vapor monitoring point 168-A; and,
- Extension of the header pipe to the southern end of the basement (where the indoor air filters are operating) for testing vapor removal from ducts/sumps and potential sidewall extraction points.

Section 4
References

1. Tetra Tech, Inc. (Tetra Tech), 2014. *Operation and Maintenance Manual: Sub-Slab Depressurization System—Building C, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard, Middle River, Maryland*. August

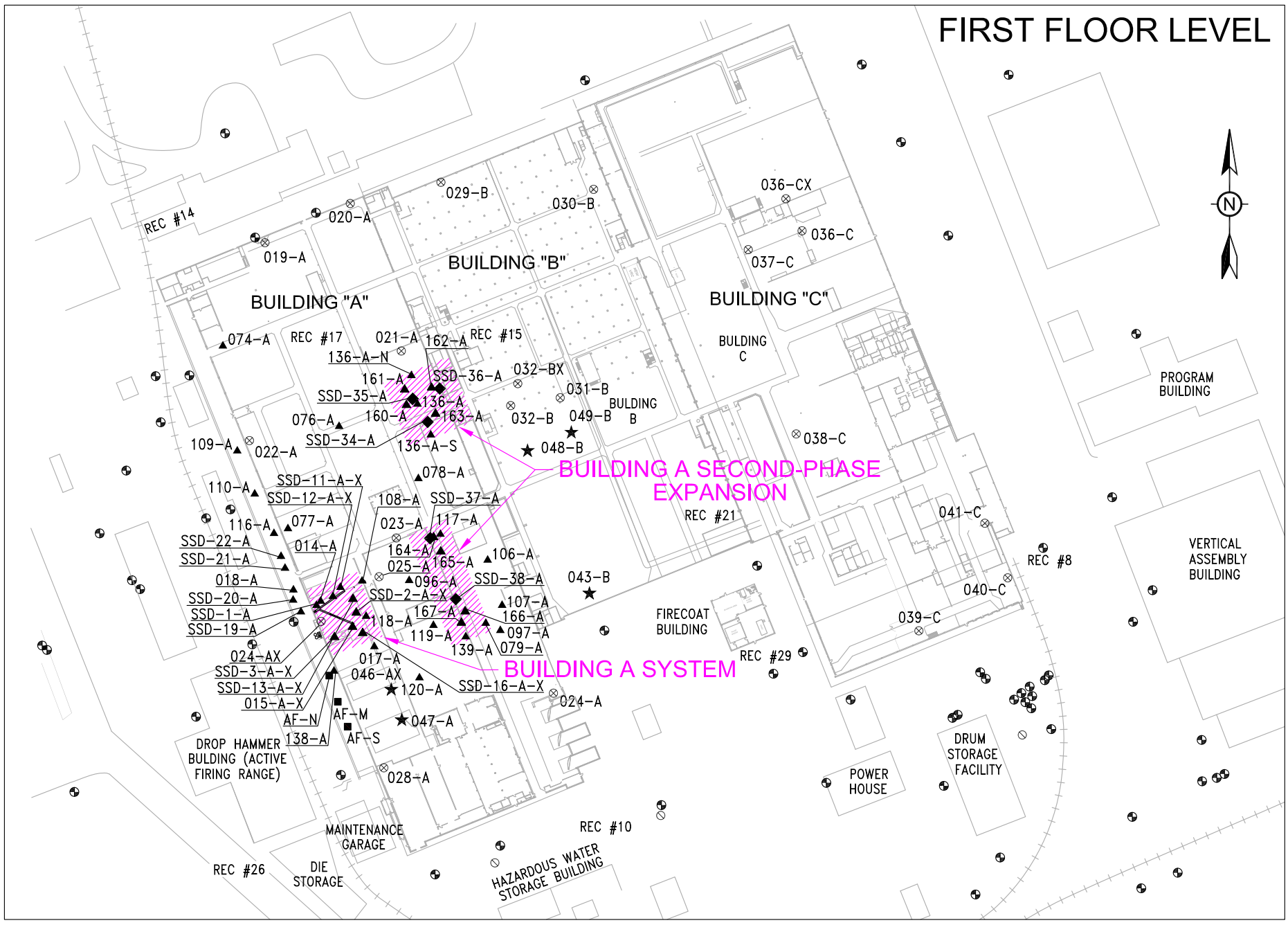
2. Tetra Tech, Inc. (Tetra Tech), 2016a. *Operation, Maintenance, and Monitoring Manual, Sub-Slab-Depressurization System Building A, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard, Middle River, Maryland*. June.

3. Tetra Tech, Inc. (Tetra Tech), 2016b. *Construction Report Sub-Slab Depressurization-System Second-Phase Expansion—Building A, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard, Middle River, Maryland*. May.

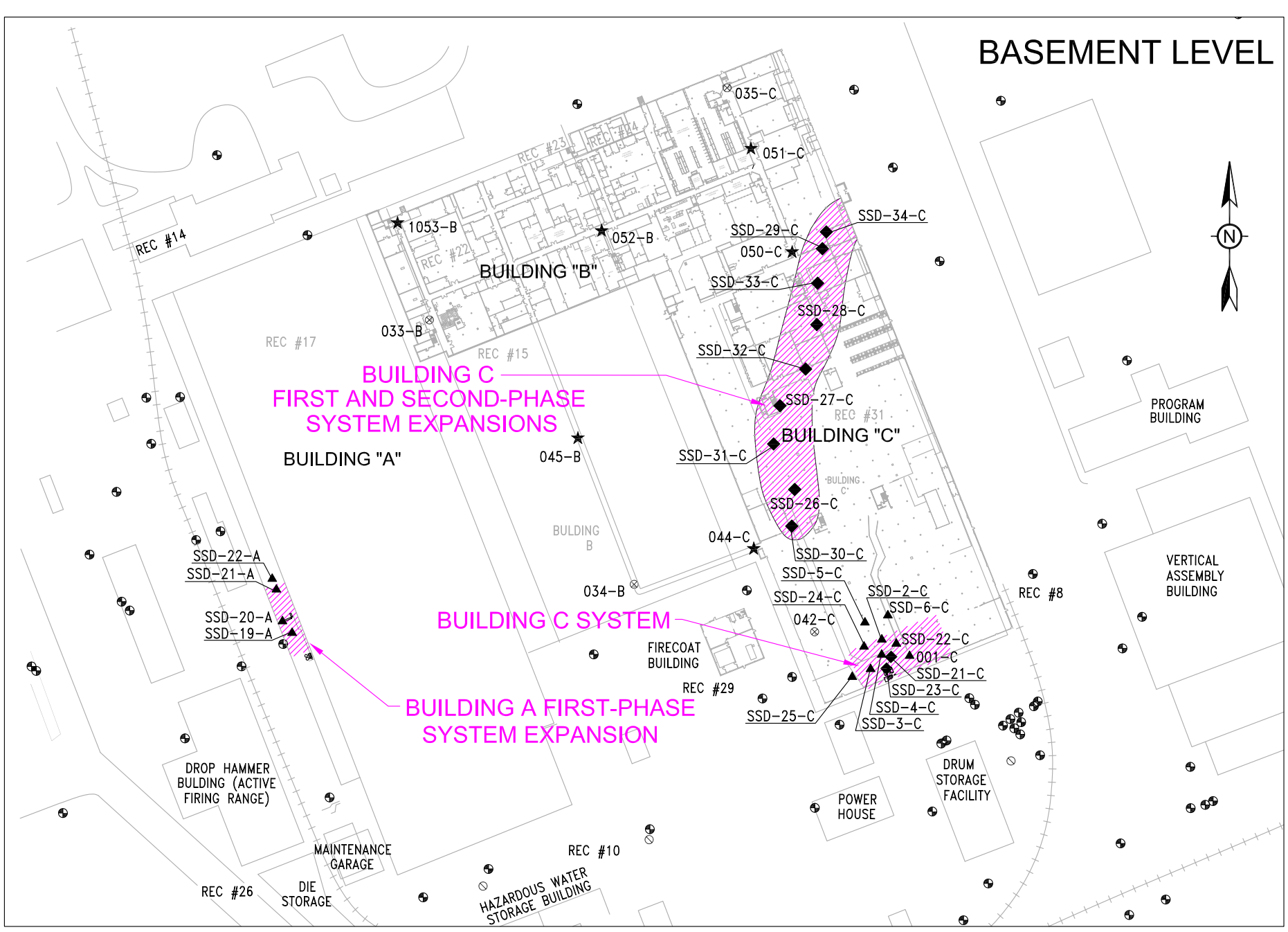
FIGURES

P:\ACAD\0512-124-MRIV\0512124037A.DWG

FIRST FLOOR LEVEL



BASEMENT LEVEL



LEGEND

- GROUNDWATER MONITORING WELL
- SUB-SLAB VAPOR MONITORING POINT
- TARGET OF OPPORTUNITY
- INDOOR AIR SAMPLE
- ABANDONED WELL BORING
- SOIL VAPOR EXTRACTION POINT
- INDOOR AIR FILTER
- SSD SUB-SLAB DEPRESSURIZATION
- APPROXIMATE AREA OF SSD SYSTEM INFLUENCE

0 200 400

SCALE IN FEET

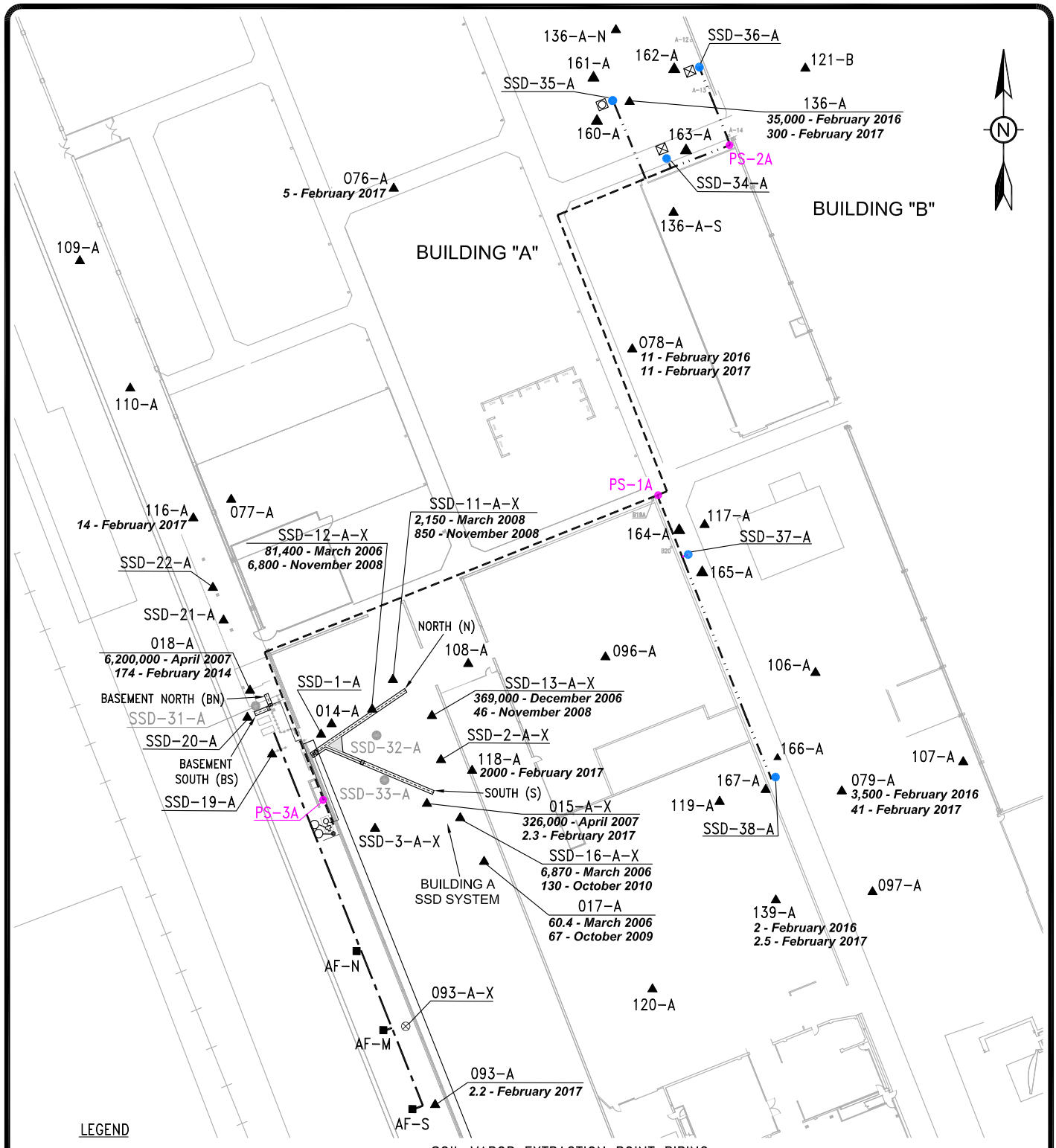
TITLE: **SSD SYSTEM LOCATIONS**

LOCATION: **Middle River, Maryland**

TETRA TECH

APPROVED	PR
DRAFTED	CP
PROJECT#	117-0512124
DATE	12-8-16

FIGURE 1



LEGEND

- PIPE SUMP
- GROUNDWATER MONITORING WELL
- SUB-SLAB VAPOR MONITORING POINT
- SOIL VAPOR EXTRACTION POINT (USED IN PILOT TEST ONLY)
- VERTICAL VAPOR EXTRACTION POINT
- HORIZONTAL SOIL VAPOR EXTRACTION POINT
- HIGHEST SUB-SLAB TCE CONCENTRATION ($\mu g/m^3$)
- **326,000** PRE-SSD SYSTEM AND MOST RECENT CONCENTRATION POST-SSD SYSTEM OPERATION
- ***DL*** DILUTION ANALYSIS
- SOIL VAPOR EXTRACTION POINT PIPING (2" DIA. SCH 40)
- HEADER PIPE (6" DIA. SCH 40)
- INDOOR AIR FILTER CONNECTION TO EMERGENCY POWER SUPPLY (FIELD RUN)

TITLE: **BUILDING A SSD SYSTEM LAYOUT**

LOCATION: **Middle River, Maryland**

TETRA TECH

APPROVED	PR
DRAFTED	CP
PROJECT#	117-0512124
DATE	4-19-17

FIGURE **2**

P:\ACAD\0512-124-MRIV\0512124045A.DWG

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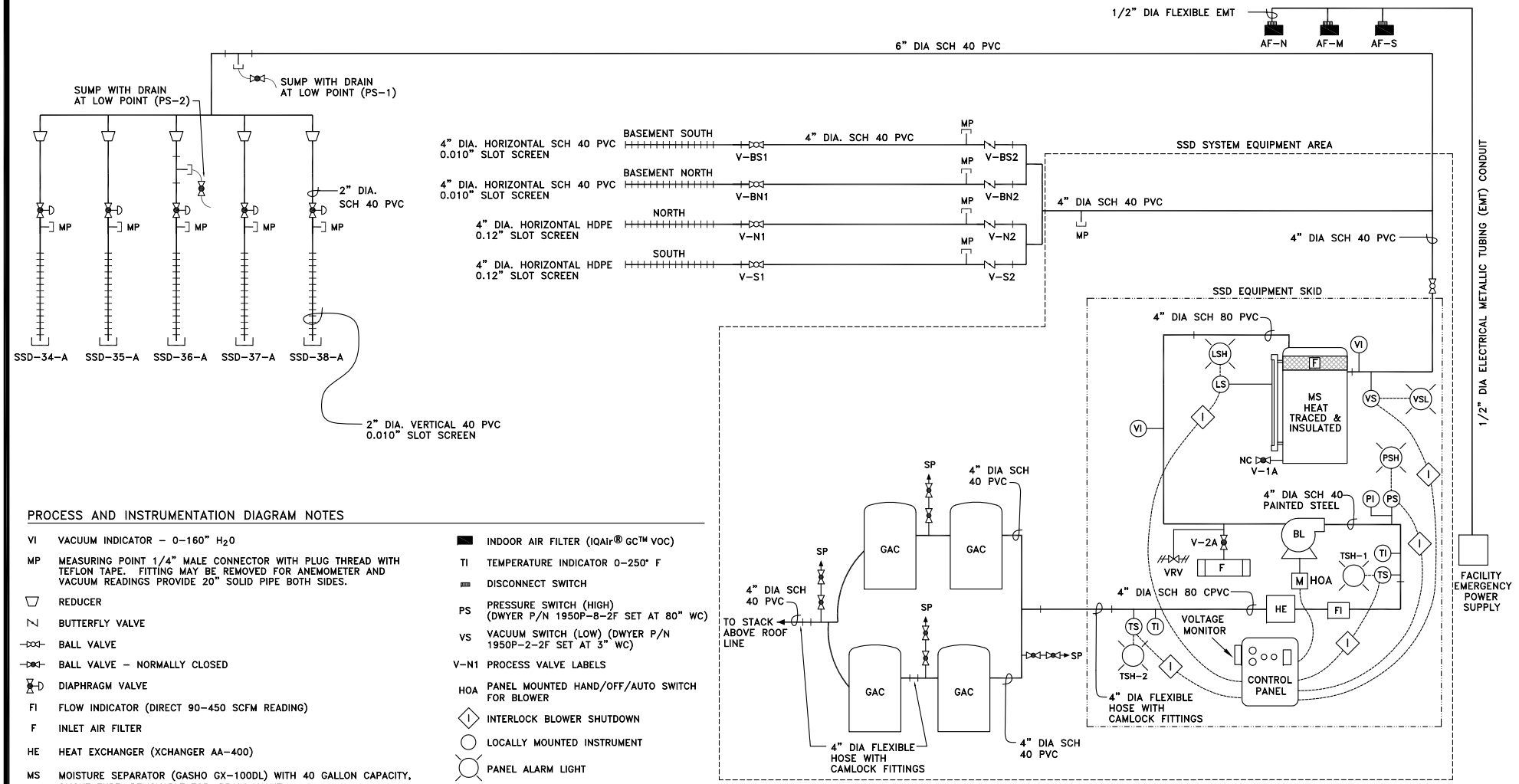


PROCESS AND INSTRUMENTATION DIAGRAM NOTES

VI	VACUUM INDICATOR – 0–160" H_2O
MP	MEASURING POINT 1/4" MALE CONNECTOR WITH PLUG THREAD WITH TEFLON TAPE. FITTING MAY BE REMOVED FOR ANEMOMETER AND VACUUM READINGS PROVIDE 20" SOLID PIPE BOTH SIDES.
	REDUCER
	BUTTERFLY VALVE
	BALL VALVE
	BALL VALVE – NORMALLY CLOSED
	DIAPHRAGM VALVE
FI	FLOW INDICATOR (DIRECT 90–450 SCFM READING)
F	INLET AIR FILTER
HE	HEAT EXCHANGER (XCHANGER AA–400)
MS	MOISTURE SEPARATOR (GASHO GX–100DL) WITH 40 GALLON CAPACITY, SLIGHT TUBE, REMOVABLE TOP, DRAIN VALVE
LS	LEVEL SWITCH
VRV	VACUUM RELIEF VALVE – 2" (SET AT 81.6" WC)
SP	SAMPLE PORT 1/4" DIAMETER
BL	AMETEK®, ROTRON® 909BB72W 10 HP MOTOR, 300 SCFM @ 75" H_2O
PI	PRESSURE INDICATOR 0–160" H_2O
TS	TEMPERATURE SWITCH (ASHCROFT P/N T424–T05–030–XFS–150–260; TSH–1 SET AT 220° F AND TSH–2 SET AT 115° F)
GAC	GRANULAR ACTIVATED CARBON VAPOR TREATMENT (SIEMENS VENT SCRUB® VSC400, VOCARB® 48C)
	INDOOR AIR FILTER (IQAir® GC™ VOC)
TI	TEMPERATURE INDICATOR 0–250° F
	DISCONNECT SWITCH
PS	PRESSURE SWITCH (HIGH) (DWYER P/N 1950P–8–2F SET AT 80" WC)
VS	VACUUM SWITCH (LOW) (DWYER P/N 1950P–2–2F SET AT 3" WC)
V–N1	PROCESS VALVE LABELS
HOA	PANEL MOUNTED HAND/OFF/AUTO SWITCH FOR BLOWER
I	INTERLOCK BLOWER SHUTDOWN
	LOCALLY MOUNTED INSTRUMENT
	PANEL ALARM LIGHT
H	HIGH
L	LOW
SSD	SUB–SLAB DEPRESSUIZATION
M	MOTOR
EMT	ELECTRICAL METALLIC TUBING

TITLE:

BUILDING A SSD SYSTEM PROCESS AND INSTRUMENTATION DIAGRAM

LOCATION:

Middle River, Maryland

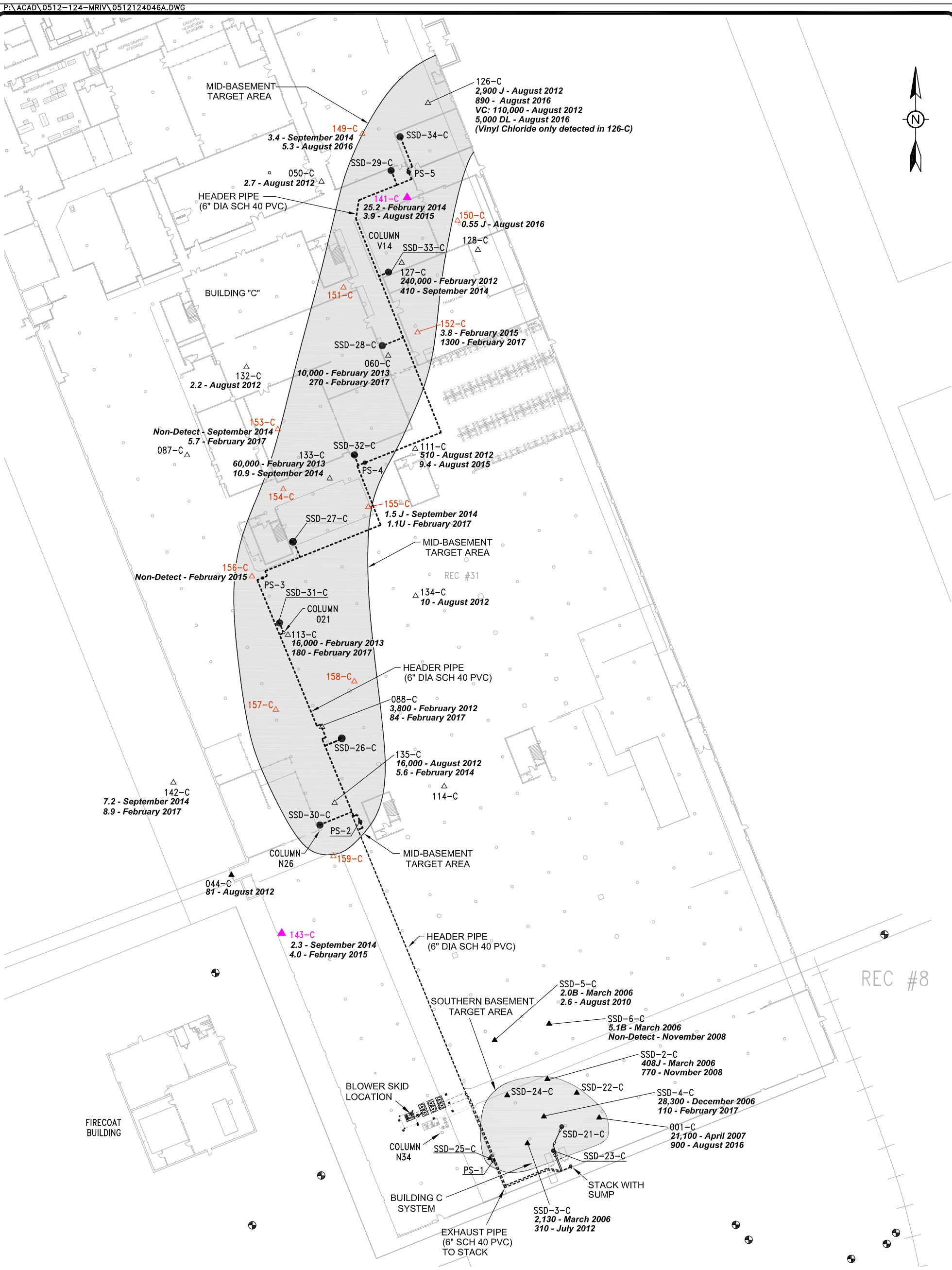
TETRA TECH

APPROVED	PR
DRAFTED	CP
PROJECT#	117–0512124
DATE	4–27–17

FIGURE

3

P:\ACAD\0512-124-MRIV\0512124046A.DWG



LEGEND

- GROUNDWATER MONITORING WELL
- SUB-SLAB VAPOR MONITORING POINT
- SUB-SLAB VAPOR MONITORING POINT INSTALLED JANUARY 2010
- SUB-SLAB VAPOR MONITORING POINT INSTALLED FEBRUARY 2013
- SUB-SLAB VAPOR MONITORING POINT INSTALLED AUGUST 2014
- SOIL VAPOR EXTRACTION POINT
- SUMP

21,100 HIGHEST SUB-SLAB TCE CONCENTRATION ($\mu g/m^3$) PRE-SSD SYSTEM AND MOST RECENT TCE CONCENTRATION POST-SSD SYSTEM OPERATION

---- HEADER PIPE (2", 3" OR 6" DIA. SCH 40)

SSD SUB-SLAB DEPRESSURIZATION

J ESTIMATED CONCENTRATION

B DETECTED IN LAB BLANK

TCE TRICHLOROETHENE

VC VINYL CHLORIDE

DL DILUTION ANALYSIS

TITLE:

BUILDING C SSD SYSTEM LAYOUT

LOCATION:

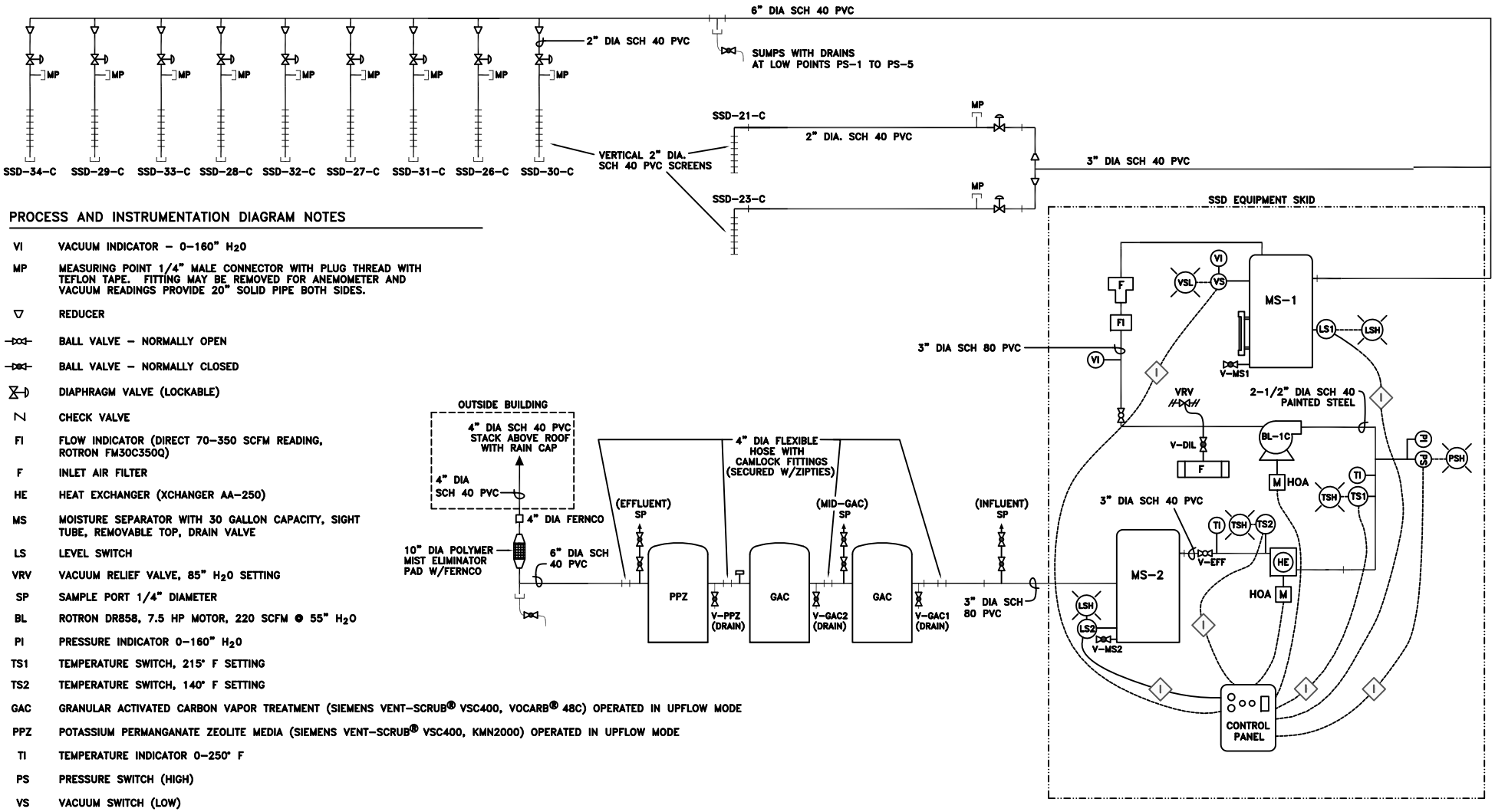
Middle River, Maryland

TETRA TECH

APPROVED	PR
DRAFTED	CP
PROJECT#	117-0512124
DATE	4-12-17

FIGURE 4

P:\ACAD\0512-124-MRIV\0512124053A.DWG



PROCESS AND INSTRUMENTATION DIAGRAM NOTES

VI	VACUUM INDICATOR – 0–160" H_2O
MP	MEASURING POINT 1/4" MALE CONNECTOR WITH PLUG THREAD WITH TEFLON TAPE. FITTING MAY BE REMOVED FOR ANEMOMETER AND VACUUM READINGS PROVIDE 20" SOLID PIPE BOTH SIDES.
▽	REDUCER
–⋈–	BALL VALVE – NORMALLY OPEN
–⋈–	BALL VALVE – NORMALLY CLOSED
⧖	DIAPHRAGM VALVE (LOCKABLE)
⩘	CHECK VALVE
FI	FLOW INDICATOR (DIRECT 70–350 SCFM READING, ROTRON FM30C350Q)
F	INLET AIR FILTER
HE	HEAT EXCHANGER (XCHANGER AA-250)
MS	MOISTURE SEPARATOR WITH 30 GALLON CAPACITY, SIGHT TUBE, REMOVABLE TOP, DRAIN VALVE
LS	LEVEL SWITCH
VRV	VACUUM RELIEF VALVE, 85" H_2O SETTING
SP	SAMPLE PORT 1/4" DIAMETER
BL	ROTRON DR858, 7.5 HP MOTOR, 220 SCFM @ 55" H_2O
PI	PRESSURE INDICATOR 0–160" H_2O
TS1	TEMPERATURE SWITCH, 215° F SETTING
TS2	TEMPERATURE SWITCH, 140° F SETTING
GAC	GRANULAR ACTIVATED CARBON VAPOR TREATMENT (SIEMENS VENT-SCRUB® VSC400, VOCARB® 48C) OPERATED IN UPFLOW MODE
PPZ	POTASSIUM PERMANGANATE ZEOLITE MEDIA (SIEMENS VENT-SCRUB® VSC400, KMN2000) OPERATED IN UPFLOW MODE
TI	TEMPERATURE INDICATOR 0–250° F
PS	PRESSURE SWITCH (HIGH)
VS	VACUUM SWITCH (LOW)
V-MS1	PROCESS VALVE LABELS
HOA	PANEL MOUNTED HAND/OFF/AUTO SWITCH
◇ I	INTERLOCK BLOWER SHUTDOWN
○	LOCALLY MOUNTED INSTRUMENT
⊗	PANEL ALARM LIGHT
H	HIGH
L	LOW
M	MOTOR
⊤	TAP PLUG
SSD	SUB-SLAB DEPRESSURIZATION

TITLE:

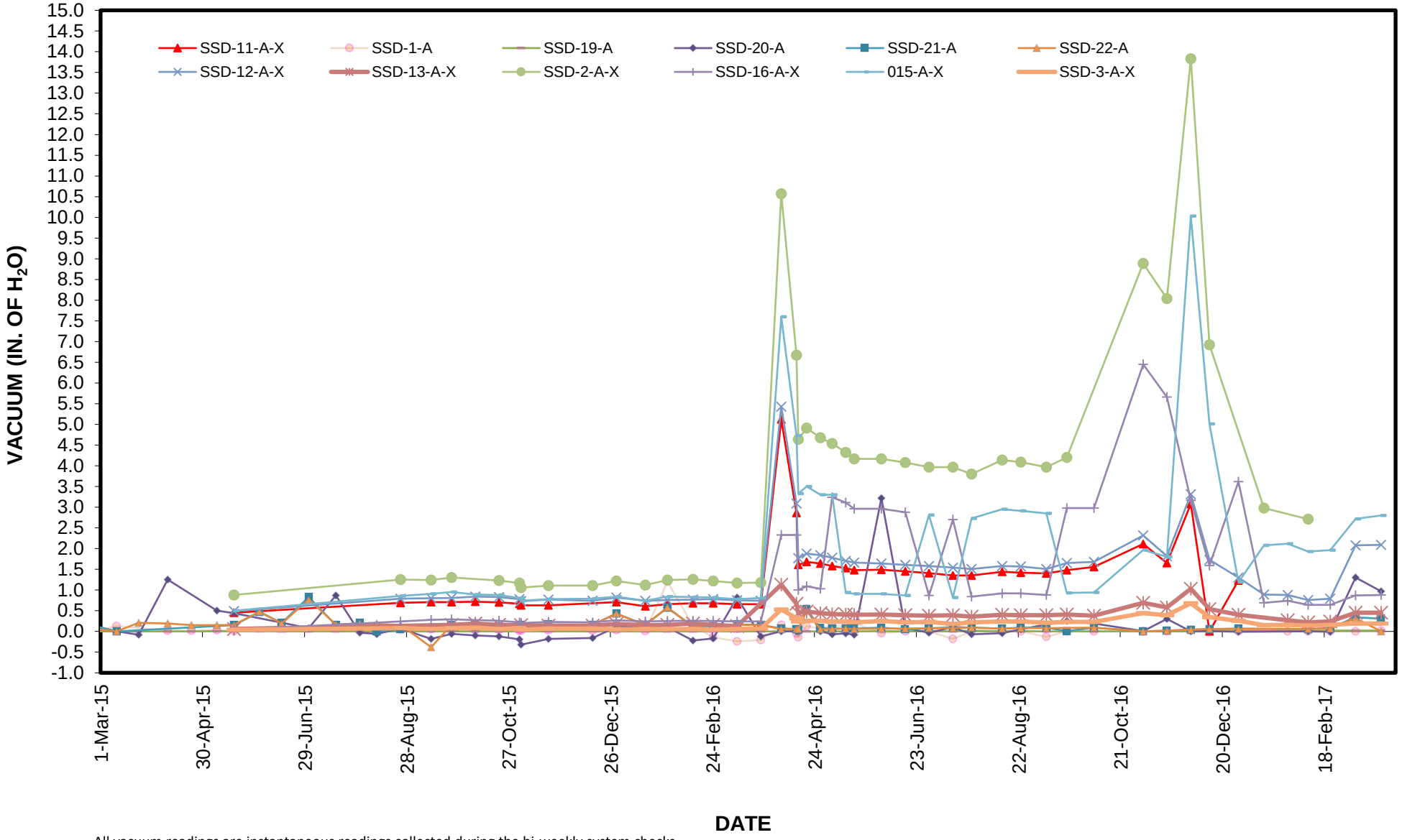
BUILDING C SSD SYSTEM PROCESS AND INSTRUMENTATION DIAGRAM

LOCATION: Middle River, Maryland

TETRA TECH

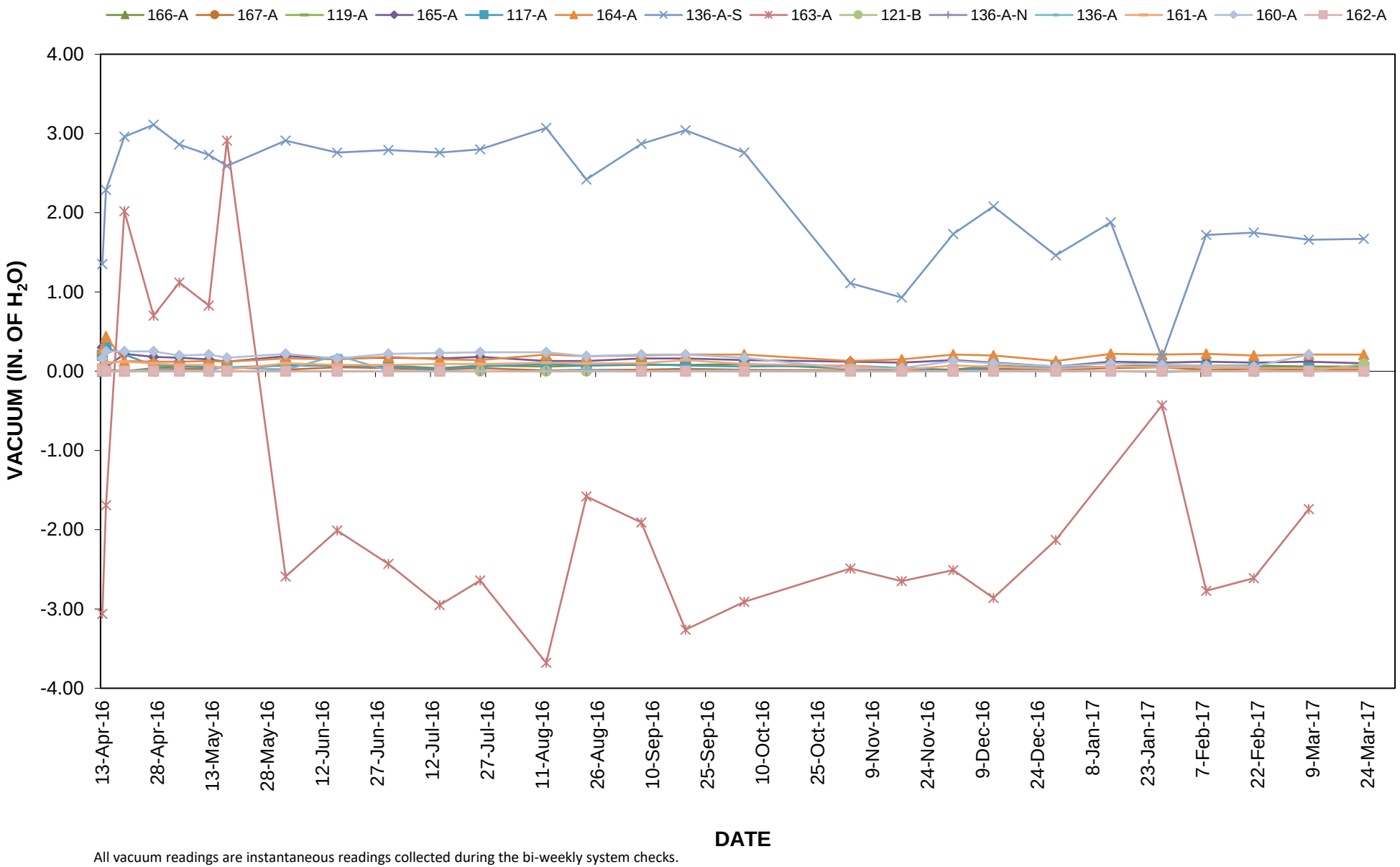
APPROVED	PR	FIGURE
DRAFTED	CP	5
PROJECT#	117-0507533	
DATE	4-27-17	

FIGURE 6
INDUCED VACUUM
MARCH 2015 TO MARCH 2017
BUILDING A SSD SYSTEM - LAY-UP ROOM AND BASEMENT



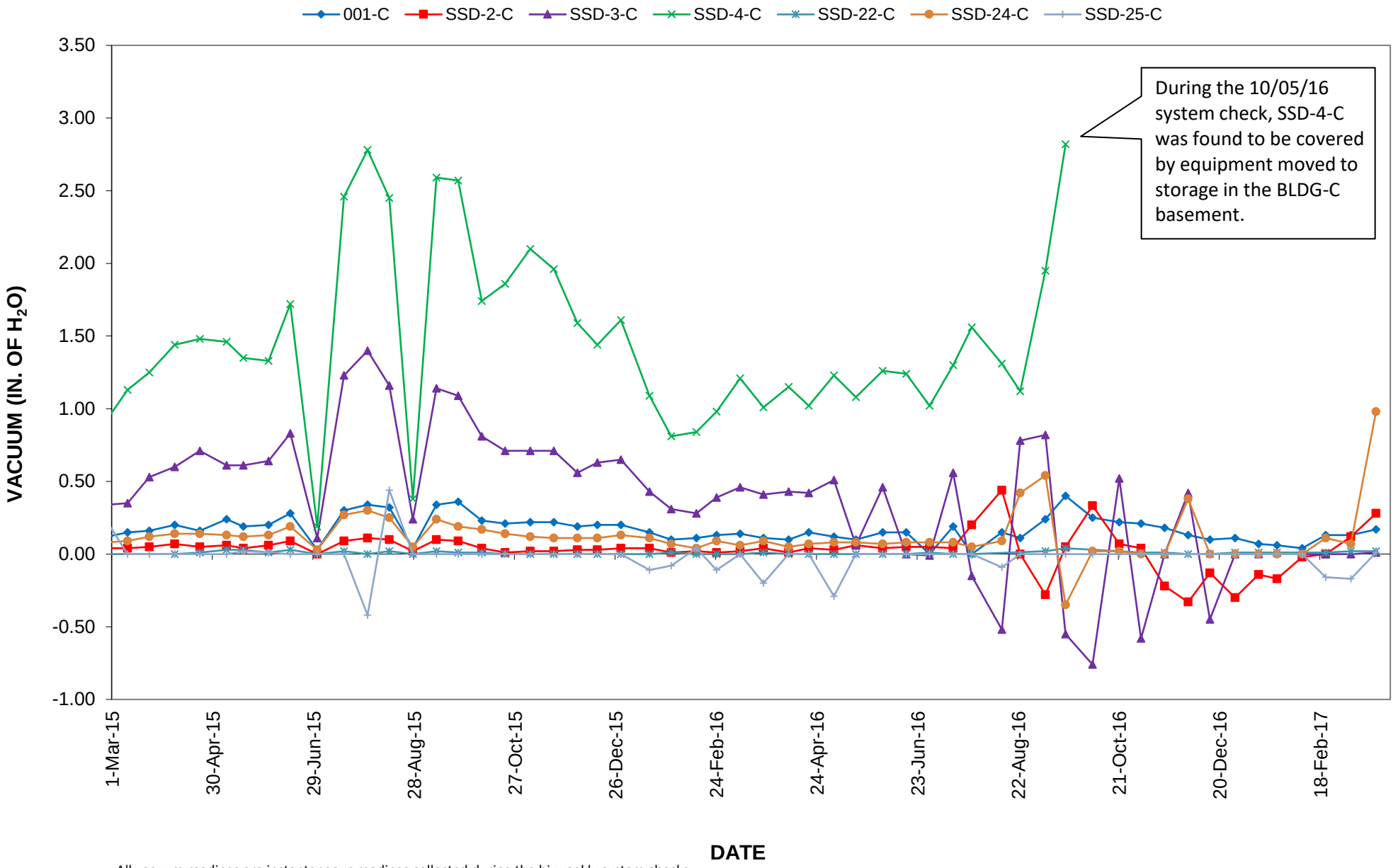
All vacuum readings are instantaneous readings collected during the bi-weekly system checks.
Only the past two years of vacuum data are depicted above.
Increase in vacuum influence beginning April 4, 2016 a result of the installation and operation of the larger blower skid associated with the second-phase expansion.
** NOTE: As of May 18, 2015, all vacuum readings for SSD-11-A, SSD-12-A, SSD-13-A, 015-A, SSD-16-A, SSD-2-A, and SSD-3-A were taken from the SSD-11-A-X, SSD-12-A-X, SSD-13-A-

FIGURE 7
INDUCED VACUUM
APRIL 2016 TO MARCH 2017
BUILDING A SSD SYSTEM - EASTERN AREA



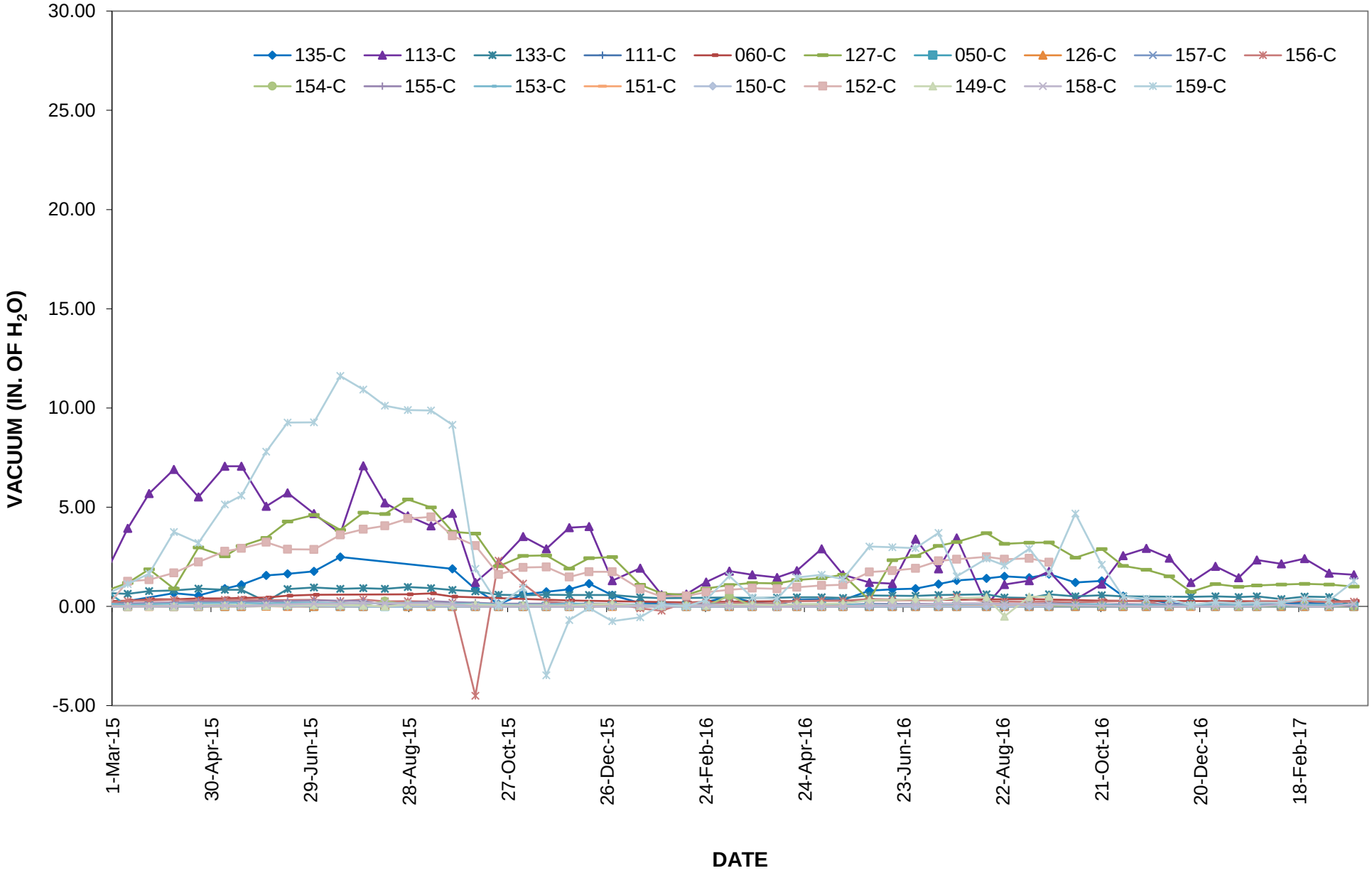
All vacuum readings are instantaneous readings collected during the bi-weekly system checks.
VMPs we included in bi-weekly system checks upon start-up of the second-phase expansion on April 13, 2016.

FIGURE 8
INDUCED VACUUM
MARCH 2015 TO MARCH 2017
BUILDING C SSD SYSTEM - SOUTHERN BASEMENT AREA

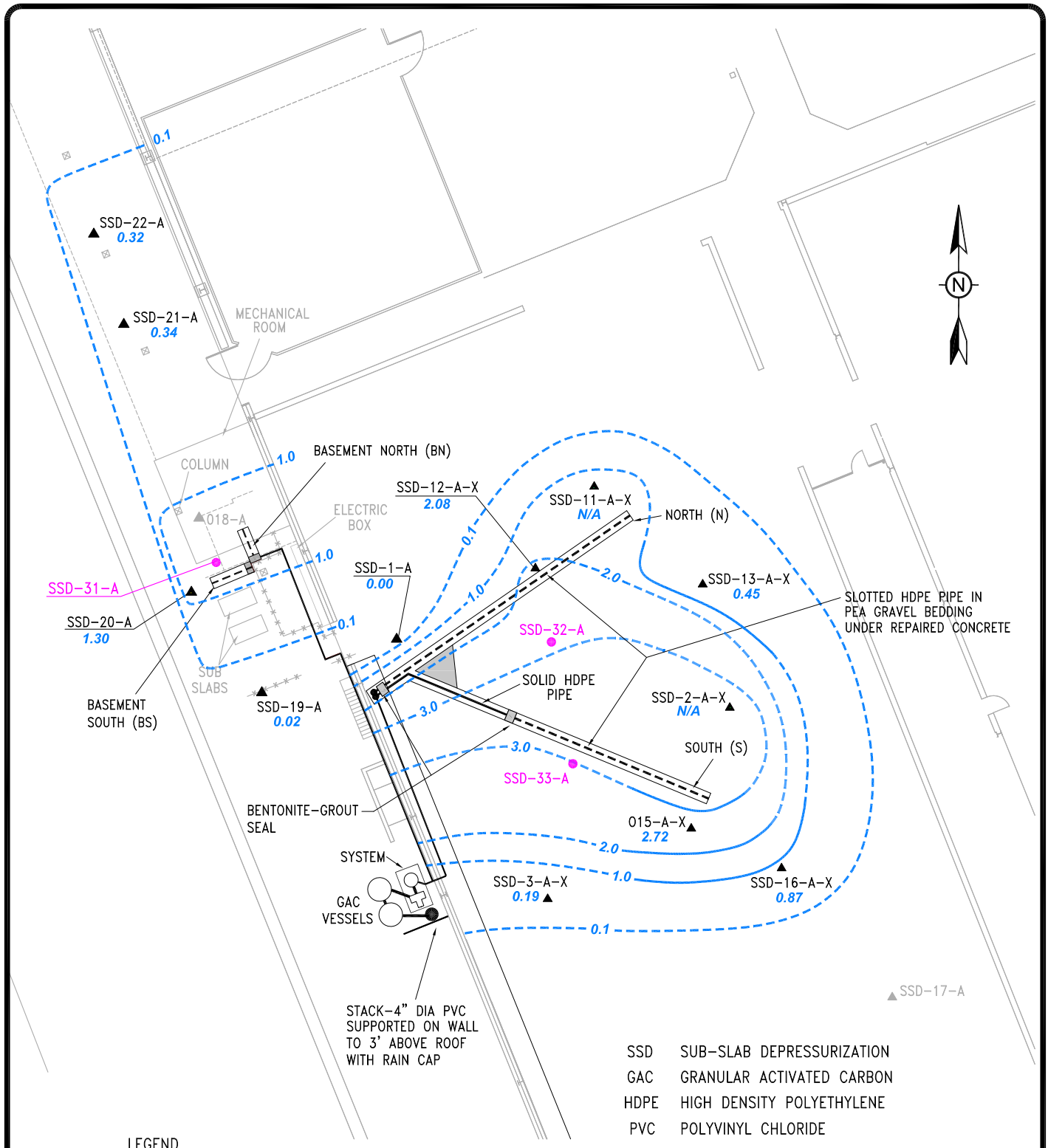


All vacuum readings are instantaneous readings collected during the bi-weekly system checks.
Only the past two years of vacuum data are depicted above.

FIGURE 9
INDUCED VACUUM
MARCH 2015 TO MARCH 2017
BUILDING C SSD SYSTEM - MID-BASEMENT AREA



All vacuum readings are instantaneous readings collected during the bi-weekly system checks.
Sub-slab vapor monitoring points routinely monitored beginning May 1, 2013 following second-phase system expansion in the middle basement area of Building C.



LEGEND

- GROUNDWATER MONITORING WELL
- SUB-SLAB VAPOR MONITORING POINT
- SOIL VAPOR EXTRACTION POINT (USED IN PILOT TEST ONLY)
- 0.06 INCHES OF H_2O INDUCED VACUUM MEASURED ON 3/8/17
- INFERRED EQUAL VACUUM INFLUENCE
- HORIZONTAL SOIL VAPOR EXTRACTION POINT

TITLE:

INFLUENCE OF SOIL VAPOR EXTRACTION POINTS BUILDING A LAY-UP ROOM AND BASEMENT

LOCATION:

Middle River, Maryland

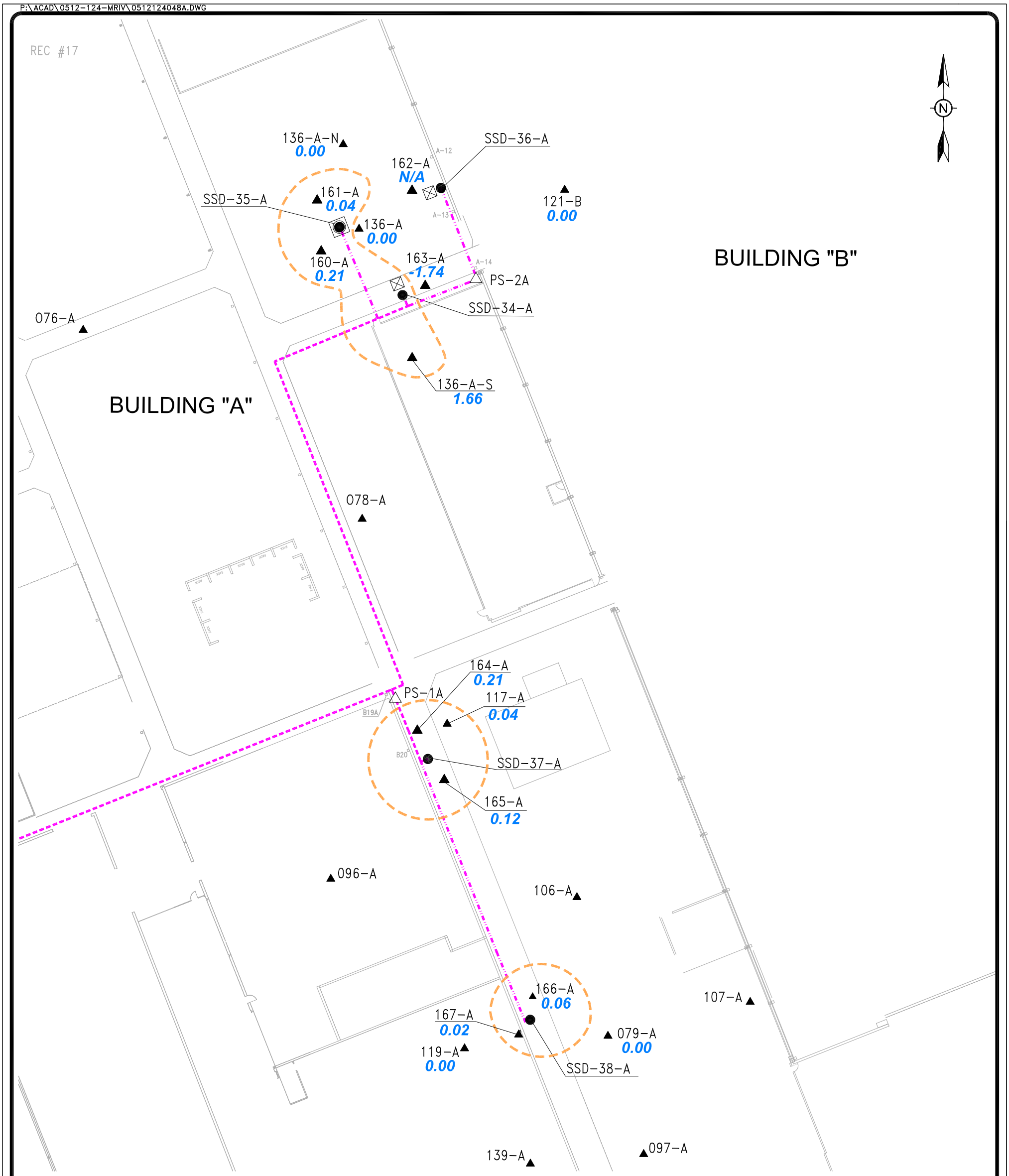
TETRA TECH

APPROVED	PR
DRAFTED	CP
PROJECT#	117-0512124
DATE	6-14-17

FIGURE 10

P:\ACAD\0512-124-MRIV\0512124047A.DWG

P:\ACAD\0512-124-MRIV\0512124048A.DWG



LEGEND

- ▲ SUB-SLAB VAPOR MONITORING POINT
- ● VERTICAL SOIL VAPOR EXTRACTION POINT
- ● SOIL VAPOR EXTRACTION POINT (USED IN PREVIOUS PILOT TEST)
- ⊗ INDOOR AIR SAMPLING POINT
- AREA OF VACCUM INFLUENCE
- EXISTING HORIZONTAL SOIL VAPOR EXTRACTION POINT
- 1.03 INCHES OF H_2O INDUCED VACUUM MEASURED ON 3/8/17
- N/A NOT ACCESSIBLE
- EXTRACTION POINT PIPING (2" DIA. SCH 40)
- HEADER PIPE (6" DIA. SCH 40)
- △ PIPE SUMP
- ◯ STEEL PIPE SLEEVE (4" DIA.)
- ⊠ PIPE BOLLARD (2" DIA.)
- SSD SUB-SLAB DEPRESSURIZATION

NOTE:

PIPE HANGERS PLACED NEXT TO EXISTING SUPPORT BRACKETS FOR STEEL PIPING IN CEILING APPROX. 6-12 FT APART.

0 40 80

SCALE IN FEET

TITLE: **INFLUENCE OF SOIL VAPOR EXTRACTION POINTS BUILDING A EASTERN AREA**

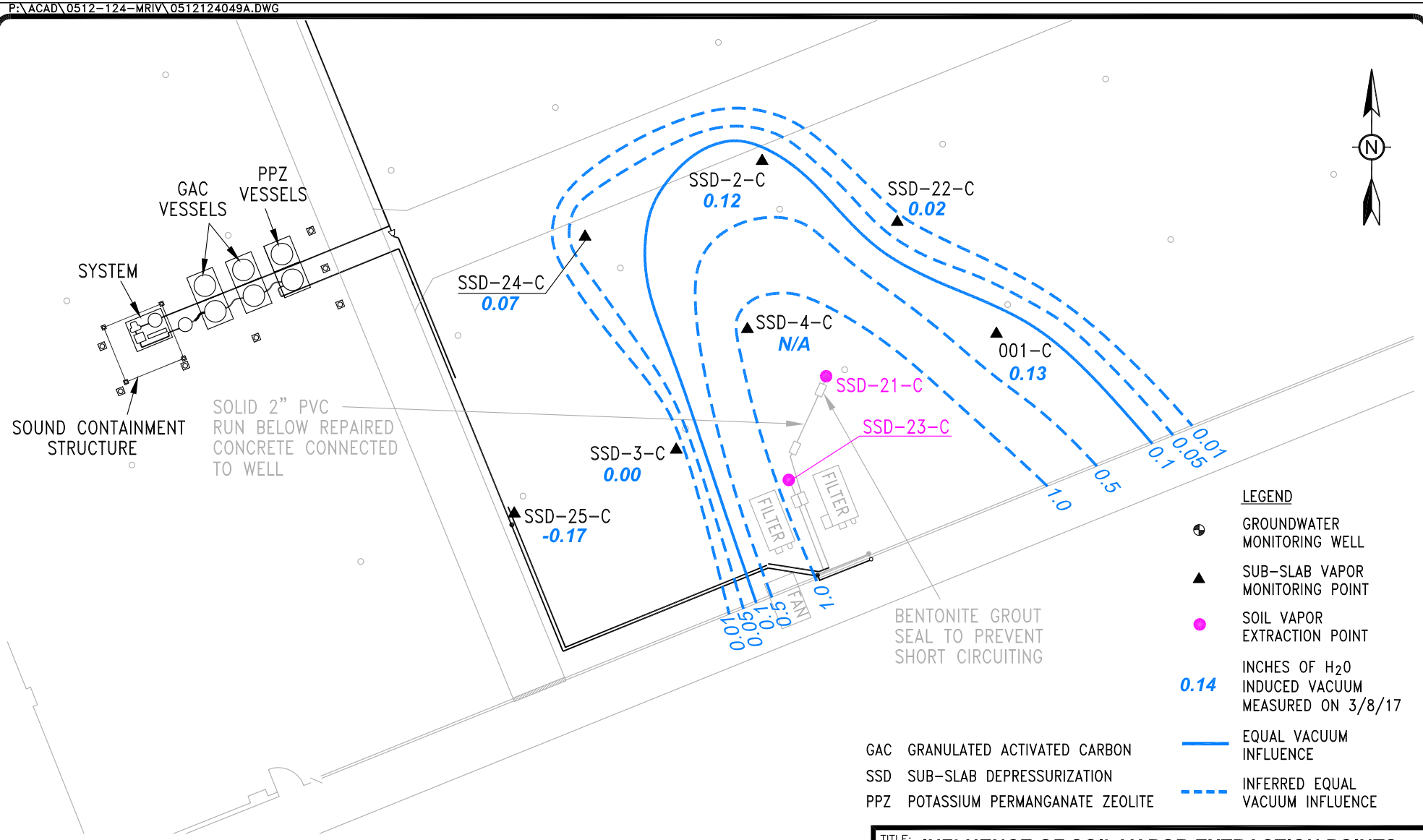
LOCATION: **Middle River, Maryland**

TETRA TECH

APPROVED	DM
DRAFTED	CP
PROJECT#	117-0512124
DATE	6-14-17

FIGURE 11

P:\ACAD\0512-124-MRIV\0512124049A.DWG



LEGEND

- GROUNDWATER MONITORING WELL
- SUB-SLAB VAPOR MONITORING POINT
- SOIL VAPOR EXTRACTION POINT
- 0.14 INCHES OF H_2O INDUCED VACUUM MEASURED ON 3/8/17
- EQUAL VACUUM INFLUENCE
- INFERRED EQUAL VACUUM INFLUENCE

GAC GRANULATED ACTIVATED CARBON
SSD SUB-SLAB DEPRESSURIZATION
PPZ POTASSIUM PERMANGANATE ZEOLITE

TITLE: **INFLUENCE OF SOIL VAPOR EXTRACTION POINTS BUILDING C - SOUTHERN BASEMENT AREA**

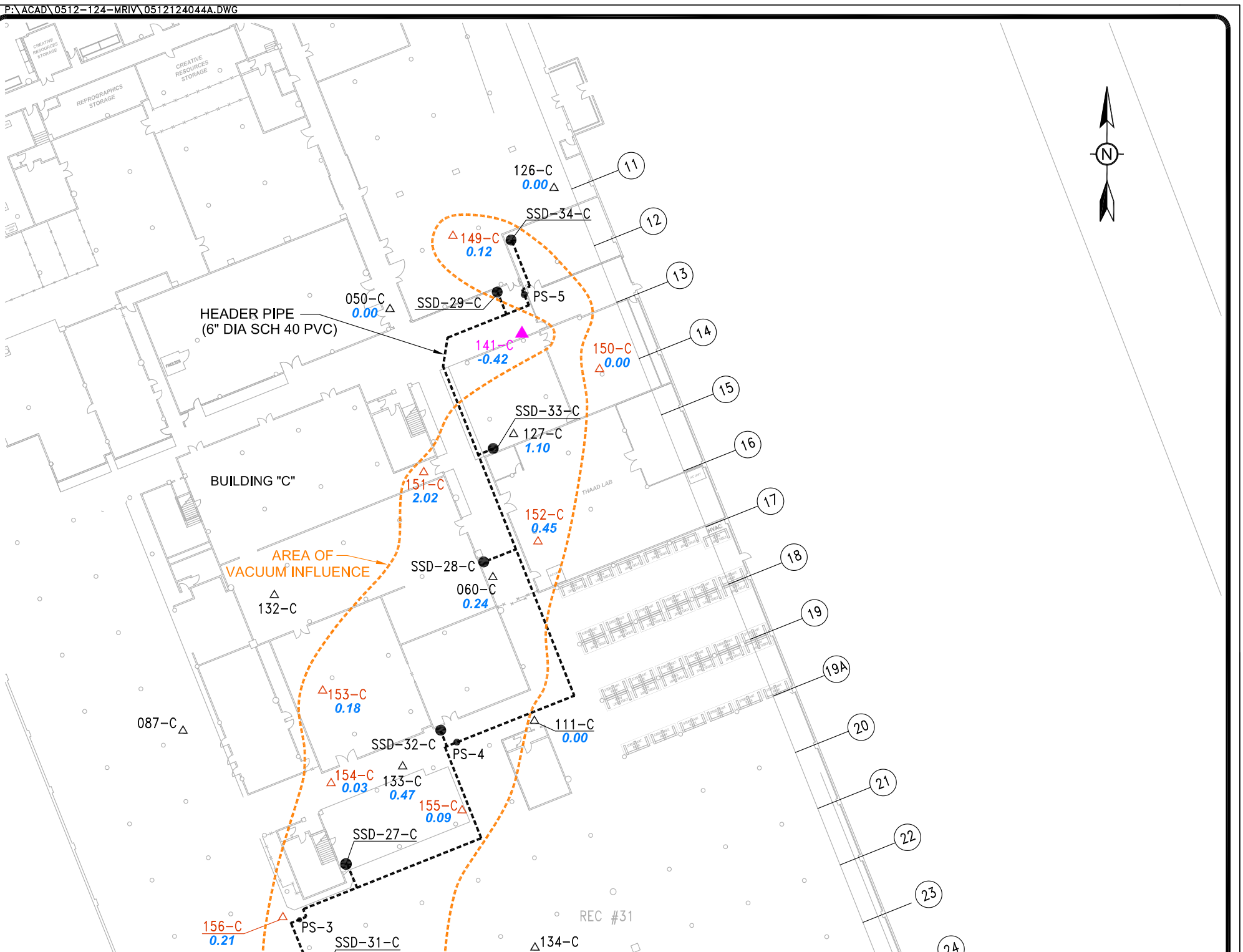
LOCATION: **Middle River, Maryland**

TETRA TECH

APPROVED	PR
DRAFTED	CP
PROJECT#	117-0512124
DATE	5-5-17

FIGURE 12

P:\ACAD\0512-124-MRIV\0512124044A.DWG



LEGEND

- GROUNDWATER MONITORING WELL
- SUB-SLAB VAPOR MONITORING POINT
- SUB-SLAB VAPOR MONITORING POINT INSTALLED JANUARY 2010
- SUB-SLAB VAPOR MONITORING POINT INSTALLED FEBRUARY 2013
- SUB-SLAB VAPOR MONITORING POINT INSTALLED AUGUST 2014
- SOIL VAPOR EXTRACTION POINT
- SUMP

NOTE:
088-C HAS BEEN REMOVED FROM MONITORING.

- AREA OF VACUUM INFLUENCE (> 0.01 INCHES OF H_2O)
- HEADER PIPE (2", 3" OR 6" DIA. SCH 40)
- SSD SUB-SLAB DEPRESSURIZATION
- 0.11 INCHES OF H_2O INDUCED VACUUM MEASURED ON 3/8/17

0 50 100
SCALE IN FEET

TITLE: **INFLUENCE OF SOIL VAPOR EXTRACTION POINTS BUILDING C MID-BASEMENT AREA**

LOCATION: **Middle River, Maryland**

TETRA TECH

APPROVED	PR
DRAFTED	CP
PROJECT#	117-0512124
DATE	4-19-17

FIGURE 13

FIGURE 14

BUILDING A INFLUENT VOC CONCENTRATIONS

SSD System, Middle River Complex, Middle River, Maryland

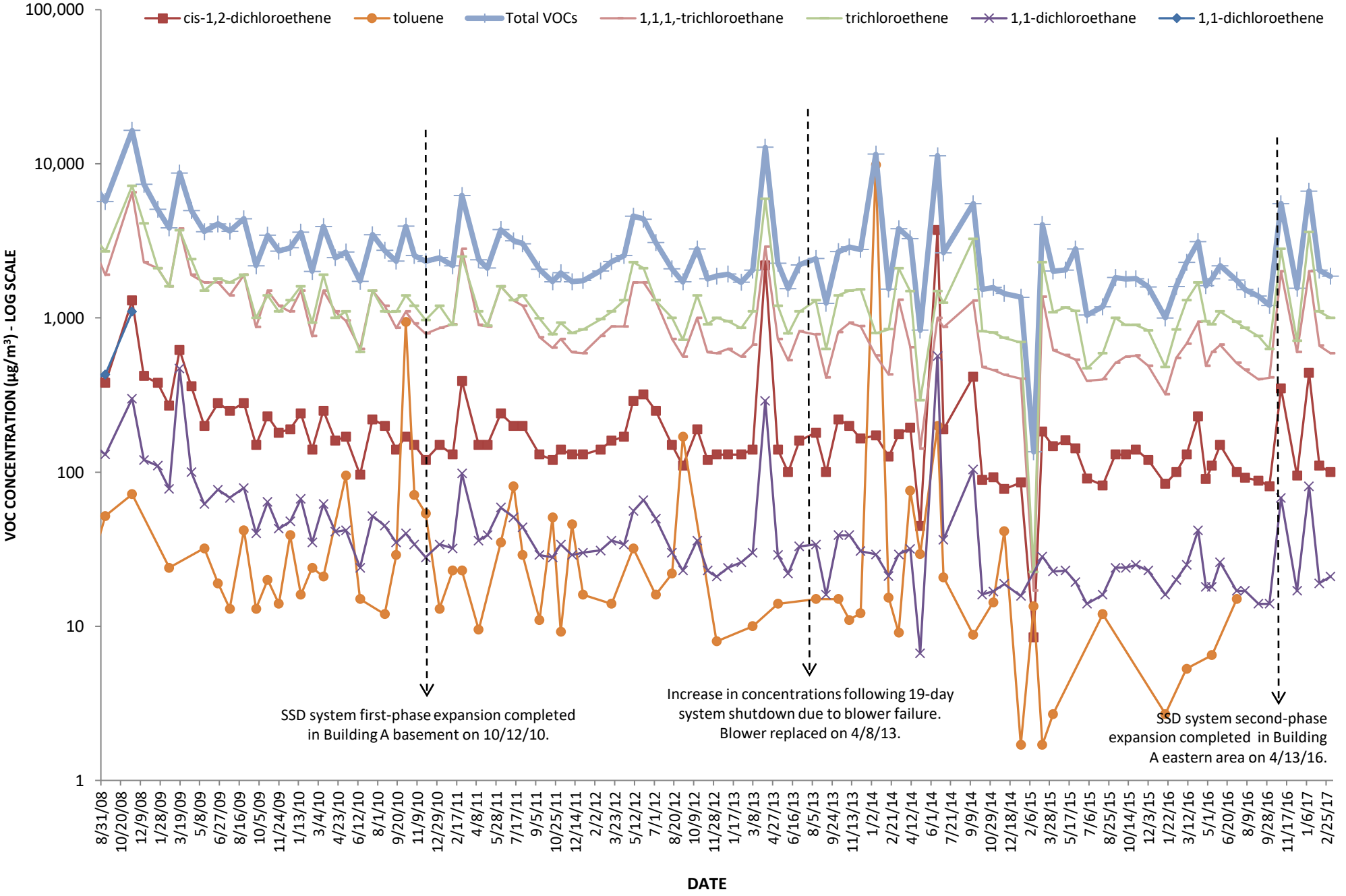
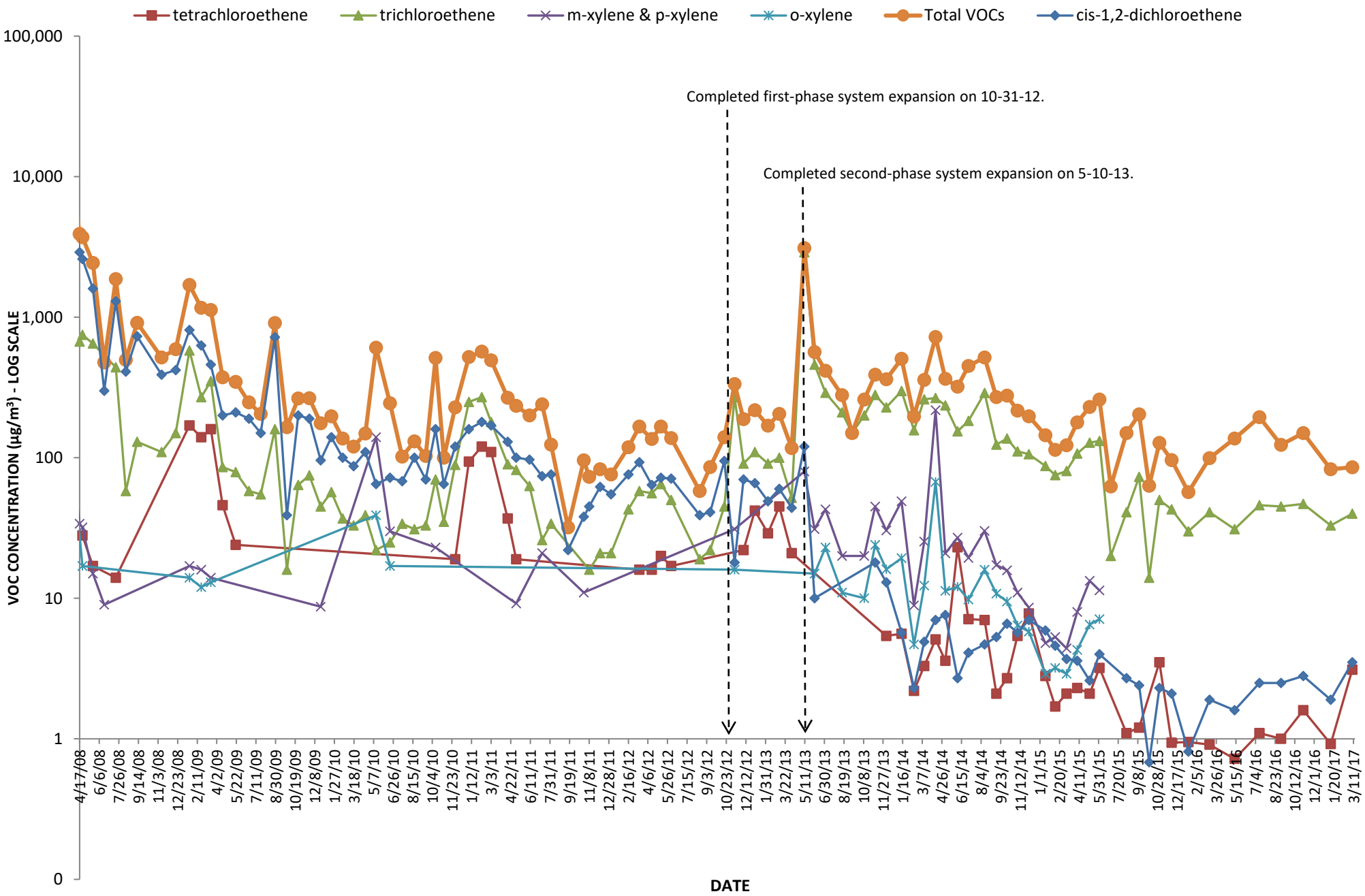


FIGURE 15

BUILDING C INFLUENT VOC CONCENTRATIONS

SSD System, Middle River Complex, Middle River, Maryland



TABLES

TABLE 1

Building A Influent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	FLOW (scfm)	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)	Mass (lbs. removed in period)
3/31/08	NA	ND	ND	N/A	ND	8,300	ND	2,100	ND	7,900	300	ND	ND	ND	330	ND	30,000	44,000	ND	ND	ND	ND	ND	N/A	1,100	280	94,310	1.190	3.570
4/2/08	140	ND	ND	N/A	ND	3,800	ND	660	ND	4,500	ND	ND	ND	ND	ND	ND	16,000	34,000	ND	ND	ND	ND	ND	N/A	ND	ND	58,960	0.740	4.340
4/4/08	140	ND	ND	N/A	ND	2,300	ND	460	ND	3,300	ND	ND	ND	ND	ND	ND	13,000	30,000	ND	ND	ND	ND	ND	N/A	ND	ND	49,060	0.620	4.340
4/11/08	140	ND	ND	N/A	ND	1,100	ND	280	ND	1,500	ND	ND	ND	ND	120	ND	9,100	14,000	ND	ND	ND	ND	ND	N/A	ND	ND	26,100	0.330	1.980
4/17/08	112	ND	ND	N/A	ND	2,000	ND	480	ND	2,200	ND	ND	ND	ND	120	ND	11,000	18,000	ND	ND	ND	ND	ND	N/A	110	ND	33,910	0.340	2.380
4/24/08	84	ND	ND	N/A	ND	930	ND	260	ND	1,200	ND	ND	ND	ND	86	ND	6,500	8,600	ND	ND	ND	ND	ND	N/A	ND	ND	17,576	0.130	3.510
5/21/08	84	ND	ND	N/A	ND	1,000	ND	320	ND	950	ND	ND	ND	ND	ND	ND	6,000	5,500	ND	ND	ND	ND	ND	N/A	ND	ND	13,770	0.100	3.100
6/19/08	70	180	ND	N/A	ND	720	ND	180	ND	760	ND	ND	ND	ND	ND	ND	4,800	7,100	ND	ND	ND	ND	ND	N/A	ND	ND	13,740	0.090	2.700
7/18/08	84	ND	ND	N/A	ND	350	ND	110	ND	430	ND	ND	ND	ND	ND	ND	3,200	3,700	ND	ND	ND	ND	ND	N/A	ND	ND	7,790	0.060	1.860
8/12/08	56	ND	ND	N/A	ND	470	ND	150	ND	400	ND	ND	ND	ND	28	ND	2,900	3,400	ND	ND	ND	ND	ND	N/A	ND	ND	7,348	0.040	1.240
9/11/08	80	ND	ND	N/A	ND	380	ND	130	ND	430	ND	17	ND	70	52	ND	1,900	2,700	32	ND	ND	ND	ND	N/A	ND	ND	5,711	0.040	2.440
11/18/08	84	ND	ND	N/A	ND	1,300	ND	300	ND	1,100	ND	ND	ND	ND	72	ND	6,500	7,200	ND	ND	ND	ND	ND	N/A	ND	ND	16,472	0.105	3.142
12/18/08	84	ND	ND	N/A	ND	420	ND	120	ND	380	ND	ND	ND	ND	ND	ND	2,300	4,100	ND	ND	ND	ND	ND	N/A	53	ND	7,373	0.056	1.724
1/22/09	84	ND	ND	N/A	ND	380	ND	110	ND	380	ND	ND	ND	ND	ND	ND	2,100	2,100	ND	ND	ND	ND	ND	N/A	ND	ND	5,070	0.038	1.185
2/20/09	84	ND	ND	N/A	ND	270	ND	78	ND	260	ND	ND	ND	ND	24	ND	1,600	1,600	ND	ND	ND	ND	ND	N/A	ND	ND	3,832	0.029	0.809
3/18/09	28	ND	ND	N/A	ND	620	ND	470	ND	150	ND	ND	ND	ND	ND	ND	3,800	3,700	ND	ND	ND	ND	ND	N/A	ND	ND	8,740	0.063	1.946
4/17/09	56	ND	ND	N/A	ND	360	ND	100	ND	220	ND	ND	ND	ND	ND	ND	1,900	2,400	ND	ND	ND	ND	ND	N/A	ND	ND	4,980	0.056	1.677
5/20/09	NA	ND	ND	N/A	ND	200	ND	62	ND	140	ND	ND	ND	ND	32	ND	1,700	1,500	ND	ND	ND	ND	ND	N/A	ND	ND	3,634	0.041	1.264
6/23/09	134	ND	ND	N/A	ND	280	ND	77	ND	200	ND	ND	ND	ND	19	ND	1,700	1,800	ND	ND	ND	ND	ND	N/A	ND	ND	4,076	0.049	1.471
7/23/09	129	ND	ND	N/A	ND	250	ND	68	ND	180	ND	27	ND	ND	13	ND	1,400	1,700	14	ND	ND	ND	ND	N/A	ND	ND	3,652	0.044	1.352
8/28/09	NA	ND	ND	N/A	ND	280	ND	79	ND	200	ND	ND	ND	ND	42	ND	1,900	1,900	ND	ND	ND	ND	ND	N/A	ND	ND	4,401	0.051	1.568
9/28/09	125	ND	ND	N/A	ND	150	ND	40	ND	110	ND	ND	ND	ND	13	ND	870	1,000	ND	ND	ND	ND	ND	N/A	ND	ND	2,183	0.025	0.735
10/27/09	NA	ND	ND	N/A	ND	230	ND	64	ND	210	ND	ND	ND	ND	20	ND	1,500	1,400	ND	ND	ND	ND	ND	N/A	9.7	ND	3,434	0.026	0.803
11/24/09	130	ND	ND	N/A	ND	180	ND	43	ND	180	ND	ND	ND	ND	14	ND	1,200	1,100	ND	ND	ND	ND	ND	N/A	ND	ND	2,717	0.032	0.960
12/23/09	132	ND	ND	N/A	ND	190	ND	48	ND	180	ND	ND	ND	ND	39	ND	1,100	1,300	ND	ND	ND	ND	ND	N/A	ND	ND	2,857	0.035	1.074
1/19/10	130	ND	ND	N/A	ND	240	ND	67	ND	180	ND	ND	ND	ND	16	ND	1,500	1,600	ND	ND	ND	ND	ND	N/A	ND	ND	3,603	0.042	1.304
2/17/10	130	ND	ND	N/A	ND	140	ND	35	ND	120	ND	ND	ND	ND	24	ND	760	930	ND	ND	ND	ND	ND	N/A	ND	ND	2,009	0.023	0.657
3/17/10	120	ND	ND	N/A	ND	250	ND	62	ND	190	ND	ND	ND	ND	21	ND	1,500	1,900	ND	ND	ND	ND	ND	N/A	ND	ND	3,923	0.042	1.302
4/16/10	120	ND	ND	N/A	ND	160	ND	41	ND	160	ND	ND	ND	ND	ND	ND	1,100	1,000	ND	ND	ND	ND	ND	N/A	ND	ND	2,461	0.027	0.796
5/13/10	119	ND	ND	N/A	ND	170	ND	42	ND	170	19	ND	ND	ND	95	ND	960	1,100	ND	ND	18	ND	ND	N/A	75	23	2,672	0.029	0.886
6/18/10	110	ND	ND	N/A	ND	96	ND	24	ND	110	12	ND	ND	ND	15	ND	630	600	12	ND	130	28	ND	N/A	50	26	1,733	0.017	0.514
7/19/10	110	ND	ND	N/A	ND	220	ND	52	ND	180	ND	ND	ND	ND	ND	ND	1,500	1,500	ND	ND	24	ND	ND	N/A	ND	ND	3,476	0.034	1.066
8/19/10	110	ND	ND	N/A	ND	200	ND	45	ND	170	ND	ND	ND	ND	12	ND	1,200	1,100	16	ND	ND	ND	ND	N/A	ND	ND	2,743	0.027	0.841
9/17/10	108	ND	ND	N/A	ND	140	ND	35	ND	150	ND	ND	ND	ND	29	ND	860	1,100	20	ND	ND	ND	ND	N/A	ND	ND	2,334	0.023	0.680
10/12/10	100	ND	ND	N/A	ND	170	ND	40	ND	140	ND	ND	ND	ND	940	ND	1,100	1,400	20	ND	ND	ND	ND	N/A	89	33	3,932	0.035	1.060
11/2/10	138	ND	ND	N/A	ND	150	ND	34	ND	100	ND	ND	ND	ND	71	ND	920	1,200	53	ND	ND	ND	ND	N/A	14	ND	2,542	0.032	0.946
12/1/10	138	ND	ND	N/A	ND	120	ND	28	ND	110	42	ND	ND	ND	54	ND	790	970	13	ND	ND	ND	ND	N/A	170	31	2,328	0.029	0.866
1/5/11	133	ND	ND	N/A	ND	150	ND	34	ND	130	14	ND	ND	ND	13	ND	860	1,200	ND	ND	ND	ND	ND	N/A	47	10	2,458	0.029	0.882
2/7/11	130	ND	ND	N/A	ND	130	ND	32	ND	160	ND	ND	ND	ND	23	ND	910	900	ND	ND	ND	ND	ND	N/A	29	ND	2,184	0.026	0.766
3/3/11	130	ND	ND	N/A	ND	390	ND	98	ND	350	19	ND	ND	ND	23	ND	2,800	2,500	ND	ND	ND	ND	ND	N/A	61	ND	6,241	0.073	2.188
4/14/11	125	ND	ND	N/A	ND	150	ND	36	ND	160	ND	30	ND	ND	10	ND	900	1,100	ND	ND	ND	ND	ND	N/A	ND	ND	2,386	0.027	0.804
5/6/11	130	ND	ND	N/A	ND	150	ND	39	ND	150	ND	ND	ND	ND	ND	ND	880	890	ND	ND	ND	ND	ND	N/A	ND	ND	2,109	0.025	0.764
6/9/11	150	ND	ND	N/A	ND	240	ND	59	ND	190	ND	ND	ND	ND	35	ND	1,600	1,600	20	ND	ND	ND	ND	N/A	ND	ND	3,744	0.050	1.515
7/11/11	128	ND	ND	N/A	ND	200	ND	51	ND	170	ND	40	ND	ND	81	ND	1,300	1,300	ND	ND	ND	ND	ND	N/A	26	ND	3,168	0.036	1.094
8/3/11	160	ND	ND	N/A	ND	200	ND	44	ND	160	ND	ND	ND	ND	29	ND	1,200	1,400	ND	ND	ND	ND	ND	N/A	ND	ND	3,033	0.044	1.309
9/15/11	160	12	ND	N/A	ND	130	ND	29	ND	130	ND	ND	ND	ND	11	ND	750	990	12	ND	ND	ND	ND	N/A	ND	ND	2,064	0.030	0.891
10/18/11	160	8.3	ND	N/A	ND	120	ND	28	ND	93	ND	ND	ND	ND	51	ND	640	780	ND	ND	ND	ND	ND	N/A	ND	ND	1,720	0.025	0.767
11/8/11	165	10	ND	N/A	ND	140	ND	34	ND	110	ND	ND	ND	ND	9.2	ND	730	930	ND	ND	ND	ND	ND	N/A	ND	ND	1,963	0.029	0.874
12/6/11	160	7.3	ND	N/A	ND	130	ND	29	ND	110	ND	ND	ND	ND	46	ND	600	800	ND	ND	ND	ND	ND	N/A	ND	ND	1,722	0.025	0.768
1/3/12	165	ND	ND	N/A	ND	130	ND	30	ND	140	ND	ND	ND	ND	16	ND	590	840	ND	ND	ND	ND	ND	N/A	ND	ND	1,746	0.026	0.803
2/16/12	160	ND	ND	N/A	ND	140	ND	31	ND	110	ND	ND	ND	ND	ND	ND	760	980	ND	ND	ND	ND	ND	N/A	ND	ND	2,021	0.029	0.843
3/15/12	160	ND	ND	N/A	ND	160	ND	36	ND	130	ND	ND	ND	ND	14	ND	880	1,100	ND	ND	ND	ND	ND	N/A	ND	ND	2,320	0.033	1.034
4/16/12	158	ND	ND	N/A	ND	170	ND	34	ND	140	ND	ND	ND	ND	ND	ND	880	1,300	ND	ND	ND	ND	ND	N/A	20	ND	2,544	0.036	1.084
5/9/12	159	ND	ND	N/A	ND	290	ND	56	ND	200	ND	ND	ND	ND	32	ND	1,700	2,300	ND	ND	ND	ND	ND	N/A	ND	ND	4,578	0.065	2.029
6/4/12	159	ND	ND	N/A	ND	320	ND	66	ND	200	ND	ND	ND	ND	ND	ND	1,700	2,100	ND	ND	ND	ND	ND	N/A	ND	ND	4,386	0.063	1.881
7/5/12	162	ND	ND	N/A	ND	250	ND	50	ND	180	ND	ND	ND	ND	16	ND	1,300	1,300	ND	ND	ND	ND	ND	N/A	ND	ND	3,096	0.045	1.398

TABLE 1

Building A Influent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	FLOW (scfm)	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)	Mass (lbs. removed in period)
8/15/12	164	ND	ND	N/A	ND	150	ND	30	ND	130	ND	ND	ND	ND	22	ND	730	1,000	17	ND	ND	ND	ND	N/A	ND	ND	2,079	0.031	0.950
9/12/12	165	ND	ND	N/A	ND	110	ND	23	ND	120	ND	ND	ND	ND	170	ND	560	720	ND	ND	ND	ND	ND	N/A	11	ND	1,714	0.025	0.763
10/18/12	160	ND	ND	N/A	ND	190	ND	36	ND	180	ND	ND	ND	ND	ND	ND	1,000	1,400	ND	ND	ND	ND	ND	N/A	ND	ND	2,806	0.040	1.251
11/13/12	161	ND	ND	N/A	ND	120	ND	23	ND	140	ND	ND	ND	ND	ND	ND	600	910	ND	ND	ND	ND	ND	N/A	ND	ND	1,793	0.026	0.779
12/6/12	160	ND	ND	N/A	ND	130	ND	21	ND	120	ND	ND	ND	ND	8	ND	590	1,000	ND	ND	ND	ND	ND	N/A	ND	ND	1,869	0.027	0.833
1/4/13	160	ND	ND	N/A	ND	130	ND	24	ND	190	ND	ND	ND	ND	ND	ND	630	950	ND	ND	ND	ND	ND	N/A	ND	ND	1,924	0.028	0.858
2/6/13	160	ND	ND	N/A	ND	130	ND	26	ND	130	ND	ND	ND	ND	ND	ND	560	860	ND	ND	ND	ND	ND	N/A	ND	ND	1,706	0.025	0.687
3/7/13	160	ND	ND	N/A	ND	140	ND	30	ND	94	ND	ND	ND	ND	10	ND	670	1,100	ND	ND	ND	ND	ND	N/A	ND	ND	2,044	0.029	0.911
4/8/13	150	ND	ND	N/A	ND	2,200	ND	290	ND	1,500	ND	ND	ND	ND	ND	ND	2,900	5,900	ND	ND	ND	ND	ND	N/A	ND	ND	12,790	0.172	5.174
5/10/13	150	ND	ND	N/A	ND	140	11	29	ND	130	ND	ND	ND	ND	14	ND	730	1,200	17	ND	ND	ND	ND	N/A	ND	ND	2,271	0.031	0.949
6/5/13	155	ND	ND	N/A	ND	100	ND	22	ND	110	ND	ND	ND	ND	ND	ND	530	790	ND	ND	ND	ND	ND	N/A	ND	ND	1,552	0.022	0.649
7/3/13	159	ND	ND	N/A	ND	160	ND	33	ND	100	ND	ND	ND	ND	ND	ND	820	1,100	ND	ND	ND	ND	ND	N/A	ND	ND	2,213	0.032	0.981
8/14/13	160	ND	ND	N/A	ND	180	ND	34	ND	120	ND	ND	ND	ND	15	ND	780	1,300	ND	ND	ND	ND	ND	N/A	ND	ND	2,429	0.035	1.083
9/9/13	160	ND	ND	N/A	ND	100	ND	16	ND	90	ND	ND	ND	ND	ND	ND	410	630	ND	ND	ND	ND	ND	N/A	ND	ND	1,246	0.018	0.538
10/10/13	160	ND	ND	N/A	ND	220	ND	39	ND	190	ND	ND	ND	ND	15	ND	810	1,400	16	ND	ND	ND	ND	N/A	ND	ND	2,690	0.039	1.199
11/7/13	160	ND	ND	N/A	ND	200	ND	39	ND	170	ND	ND	ND	ND	11	ND	930	1,500	41	ND	ND	ND	ND	N/A	ND	ND	2,891	0.042	1.247
12/5/13	160	0.94	ND	ND	21.2	165	ND	30.7	ND	132	ND	4.4	ND	ND	12.2	2.5	883	1,530	N/A	ND	ND	ND	ND	N/A	ND	ND	2,782	0.040	1.240
1/13/14	160	ND	ND	6.5	11.6	173	2.2	29.3	ND	141	1.8	3.3	4.9	ND	9,820	ND	570	795	N/A	ND	1.9	ND	ND	N/A	4.3	1.7	11,567	0.166	5.157
2/14/14	153	ND	ND	2.4	7.4	126	ND	21.2	ND	92.7	ND	2.1	ND	ND	15.3	ND	429	843	N/A	ND	ND	ND	ND	N/A	ND	ND	1,539	0.021	0.593
3/12/14	160	ND	ND	2.4	ND	176	2.0	29.3	36.4	130	ND	ND	ND	3.6	9.1	ND	1,310	2,100	N/A	ND	ND	ND	ND	N/A	3.0	ND	3,802	0.055	1.695
4/10/14	160	81.7	ND	ND	ND	194	ND	31.8	ND	131	120	ND	ND	ND	75.7	ND	646	1,490	N/A	ND	ND	ND	ND	N/A	387	109	3,266	0.047	1.361
5/5/14	150	4.8	ND	8.8	3.9	44.7	4.1	6.7	ND	32.6	6.5	202	2.3 J	1.2	29.5	ND	142	292	N/A	2.8	11.5	3.0	ND	N/A	24.3	9.3	832	0.011	0.280
6/18/14	155	1,040	ND	30.3	136	3,710	ND	565	ND	2,840	ND	138	34.9 J	ND	199	51.7	1,000 J	1,490	N/A	ND	17.6 J	ND	ND	N/A	25.6 J	ND	11,278	0.157	6.907
7/3/14	158	45.1	ND	ND	8.4 J	189	ND	36.5	81.2	145	ND	ND	ND	ND	20.8 J	ND	871	1,250	N/A	ND	ND	ND	ND	N/A	ND	ND	2,647	0.038	0.563
9/16/14	150	51.1	1.1	1.0 J	54.0	416	4.7	104	ND	323	ND	0.67 J	ND	2.3	8.8	8.1	1,290	3,250	N/A	ND	2.3	0.83 J	1.5	N/A	1.5 J	1.1 J	5,522	0.074	5.578
10/9/14	152	46.6	ND	ND	ND	89.0	ND	16.1	ND	69.8	ND	17.3 J	ND	ND	ND	ND	480	819	N/A	ND	ND	ND	ND	N/A	ND	ND	1,538	0.021	0.483
11/6/14	135	38.2	ND	ND	ND	92.4	ND	16.8 J	ND	71.0	ND	23.9 J	ND	59.4	14.3 J	ND	459	803	N/A	ND	ND	ND	ND	N/A	ND	ND	1,578	0.019	0.536
12/4/14	120	34.3	ND	ND	11.8	77.6	ND	18.8	ND	68.6	ND	19.4 J	ND	ND	41.5 J	ND	428	741	N/A	ND	ND	ND	ND	N/A	ND	ND	1,441	0.016	0.435
1/15/15	50	64.8	ND	ND	6.8	85.6	4.4	15.7	ND	81.0	ND	2.0 J	ND	2.0	1.7	1.3	404	695	N/A	ND	ND	ND	ND	N/A	0.90 J	ND	1,365	0.006	0.257
2/16/15	50	1.5	ND	3.7	ND	8.5	ND	ND	ND	6.5	1.9 J	46.9	4.1 J	ND	13.5	ND	17.0	22.4	N/A	ND	ND	ND	ND	N/A	6.5	2.7 J	135	0.001	0.019
3/10/15	110	0.54	2.9	1.4	2.4	183	1.6	28.3	ND	141	1.1 J	1.4 J	1.2 J	ND	1.7	ND	1,370	2,300	N/A	ND	ND	ND	ND	N/A	4.1	1.3 J	4,042	0.040	0.878
4/6/15	115	0.73	0.78 J	2.1	7.1	147	2.2	22.7	ND	112	ND	3.5 J	2.7 J	0.87 J	2.7	ND	617	1,090	N/A	ND	1.3 J	ND	ND	N/A	2.7 J	0.99 J	2,016	0.021	0.562
5/8/15	110	ND	ND	ND	ND	161	ND	23.0 J	ND	121	ND	ND	ND	ND	ND	ND	573	1,170	N/A	ND	ND	ND	ND	N/A	ND	ND	2,048	0.020	0.647
6/2/15	125	ND	ND	ND	ND	143	ND	19.4 J	33.4	105	133	ND	ND	ND	ND	ND	536	1,110	N/A	ND	ND	ND	ND	N/A	582	142	2,804	0.031	0.787
7/1/15	80	ND	ND	ND	ND	91	ND	14.0	ND	78	ND	ND	ND	ND	ND	ND	390	470	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,043	0.007	0.217
8/10/15	140	12.0	ND	1.3 J	2.4 J	82	2.9 J	16.0	ND	63	ND	ND	ND	ND	12.0	1.4 J	400	590	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,183	0.015	0.595
9/11/15	140	72	ND	2.7 J	1.8 J	130	ND	24	ND	86	ND	ND	ND	ND	ND	1.9 J	510	1,000	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,828	0.023	0.736
10/7/15	145	78	ND	1.5 J	ND	130	ND	24	ND	91	ND	ND	ND	ND	ND	2.0 J	560	900	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,787	0.023	0.605
11/2/15	145	43	ND	3.2 J	1.9 J	140	3.6 J	25	ND	110	ND	ND	ND	ND	ND	2.5 J	570	900	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,799	0.023	0.609
12/3/15	145	34	ND	3.2 J	1.4 J	120	3.2 J	23	ND	83	ND	ND	ND	ND	ND	1.8 J	490	830	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,590	0.021	0.642
1/15/16	140	9.2	ND	1.1 J	2.0	84	2.1	16	ND	80	ND	3.0 J	ND	ND	2.7	1.5 J	320	480 DL	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,002	0.013	0.541
2/12/16	140	2.6	ND	1.0 J	1.0 J	100	2.4	20	0.60 J	82	ND	ND	ND	ND	ND	1.6	550 EB	840 E	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,601	0.020	0.564
3/9/16	130	36	0.49 J	7.9	1.5 J	130	2.4	25	0.70 J	98	ND	2.8 J	ND	0.64 J	5.3	2.0	680 E	1,300 E	N/A	ND	ND	ND	0.42 J	ND	N/A	N/A	2,293	0.027	0.696
4/7/16	288	28	ND	ND	ND	230	ND	42	ND	180	ND	ND	ND	ND	ND	ND	940	1,700	N/A	ND	ND	ND	ND	ND	N/A	N/A	3,120	0.081	2.340
4/27/16	250	ND	ND	ND	ND	90	ND	18	ND	68	ND	ND	ND	ND	ND	ND	490	950	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,616	0.036	0.726
5/12/16	248	ND	ND	19	2.0 J	110	3.5 J	18	ND	120	ND	9.0	ND	ND	6.5	ND	600 B	910	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,798	0.040	0.601
6/2/16	259	31	ND	63	ND	150	ND	26	ND	140	ND	ND	ND	ND	ND	3.6 J	670	1,100	N/A	ND	ND	ND	ND	ND	N/A	N/A	2,184	0.051	1.066
7/14/16	252	65	ND	ND	ND	100	ND	17	ND	75	ND	36	ND	ND	15	ND	510	940	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,758	0.040	1.671
8/4/16	260	20	ND	ND	ND	92	ND	17	ND	68	ND	ND	ND	ND	ND	ND	460	860	N/A	ND	8.2 J	ND	ND	ND	N/A	N/A	1,525	0.036	0.748
9/7/16	260	38	ND	1.5 J	1.2 J	88	2.3 J	14	ND	66	ND	15	ND	ND	ND	1.8 J	400	760	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,388	0.032	1.102
10/5/16	270	ND	ND	1.7	ND	81	ND	14	ND	68	ND	ND	ND	ND	ND	ND	410	630	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,205	0.029	0.818
11/3/16	216	ND	ND	ND	ND	350	ND	68	ND	260	ND	49 J	ND	ND	ND	ND	2,000	2,800	N/A	ND	ND	ND	ND	ND	N/A	N/A	5,527	0.107	3.109
12/14/16	225	11	ND	2 J	ND	95	3.1 J	17	ND	120	ND	ND	ND	ND	ND	2.5 J	600	710	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,561	0.032	1.293

TABLE 1

Building A Influent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	FLOW (scfm)	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)	Mass (lbs. removed in period)
1/13/17	195	**17**	ND	ND	**8.4 J**	**440**	ND	**81**	ND	**370**	ND	**130**	ND	ND	ND	**9.3 J**	**2,000**	**3,600**	N/A	ND	ND	ND	ND	ND	N/A	N/A	**6,656**	**0.117**	3.496
2/8/17	200	**33**	ND	ND	**6**	**110**	**3.7 J**	**19**	ND	**100**	ND	ND	ND	ND	ND	**2.1 J**	**660**	**1,100 E**	N/A	ND	ND	ND	ND	**5.9 J**	N/A	N/A	**2,040**	**0.037**	0.952
3/8/17	360	**21**	ND	ND	**2 J**	**100**	**3.3 J**	**21**	ND	**110**	ND	ND	ND	**8.50 J**	ND	**2.2 J**	**590**	**1,000**	N/A	ND	ND	ND	ND	**6.9 J**	N/A	N/A	**1,865**	**0.060**	1.688
4/5/17	355	**15**	ND	ND	**1.3 J**	**65**	ND	**10**	ND	**71**	ND	ND	ND	ND	ND	ND	**370**	**680**	N/A	ND	ND	ND	ND	ND	N/A	N/A	**1,212**	**0.039**	1.082

Notes:

µg/m^3 - micrograms per cubic meter

B - compound was found in the blank and sample

DL - dilution analysis

E - results exceeded calibration range

EPA - United States Environmental Protection Agency

GAC - granular activated-carbon

J - result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

lbs./day - pounds per day

N/A - not applicable (samples not analyzed for compound)

ND - non-detect (below detection limit)

OM&M - operation, maintenance, and monitoring

scfm - standard cubic feet per minute

SSD - sub-slab depressurization

TO-15 - Toxic Organic Method 15

VOCs - volatile organic compounds

Completed first-phase system expansion (to Building A basement) on October 22, 2010.

Completed second-phase system expansion (to eastern area) on April 13, 2016.

Increase in concentrations following 19-day system shutdown due to blower failure. Blower was replaced on 4/8/13.

Samples not collected in May 2014 and August 2014 as system was shut down due to firewater line break.

Samples analyzed from 4/2/08 to 11/7/13 and from 7/1/15 to present analyzed by TestAmerica, Inc. of Knoxville, TN.

Samples analyzed from 12/5/13 to 6/2/15 analyzed by Pace Analytical Services, Inc. of Minneapolis, MN.

TABLE 2

Building A Mid-GAC Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
4/2/08	6.9	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	6.9	0.0000
4/24/08	ND	ND	N/A	ND	810	ND	240	ND	2,200	ND	ND	ND	ND	ND	ND	2,100	ND	ND	ND	ND	ND	ND	N/A	ND	ND	5,350	0.0400
5/21/08	ND	ND	N/A	ND	280	ND	100	ND	740	ND	ND	ND	ND	ND	ND	410	11	ND	ND	ND	ND	ND	N/A	ND	ND	1,541	0.0100
6/19/08	110	ND	N/A	ND	2,300	ND	830	ND	2,200	ND	53	ND	ND	ND	ND	1,200	ND	ND	ND	ND	ND	ND	N/A	ND	ND	6,693	0.0400
7/18/08	ND	ND	N/A	ND	60	ND	27	ND	270	ND	ND	ND	ND	ND	ND	100	ND	ND	ND	ND	ND	ND	N/A	ND	ND	457	0.0030
8/12/08	ND	ND	N/A	15	60	ND	130	ND	400	ND	ND	ND	ND	ND	ND	1,500	30	16	ND	ND	ND	ND	N/A	ND	ND	2,151	0.0100
9/11/08	ND	ND	N/A	15	ND	ND	170	ND	520	ND	ND	ND	ND	ND	ND	890	53	30	ND	ND	ND	ND	N/A	ND	ND	1,678	0.0100
11/18/08	ND	ND	N/A	ND	ND	ND	60	ND	97	ND	ND	ND	ND	ND	ND	150	180	ND	ND	ND	ND	ND	N/A	ND	ND	487	0.0031
12/18/08	ND	ND	N/A	ND	98	ND	38	ND	330	ND	ND	ND	ND	ND	ND	51	18	ND	ND	ND	ND	ND	N/A	ND	ND	535	0.0040
1/22/09	ND	ND	N/A	ND	42	ND	19	ND	490	ND	ND	ND	ND	ND	ND	25	12	11	ND	ND	ND	ND	N/A	ND	ND	599	0.0045
2/20/09	ND	ND	N/A	ND	220	ND	91	ND	310	ND	ND	ND	ND	ND	ND	380	68	ND	ND	ND	ND	ND	N/A	ND	ND	1,069	0.0081
3/18/09	ND	ND	N/A	ND	210	ND	69	ND	280	ND	ND	ND	ND	ND	ND	1,900	190	ND	ND	ND	ND	ND	N/A	ND	ND	2,649	0.0067
4/17/09	ND	ND	N/A	ND	ND	ND	ND	ND	140	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	140	0.0016
5/20/09	ND	ND	N/A	ND	110	ND	42	ND	140	ND	ND	ND	ND	ND	ND	200	ND	ND	ND	ND	ND	ND	N/A	ND	ND	492	0.0055
6/23/09	ND	ND	N/A	ND	66	ND	130	ND	320	ND	ND	ND	ND	ND	ND	82	ND	18	ND	ND	ND	ND	N/A	ND	ND	616	0.0074
7/23/09	ND	ND	N/A	ND	250	ND	88	ND	210	ND	ND	ND	ND	ND	ND	890	ND	12	ND	ND	ND	ND	N/A	ND	ND	1,450	0.0173
8/28/09	ND	ND	N/A	ND	330	ND	130	ND	290	ND	ND	ND	ND	ND	ND	1,100	ND	14	ND	ND	ND	ND	N/A	ND	ND	1,864	0.0214
9/28/09	ND	ND	N/A	ND	130	ND	38	ND	110	ND	ND	ND	ND	ND	ND	580	ND	ND	ND	ND	ND	ND	N/A	ND	ND	858	0.0096
10/27/09	ND	ND	N/A	ND	170	ND	94	ND	260	ND	ND	ND	ND	ND	ND	180	35	ND	ND	ND	ND	ND	N/A	ND	ND	739	0.0086
11/24/09	ND	ND	N/A	ND	250	ND	84	ND	210	ND	ND	ND	ND	ND	ND	710	ND	ND	ND	ND	ND	ND	N/A	ND	ND	1,254	0.0150
12/23/09	ND	ND	N/A	ND	28	ND	30	ND	180	ND	ND	ND	ND	ND	ND	19	29	ND	ND	ND	ND	ND	N/A	ND	ND	286	0.0035
1/19/10	ND	ND	N/A	ND	190	ND	100	ND	260	ND	ND	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	N/A	ND	ND	566	0.0066
2/17/10	ND	ND	N/A	ND	ND	ND	100	ND	110	ND	ND	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	N/A	ND	ND	226	0.0026
3/17/10	ND	ND	N/A	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	19	0.0000
4/16/10	ND	ND	N/A	ND	260	ND	89	ND	200	ND	ND	ND	ND	ND	ND	600	14	ND	ND	ND	ND	ND	N/A	ND	ND	1,163	0.0125
5/13/10	13	ND	N/A	ND	260	ND	61	ND	180	15	ND	ND	ND	67	ND	1,300	ND	13	ND	12	ND	ND	N/A	55	16	1,992	0.0213
6/18/10	ND	ND	N/A	ND	20	ND	ND	ND	19	ND	ND	ND	ND	ND	ND	18	ND	ND	ND	76	16	ND	N/A	25	14	188	0.0019
7/19/10	ND	ND	N/A	ND	74	ND	24	ND	89	ND	ND	ND	ND	ND	ND	87	ND	ND	ND	11	ND	ND	N/A	ND	ND	285	0.0028
8/19/10	ND	ND	N/A	ND	210	ND	55	ND	210	ND	ND	ND	ND	ND	ND	720	ND	13	ND	ND	ND	ND	N/A	ND	ND	1,208	0.0120
9/17/10	ND	ND	N/A	ND	330	ND	110	ND	310	ND	ND	ND	ND	ND	ND	430	ND	24	ND	ND	ND	ND	N/A	ND	ND	1,204	0.0119
10/12/10	ND	ND	N/A	ND	400	ND	81	ND	170	ND	ND	ND	ND	32	ND	1,000	49	17	ND	ND	ND	ND	N/A	ND	ND	1,749	0.0173
11/2/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.00	0.0000
12/1/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	N/A	ND	ND	14	0.0001
1/5/11	ND	ND	N/A	ND	ND	ND	ND	ND	24	ND	ND	ND	ND	ND	ND	20	11	ND	ND	ND	ND	ND	N/A	ND	ND	55	0.0005
2/7/11	ND	ND	N/A	ND	13	ND	9	ND	95	ND	ND	ND	ND	ND	ND	53	12	20	ND	ND	ND	ND	N/A	ND	ND	202	0.0020
3/3/11	ND	ND	N/A	ND	15	ND	8	ND	120	ND	ND	ND	ND	66	ND	44	16	13	ND	ND	ND	ND	N/A	18	ND	300	0.0030
4/14/11	ND	ND	N/A	ND	110	ND	40	ND	310	ND	25	ND	ND	ND	ND	48	ND	13	ND	ND	ND	ND	N/A	ND	ND	546	0.0054
5/6/11	ND	ND	N/A	ND	150	ND	51	ND	240	ND	ND	ND	ND	ND	ND	70	34	ND	ND	ND	ND	ND	N/A	ND	ND	545	0.0054
6/9/11	14	ND	N/A	23	760	ND	190	ND	340	ND	ND	ND	ND	26	ND	440	51	20	ND	ND	ND	ND	N/A	ND	ND	1,864	0.0184
7/11/11	11	ND	N/A	ND	320	ND	92	ND	220	ND	21	ND	ND	67	ND	320	16	ND	ND	ND	ND	ND	N/A	29	10	1,106	0.0109
8/3/11	ND	ND	N/A	ND	320	ND	60	ND	170	ND	ND	ND	ND	ND	ND	110	ND	ND	ND	ND	ND	ND	N/A	ND	ND	660	0.0065
9/15/11	ND	ND	N/A	ND	170	ND	35	ND	140	ND	ND	ND	ND	ND	ND	200	ND	ND	ND	ND	ND	ND	N/A	ND	ND	545	0.0054
10/18/11	ND	ND	N/A	ND	110	ND	27	ND	80	ND	ND	ND	ND	22	ND	200	ND	ND	ND	ND	ND	ND	N/A	ND	ND	439	0.0043
11/8/11	ND	ND	N/A	ND	130	ND	33	ND	110	ND	ND	ND	ND	ND	ND	330	ND	ND	ND	ND	ND	ND	N/A	ND	ND	603	0.0060
12/6/11	ND	ND	N/A	ND	140	ND	36	ND	140	ND	ND	ND	ND	ND	ND	310	ND	ND	ND	ND	ND	ND	N/A	ND	ND	626	0.0062
1/3/12	ND	ND	N/A	ND	71	ND	19	ND	82	ND	ND	ND	ND	ND	ND	200	ND	ND	ND	ND	ND	ND	N/A	ND	ND	372	0.0037
2/16/12	ND	ND	N/A	ND	120	ND	26	ND	130	ND	ND	ND	ND	ND	ND	430	11	ND	ND	ND	ND	ND	N/A	ND	ND	717	0.0071
3/15/12	ND	ND	N/A	ND	190	ND	37	ND	210	ND	ND	ND	ND	ND	ND	480	38	ND	ND	ND	ND	ND	N/A	ND	ND	955	0.0094
4/16/12	ND	ND	N/A	ND	260	ND	48	ND	200	ND	ND	ND	ND	ND	ND	640	34	ND	ND	ND	ND	ND	N/A	ND	ND	1,182	0.0117
5/9/12	ND	ND	N/A	ND	140	ND	26	ND	140	ND	ND	ND	ND	ND	ND	76	14	ND	ND	ND	ND	ND	N/A	ND	ND	396	0.0039

TABLE 2

Building A Mid-GAC Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
6/4/12	ND	ND	N/A	ND	170	ND	35	ND	170	ND	ND	ND	ND	ND	ND	120	63	ND	ND	ND	ND	ND	N/A	ND	ND	558	0.0055
7/5/12	ND	ND	N/A	ND	320	ND	74	ND	260	ND	19	ND	ND	ND	ND	210	26	12	ND	ND	ND	ND	N/A	ND	ND	921	0.0091
8/15/12	ND	ND	N/A	ND	240	ND	40	ND	130	ND	ND	ND	ND	10	ND	420	20	13	ND	ND	ND	ND	N/A	ND	ND	873	0.0086
9/12/12	ND	ND	N/A	ND	180	ND	43	ND	140	ND	ND	ND	ND	14	ND	34	13	13	ND	ND	ND	ND	N/A	ND	ND	437	0.0043
10/18/12	ND	ND	N/A	ND	160	ND	29	ND	95	ND	ND	ND	ND	ND	ND	25	28	ND	ND	ND	ND	ND	N/A	ND	ND	337	0.0033
11/13/12	ND	ND	N/A	ND	89	ND	16	ND	94	ND	ND	ND	ND	ND	ND	20	21	ND	ND	ND	ND	ND	N/A	ND	ND	240	0.0024
12/6/12	ND	ND	N/A	ND	86	ND	14	ND	92	ND	ND	ND	ND	ND	ND	26	20	ND	ND	ND	ND	ND	N/A	ND	ND	238	0.0024
1/4/13	ND	ND	N/A	ND	97	ND	21	ND	130	ND	ND	ND	ND	ND	ND	88	15	ND	ND	ND	ND	ND	N/A	ND	ND	351	0.0035
2/6/13	ND	ND	N/A	ND	120	ND	32	ND	120	ND	ND	ND	ND	ND	ND	180	19	ND	ND	ND	ND	ND	N/A	ND	ND	471	0.0047
3/7/13	ND	ND	N/A	ND	180	ND	46	ND	150	ND	ND	ND	ND	ND	ND	150	37	ND	ND	ND	ND	ND	N/A	ND	ND	563	0.0056
4/8/13	ND	ND	N/A	ND	66	ND	15	ND	46	ND	ND	ND	ND	ND	ND	43	92	ND	ND	ND	ND	ND	N/A	ND	ND	262	0.0026
5/10/13	ND	ND	N/A	ND	380	ND	73	ND	210	ND	ND	ND	ND	ND	ND	170	31	16	ND	ND	ND	ND	N/A	ND	ND	880	0.0087
6/5/13	ND	ND	N/A	ND	210	ND	33	ND	160	ND	ND	ND	23	ND	ND	460	15	ND	ND	ND	ND	ND	N/A	ND	ND	901	0.0089
7/3/13	21	ND	N/A	ND	330	ND	78	ND	200	ND	ND	ND	ND	ND	ND	38	42	ND	ND	ND	ND	ND	N/A	ND	ND	709	0.0070
8/14/13	50	ND	N/A	ND	390	ND	59	ND	120	ND	20	ND	ND	7.3	ND	63	66	11	ND	ND	ND	ND	N/A	ND	ND	786	0.0078
9/9/13	17	ND	N/A	ND	180	ND	23	ND	110	ND	ND	ND	ND	ND	ND	50	21	ND	ND	ND	ND	ND	N/A	ND	ND	401	0.0040
10/10/13	29	ND	N/A	ND	190	ND	33	ND	120	ND	ND	ND	ND	9.9	ND	170	32	ND	ND	ND	ND	ND	N/A	ND	ND	584	0.0058
11/7/13	38	ND	N/A	ND	260	ND	48	ND	95	ND	ND	ND	ND	ND	ND	38	39	ND	ND	ND	ND	ND	N/A	ND	ND	518	0.0051
12/5/13	31.8	ND	ND	ND	107	2.9	18.8	ND	51.6	ND	6.0	5.9	ND	4.7	ND	34.1	43.5	N/A	ND	3.2	ND	ND	N/A	ND	ND	310	0.0031
1/13/14	ND	ND	3.9	1.6	162	2.2	22.4	ND	113.0	1.9	2.3	4.7	42.1	64.0	ND	19.3	4.9	N/A	ND	3.7	1.7	ND	N/A	7.4	2.5	460	0.0045
2/14/14	55.1	ND	3.1	3.1	189	2.8	31.0	ND	166	ND	ND	ND	ND	ND	2.5	64.8	54.9	N/A	ND	ND	ND	ND	N/A	ND	ND	572	0.0057
3/12/14	24.5	ND	4.5	ND	154	2.2	24.5	ND	134	ND	28.1	ND	ND	3.4	ND	38.5	47.5	N/A	ND	ND	ND	ND	N/A	ND	ND	461	0.0046
4/10/14	40.8	ND	ND	ND	270	ND	51.4	ND	267	66.2	ND	ND	ND	45.2	ND	65.6	74.8	N/A	ND	ND	ND	ND	N/A	215	59.5	1,156	0.0114
5/5/14	53.4	ND	1.4	10.5	406	3.1	63.8	ND	253	ND	0.96 J	3.6 J	ND	3.0	5.7	47.8	48.9	N/A	ND	ND	ND	ND	N/A	0.94 J	ND	902	0.0089
6/5/14	2.3	ND	9.6	ND	113	3.0	14.3	ND	165	ND	167	1.8 J	23.1	60.4	ND	63.5	24.5	N/A	ND	1.9	ND	ND	N/A	1.8 J	1.9	653	0.0065
7/3/14	7.6 J	ND	ND	ND	286	ND	47.4	16.8	344	ND	ND	ND	ND	11.7 J	ND	178	25.4	N/A	ND	ND	ND	ND	N/A	ND	ND	917	0.0091
9/16/14	ND	ND	1.9	3.6	294	3.0	53.9	ND	179	0.40 J	ND	ND	0.88 J	4.6	ND	76	43.6	N/A	ND	2.4	0.71 J	ND	N/A	1.2 J	ND	665	0.0066
10/9/14	ND	ND	ND	10.4	361	ND	57.5	ND	157	ND	ND	ND	ND	4.4 J	4.7 J	130	17.9	N/A	ND	ND	ND	ND	N/A	ND	ND	743	0.0073
11/6/14	ND	ND	ND	ND	172	ND	25.7	ND	62.2	ND	9.7 J	ND	16.7	6.1 J	3.7 J	98.6	26.2	N/A	ND	ND	ND	ND	N/A	ND	ND	421	0.0042
12/4/14	1.0	ND	ND	7.0	111	3.0	17.3	ND	45.7	ND	3.5 J	4.0 J	5.8	3.1	2.2 J	109.0	25.2	N/A	ND	ND	ND	ND	N/A	ND	ND	338	0.0033
1/15/15	5.9	ND	ND	ND	7.7 J	30.6	ND	ND	5.2 J	ND	ND	ND	10.4	10.9	ND	54.3	49.0	N/A	ND	8.2 J	ND	ND	N/A	6.8 J	7.5 J	197	0.0019
2/9/15	6.5	ND	ND	1.5	18.7	ND	3.1	ND	15.9	ND	ND	ND	ND	0.70 J	ND	17.1	2.6	N/A	ND	ND	ND	ND	N/A	ND	ND	66	0.0007
3/10/15	21.5	ND	2.8	6.9	73.5	2.3	13.1	ND	70.1	ND	ND	3.1 J	ND	2.0	0.79 J	97.3	87.9	N/A	ND	ND	ND	ND	N/A	1.8 J	ND	383	0.0038
4/6/15	29.7	ND	3.1	14.1	173	3.0	27.5	ND	194	ND	ND	3.3 J	ND	4.6	ND	133	102	N/A	ND	1.3 J	ND	0.41 J	N/A	ND	ND	689	0.0068
5/8/15	13.4	ND	ND	17.0	216	ND	37.5	ND	193	ND	ND	ND	ND	ND	ND	96.2	63.3	N/A	ND	ND	ND	ND	N/A	ND	ND	636	0.0063
6/2/15	44.7	ND	3.0	15.9	238	ND	36.1	10.4	128	7.4	3.9 J	4.6	ND	2.7	3.9	179	74.1	N/A	ND	0.99 J	ND	ND	N/A	32.9	8.5	794	0.0079
7/1/15	3.9	ND	1.5	7.7	140	ND	21.0	ND	74	ND	ND	ND	ND	3.0	2.1	260	43.0	N/A	ND	ND	ND	ND	ND	N/A	N/A	556	0.0055
8/10/15	3.7	ND	ND	7.3	150	2.4	28.0	ND	90	ND	ND	ND	ND	8.4	2.8	180	54.0	N/A	ND	ND	ND	ND	ND	N/A	N/A	527	0.0052
9/11/15	2.2	ND	1.9	10	300	2.8	41	0.66 J	140	ND	5.2	ND	ND	3.3	5.1	390	120	N/A	ND	1.3 J	ND	0.48 J	1.3 J	N/A	N/A	1,025	0.0101
10/7/15	1.5	ND	1.8	8.6	220	2.0	33	ND	98	ND	2.8 J	ND	ND	3.6	3.5	310	71	N/A	ND	ND	3.3	ND	ND	N/A	N/A	759	0.0075
11/2/15	0.58 J	ND	3.0	8.4	210	3.3	33	ND	98	ND	2.9 J	ND	ND	ND	3.0	330	30	N/A	ND	ND	ND	0.45 J	ND	N/A	N/A	723	0.0071
12/3/15	ND	ND	1.5	4.8	110	2.2	20	ND	65	ND	2.3 J	ND	ND	ND	1.4 J	97	4.5	N/A	ND	ND	ND	ND	ND	N/A	N/A	309	0.0031

TABLE 2

Building A Mid-GAC Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
1/15/16	0.58 J	ND	1.9	4.1	110	2.1	25	ND	95	ND	4.0	ND	ND	3.8	1.6	180	31	N/A	ND	ND	ND	ND	ND	N/A	N/A	459	0.0045
2/12/16	ND	ND	2.5	2.2	62	2.6	15	ND	58	ND	3.6	ND	ND	ND	1.0 J	160 B	28	N/A	ND	ND	ND	ND	ND	N/A	N/A	335	0.0033
3/9/16	0.61 J	ND	6.5	3.0	130	2.0	25	ND	100	ND	2.5 J	ND	ND	4.0	1.9	120	3.8	N/A	ND	ND	ND	ND	ND	N/A	N/A	399	0.0039
4/7/16	ND	ND	ND	ND	650	ND	90	ND	290	ND	ND	ND	ND	ND	ND	2,700	530	N/A	ND	ND	ND	ND	ND	N/A	N/A	4,260	0.0421
4/27/16	14	ND	1.8	4.2	210	2.8	17	0.64 J	71	ND	ND	ND	ND	4.9	2.8	250	17	N/A	ND	ND	ND	0.50 J	ND	N/A	N/A	597	0.0059
5/12/16	13	ND	13	4.4 J	190	ND	17	ND	130	ND	17 J	ND	ND	ND	3.8 J	690 B	20	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,098	0.0109
6/2/16	2.6	ND	85	1.1 J	64	2.4	5.6	ND	29	ND	2.2 J	ND	ND	3.1	1.0 J	34	1.6	N/A	ND	ND	ND	0.39 J	1.8 J	N/A	N/A	234	0.0023
7/14/16	3.5	ND	2.5	2.6	170	2.7	18	0.41 J	88	ND	47	ND	ND	5.1	2.8	170	1.7	N/A	ND	1.4 J	ND	ND	2.5 J	N/A	N/A	518	0.0051
8/4/16	2.1	ND	1.5	2.6	160	2.3	25	0.65 J	96	ND	2.3 J	ND	ND	ND	2.6	240	14	N/A	1.7 J	7.5	1.7 J	ND	1.8 J	N/A	N/A	562	0.0056
9/7/16	5.8	0.58 J	1.6	2.8	160	2.8	22	1.1 J	77	ND	3.6	ND	1.7 J	ND	2.9	480 DL	1.1	N/A	ND	1.2 J	ND	0.40 J	1.8 J	N/A	N/A	766	0.0076
10/5/16	11	0.69 J	1.6	4.1	220	2.2	30	1.5 J	100	ND	2.8 J	ND	ND	3	3.5	890 DL	67	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,337	0.0132
11/3/16	42	3.1	3.5	12.0	510 DL	2.9	390	6.3 J	350 E	1 J	13 J	ND	ND	5.6	7.8	4,300 DL	84	N/A	ND	0.8 J	ND	1.2	3.6	N/A	N/A	5,737	0.0567
12/14/16	ND	0.65 J	ND	1.6 J	170	2.6	26	1.0 J	140	ND	6.7	ND	ND	ND	2.8	850 E	110	N/A	ND	ND	ND	0.5 J	ND	N/A	N/A	1,312	0.0130
1/13/17	ND	ND	1.2 J	1.5 J	120	2.5	30	ND	160	ND	8.5	ND	ND	6.3	1.8	610 E	6	N/A	ND	ND	ND	1.2	1.2 J	N/A	N/A	950	0.0094
2/8/17	140	ND	1.1 J	0.7 J	36	1.0 J	9	ND	41	5.6	ND	ND	ND	13.0	0.7 J	190	3	N/A	2.9	6.8	2.4	ND	28	N/A	N/A	481	0.0048
3/8/17	ND	ND	1.3 J	0.7 J	37	2.7	11	ND	61	1.2 J	2.4 J	ND	ND	2.5	0.8 J	160	1 J	N/A	ND	2.3	ND	ND	7.5	N/A	N/A	291	0.0029
4/5/17	1.9	ND	1.0 J	0.5 J	27	2.1	5	ND	47	1.1 J	2.5 J	ND	ND	3.5	0.6 J	43	1 J	N/A	ND	1.7 J	0.8 J	ND	7.5	N/A	N/A	146	0.0014

Notes:

µg/m^3 - micrograms per cubic meter

B - compound was found in the blank and sample

DL - dilution analysis

E - results exceeded calibration range

EPA - United States Environmental Protection Agency

GAC - granular activated-carbon

J - result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

lbs./day - pounds per day

N/A - not applicable (samples not analyzed for compound)

ND - non-detect (below detection limit)

OM&M - operation, maintenance, and monitoring

scfm - standard cubic feet per minute

SSD - sub-slab depressurization

TO-15 - Toxic Organic Method 15

VOCs - volatile organic compounds

Samples not collected in May 2014 and August 2014 as system was shut down due to firewater line break.

Samples analyzed from 4/2/08 to 11/7/13 and from 7/1/15 to present analyzed by TestAmerica, Inc. of Knoxville, TN.

Samples analyzed from 12/5/13 to 6/2/15 analyzed by Pace Analytical Services, Inc. of Minneapolis, MN.

TABLE 3

Building A Effluent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
3/31/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/2/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/4/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	110	N/A	ND	ND	110	0.001
4/11/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/17/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/24/08	ND	ND	N/A	ND	30	ND	13	ND	470	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	513	0.004
5/21/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.00	0.000
6/19/08	76	ND	N/A	ND	67	ND	65	ND	2,200	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	2,408	0.015
8/1/08	ND	ND	N/A	ND	14	ND	15	ND	300	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	329	0.005
8/12/08	ND	ND	N/A	ND	55	ND	42	ND	310	ND	19	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	426	0.005
9/11/08	ND	ND	N/A	ND	ND	ND	ND	ND	46	ND	18	ND	ND	ND	ND	11	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	75	0.001
11/18/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	61	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	61	0.000
12/18/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
1/22/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
2/20/09	ND	ND	N/A	ND	10	ND	ND	ND	110	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	120	0.000
3/18/09	ND	ND	N/A	ND	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	14	0.000
4/17/09	ND	ND	N/A	ND	64	ND	20	ND	53	ND	ND	ND	ND	ND	ND	26	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	163	0.001
5/20/09	ND	ND	N/A	ND	9.9	ND	ND	ND	46	ND	ND	ND	ND	ND	ND	38	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	94	0.000
6/23/09	ND	ND	N/A	ND	11.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	44	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	55	0.000
7/23/09	ND	ND	N/A	ND	ND	ND	21	ND	190	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	211	0.002
8/28/09	ND	ND	N/A	ND	52	ND	29	ND	46	ND	ND	ND	ND	7.7	ND	250	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	385	0.003
9/28/09	ND	ND	N/A	ND	27	ND	19	ND	100	ND	ND	ND	ND	ND	ND	93	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	239	0.002
10/27/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	40	ND	24	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	64	0.001
11/24/09	ND	ND	N/A	ND	ND	ND	ND	ND	53	ND	ND	ND	ND	ND	ND	21	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	74	0.001
12/23/09	ND	ND	N/A	ND	21	ND	10	ND	11	ND	ND	ND	ND	8.8	ND	190	16	ND	N/A	ND	ND	ND	N/A	ND	ND	257	0.003
1/19/10	ND	ND	N/A	ND	27	ND	10	ND	18	ND	ND	ND	ND	ND	ND	200	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	255	0.003
2/17/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
3/17/10	ND	ND	N/A	ND	11	ND	ND	ND	20	ND	ND	ND	ND	ND	ND	17	11	ND	N/A	ND	ND	ND	N/A	ND	ND	59	0.001
4/16/10	ND	ND	N/A	ND	12	ND	9.4	ND	330	ND	ND	ND	ND	ND	ND	27	31	ND	N/A	ND	ND	ND	N/A	ND	ND	409	0.004
5/13/10	7.2	ND	N/A	ND	250	ND	57.0	ND	160	19	ND	ND	ND	58	ND	1,100	24	12	N/A	33	ND	ND	N/A	77	24	1,821	0.019
6/18/10	ND	ND	N/A	ND	ND	ND	ND	ND	90	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	62	13	ND	N/A	16	9.3	190	0.002
7/19/10	ND	ND	N/A	ND	8.7	ND	ND	ND	100	ND	ND	ND	ND	ND	ND	40	16	ND	N/A	ND	ND	ND	N/A	ND	ND	165	0.002
8/19/10	ND	ND	N/A	ND	90	ND	47	ND	270	ND	ND	ND	ND	ND	ND	41	ND	15	N/A	ND	ND	ND	N/A	ND	ND	463	0.005
9/17/10	ND	ND	N/A	ND	88	ND	39	ND	260	ND	ND	ND	ND	ND	ND	120	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	507	0.01
10/12/10	ND	ND	N/A	ND	81	ND	10	ND	58	ND	ND	ND	ND	16	ND	360	30	17	N/A	ND	ND	ND	N/A	ND	ND	572	0.01
11/2/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
12/1/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14.0	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	14	0.000
1/5/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
2/7/11	ND	ND	N/A	ND	ND	ND	ND	ND	24	ND	ND	ND	ND	ND	ND	ND	14	21	N/A	ND	ND	ND	N/A	ND	ND	59	0.000
3/3/11	120	ND	N/A	ND	ND	ND	ND	ND	25	ND	ND	ND	ND	58	ND	ND	ND	19	N/A	ND	ND	ND	N/A	23	ND	245	0.002
4/14/11	ND	ND	N/A	ND	ND	ND	ND	ND	110	ND	23	ND	ND	55	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	11	ND	199	0.002
5/6/11	ND	ND	N/A	ND	8.8	ND	ND	ND	170	ND	ND	ND	ND	ND	ND	21	19	ND	N/A	ND	ND	ND	N/A	ND	ND	219	0.002
6/9/11	ND	ND	N/A	ND	59.0	ND	91	ND	580	ND	ND	ND	ND	30	ND	34	ND	19	N/A	ND	ND	ND	N/A	ND	ND	813	0.008
7/11/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	13	21	ND	ND	100	ND	26	ND	ND	N/A	ND	ND	ND	N/A	43	17	220	0.002
8/3/11	ND	ND	N/A	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	11	ND	20	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	50	0.001
9/15/11	ND	ND	N/A	ND	100	ND	41	ND	150	ND	ND	ND	ND	ND	ND	12	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	303	0.003
10/18/11	ND	ND	N/A	ND	130	ND	35	ND	77	ND	ND	ND	ND	25	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	267	0.003
11/8/11	ND	ND	N/A	ND	150	ND	39	ND	95	ND	ND	ND	ND	ND	ND	15	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	299	0.003
12/6/11	ND	ND	N/A	ND	150	ND	37	ND	110	ND	ND	ND	ND	ND	ND	16	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	313	0.003

TABLE 3

Building A Effluent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
1/3/12	ND	ND	N/A	ND	56	ND	15	ND	67	ND	ND	ND	ND	ND	ND	20	11	ND	N/A	ND	ND	ND	N/A	ND	ND	169	0.002
2/16/12	ND	ND	N/A	ND	85	ND	24	ND	100	ND	ND	ND	ND	ND	ND	52	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	261	0.003
3/15/12	ND	ND	N/A	ND	82	ND	19	ND	100	ND	ND	ND	ND	ND	ND	45	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	246	0.002
4/16/12	ND	ND	N/A	ND	180	ND	44	ND	240	ND	ND	ND	ND	ND	ND	140	12	ND	N/A	ND	ND	ND	N/A	ND	ND	616	0.006
5/9/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
6/4/12	ND	ND	N/A	ND	ND	ND	ND	ND	12	9.6	ND	ND	ND	9.1	ND	ND	18	ND	N/A	ND	ND	ND	N/A	42	12	103	0.001
7/5/12	ND	ND	N/A	ND	ND	ND	ND	ND	87	ND	ND	ND	ND	26	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	113	0.001
8/15/12	ND	ND	N/A	ND	130	ND	38	ND	210	ND	ND	ND	ND	8.7	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	387	0.004
9/12/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	13	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	13	0.000
10/18/12	ND	ND	N/A	ND	ND	ND	ND	ND	9.8	ND	ND	ND	ND	ND	ND	ND	13	ND	N/A	ND	ND	ND	N/A	ND	ND	23	0.000
11/13/12	ND	ND	N/A	ND	ND	ND	ND	ND	48	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	48	0.001
12/6/12	ND	ND	N/A	ND	8.8	ND	ND	ND	63	ND	ND	ND	ND	ND	ND	ND	13	ND	N/A	ND	ND	ND	N/A	ND	ND	85	0.001
1/4/13	ND	ND	N/A	ND	33	ND	12	ND	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	145	0.001
2/6/13	ND	ND	N/A	ND	77	ND	28	ND	150	ND	ND	ND	ND	ND	ND	ND	11	ND	N/A	ND	ND	ND	N/A	ND	ND	266	0.003
3/7/13	ND	ND	N/A	ND	130	ND	40	ND	140	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	310	0.003
4/8/13	ND	ND	N/A	ND	56	ND	16	ND	55	ND	ND	ND	ND	ND	ND	ND	42	ND	N/A	ND	ND	ND	N/A	ND	ND	169	0.002
5/10/13	ND	ND	N/A	ND	180	ND	38	ND	190	ND	ND	ND	ND	ND	ND	12	16	ND	N/A	ND	ND	ND	N/A	ND	ND	436	0.004
6/5/13	ND	ND	N/A	ND	86	ND	21	ND	110	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	217	0.002
7/3/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
8/14/13	ND	ND	N/A	ND	8.2	ND	ND	ND	52	ND	17	ND	ND	ND	ND	ND	16	ND	N/A	ND	ND	ND	N/A	ND	ND	93	0.001
9/9/13	ND	ND	N/A	ND	15	ND	ND	ND	180	ND	ND	ND	ND	ND	ND	ND	ND	12	N/A	ND	ND	ND	N/A	ND	ND	207	0.002
10/10/13	ND	ND	N/A	ND	270	ND	66	ND	190	ND	ND	ND	ND	11	ND	ND	13	15	N/A	ND	ND	ND	N/A	ND	ND	565	0.006
11/7/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
12/5/13	0.97	ND	856	ND	1.9	ND	3.0	ND	14.8	ND	105	ND	1.6	3.0	ND	ND	1.8	N/A	12	ND	ND	ND	N/A	ND	ND	1,000	0.010
1/13/14	1.7	ND	12.5	ND	6.4	2.3	5.9	ND	31.3	1.9	1.8	5.7	ND	22.2	ND	ND	ND	N/A	1.4	4.0	ND	ND	N/A	5.8	2.2	105	0.001
2/14/14	0.65	ND	1.7	ND	42.6	2.1	26	ND	111	ND	ND	ND	ND	4.0	ND	2.4	10	N/A	ND	ND	ND	ND	N/A	ND	ND	200	0.002
3/12/14	2.0	ND	13.3	ND	ND	2.3	ND	ND	ND	3.5	35.2	ND	2.6	36.5	ND	ND	1.2	N/A	ND	3.0	ND	ND	N/A	7.7	2.9	110	0.001
4/10/14	2.8	ND	ND	ND	82.9	ND	15.1	ND	97	49.4	48.3	ND	ND	64.9	ND	ND	62.1	N/A	ND	7.2	ND	ND	N/A	154	45.1	629	0.006
5/5/14	0.9	ND	1.4	ND	98.7	2.8	16.8	ND	139	ND	0.88 J	3.1 J	ND	2.5	1.8	1.4 J	ND	N/A	ND	ND	ND	ND	N/A	1.4 J	ND	271	0.003
6/5/14	2.3	ND	3.2	ND	2.9	3.4	ND	ND	ND	ND	19.6	2.6 J	21.9	3.1	ND	6.1	7.1	N/A	ND	2.0	ND	ND	N/A	1.7 J	1.9	78	0.001
7/3/14	5.0 J	ND J	3.5 J	ND	4.1 J	ND	ND	ND	8.6	6.8 J	ND	6.8 J	ND	7.2	ND	ND	ND	N/A	ND	7.3 J	6.5 J	ND	N/A	8.8 J	7.4 J	72	0.001
9/16/14	0.42 J	ND	ND	ND	6.5	3.3	3.5	ND	209	ND	1.4 J	4.5	0.89 J	58.2	ND	8.7	19.4	N/A	0.79 J	2.0	0.75 J	ND	N/A	1.2 J	0.86 J	321	0.003
10/9/14	1.7	ND	4.2	ND	75.9	ND	37.2	ND	409	ND	2.5 J	7.1 J	ND	4.4	2.6 J	8.5	7.2	N/A	ND	ND	ND	ND	N/A	ND	ND	560	0.006
11/6/14	1.3	ND	ND	ND	177	2.0	44.2	ND	151	ND	6.0	5.7	4.1	3.4	3.7	6.3	7.8	N/A	ND	ND	ND	0.5	N/A	5.3 J	3.2 J	422	0.004
12/4/14	1.2	ND	ND	ND	147	3.4	33.9	ND	71.1	ND	2.4 J	4.0 J	5.3 J	3.0	3.3	6.0	8.2	N/A	ND	ND	ND	ND	N/A	ND	3.5	292	0.003
1/15/15	1.9	ND	ND	3.9	161	7.4	30.1	ND	55.3	ND	1.9 J	1.2 J	1.7	2.2	2.1	10.0	10.0	N/A	ND	0.91 J	ND	ND	N/A	1.5 J	ND	291	0.003
2/9/15	1.0 J	ND	ND	3.8	123	ND	19.1	ND	47.8	ND	ND	ND	ND	0.93 J	1.8	5.9	ND	N/A	ND	ND	ND	ND	N/A	ND	ND	203	0.002
3/10/15	0.59	ND	2.1	8.0	195	1.6 J	27.9	ND	79.2	ND	0.59 J	ND	ND	0.74 J	ND	31.6	11.4	N/A	ND	ND	ND	ND	N/A	ND	ND	359	0.004
4/6/15	2.0	0.75 J	6.9	1.6	44.3	3.1	4.4	0.43 J	18.5	ND	161	ND	ND	19.5	ND	3.9	3.1	N/A	ND	1.2 J	ND	ND	N/A	2.1 J	0.96 J	274	0.003
5/8/15	1.4	ND	2.5	4.3	139	2.7 J	12.6	ND	87.6	4.6 J	4.6 J	4.2 J	13.3	12.3	ND	9.9	10.3	N/A	11.3	16.3	5.9 J	ND	N/A	9.2 J	4.00 J	356	0.004
6/2/15	4.5	ND	3.9	4.3	120	ND	12.6	0.77	130	3.7	5.1 J	4.4	ND	2.6	1.7	12.6	12.3	N/A	ND	1.0 J	ND	ND	N/A	16.1	4.40	340	0.003
7/1/15	ND	ND	1.6	5.4	94	2.0	17.0	ND	120	ND	ND	ND	ND	ND	1.7	14.0	7.7	N/A	ND	ND	ND	ND	ND	N/A	N/A	263	0.003
8/24/15	4.6	ND	2.0	ND	1.3 J	2.3	ND	ND	0.61 J	0.61 J	7.5	ND	0.66 J	3.7	ND	3.7	0.60 J	N/A	ND	0.80 J	ND	ND	2.8 J	N/A	N/A	31	0.000
9/11/15	3.8	ND	2.0	0.40 J	11	2.3	1.1 J	ND	4.7	ND	4.3	ND	ND	ND	ND	21	19	N/A	ND	0.95 J	ND	ND	ND	N/A	N/A	71	0.001
10/7/15	4.6	ND	2.1	ND	9.1	2.1	1.2 J	ND	30	ND	3.0 J	ND	ND	4.3	ND	18	16	N/A	ND	ND	3.7	ND	1.7 J	N/A	N/A	96	0.001
11/2/15	2.2	ND	3.2	ND	2.3	3.2	3.0	ND	80	0.60 J	3.9	ND	ND	ND	ND	1.9 J	1.1	N/A	ND	ND	ND	0.38 J	2.3 J	N/A	N/A	104	0.001
12/3/15	1.7	ND	4.9	0.43 J	12	2.3	6.2	ND	76	ND	5.0	ND	ND	2.6	ND	0.75 J	ND	N/A	ND	ND	ND	ND	ND	N/A	N/A	112	0.001

TABLE 3

Building A Effluent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
1/15/16	2.2	ND	2.0	1.5 J	37	2.3	14	ND	73	ND	2.4 J	ND	ND	2.9	0.96 J	6.3	8.4	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	153	0.002
2/12/16	0.4 J	ND	1.6	3.5 J	74	3.9	24	ND	81	ND	ND	ND	ND	ND	1.8	10 B	15	N/A	ND	ND	1.0 J	ND	ND	N/A	N/A	216	0.002
3/9/16	1.8	ND	5.1	8.9	200	2.0	45	ND	130	ND	2.6 J	ND	ND	4.4	3.3	2.5	0.50 J	N/A	ND	ND	ND	ND	ND	N/A	N/A	406	0.004
4/7/16	ND	ND	ND	41 J	670	ND	230	ND	530	ND	ND	ND	ND	ND	ND	4,000	ND	N/A	ND	ND	ND	ND	ND	N/A	N/A	5,471	0.054
4/27/16	1.5	ND	1.9	ND	ND	2.5	0.40 J	ND	3.4	ND	ND	ND	0.64 J	ND	ND	3.7	0.45 J	N/A	ND	ND	ND	ND	ND	N/A	N/A	14	0.000
5/12/16	1.5 J	ND	18	7.5	140	3.7 J	44	ND	210	ND	17	ND	ND	6.3	ND	780 B	ND	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,228	0.012
6/2/16	0.47 J	ND	13	0.61 J	46	ND	4.0	ND	8.1	0.66 J	ND	ND	ND	3.8	0.63 J	110	18	N/A	ND	ND	ND	ND	1.9 J	N/A	N/A	207	0.002
7/14/16	1.1 J	ND	2.3	1.1 J	73	3.1	12	ND	120	0.59 J	37	ND	ND	6.4	1.4 J	110	18	N/A	ND	1.5 J	ND	0.44 J	2.3 J	N/A	N/A	390	0.004
8/4/16	0.77 J	ND	1.8	2.3	150	3.4	23	ND	120	0.85 J	3.3 J	ND	3.2	2.9	2.7	95	22	N/A	4.1	18	3.8	ND	3 J	N/A	N/A	460	0.005
9/7/16	0.68 J	ND	1.6	3.5	200	2.6	35	ND	110	ND	4.8	ND	ND	ND	3.5	100	9.1	N/A	ND	1.1 J	ND	ND	ND	N/A	N/A	472	0.005
10/5/16	4	ND	1.7	3.4	77	2.1	40	ND	110	ND	3.5	ND	ND	ND	1.5 J	850	9.8	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,103	0.011
11/3/16	ND	1.2 J	3.3	4.5	51	3.1	68	ND	120	ND	11.0	ND	ND	ND	ND	1600 DL	ND	N/A	ND	ND	ND	1.3	ND	N/A	N/A	1,863	0.018
12/14/16	ND	ND	1.4 J	1.4 J	89	2.7	25	ND	120	ND	4.1	ND	ND	ND	1.5 J	660 E	1.8	N/A	ND	ND	ND	0.46 J	ND	N/A	N/A	907	0.009
1/13/17	ND	ND	N/A	N/A	N/A	N/A	N/A	ND	N/A	ND	5.2	ND	1 J	7.4	N/A	0.97 J	N/A	N/A	ND	ND	ND	N/A	2.3 J	N/A	N/A	17	0.000
2/8/17	0.39 J	ND	1.4	0.42	37	N/A	7	ND	N/A	0.67 J	2.3 J	ND	ND	2.5	N/A	75	18	N/A	ND	1 J	ND	N/A	3.2 J	N/A	N/A	149	0.002
3/8/17	ND	ND	1.3 J	0.84 J	33	N/A	15	ND	71	0.80 J	2.4 J	ND	ND	3.7	0.58 J	260	4.6	N/A	ND	ND	ND	0.42 J	4.8	N/A	N/A	398	0.004
4/5/17	ND	ND	1.3 J	0.96 J	63	N/A	5.5	ND	33	0.79 J	ND	ND	ND	3	0.88 J	150	27	N/A	ND	ND	ND	ND	4.8	N/A	N/A	290	0.003

Notes:

µg/m^3 - micrograms per cubic meter

B - compound was found in the blank and sample

E - results exceeded calibration range

EPA - United States Environmental Protection Agency

J - result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

lbs./day - pounds per day

N/A - not applicable (samples not analyzed for compound)

ND - non-detect (below detection limit)

OM&M - operation, maintenance, and monitoring

SSD - sub-slab depressurization

TO-15 - Toxic Organic Method 15

VOCs - volatile organic compounds

The chlorodifluoromethane and 1,2,3-trimethylbenzene concentrations reported in the 12/5/2013 sample were reported as tentatively identified compounds and were converted from 238 ppbv and 2.3. ppbv, respectively.

Samples not collected in May 2014 and August 2014 as system was shut down due to firewater line break.

Samples analyzed from 4/2/08 to 11/7/13 and from 7/1/15 to present analyzed by TestAmerica, Inc. of Knoxville, TN.

Samples analyzed from 12/5/13 to 6/2/15 analyzed by Pace Analytical Services, Inc. of Minneapolis, MN.

TABLE 4

Building C Influent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	FLOW (scfm)	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	chloromethane	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-Dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1,-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)	Mass (lbs. removed in period)
3/31/08	55	ND	ND	N/A	ND	ND	25,000	ND	ND	ND	ND	320	ND	ND	ND	ND	ND	ND	550	ND	N/A	990	740	2,100	N/A	1,100	370	31,170	0.1500	0.450
4/2/08	57	ND	ND	N/A	ND	ND	2,700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	84	ND	N/A	63	56	320	N/A	65	ND	3,288	0.0200	0.040
4/4/08	60	ND	ND	N/A	ND	ND	6,600	ND	ND	ND	32	44	ND	ND	ND	ND	ND	ND	440	ND	N/A	180	170	690	N/A	180	68	8,404	0.0500	0.350
4/11/08	65	ND	ND	N/A	ND	ND	4,100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	600	ND	N/A	73	61	370	N/A	48	ND	5,252	0.0300	0.180
4/17/08	60	ND	ND	N/A	ND	ND	2,900	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	670	ND	N/A	69	55	190	N/A	34	ND	3,918	0.0200	0.140
4/24/08	63	ND	ND	N/A	ND	ND	2,600	ND	ND	ND	ND	ND	ND	ND	28	ND	ND	ND	750	ND	N/A	85	70	130	N/A	32	17	3,712	0.0200	0.540
5/21/08	60	ND	ND	N/A	ND	ND	1,600	ND	ND	ND	ND	ND	ND	ND	17	ND	ND	ND	650	ND	N/A	65	51	41	N/A	15	ND	2,439	0.0100	0.310
6/19/08	60	7.4	ND	N/A	ND	ND	300	ND	ND	ND	ND	ND	ND	ND	ND	110	ND	ND	ND	ND	N/A	23	19	8	N/A	9	ND	476	0.0030	0.090
7/18/08	54	ND	ND	N/A	ND	ND	1,300	ND	ND	ND	ND	ND	ND	ND	14	ND	ND	ND	440	ND	N/A	45	36	35	N/A	ND	ND	1,870	0.0090	0.279
8/13/08	60	ND	ND	N/A	16	ND	410	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	58	ND	N/A	ND	ND	13	N/A	ND	ND	497	0.0030	0.093
9/11/08	60	ND	ND	N/A	ND	ND	730	ND	ND	ND	ND	18	ND	ND	ND	ND	ND	13	130	ND	N/A	ND	ND	20	N/A	ND	ND	911	0.0050	0.305
11/12/08	62	ND	ND	N/A	ND	ND	390	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	110	ND	N/A	ND	ND	17	N/A	ND	ND	517	0.0029	0.086
12/18/08	66	ND	ND	N/A	ND	ND	420	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	150	ND	N/A	ND	ND	22	N/A	ND	ND	592	0.0035	0.105
1/22/09	67	ND	ND	N/A	ND	ND	810	ND	ND	ND	ND	ND	ND	ND	170	ND	ND	ND	580	ND	N/A	37	29	38	N/A	17	14	1,695	0.0102	0.306
2/21/09	65	ND	ND	N/A	ND	ND	630	ND	ND	ND	ND	ND	ND	ND	140	ND	ND	ND	270	ND	N/A	39	34	25	N/A	16	12	1,166	0.0068	0.204
3/18/09	66	ND	ND	N/A	ND	ND	460	ND	ND	ND	ND	ND	ND	ND	160	ND	ND	ND	350	ND	N/A	62	51	16	N/A	14	13	1,126	0.0067	0.200
4/17/09	66	ND	ND	N/A	ND	ND	200	ND	ND	ND	ND	ND	ND	ND	46	ND	ND	ND	86	ND	N/A	19	16	6.1	N/A	ND	ND	373	0.0022	0.066
5/20/09	64	ND	ND	N/A	ND	ND	210	ND	ND	ND	ND	ND	ND	ND	24	ND	ND	ND	79	ND	N/A	14	14	5.7	N/A	ND	ND	347	0.0020	0.060
6/23/09	56	ND	ND	N/A	ND	ND	190	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	58	ND	N/A	ND	ND	ND	N/A	ND	ND	248	0.0012	0.037
7/23/09	60	ND	ND	N/A	ND	ND	150	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	55	ND	N/A	ND	ND	ND	N/A	ND	ND	205	0.0011	0.033
8/28/09	NA	ND	ND	N/A	ND	ND	720	ND	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	160	ND	N/A	ND	ND	13	N/A	ND	ND	910	0.0049	0.147
9/28/09	NA	ND	ND	N/A	ND	ND	39	ND	ND	ND	ND	ND	110	ND	ND	ND	ND	ND	16	ND	N/A	ND	ND	ND	N/A	ND	ND	165	0.0009	0.027
10/27/09	60	ND	ND	N/A	ND	ND	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	64	ND	N/A	ND	ND	ND	N/A	ND	ND	264	0.0014	0.043
11/24/09	60	ND	ND	N/A	ND	ND	190	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	75	ND	N/A	ND	ND	ND	N/A	ND	ND	265	0.0000	0.000
12/23/09	65	ND	ND	N/A	ND	ND	96	ND	ND	ND	ND	ND	ND	ND	ND	26	ND	ND	45	ND	N/A	ND	ND	ND	N/A	8.7	ND	176	0.0010	0.031
1/19/10	65	ND	ND	N/A	ND	ND	140	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	57	ND	N/A	ND	ND	ND	N/A	ND	ND	197	0.0012	0.035
2/17/10	68	ND	ND	N/A	ND	ND	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	37	ND	N/A	ND	ND	ND	N/A	ND	ND	137	0.0008	0.025
3/17/10	65	ND	ND	N/A	ND	ND	87	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	33	ND	N/A	ND	ND	ND	N/A	ND	ND	120	0.0007	0.021
4/16/10	65	ND	ND	N/A	ND	ND	110	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	39	ND	N/A	ND	ND	ND	N/A	ND	ND	149	0.0009	0.026
5/13/10	68	58	ND	N/A	ND	ND	65	ND	ND	ND	ND	38	ND	ND	ND	220	ND	ND	22	ND	N/A	25	ND	ND	N/A	140	39	607	0.0037	0.111
6/18/10	66	ND	ND	N/A	ND	ND	72	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	25	ND	N/A	83	17	ND	N/A	30	17	244	0.0014	0.043
7/19/10	60	ND	ND	N/A	ND	ND	68	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	34	ND	N/A	ND	ND	ND	N/A	ND	ND	102	0.0006	0.017
8/19/10	61	ND	ND	N/A	ND	ND	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	31	ND	N/A	ND	ND	ND	N/A	ND	ND	131	0.0007	0.022
9/17/10	63	ND	ND	N/A	ND	ND	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	33	ND	N/A	ND	ND	ND	N/A	ND	ND	103	0.0006	0.018
10/12/10	60	10	ND	N/A	ND	ND	160	ND	ND	ND	ND	11	ND	ND	ND	130	ND	110.0	70	ND	N/A	ND	ND	ND	N/A	23	ND	514	0.0028	0.083
11/2/10	65	ND	ND	N/A	ND	ND	65	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	35	ND	N/A	ND	ND	ND	N/A	ND	ND	100	0.0006	0.018
12/1/10	65	ND	ND	N/A	ND	ND	120	ND	ND	ND	ND	ND	ND	ND	19	ND	ND	ND	89	ND	N/A	ND	ND	ND	N/A	ND	ND	228	0.0013	0.040
1/5/11	68	ND	ND	N/A	ND	ND	160	ND	ND	ND	ND	ND	ND	ND	94	7.7	ND	ND	250	ND	N/A	ND	ND	9	N/A	ND	ND	520	0.0032	0.095
2/7/11	70	ND	ND	N/A	ND	ND	180	ND	ND	ND	ND	ND	ND	ND	120	ND	ND	ND	270	ND	N/A	ND	ND	ND	N/A	ND	ND	570	0.0036	0.108
3/3/11	69	ND	ND	N/A	ND	ND	170	ND	ND	ND	ND	ND	ND	ND	110	34	ND	ND	180	ND	N/A	ND	ND	ND	N/A	ND	ND	494	0.0031	0.092
4/14/11	65	ND	ND	N/A	ND	ND	130	ND	ND	ND	ND	ND	ND	ND	37	10	ND	ND	90	ND	N/A	ND	ND	ND	N/A	ND	ND	267	0.0016	0.047
5/6/11	70	8	ND	N/A	ND	ND	100	ND	ND	ND	ND	16	ND	ND	19	ND	ND	ND	82	ND	N/A	ND	ND	ND	N/A	9	ND	234	0.0015	0.046
6/9/11	55	26	ND	N/A	ND	ND	97	ND	ND	ND	ND	ND	ND	ND	ND	14	ND	ND	63	ND	N/A	ND	ND	ND	N/A	ND	ND	200	0.0010	0.030
7/11/11	51	20	ND	N/A	ND	ND	74	ND	ND	ND	ND	ND	37	ND	ND	62	ND	ND	26	ND	N/A	ND	ND	ND	N/A	21	ND	240	0.0011	0.033
8/3/11	50	14	ND	N/A	ND	ND	76	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	34	ND	N/A	ND	ND	ND	N/A	ND	ND	124	0.0006	0.017
9/15/11	48	10	ND	N/A	ND	ND	22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	32	0.0001	0.004
10/25/11	55	ND	ND	N/A	ND	ND	38	ND	ND	ND	ND	ND	27	ND	ND	20	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	11	ND	96	0.0005	0.015
11/8/11	55	12	ND	N/A	ND	ND	45	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	16	ND	N/A	ND	ND	ND	N/A	ND	ND	73	0.0004	0.011
12/6/11	55	ND	ND	N/A	ND	ND	62	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	21	ND	N/A	ND	ND	ND	N/A	ND	ND	83	0.0004	0.013

TABLE 4

Building C Influent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	FLOW (scfm)	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	chloromethane	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-Dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1,-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)	Mass (lbs. removed in period)
1/3/12	50	ND	ND	N/A	ND	ND	55	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	21	ND	N/A	ND	ND	ND	N/A	ND	ND	76	0.0003	0.011
2/16/12	54	ND	ND	N/A	ND	ND	76	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	43	ND	N/A	ND	ND	ND	N/A	ND	ND	119	0.0006	0.017
3/15/12	55	ND	ND	N/A	ND	ND	93	ND	ND	ND	ND	ND	ND	ND	16	ND	ND	ND	58	ND	N/A	ND	ND	ND	N/A	ND	ND	167	0.0008	0.026
4/16/12	54	ND	ND	N/A	ND	ND	64	ND	ND	ND	ND	ND	ND	ND	16	ND	ND	ND	56	ND	N/A	ND	ND	ND	N/A	ND	ND	136	0.0007	0.020
5/9/12	51	ND	ND	N/A	ND	ND	72	ND	ND	ND	ND	ND	ND	ND	20	9.8	ND	ND	65	ND	N/A	ND	ND	ND	N/A	ND	ND	167	0.0008	0.024
6/4/12	52	ND	ND	N/A	ND	ND	71	ND	ND	ND	ND	ND	ND	ND	17	ND	ND	ND	50	ND	N/A	ND	ND	ND	N/A	ND	ND	138	0.0006	0.003
8/16/12	49	ND	ND	N/A	ND	ND	39	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	ND	N/A	ND	ND	ND	N/A	ND	ND	58	0.0003	0.008
9/12/12	30	ND	ND	N/A	ND	ND	41	ND	ND	ND	ND	ND	ND	ND	23	ND	ND	ND	22	ND	N/A	ND	ND	ND	N/A	ND	ND	86	0.0002	0.007
10/18/12	65	ND	ND	N/A	ND	ND	95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	45	ND	N/A	ND	ND	ND	N/A	ND	ND	140	0.0008	0.025
11/13/12	61	ND	ND	N/A	ND	ND	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	270	ND	N/A	ND	ND	ND	N/A	31	16	335	0.0018	0.055
12/6/12	62	ND	ND	N/A	ND	ND	70	ND	ND	ND	ND	ND	ND	ND	22	ND	ND	ND	91	ND	N/A	ND	ND	5.3	N/A	ND	ND	188	0.0010	0.033
1/4/13	56	ND	ND	N/A	ND	ND	66	ND	ND	ND	ND	ND	ND	ND	42	ND	ND	ND	110	ND	N/A	ND	ND	ND	N/A	ND	ND	218	0.0011	0.034
2/6/13	60	ND	ND	N/A	ND	ND	49	ND	ND	ND	ND	ND	ND	ND	29	ND	ND	ND	91	ND	N/A	ND	ND	ND	N/A	ND	ND	169	0.0009	0.026
3/7/13	57	ND	ND	N/A	ND	ND	60	ND	ND	ND	ND	ND	ND	ND	45	ND	ND	ND	100	ND	N/A	ND	ND	ND	N/A	ND	ND	205	0.0011	0.033
4/8/13	57	ND	ND	N/A	ND	ND	44	ND	ND	ND	ND	ND	ND	ND	21	ND	ND	ND	52	ND	N/A	ND	ND	ND	N/A	ND	ND	117	0.0006	0.018
5/10/13	112	ND	ND	N/A	ND	ND	120	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,900	ND	N/A	ND	ND	ND	N/A	80	ND	3,100	0.0312	0.968
6/5/13	161	ND	ND	N/A	ND	ND	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	460	50	N/A	ND	ND	ND	N/A	31	15	566	0.0082	0.246
7/3/13	182	12	ND	N/A	ND	12	ND	ND	ND	ND	ND	9.4	ND	ND	ND	ND	ND	ND	290	16	N/A	11	ND	ND	N/A	43	23	416	0.0068	0.211
8/14/13	180	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	20	ND	ND	ND	ND	ND	210	18	N/A	ND	ND	ND	N/A	20	11	279	0.0045	0.140
9/9/13	182	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	150	ND	N/A	ND	ND	ND	N/A	ND	ND	150	0.0025	0.074
10/10/13	190	14	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	200	16	N/A	ND	ND	ND	N/A	20	10	260	0.0044	0.138
11/7/13	160	13	ND	N/A	ND	ND	18	ND	ND	ND	ND	9.8	ND	ND	ND	ND	ND	ND	280	ND	N/A	ND	ND	ND	N/A	45	24	390	0.0056	0.168
12/5/13	154	6.3	ND	ND	ND	N/A	13	6.6	ND	ND	ND	7.3	4.1	33.9	5.4	4.0	ND	ND	228	N/A	ND	4.8	2.4	ND	N/A	30.4	16.1	362	0.0050	0.155
1/13/14	175	13.7	ND	4.7	ND	N/A	5.7	ND	ND	ND	ND	10.3	3.4	22.6	5.6	49.6	ND	ND	298	N/A	5.5	17.8	ND	ND	N/A	49.1	19.3	505	0.0079	0.246
2/14/14	168	1.8	ND	4.5	ND	N/A	2.3	2.2	ND	ND	ND	2.1	ND	5.3	2.2	2.7	ND	ND	157	N/A	ND	2.8	ND	ND	N/A	8.9	4.7	197	0.0030	0.083
3/12/14	175	9.1	ND	3.0	3.2	N/A	4.9	2.2	ND	ND	ND	5.9	ND	11.5	3.3	6.0	ND	ND	261.0	N/A	1.6	6.0	3.0	ND	N/A	25.3	12.3	358	0.0056	0.175
4/10/14	168	10	ND	7.1	ND	N/A	7.0	ND	ND	ND	ND	67	ND	12.1	5.1	50.7	ND	6.6	266	N/A	ND	6.9	ND	ND	N/A	218	67.4	724	0.0109	0.317
5/5/14	182	11.8	1.2	5.8	1.5 J	N/A	7.6	2.9	ND	ND	ND	4.7	1.2 J	12.7	3.6	30.6	ND	ND	236	N/A	2.1	6.8	3.5	ND	N/A	20.9	11.3	364	0.0060	0.149
6/5/14	180	12.8	ND	ND	2.7	N/A	2.7	2.1	ND	ND	ND	4.1	24.5	13.1	23.1	11.6	ND	ND	154	N/A	6.1	18	6.1	ND	N/A	27	12.1	320	0.0052	0.160
7/3/14	182	14.4	0.77 J	11.2	5.6	N/A	4.1	1.4 J	ND	ND	0.88 J	6.3	147	16.9	7.1	5.7	0.81 J	ND	183	N/A	2.8	7.3	4.7	ND	N/A	19.4	9.8	449	0.0073	0.206
8/13/14	166	10.8	1.7	N/A	66.2	1.5	4.7	ND	7.6	ND	4.8	7.5	ND	20.6	7.0	5.0	ND	33.6	289	N/A	N/A	7.8	3.9	ND	N/A	30.2	16.0	518	0.0077	0.317
9/12/14	175	8.0	1.1	5.6	ND	N/A	5.3	2.9	7.0	ND	ND	2.9	0.76 J	31.2	2.1	3.4	ND	37.9	124	N/A	2.1	5.4	2.1	ND	N/A	17.2	10.8	270	0.0042	0.127
10/9/14	174	6.6	1.2	10.1	0.98	N/A	6.6	2.0	6.1	2.7	3.0	3.2	2.1 J	13.3	2.7	5.1	0.71 J	38.6	137	N/A	2.6	4.7	2.0	ND	N/A	15.8	9.5	277	0.0043	0.117
11/5/14	175	5.2	ND	7.5	ND	N/A	5.7	2.3	3.5	ND	ND	3.2 J	6.0	10.5	5.4	4.3	ND	22.6	111	N/A	3.5 J	5.4	3.2 J	ND	N/A	11.0 J	6.4	217	0.0034	0.092
12/4/14	168	5.3	ND	8.1	1.3	N/A	7.0	2.8	1.9	ND	ND	3.2 J	3.3 J	8.7	7.8	5.0	1.6 J	9.1	106	N/A	3.6 J	4.7	3.7 J	ND	N/A	8.6	5.8	198	0.0030	0.086
1/15/15	175	6.2	ND	8.3	1.7	N/A	5.9	3.1	ND	ND	ND	1.2 J	2.5 J	3.1 J	2.8	3.1	ND	3.0	87.5	N/A	1.2 J	5.5	2.0	ND	N/A	4.8	2.9	145	0.0023	0.096
2/9/15	170	5.6	ND	3.8	0.94	N/A	4.6	ND	ND	ND	ND	1.3 J	0.61 J	2.3 J	1.7	3.7	ND	ND	75.3	N/A	ND	3.8	1.7	ND	N/A	5.3	3.2	114	0.0017	0.043
3/10/15	182	5.0	2.8	4.0	0.82	N/A	3.7	1.5 J	ND	ND	ND	1.3 J	0.62 J	3.0 J	2.1	2.5	ND	0.94 J	80.5	N/A	0.97 J	4.0	1.7	ND	N/A	4.4	2.9	123	0.0020	0.058
4/6/15	175	6.5	1.1	4.6	1.2	N/A	3.6	1.8	2.0	ND	1.1 J	2.0	ND	6.1	2.3	2.3	ND	14.6	107	N/A	1.5 J	5.8	2.4	ND	N/A	8.0	4.3	178	0.0028	0.076
5/8/15	175	6.1	ND	10.4	ND	N/A	2.6	2.3 J	1.7 J	ND	ND	5.3 J	4.0 J	7.8 J	2.1 J	5.2	ND	14	128	N/A	5.1 J	10	5.3 J	ND	N/A	13.3 J	6.5 J	230	0.0036	0.116
6/2/15	170	7.4	1.2	8.3	1.0	N/A	4.0	ND	4.9	ND	ND	2.5	6.3	14.4	3.2	4.3	ND	32.1	132	N/A	3.7	11.1	4.9	ND	N/A	11.4	7.1	260	0.0040	0.099
7/1/15	175	3.2	ND	6.6	4.9	N/A	ND	ND	3.2	ND	ND	ND	ND	ND	ND	2.5	ND	22	20	N/A	ND	ND	ND	ND	ND	N/A	N/A	62	0.0010	0.028
8/10/15	175	5.1	2.1 J	15	0.74 J	N/A	2.7	2.4	5.9	ND	2.0	1.3 J	ND	ND	1.1 J	15.0	ND	45	41	N/A	ND	2.0	0.84 J	ND	7.5	N/A	N/A	150	0.0024	0.094
9/11/15	175	8.0	1.3 J	12	1.1 J	N/A	2.4	2.3	7.7	ND	2.8	2.0	8.7	ND	1.2 J	6.2	ND	58	73	N/A	1.1 J	3.5	1.3 J	ND	11	N/A	N/A	204	0.0032	0.102
10/7/15	175	5.5	ND	3.3	ND	N/A	0.68 J	2.1	2.0	ND	1.0 J	0.60 J	3.4 J	ND	ND	8.7	ND	18	14	N/A	ND	1.2 J	ND	ND	2.6 J	N/A	N/A	63	0.0010	0.026
11/2/15	182	5.1	0.73 J	8.6	0.93 J	N/A	2.3	3.2	3.7	ND	1.4 J	1.2 J	3.4 J	ND	3.5	3.0	ND	32	50	N/A	ND	2.1	0.94 J	ND	5.6	N/A	N/A	128	0.0021	0.054
12/3/15	182	4.5	0.59 J	14	0.51 J	N/A	2.1	2.4	1.5 J	ND	0.54 J	0.61 J	2.4 J	ND	0.94 J	3.9	ND	14	43	N/A	ND	1.9 J	ND	ND	3.2 J	N/A	N/A	96	0.0016	0.049

TABLE 4

Building C Influent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	FLOW (scfm)	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	chloromethane	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-Dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1,-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)	Mass (lbs. removed in period)
1/15/16	188	**4.4**	ND	**4.8**	**0.43 J**	N/A	**0.81 J**	**2.0**	**0.27 J**	ND	ND	ND	**2.4 J**	ND	**0.95 J**	**5.0**	ND	**2.4**	**30**	N/A	ND	**1.3 J**	ND	ND	**2.1 J**	N/A	N/A	**57**	0.0010	0.041
3/9/16	182	**6.4**	**0.64 J**	**12**	**0.88 J**	N/A	**1.9**	**2.3**	**0.69 J**	ND	**0.31 J**	**0.80 J**	**3.3 J**	ND	**0.91 J**	**10**	ND	**11**	**41**	N/A	ND	**2.6**	**0.86 J**	ND	ND	**3.8**	N/A	N/A	**99**	0.0016	0.088
5/12/16	182	**2.9**	**0.50 J**	**6.6**	**1.0 J**	N/A	**1.6**	**2.9**	**0.44 J**	ND	**0.48 J**	**1.1 J**	**2.8 J**	ND	**0.72 J**	**73**	ND	**5.4 B**	**31**	N/A	ND	**1.6 J**	ND	ND	**5.2**	N/A	N/A	**137**	0.0022	0.144
7/14/16	180	**8.0**	**1.2 J**	**13**	**2.4**	N/A	**2.5**	**2.7**	**11**	ND	**5.5**	**1.3 J**	**4.2**	ND	**1.1 J**	**6.2**	ND	**76 B**	**46**	N/A	**1.2 J**	**4.4**	**1.5 J**	ND	**6.5**	N/A	N/A	**195**	0.0031	0.198
9/7/16	182	**8.6**	**0.52 J**	**4.0**	**2.5**	N/A	**2.5**	**2.4**	**4.2**	ND	**1.9**	**1.4 J**	**5.3**	ND	**1.0 J**	**3.2**	ND	**29**	**45**	N/A	**0.93 J**	**3.5**	**1.5 J**	ND	**6.2**	N/A	N/A	**124**	0.0020	0.111
11/3/16	185	**9.8**	**0.80 J**	**22.0**	**2.7**	N/A	**2.8**	**3.0**	**1.7**	ND	**0.8 J**	**1.9**	**13.0**	ND	**1.6 J**	**14**	ND	**13**	**47**	N/A	**1.20 J**	**4.3 J**	**1.4 J**	ND	**9.1**	N/A	N/A	**150**	0.0025	0.142
1/12/17	185	**2.0**	ND	**6.3**	**0.78 J**	N/A	**1.9**	**1.9 J**	ND	ND	ND	**0.90 J**	**6.2**	ND	**0.92 J**	**20**	ND	**1.4 J**	**33**	N/A	ND	**2.0**	**0.91 J**	ND	**4.5**	N/A	N/A	**83**	0.0014	0.096
3/8/17	185	**3.1**	**0.58 J**	**4.8**	**0.59 J**	N/A	**3.5**	**2.7**	**0.31 J**	ND	ND	**2.2**	**3.3 J**	ND	**3.1**	**6.2**	ND	**1 J**	**40**	N/A	ND	**1.8 J**	ND	ND	**12.0**	N/A	N/A	**85**	0.0014	0.078

Notes:

µg/m^3 - micrograms per cubic meter

B - compound was found in the blank and sample

EPA - United States Environmental Protection Agency

lbs. - pounds

lbs./day - pounds per day

J - result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

N/A - not applicable (samples not analyzed for compound)

ND - non-detect (below detection limit)

OM&M - operation, maintenance, and monitoring

scfm - standard cubic feet per minute

SSD - sub-slab depressurization

TO-15 - Toxic Organic Method 15

VOCs - volatile organic compounds

Sampling not conducted in July 2012 due to system shutdown test.

Completed first-phase system expansion on October 31, 2012.

Completed second-phase system expansion on May 10, 2013.

Samples analyzed from 4/2/08 to 11/7/13 and from 7/1/15 to present analyzed by TestAmerica, Inc. of Knoxville, TN.

Samples analyzed from 12/5/13 to 6/2/15 analyzed by Pace Analytical Services, Inc. of Minneapolis, MN.

TABLE 5

Building C Mid-GAC Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,2,4-Trichlorobenzene	1,1,1,-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
4/2/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	720	N/A	ND	ND	720	0.004
4/24/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	230	N/A	ND	ND	230	0.001
5/21/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50	N/A	ND	ND	50	0.000
6/19/08	28	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	51	N/A	ND	ND	79	0.000
7/18/08	ND	ND	N/A	ND	150	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	40	N/A	ND	ND	190	0.001
8/13/08	ND	ND	N/A	ND	750	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	15	N/A	ND	ND	765	0.004
9/11/08	ND	ND	N/A	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	N/A	ND	ND	23	0.000
11/12/08	ND	ND	N/A	ND	160	ND	ND	ND	ND	ND	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	17	N/A	ND	ND	227	0.001
12/18/08	ND	ND	N/A	ND	180	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	25	N/A	ND	ND	205	0.001
1/22/09	ND	ND	N/A	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	35	N/A	ND	ND	48	0.000
2/20/09	ND	ND	N/A	ND	14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	15	N/A	ND	ND	29	0.000
3/18/09	ND	ND	N/A	ND	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	N/A	ND	ND	119	0.001
4/17/09	ND	ND	N/A	ND	340	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.1	N/A	ND	ND	347	0.002
5/20/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000
6/23/09	ND	ND	N/A	ND	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.2	N/A	ND	ND	75	0.000
7/23/09	ND	ND	N/A	ND	360	ND	ND	ND	ND	ND	21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	381	0.002
8/28/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	20	0.000
9/28/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000
10/27/09	ND	ND	N/A	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	13	0.000
11/24/09	ND	ND	N/A	ND	23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	23	0.000
12/23/09	ND	ND	N/A	ND	23	ND	ND	ND	ND	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	36	0.000
1/19/10	ND	ND	N/A	ND	21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	21	0.000
2/17/10	ND	ND	N/A	ND	23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	23	0.000
3/17/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/16/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000
5/13/10	15	ND	N/A	ND	9.6	ND	ND	ND	ND	9.8	ND	ND	ND	51	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	36	10	131	0.001
6/18/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	79	16	ND	N/A	26	15	136	0.001
7/19/10	11	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	11	0.000
8/19/10	ND	ND	N/A	ND	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	15	0.000
9/17/10	35	ND	N/A	ND	26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	61	0.000
10/12/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	ND	ND	24	ND	ND	ND	ND	ND	ND	N/A	ND	ND	36	0.000
11/2/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	ND	ND	N/A	ND	ND	12	0.000
12/1/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000
1/5/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9	N/A	ND	ND	9.0	0.000
2/7/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000
3/3/11	ND	ND	N/A	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	20	0.000
4/14/11	ND	ND	N/A	ND	180	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	180	0.000
5/6/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	11	0.000
6/9/11	32	ND	N/A	ND	17	ND	ND	ND	ND	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	62	0.000
7/11/11	29	ND	N/A	ND	160	ND	ND	ND	ND	ND	28	ND	ND	74	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	24	8.9	324	0.000
8/3/11	25	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	25	0.000
9/15/11	22	ND	N/A	ND	12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	34	0.000
10/25/11	16	ND	N/A	ND	19	ND	ND	ND	ND	ND	24	ND	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	13	ND	92	0.000
11/8/11	16	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	16	0.000
12/6/11	8.4	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	8.4	0.000
1/3/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.00	0.000
2/16/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.00	0.000
3/15/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.00	0.000
4/16/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.00	0.000
5/9/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.00	0.000
6/4/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	8.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	8.7	0.000

TABLE 5

Building C Mid-GAC Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,2,4-Trichlorobenzene	1,1,1-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
8/15/12	ND	ND	N/A	ND	28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	28	0.000
9/12/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	19	0.000
10/18/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000
11/13/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000
12/6/12	ND	ND	N/A	ND	9.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	57	ND	ND	ND	ND	ND	N/A	ND	ND	66	0.001
1/4/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	21	ND	ND	ND	ND	ND	N/A	ND	ND	21	0.000
2/6/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	24	ND	ND	ND	ND	ND	N/A	ND	ND	24	0.000
3/7/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	ND	N/A	ND	ND	19	0.000
4/8/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	ND	N/A	ND	ND	19	0.000
5/10/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	87	ND	ND	ND	ND	ND	N/A	ND	ND	87	0.001
6/5/13	ND	ND	N/A	ND	28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	N/A	ND	ND	47	0.000
7/3/13	ND	ND	N/A	ND	34	ND	ND	ND	ND	ND	21	ND	ND	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	N/A	ND	ND	69	0.001
8/14/13	9.9	ND	N/A	ND	17	ND	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	N/A	ND	ND	56	0.001
9/9/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000
10/10/13	11	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	11	0.000
11/7/13	11	ND	N/A	ND	9.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	ND	ND	N/A	ND	ND	31	0.000
12/5/13	10.9	ND	N/A	ND	7.4	8.6	ND	ND	ND	ND	6.4	ND	ND	2.5	ND	ND	ND	10.7	N/A	ND	ND	ND	ND	N/A	ND	ND	47	0.000
1/13/14	8.3	ND	4.2	ND	11.0	2.2	ND	ND	ND	1.7	2.4	4.8	ND	21.3	ND	ND	3.0	124	N/A	ND	2.7	ND	ND	N/A	5.8	2.4	194	0.002
2/14/14	5.8	ND	6.1	ND	5.7	2.0	ND	ND	ND	ND	ND	2.5	ND	ND	ND	ND	ND	256	N/A	ND	ND	ND	ND	N/A	ND	ND	278	0.003
3/12/14	13.5	ND	3.7	ND	10.5	2.4	ND	ND	ND	3.7	ND	ND	18.2	12.5	ND	ND	ND	5.6	N/A	5.9	15.3	4.4	ND	N/A	17.1	7.6	120	0.001
4/10/14	7.8	ND	8.2	ND	14.6	ND	ND	ND	ND	84.3	ND	ND	ND	64.8	ND	ND	9.6	18.6	N/A	ND	ND	ND	ND	N/A	263	73.6	545	0.005
5/5/14	9.6	ND	6.1	1.3 J	11.7	2.9	ND	ND	ND	ND	1.4 J	3.4 J	ND	1.6	0.90 J	ND	ND	0.86 J	N/A	ND	0.88 J	ND	ND	N/A	0.85 J	ND	41	0.000
6/5/14	8.5	ND	2.6	ND	5.9	2.6	ND	ND	ND	ND	20.6	2.3 J	9.6	1.3 J	ND	ND	ND	ND	N/A	2.0	2.6	ND	ND	N/A	1.9 J	2.2	62	0.001
7/3/14	10.2	0.64 J	12.3	5.1	5.8	1.8	ND	ND	ND	1.4 J	9.7	4.1 J	ND	1.4	0.79 J	ND	ND	3.4	N/A	ND	1.6 J	1.5 J	ND	N/A	1.9 J	1.6	63	0.001
8/13/14	11.4	1.8	N/A	60.1	5.8	1.6 J	5.1	0.69 J	ND	6.0	1.3 J	5.0 J	2.6	10.8	ND	5.4	4.4	20.1	N/A	N/A	14.4	6.3	ND	N/A	18.7	6.4	188	0.002
9/12/14	7.4	2.1	5.9	31.4	5.4	2.4	9.4	ND	ND	0.41 J	1.1 J	ND	0.62 J	1.3	ND	ND	25.3	50.2	N/A	ND	ND	ND	ND	N/A	0.96 J	ND	144	0.001
10/9/14	10.8	ND	11.9	0.90	ND	2.2	1.2 J	ND	ND	ND	1.4 J	4.0 J	ND	1.5	ND	ND	ND	2.2	N/A	ND	ND	ND	ND	N/A	0.87 J	ND	37	0.000
11/5/14	4.9	1.1	8.5	7.3	6.0	2.3	4.7	ND	ND	ND	5.9	5.4	4.2	1.3	ND	ND	15.7	2.8	N/A	ND	ND	ND	ND	N/A	ND	ND	70	0.001
12/4/14	4.9	1.2	7.4	4.9	6.2	3.0	2.9	ND	ND	ND	4.4J	4.0 J	6.0	2.9 J	ND	ND	19.3	ND	N/A	ND	3.1 J	ND	ND	N/A	ND	ND	66	0.001
1/15/15	8.1	ND	8.4	1.8	5.9	3.8	ND	ND	ND	0.74 J	1.7 J	1.0 J	1.7	2.2	ND	ND	9.4	2.9	N/A	ND	0.95 J	ND	ND	N/A	2.4 J	0.80 J	52	0.001
2/9/15	5.9	ND	3.8	1.1	5.7	ND	ND	ND	ND	ND	ND	ND	ND	1.0 J	ND	ND	5.5	6.5	N/A	ND	0.87 J	ND	ND	N/A	1.1 J	ND	31	0.000
3/10/15	1.9	2.7	4.2	ND	3.9	1.9	ND	ND	ND	ND	ND	1.1 J	ND	0.84 J	ND	ND	3.1	4.6	N/A	ND	0.80 J	ND	ND	N/A	0.71 J	ND	26	0.000
4/6/15	2.0	1.1	4.6	1.5	6.0	2.3	1.8	0.71	0.95 J	0.70 J	4.7 J	2.1 J	ND	3.8	ND	ND	9.8	10.6	N/A	ND	1.4 J	0.60 J	ND	N/A	2.6 J	1.2 J	58	0.001
5/8/15	4.2	ND	11.3	ND	3.8	1.7 J	1.5 J	ND	ND	ND	2.1 J	1.8 J	ND	0.79 J	ND	ND	9.2	12.5	N/A	ND	1.4 J	ND	ND	N/A	ND	ND	50	0.000
6/2/15	5.8	ND	6.8	0.82	2.8	2.8	1.6	ND	ND	0.76 J	4.2 J	5.6	ND	1.9	ND	ND	6.0	10.6	N/A	1.1 J	2.5	1.1 J	ND	N/A	2.1 J	1.1 J	58	0.001
7/1/15	ND	ND	7.9	7.9	2.1	ND	9.2	ND	3.5	ND	5.5	ND	ND	ND	ND	ND	13.0	7.4	N/A	ND	ND	ND	ND	ND	N/A	N/A	57	0.001
8/10/15	5.2	ND	17	2.4	1.7	2.8	3.9	ND	1.6	ND	8.2	ND	ND	9.1	ND	ND	5.2	2.9	N/A	ND	ND	ND	ND	1.2 J	N/A	N/A	61	0.001
9/11/15	10	0.74 J	11	3.6	3.9	2.5	8.6	ND	3.2	0.62 J	11	ND	ND	2.8	ND	ND	16	5.9	N/A	ND	1.5 J	ND	ND	3.0 J	N/A	N/A	84	0.001
10/7/15	9.5	1.2 J	5.0	1.9 J	2.3	2.2	7.1	ND	2.7	ND	5.1	ND	ND	3.5	ND	ND	33	0.79 J	N/A	ND	ND	1.8 J	ND	ND	N/A	N/A	76	0.001
11/2/15	5.2	2.2 J	8.5	1.9	3.1	3.1	7.5	ND	2.6	0.83 J	3.8	ND	ND	ND	ND	ND	69	ND	N/A	ND	ND	ND	ND	2.7 J	N/A	N/A	110	0.001
12/3/15	5.8	0.50 J	18	0.71 J	1.6	2.6	2.0	ND	0.76 J	ND	3.0 J	ND	ND	ND	ND	ND	18	ND	N/A	ND	ND	ND	ND	ND	N/A	N/A	53	0.001
1/15/16	2.0	ND	5.4	ND	1.0 J	2.1	0.60 J	ND	0.32 J	ND	2.4 J	ND	ND	ND	ND	ND	7.7	1.0 J	N/A	ND	ND	0.83 J	ND	ND	N/A	N/A	23	0.000
3/9/16	4.8	ND	11	0.38 J	1.2 J	2.4	0.46 J	ND	ND	ND	3.5 J	ND	ND	3.8	ND	ND	7.0	ND	N/A	ND	ND	ND	ND	ND	N/A	N/A	35	0.000
5/12/16	3.6	ND	6.8	0.44 J	1.2 J	3.5	0.46 J	ND	0.51 J	ND	ND	ND	0.54 J	3.9	ND	ND	6.0 B	ND	N/A	ND	0.81 J	ND	ND	ND	N/A	N/A	28	0.000
7/14/16	9.3	0.55 J	9.9	1.4 J	3.4	2.7	3.3	ND	2.7	ND	6.3	ND	1.4 J	ND	ND	ND	11 B	ND	N/A	ND	1.6 J	ND	ND	0.52 J	N/A	N/A	54	0.001
9/7/16	12	0.65 J	3.5	1.5 J	2.7	2.0	7.0	ND	2.7	ND	4.7	ND	1.1 J	ND	ND	ND	16	3.2	N/A	ND	1.1 J	ND	ND	ND	N/A	N/A	58	0.001
11/3/16	11	0.58 J	20.0	1.9	3.1	3.3	6.2	ND	1.9	0.8 J	13.0	ND	ND	9.1	ND	ND	17	0.7 J	N/A	ND	1.1 J	ND	ND	4.0	N/A	N/A	94	0.001

TABLE 5

Building C Mid-GAC Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,2,4-Trichlorobenzene	1,1,1,-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
1/12/17	5.8	ND	5.8	0.56 J	1.2 J	2.0	0.8 J	ND	ND	ND	5.5	ND	ND	11	ND	ND	4.4	ND	N/A	ND	ND	ND	ND	2.7 J	N/A	N/A	40	0.000
3/8/17	5.3	ND	4.4	0.66 J	1.7	2.6	0.69 J	ND	ND	0.66 J	2.4 J	ND	70	4.4	ND	ND	5.3	0.55 J	N/A	ND	ND	ND	ND	3.8	N/A	N/A	102	0.001

Notes:

µg/m^3 - micrograms per cubic meter

B - compound was found in the blank and sample

EPA - United States Environmental Protection Agency

GAC - granular activated carbon

J - result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

lbs./day - pounds per day

N/A - not applicable (samples not analyzed for compound)

ND - non-detect (below detection limit)

OM&M - operation, maintenance, and monitoring

SSD - sub-slab depressurization

TO-15 - Toxic Organic Method 15

VOCs - volatile organic compounds

Sampling not conducted in July 2012 due to shutdown test.

November 2012 sample collected while four new extraction wells installed in October 2012 were operating (November 5-26, 2012). Wells temporarily closed until May 16, 2013.

Samples analyzed from 4/2/08 to 11/7/13 and from 7/1/15 to present analyzed by TestAmerica, Inc. of Knoxville, TN.

Samples analyzed from 12/5/13 to 6/2/15 analyzed by Pace Analytical Services, Inc. of Minneapolis, MN.

TABLE 6

Building C Effluent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	methyl-tert-butyl ether	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,2,4-trichlorobenzene	1,1,1,-trichloroethane	1,1,2,-trichloroethane	trichloroethene	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
3/31/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0	0.000
4/2/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	170	N/A	ND	ND	170	0.002
4/4/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	360	N/A	ND	ND	360	0.004
4/11/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	25	N/A	ND	ND	550	N/A	ND	ND	575	0.006
4/17/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	100	N/A	ND	ND	100	0.001
4/24/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	260	N/A	ND	ND	260	0.003
5/23/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	52	N/A	ND	ND	52	0.001
6/19/08	51	ND	N/A	ND	ND	ND	ND	ND	ND	ND	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	54	N/A	ND	ND	155	0.002
7/18/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	29	N/A	ND	ND	29	0.000
8/13/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	10	ND	16	N/A	ND	ND	26	0.000
9/11/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	63	ND	ND	ND	28	ND	ND	ND	ND	ND	N/A	ND	ND	6.1	N/A	ND	ND	97	0.001
11/12/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	47	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	16	N/A	ND	ND	63	0.001
12/18/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	31	N/A	ND	ND	31	0.000
2/4/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	29	N/A	ND	ND	29	0.000
2/20/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	6.8	N/A	ND	ND	6.8	0.000
3/18/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	26	N/A	ND	ND	26	0.000
4/17/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	8.9	N/A	ND	ND	8.9	0.000
5/20/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
6/23/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	5.5	N/A	9.4	ND	15	0.000
7/23/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	29	0.000
8/28/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
9/28/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
10/27/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
11/24/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
12/23/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	10	0.000
1/19/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
2/17/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
3/17/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/16/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
5/13/10	36	ND	N/A	ND	ND	ND	ND	ND	ND	24	31	ND	ND	ND	140	ND	ND	ND	ND	ND	N/A	17	ND	ND	N/A	89	25	362	0.004
6/18/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	68	16	ND	N/A	28	16	128	0.001
7/19/10	10	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	10	0.000
8/19/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
9/17/10	13	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	13	0.000
10/12/10	ND	ND	N/A	ND	21	ND	ND	ND	ND	ND	ND	ND	ND	ND	42	ND	ND	110	ND	25	N/A	ND	ND	ND	N/A	ND	ND	198	0.002
11/2/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
12/1/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	24	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	24	0.000
1/5/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	12	N/A	ND	ND	12	0.000
2/7/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	5	N/A	ND	ND	5.3	0.000
3/3/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/14/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	13	0.000
5/6/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	15	N/A	ND	ND	ND	N/A	ND	ND	26	0.000
6/9/11	8.4	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.9	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	17	0.000
7/11/11	9.5	ND	N/A	ND	ND	ND	ND	ND	ND	ND	75	ND	ND	ND	61	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	21	ND	167	0.002
8/3/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	21	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	21	0.000
9/15/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
10/25/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	23	ND	ND	ND	21	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	11	ND	55	0.001
11/8/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
12/6/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
1/3/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
2/16/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000

TABLE 6

Building C Effluent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	methyl-tert-butyl ether	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,2,4-trichlorobenzene	1,1,1,-trichloroethane	1,1,2,-trichloroethane	trichloroethene	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
3/15/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/16/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
5/9/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
6/4/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	8.4	ND	23	0.000
8/15/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
9/12/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	22	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	22	0.000
10/18/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
11/13/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
12/6/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
1/4/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
2/6/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	5.3	N/A	ND	ND	5.3	0.000
3/7/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/8/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
5/10/13	9.9	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	34	N/A	ND	ND	ND	N/A	ND	ND	44	0.000
6/5/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
7/3/13	6.4	ND	N/A	ND	ND	ND	ND	ND	ND	ND	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	35	0.000
8/14/13	5.8	ND	N/A	ND	ND	ND	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	23	0.000
9/9/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
10/10/13	11	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	11	0.000
11/7/13	10	ND	N/A	ND	ND	ND	ND	ND	ND	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	30	0.000
12/5/13	9.3	ND	ND	ND	2.1	9.2	ND	ND	ND	ND	13.9	ND	ND	ND	3.5	ND	ND	ND	ND	3.7	ND	4.9	2.3	ND	N/A	ND	ND	49	0.000
1/13/14	4.8	ND	4.3	1.6	8.2	ND	ND	ND	ND	ND	2.3	ND	4.8	ND	26.3	ND	ND	ND	ND	3.8	1.7	7.3	ND	ND	N/A	3.6	ND	69	0.001
2/14/14	6.6	3.3	10.6	3.8	7.0	4.5	2.5	2.4	2.4	2.9	1.3	2.1	3.0	4.5	4.0	2.3	3.3	3.6	3.1	5.7	8.7	6.1	4.3	ND	N/A	3.4	2.8	104	0.001
3/12/14	6.9	ND	2.5	ND	ND	2.2	ND	ND	ND	ND	13.7	ND	ND	ND	3.2	ND	ND	ND	ND	1.9	0.94	5.1	2.3	ND	N/A	ND	ND	39	0.000
4/10/14	6.2	ND	ND	ND	ND	ND	ND	ND	ND	110	ND	ND	ND	ND	95.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	330	91.7	633	0.006
5/5/14	6.0	ND	6.8	ND	2.3	3.2	ND	ND	ND	ND	1.4 J	ND	4.0 J	ND	3.4	ND	ND	ND	ND	ND	1.4 J	7.2	3.5	ND	N/A	1.2 J	ND	40	0.000
6/5/14	5.7	ND	2.9	ND	2.5	2.9	ND	ND	ND	ND	20	ND	2.3 J	21.1	2.3	ND	ND	ND	ND	ND	3.1	7.5	3.5	ND	N/A	1.5 J	1.8	77	0.001
7/3/14	10.6	ND	10.6	1.6	4.2	1.1 J	ND	ND	ND	4.3	5.8 J	ND	2.4 J	20.5	4.2	ND	ND	ND	ND	1.6	1.9	9.7	5.4	ND	N/A	7.4	1.8	93	0.001
8/13/14	6.1	ND	N/A	31.1	4.5	ND	2.1 J	ND	ND	ND	ND	ND	1.8 J	ND	3.0	ND	ND	ND	ND	ND	N/A	8.3	4.4	ND	N/A	3.4 J	2.0 J	67	0.001
9/12/14	4.0	0.89 J	5.9	59.4	3.8	3.6	7.3	ND	3.9	ND	0.80 J	ND	1.6 J	0.62 J	2.2	ND	ND	3.9	ND	6.7	1.4 J	8.0	ND	ND	N/A	0.95 J	ND	115	0.001
10/9/14	6.2	ND	10.9	2.1	ND	ND	2.0	ND	ND	ND	2.3 J	ND	4.0 J	ND	2.3	ND	ND	ND	ND	ND	2.1	6.3	2.9	ND	N/A	ND	ND	41	0.000
11/5/14	4.2	ND	9.0	9.0	2.2	2.6	4.7	ND	ND	ND	6.4	ND	5.9	4.5	2.2	ND	ND	2.1	ND	1.9	3.6 J	6.1	3.9 J	ND	N/A	ND	3.2 J	72	0.001
12/4/14	3.8	ND	7.8	8.0	3.0 J	3.1	3.7	ND	ND	ND	5.9	ND	4.3	5.7	3.3	ND	ND	7.3	ND	ND	3.7 J	5.8	4.2	ND	N/A	ND	ND	70	0.001
1/15/15	11.5	ND	8.4	4.3	4.2	2.9	1.2 J	ND	ND	ND	4.2 J	ND	1.0 J	1.9	4.0	ND	ND	13.0	ND	0.93	1.5 J	8.4	4.0	ND	N/A	1.5 J	ND	73	0.001
2/9/15	7.4	ND	3.2	1.8	2.0 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.1	ND	ND	6.3	ND	ND	1.1 J	6.7	3.0	ND	N/A	ND	ND	34	0.000
3/10/15	2.9	2.8	3.7	0.86	1.1 J	1.7 J	ND	ND	ND	ND	ND	ND	0.99 J	ND	2.1	ND	ND	2.8	ND	ND	1.0 J	4.5	2.1	ND	N/A	0.94 J	ND	27	0.000
4/6/15	10.7	0.79 J	5.1	2.10	3.6	2.7	1.0 J	ND	ND	0.79 J	8.1	ND	ND	ND	2.8	ND	ND	7.8	ND	0.87 J	1.8	8.2	3.9	ND	N/A	1.6 J	ND	62	0.001
5/8/15	5.4	ND	17.9	ND	1.4 J	ND	0.68 J	ND	ND	ND	ND	ND	ND	ND	1.4 J	ND	ND	3.4	ND	ND J	ND	5.2	2.4 J	ND	N/A	ND	ND	38	0.000
6/2/15	13.6	ND	6.1	0.99	1.7	ND	1.1 J	ND	ND	ND	6.4	ND	5.4	ND	3.5	ND	ND	4.4	ND	1.10	2.2	10.2	5.9	ND	N/A	ND	ND	63	0.001
7/1/15	ND	ND	9.7	ND	ND	ND	2.0	ND	2.0	ND	ND	ND	ND	ND	2.5	ND	ND	5.2	ND	ND	ND	ND	ND	ND	ND	N/A	N/A	21	0.000
8/10/15	7.2	ND	15.0	ND	ND	2.4	ND	ND	ND	ND	8.1	ND	ND	ND	15.0	ND	ND	1.4 J	ND	2.4	ND	3.0	1.3 J	ND	ND	N/A	N/A	56	0.001
9/11/15	11	ND	9.0	ND	ND	2.6	0.98 J	ND	1.4 J	ND	6.4	ND	ND	ND	4.1	ND	ND	1.5 J	ND	2.6	1.6 J	5.9	2.5	ND	2.0 J	N/A	N/A	52	0.001
10/7/15	11	ND	3.8	0.90 J	ND	2.1	3.9	ND	1.1 J	ND	4.2	ND	ND	ND	6.2	ND	ND	1.2 J	ND	1.4	ND	2.4	1.1 J	ND	1.2 J	N/A	N/A	41	0.000
11/2/15	9.7	0.48 J	10	4.0	1.5 J	3.6	12	ND	3.2	0.63 J	3.8	ND	ND	2.2 J	2.9	ND	ND	15	ND	ND	ND	2.7	1.3 J	ND	ND	N/A	N/A	73	0.001
12/3/15	5.9	ND	19	1.4 J	0.68 J	2.5	3.3	ND	0.88 J	ND	2.5 J	ND	ND	ND	3.2	ND	ND	9.4	ND	ND	ND	3.0	1.0 J	ND	ND	N/A	N/A	53	0.001
1/15/16	9.4	ND	5.5	0.54 J	ND	2.3	1.2 J	ND	0.48 J	ND	2.7 J	ND	ND	ND	5.0	ND	ND	6.7	ND	ND	1.1 J	4.3	1.7 J	ND	ND	N/A	N/A	41	0.000
3/9/16	5.6	ND	11	0.57 J	0.59 J	2.1	0.97 J	ND	ND	ND	5.4	ND	ND	ND	6.1	ND	ND	7.3	ND	ND	ND	3.3	1.2 J	ND	ND	N/A	N/A	44	0.000
5/12/16	3.9	ND	6.8	0.46 J	0.49 J	3.5	0.51 J	ND	ND	ND	4.0	ND	ND	ND	8.3	ND	ND	7.2 B	ND	ND	ND	2.9	1.1 J	ND	ND	N/A	N/A	39	0.000
7/14/16	10	ND	11	1.1 J	1.2 J	3.3	1.4 J	ND	1.0 J	0.90 J	7.4	ND	ND	ND	5.8	ND	ND	13 B	ND	ND	1.7 J	6.7	2.4	ND	2.4 J	N/A	N/A	69	0.001
9/7/16	7.5	ND	3.5	1.2 J	2.3	2.1	6.1	ND	2.5	ND	4.3	ND	ND	ND	2.7	ND	ND	13	ND	6.9	1.2 J	4.7	1.8 J	ND	ND	N/A	N/A	60	0.001
11/3/16	8.1	ND	17	ND	ND	3.3	1.4	ND	1.3	1.2	23	ND	ND	ND	15	ND	ND	ND	ND	ND	1.3 J	5.2	1.8 J	ND	5.5	N/A	N/A	84	0.001

TABLE 6

Building C Effluent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	methyl-tert-butyl ether	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,2,4-trichlorobenzene	1,1,1,-trichloroethane	1,1,2,-trichloroethane	trichloroethene	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
1/12/17	5.2	ND	5.9	0.50 J	ND	2.0	2.0	ND	0.5 J	1.0 J	12	ND	ND	ND	21	ND	ND	ND	ND	ND	0.9 J	3.2	1.4 J	ND	4.8	N/A	N/A	60	0.001
3/8/17	5.0	ND	4.4	0.61 J	0.5 J	2.8	1.7	ND	0.36 J	1.1 J	2.9 J	ND	ND	ND	7.9	ND	ND	0.72 J	ND	ND	ND	2.7	1.0 J	ND	1.4	N/A	N/A	33	0.000

Notes:

µg/m^3 - micrograms per cubic meter

B - compound was found in the blank and sample

EPA - United States Environmental Protection Agency

lbs./day - pounds per day

J - result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

N/A - not applicable (samples not analyzed for compound)

ND - non-detect (below detection limit)

OM&M - operation, maintenance, and monitoring

SSD - sub-slab depressurization

TO-15 - Toxic Organic Method 15

VOCs - volatile organic compounds

Sampling not conducted in July 2012 due to system shutdown test.

November 2012 sample collected after the potassium permanganate zeolite (PPZ) unit. PPZ unit was taken offline prior to the December 2012 sample.

Samples analyzed from 4/2/08 to 11/7/13 and from 7/1/15 to present analyzed by TestAmerica, Inc. of Knoxville, TN.

Samples analyzed from 12/5/13 to 6/2/15 analyzed by Pace Analytical Services, Inc. of Minneapolis, MN.

APPENDIX A— BIWEEKLY AND QUARTERLY SYSTEM CHECK FORMS

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 10-5-16 **Time:** 1230 **Personnel:** JMW

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC change out?** YES (NO)
9. **How many GAC units are at this location?** NEW _____ SPENT _____
10. **Do the these fall to zero when system is turned off?**
    Flow Gauge (YES) NO
    Pressure Gauge (YES) NO
    Vacuum Gauges (YES) NO
11. **Do the temp. gauges fall when system is turned off?** (YES) NO
12. **Does the heat-exchanger have dust on the underside?** (YES) NO
13. **Was the underside of the heat-exchanger vacuumed?** (YES) NO

Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
37	44	7	155	90		270	4291.6

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	35.8	7MAX	/ *	Yes	None	var vac
South	0.37	556	41.5 *	Yes		
Basement North	2.68	722	63.1 *	No		
Basement South	5.62	904	78.9 *	No		
SSD-34-A	36.2	1932	42.1 **	No		
SSD-35-A	35.8	2565	55.9 **	No		var vac
SSD-36-A	2.20	1460	31.8 **	No		
SSD-37-A	3.38	971	21.2 **	No		
SSD-38-A	17.20	3475	75.8 **	No		var vac

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.09		160-A	0.17	
079-A	*Destroyed*		SSD-1-A	0.00	
167-A	0.02		SSD-12-A-X	1.48	
119-A	0.00		SSD-11-A-X	1.56	
165-A	0.14		SSD-13-A-X	0.38	
117-A	0.06		SSD-2-A-X	N/A	HVY EQP
164-A	0.21		015-A-X	~~N/A~~ 2.98	~~HVY EQP~~ SHW
136-A-S	2.76		SSD-16-A-X	0.44	
163-A	-2.91		SSD-3-A-X	0.23	
121-B	0.00		SSD-22-A	0.04	
162-A	N/A	HVY EQP	SSD-21-A	0.09	
136-A-N	0.00		SSD-20-A	0.19	
136-A	0.01		SSD-19-A	0.00	
161-A	0.04				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	No	N/A	N/A	Yes	
Exhaust Stack Sump	↓	↓	↓	↓	
PS-1-A	↓	↓	↓	↓	
PS-2-A	↓	↓	↓	↓	
PS-3-A	↓	↓	↓	↓	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Green	Green	Green	
Life status color of the GAC Filter (F-2)?	Green	Green	Green	
Life status color of the Post-Filter (F-3)?	Green	Green	Green	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	No	No	No	
Was the Post-Filter (F-3) replaced?	No	No	No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

BLDG-A pressure gauge is stuck @ 0

PERSONNEL SIGNATURE: John Weiler **TIME:** 1420

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 10/21/16 **Time:** _____ **Personnel:** DM

1. Was the system running upon arrival?
YES NO

2. Where there any alarm conditions upon arrival?
YES NO

Comment: _____

3. Is the blower vacuum relief valve open?
YES NO

4. Is the dilution valve open?
YES NO % Open: _____

5. Are there any leaks or damage to system hoses?
YES NO

6. Is there any damage to system components?
YES NO

7. Are all locks and zip-ties secure?
YES NO

8. Was there a GAC change out?
YES NO

9. How many GAC units are at this location?
NEW 3 SPENT 0

10. Do the these fall to zero when system is turned off?

Flow Gauge	YES	NO
Pressure Gauge	YES	NO
Vacuum Gauges	YES	NO

11. Do the temp. gauges fall when system is turned off?
YES NO

12. Does the heat-exchanger have dust on the underside?
YES NO

13. Was the underside of the heat-exchanger vacuumed?
YES NO

Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North			*			
South			*			
Basement North			*			
Basement South			*			
SSD-34-A			**			
SSD-35-A			**			
SSD-36-A			**			
SSD-37-A			**			
SSD-38-A			**			

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A			160-A		
079-A	*Destroyed*		SSD-1-A		
167-A			SSD-12-A-X		
119-A			SSD-11-A-X		
165-A			SSD-13-A-X		
117-A			SSD-2-A-X		
164-A			015-A-X		
136-A-S			SSD-16-A-X		
163-A			SSD-3-A-X		
121-B			SSD-22-A		
162-A			SSD-21-A		
136-A-N			SSD-20-A		
136-A			SSD-19-A		
161-A					

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time				
Summa Canister ID				
Flow Contr. ID				
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator					
Exhaust Stack Sump					
PS-1-A					
PS-2-A					
PS-3-A					

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Green	Green	Green	
Life status color of the GAC Filter (F-2)?	↓	↓	↓	
Life status color of the Post-Filter (F-3)?	↓	↓	↓	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	↓	↓	↓	
Was the Post-Filter (F-3) replaced?	↓	↓	↓	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____ **TIME:** _____

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 11/3/16 **Time:** _____ **Personnel:** DLM / MW

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC change out?** YES (NO)
9. **How many GAC units are at this location?** NEW 3 SPENT 0
10. **Do the these fall to zero when system is turned off?**
    Flow Gauge (YES) NO
    Always 0.0 → Pressure Gauge YES NO
    Vacuum Gauges (YES) NO
11. **Do the temp. gauges fall when system is turned off?** (YES) NO
12. **Does the heat-exchanger have dust on the underside?** YES (NO)
13. **Was the underside of the heat-exchanger vacuumed?** YES (NO)
    Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
13	20	7	125	80	—	216	4647.7

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	3.51	294	25.7 *	No	25% open	
South	12.9	1697	148.1 *	No	25% open	Variable
Basement North	13.50	314	26.5 *	Yes	30% open	VAV VAC
Basement South	0.01	5	0.44 *	No	10% Open	
SSD-34-A	14.81	172	3.7 **	No	100% open	
SSD-35-A	14.06	555	12.1 **	No	100% open	
SSD-36-A	0.98	922	20.1 **	No	30% open	
SSD-37-A	3.84	1056	23.0 **	No	25% open	
SSD-38-A	7.32	2258	49.2 **	No	100% open	

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.03		160-A	0.13	
079-A	0.00	Destroyed	SSD-1-A	0.00	
167-A	0.01		SSD-12-A-X	2.32	
119-A	0.00		SSD-11-A-X	2.11	
165-A	0.12		SSD-13-A-X	0.69	
117-A	0.07		SSD-2-A-X	8.89	
164-A	0.13		015-A-X	0.45	
136-A-S	1.11		SSD-16-A-X	1.97	
163-A	2.49		SSD-3-A-X	0.44	
121-B	0.00		SSD-22-A	0.00	
162-A	N/A	HVY EQP	SSD-21-A	0.00	
136-A-N	0.00		SSD-20-A	0.00	
136-A	0.00		SSD-19-A	0.00	
161-A	0.07				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	1239	1237	1235	
Summa Canister ID	09647	09833	09806	
Flow Contr. ID	71	28	195	
Start Vacuum (in. Hg)	-29	-30	-29.5	
Stop Vacuum (in. Hg)	0	0	0	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	No	—	—	Yes	
Exhaust Stack Sump	No	—	—	Yes	
PS-1-A	No	—	—	Yes	
PS-2-A	No	—	—	Yes	
PS-3-A	No	—	—	Yes	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Green	Green	Green	
Life status color of the GAC Filter (F-2)?	↓	↓	↓	
Life status color of the Post-Filter (F-3)?	↓	↓	↓	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	↓	↓	↓	
Was the Post-Filter (F-3) replaced?	↓	↓	↓	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
Blower Repair/Replace	Currently @ Manufacturer for diagnosis & repair	(OPEN) CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

System operating on a rental blower (Ratron ~~88~~ DR858A472W)

PERSONNEL SIGNATURE: _____ **TIME:** _____

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 11/17/16 **Time:** 1000 **Personnel:** JMW

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC change out?** (YES) NO
9. **How many GAC units are at this location?** NEW 1 SPENT 1
10. **Do the these fall to zero when system is turned off?**
    Flow Gauge (YES) NO
    Pressure Gauge YES NO
    Vacuum Gauges (YES) NO
11. **Do the temp. gauges fall when system is turned off?** (YES) NO
12. **Does the heat-exchanger have dust on the underside?** (YES) NO
13. **Was the underside of the heat-exchanger vacuumed?** (YES) NO

Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
11	20	9	NA	78	N/A	225	4982.7

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	2.74	1185	16.2 *	No	No	
South	11.60	1334	116.5 *	No		
Basement North	2.46 3.25	1325	21.5 *	Yes		Var Vac
Basement South	0.15	391	34.1 *	Yes		Var Vac
SSD-34-A	13.15	640	14.0 **	No		Var Vac
SSD-35-A	13.15	550	12.0 **	No		Var Vac
SSD-36-A	0.86	851	18.6 **	No		
SSD-37-A	3.14	972	21.2 **	No		
SSD-38-A	6.27	2008	43.8 **	No		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.04		160-A	0.64	
079-A	*Destroyed*		SSD-1-A	0.00	
167-A	0.01		SSD-12-A-X	1.82	
119-A	0.00		SSD-11-A-X	1.65	
165-A	0.11		SSD-13-A-X	0.58	
117-A	0.04		SSD-2-A-X	8.04	
164-A	0.15		015-A-X	5.66	
136-A-S	0.93		SSD-16-A-X	1.80	
163-A	+2.65		SSD-3-A-X	0.39	
121-B	0.00		SSD-22-A	0.12	
162-A	NA	Covered	SSD-21-A	0.02	
136-A-N	0.00		SSD-20-A	0.38	
136-A	0.00		SSD-19-A	0.00	
161-A	0.02				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	NA	NA	NA	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	No	-	-	Yes	
Exhaust Stack Sump	Yes	Yes	500mL	Yes	
PS-1-A	No	-	-	Yes	
PS-2-A	No	-	-	Yes	
PS-3-A	No	-	-	Yes	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Green	Green	Green	
Life status color of the GAC Filter (F-2)?	Green	Green	Green	
Life status color of the Post-Filter (F-3)?	Green	Green	Green	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	No	No	No	
Was the Post-Filter (F-3) replaced?	No	No	No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS: Painted skid trip hazard, labelled new waste drum

PERSONNEL SIGNATURE: Michael Miller **TIME:** _____

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 12/1/16 Time: _____ Personnel: DLM

1. Was the system running upon arrival?
   (YES) NO
2. Where there any alarm conditions upon arrival?
   YES (NO)
   Comment: _____
3. Is the blower vacuum relief valve open?
   YES (NO)
4. Is the dilution valve open?
   YES (NO) % Open: _____
5. Are there any leaks or damage to system hoses?
   YES (NO)
6. Is there any damage to system components?
   YES (NO)
7. Are all locks and zip-ties secure?
   (YES) NO
8. Was there a GAC change out?
   YES (NO)
9. How many GAC units are at this location?
   NEW 2 SPENT 6
10. Do the these fall to zero when system is turned off?
    Flow Gauge (YES) NO
    Stuck @ 0 → Pressure Gauge YES NO
    Vacuum Gauges (YES) NO
11. Do the temp. gauges fall when system is turned off?
    (YES) NO
12. Does the heat-exchanger have dust on the underside?
    (YES) NO
13. Was the underside of the heat-exchanger vacuumed?
    (YES) NO
    Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
32	30	8	140	80	N/A	270	5313.2

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	3.35	2061	22.8 *	No	No	
South	12.44	1729	150.9 *	No	~30% open	Var. Vac
Basement North	35.5	16411	143.3 *	Yes	No	
Basement South	0.28	523	46.7 *	Yes		
SSD-34-A	25.0	665	14.5 **	No		
SSD-35-A	24.8	312	6.8 **	No		Variable vac
SSD-36-A	1.46	982	21.4 **	No		
SSD-37-A	3.13	814	17.7 **	No		
SSD-38-A	11.25	2919	63.6 **	No		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.02		160-A	0.13	
079-A	New gfm -0.01		SSD-1-A	0.03	
167-A	0.081		SSD-12-A-X	3.31	
119-A	0.00		SSD-11-A-X	3.08	
165-A	0.14		SSD-13-A-X	1.03	
117-A	N/A	Heavy Equip	SSD-2-A-X	13.83	Var.
164-A	0.21		015-A-X	10.03	
136-A-S	1.73		SSD-16-A-X	3.17	
163-A	-2.51		SSD-3-A-X	0.68	
121-B	0.00		SSD-22-A	0.04	
162-A	N/A	Perm. Cov.	SSD-21-A	0.04	
136-A-N	0.00		SSD-20-A	~~0.04~~ DLM	

136-A	0.00		SSD-19-A	0.00	
161-A	0.07				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	Yes	Yes	37.5gal	Yes	
Exhaust Stack Sump	Yes	Yes	~2.75gal	Yes	
PS-1-A	No	—	—	Yes	
PS-2-A	No	—	—	Yes	
PS-3-A	No	—	—	Yes	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Green	Green	Green	
Life status color of the GAC Filter (F-2)?	↓	↓	↓	
Life status color of the Post-Filter (F-3)?	↓	↓	↓	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	↓	↓	↓	
Was the Post-Filter (F-3) replaced?	↓	↓	↓	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____ **TIME:** _____

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 12-12-16 **Time:** 1100 **Personnel:** JMW

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC change out?** YES (NO)
9. **How many GAC units are at this location?** NEW 1 SPENT 1
10. **Do the these fall to zero when system is turned off?**
    Flow Gauge (YES) NO
    Pressure Gauge YES NO
    Vacuum Gauges (YES) NO
11. **Do the temp. gauges fall when system is turned off?** (YES) NO
12. **Does the heat-exchanger have dust on the underside?** (YES) NO
13. **Was the underside of the heat-exchanger vacuumed?** (YES) NO

Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
26	35	9	136	72	—	225	5572.9

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	2.78	208	18.2 *	X	N/A	
South	10.21	1533	133.8 *	X		
Basement North	27.1	415	36.2 *	✓		Var Vac, VP1
Basement South	50.8	0.30	44.3 *	✓		
SSD-34-A	28.4	292	6.4 **	X		
SSD-35-A	28.4	269	5.9 **	X		
SSD-36-A	1.66	1162	25.3 **	X		
SSD-37-A	3.26	906	19.8 **	X		
SSD-38-A	12.66	2978	64.9 **	X		Var Vac

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.07		160-A	0.10	
079-A	0.00	Destroyed	SSD-1-A	0.04	
167-A	0.03		SSD-12-A-X	1.73	
119-A	0.00		SSD-11-A-X		HVY EAP
165-A	0.11		SSD-13-A-X	0.54	
117-A	0.06		SSD-2-A-X	6.92	
164-A	0.20		015-A-X	5.01	
136-A-S	2.08		SSD-16-A-X	1.59	
163-A	2.86		SSD-3-A-X	0.34	
121-B	0.00		SSD-22-A	2.96	
162-A		HVY EAP	SSD-21-A	0.06	
136-A-N		HVY EAP	SSD-20-A	0.01	
136-A	0.01		SSD-19-A	0.00	
161-A	0.06				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time 12-14-16	1258	1254	1250	
Summa Canister ID	1163	09738	09639	
Flow Contr. ID	11163	05660	10901	
Start Vacuum (in. Hg)	29	30	28	
Stop Vacuum (in. Hg)	0	0	0	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	✓	✓	~1000 mL	Yes	
Exhaust Stack Sump	✓	✓	~10000 mL	Yes	
PS-1-A	X	X	✓	Yes	
PS-2-A	X	X	✓	Yes	
PS-3-A	X	X	✓	Yes	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Green	Green	Green	
Life status color of the GAC Filter (F-2)?	Green	Green	Green	
Life status color of the Post-Filter (F-3)?	Green	Green	Green	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	No	No	No	
Was the Post-Filter (F-3) replaced?	No	No	No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS: Heat trace connected at moisture separator

PERSONNEL SIGNATURE: _____ **TIME:** _____

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 12-29-16 **Time:** 1145 **Personnel:** JMW

1. Was the system running upon arrival?
YES NO

2. Where there any alarm conditions upon arrival?
YES (NO)

Comment: _____

3. Is the blower vacuum relief valve open?
YES (NO)

4. Is the dilution valve open?
YES (NO) % Open: _____

5. Are there any leaks or damage to system hoses?
YES (NO)

6. Is there any damage to system components?
YES (NO)

7. Are all locks and zip-ties secure?
(YES) NO

8. Was there a GAC change out?
YES (NO)

9. How many GAC units are at this location?
NEW 2 SPENT 1

10. Do the these fall to zero when system is turned off?

Flow Gauge	YES	NO
Pressure Gauge	YES	NO
Vacuum Gauges	YES	NO

11. Do the temp. gauges fall when system is turned off?
YES NO

12. Does the heat-exchanger have dust on the underside?
YES NO

13. Was the underside of the heat-exchanger vacuumed?
YES NO

Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
18	26	8	150	74	62	240	5982.4

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	15.50	1554	135.7 *	Yes	No	var vel, vac
South	7.37	1135	99.1 *	No		
Basement North	2.11	195	17.0 *	No		
Basement South	0.26	338	29.5 *	No		
SSD-34-A	19.63	425	9.3 **	No		var vac
SSD-35-A	19.58	505	11.0 **	No		var vel
SSD-36-A	1.19	938	20.4 **	No		replaced cap
SSD-37-A	2.51	810	17.7 **	No		
SSD-38-A	9.29	2539	55.4 **	No		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.04		160-A	0.06	
079-A	NA	Destroy Patching	SSD-1-A	0.00	
167-A	0.02		SSD-12-A-X	1.30	
119-A	0.00		SSD-11-A-X	1.23	
165-A	0.06		SSD-13-A-X	0.40	
117-A	0.05		SSD-2-A-X	NA	HWEAP
164-A	0.13		015-A-X	3.62	
136-A-S	1.46		SSD-16-A-X	1.19	
163-A	-2.13		SSD-3-A-X	0.26	
121-B	0.00		SSD-22-A	0.06	
162-A	NA	Covered	SSD-21-A	0.07	
136-A-N	NA	Could not locate	SSD-20-A	-0.01	
136-A	0.01		SSD-19-A	0.01	
161-A	0.03				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓		

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	Yes	Yes	~40 gal	Yes	
Exhaust Stack Sump	Yes	Yes	~2.5 gal	Yes	
PS-1-A	No	-	-	Yes	
PS-2-A	No	-	-	Yes	
PS-3-A	No	-	-	Yes	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	3/600	3/600	3/600	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Grn	Grn	Grn	
Life status color of the GAC Filter (F-2)?	Grn	Grn	Grn	
Life status color of the Post-Filter (F-3)?	Grn	Grn	Grn	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	No	No	No	
Was the Post-Filter (F-3) replaced?	No	No	No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____ **TIME:** _____

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 1/13/16 **Time:** 1300 **Personnel:** JMW

1. **Was the system running upon arrival?**
   YES (NO - Repaired; spare blower)
2. **Where there any alarm conditions upon arrival?**
   YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?**
   YES (NO)
4. **Is the dilution valve open?**
   YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?**
   YES (NO)
6. **Is there any damage to system components?**
   YES (NO)
7. **Are all locks and zip-ties secure?**
   (YES) NO 10-11 amps
8. **Was there a GAC change out?**
   (YES) NO
9. **How many GAC units are at this location?**
   NEW 1 SPENT 2
10. **Do the these fall to zero when system is turned off?**
    Flow Gauge (YES) NO
    Pressure Gauge (YES) NO
    Vacuum Gauges (YES) NO
11. **Do the temp. gauges fall when system is turned off?**
    (YES) NO
12. **Does the heat-exchanger have dust on the underside?**
    (YES) NO
13. **Was the underside of the heat-exchanger vacuumed?**
    (YES) NO
    Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
24	34	10	117	63	32	195	6092.0

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	1.35	216	18.9 *	No	No	
South	4.13	888	77.5 *	No		
Basement North	N/A		*			
Basement South	N/A	888	*			
SSD-34-A	24.8	442	9.6 **	No		
SSD-35-A	24.8	653	14.3 **	No		
SSD-36-A	1.49	1094	23.8 **	No		
SSD-37-A	3.17	963	21.0 **	No		Missing cap; taped
SSD-38-A	11.77	2891	63.0 **	No	↓	

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.96		160-A	0.10	
079-A	0.00	Destroyed	SSD-1-A	N/A	
167-A	0.04		SSD-12-A-X	1.86	
119-A	N/A		SSD-11-A-X	N/A	Construction HAVERAP
165-A	0.12		SSD-13-A-X	N/A	
117-A	N/A		SSD-2-A-X	2.98	2.08
164-A	0.22		015-A-X	2.08	
136-A-S	1.98		SSD-16-A-X	0.69	
163-A	N/A		SSD-3-A-X	0.15	
121-B	N/A		SSD-22-A	N/A	
162-A	N/A		SSD-21-A	N/A	
136-A-N	N/A		SSD-20-A	N/A	
136-A	N/A		SSD-19-A	N/A	
161-A	0.96				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	1350	1344	1340	
Summa Canister ID	11517	11270	11285	
Flow Contr. ID	09569	10104	10901	
Start Vacuum (in. Hg)	30	29	29	
Stop Vacuum (in. Hg)	0	0.5	9	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	Yes	Yes	~12.5 gallons	Yes	
Exhaust Stack Sump	Yes	Yes	~0.1 gallon	Yes	
PS-1-A	No	—	—	Yes	
PS-2-A	No	—	—	Yes	
PS-3-A	No	—	—	Yes	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Grn	Grn	Grn	
Life status color of the GAC Filter (F-2)?	Grn	Grn	Grn	
Life status color of the Post-Filter (F-3)?	Grn	Grn	Grn	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	No	No	No	
Was the Post-Filter (F-3) replaced?	No	No	No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: J. Wilkes **TIME:** _____

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 1-27-17 Time: 1310 Personnel: JMW

1. Was the system running upon arrival?
   YES NO
2. Where there any alarm conditions upon arrival?
   YES NO
   Comment: _____
3. Is the blower vacuum relief valve open?
   YES NO
4. Is the dilution valve open?
   YES NO % Open: _____
5. Are there any leaks or damage to system hoses?
   YES NO
6. Is there any damage to system components?
   YES NO
7. Are all locks and zip-ties secure?
   YES NO
8. Was there a GAC change out?
   YES NO
9. How many GAC units are at this location?
   NEW ~~0~~ 1 SPENT ~~2~~ 2
10. Do the these fall to zero when system is turned off?
    Flow Gauge YES NO
    Pressure Gauge YES NO
    Vacuum Gauges YES NO
11. Do the temp. gauges fall when system is turned off?
    YES NO
12. Does the heat-exchanger have dust on the underside?
    YES NO
13. Was the underside of the heat-exchanger vacuumed?
    YES NO
    Comment: _____

GENERAL SYSTEM MONITORING							
Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
23	31	8	116	58	24	190	6424.3

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING						
Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	~~200~~ 1.24	~~200~~ ~~1.24~~	17.5 *			
South	4.37	801	69.9 *			
Basement North			*			Last measurement
Basement South			*			Last measurement
SSD-34-A	27.2	542	11.8 **			
SSD-35-A	27.4	375	8.2 **			
SSD-36-A	1.50	1100	24.0 **			
SSD-37-A	3.22	958	20.9 **			
SSD-38-A	12.65	2810	61.3 **			var vac.

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING					
VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.08		160-A	0.08	
079-A	0.00 Destroyed		SSD-1-A	0.00	
167-A	0.05		SSD-12-A-X	0.88	
119-A	0.00		SSD-11-A-X	N/A	HVY EQP
165-A	0.11		SSD-13-A-X	0.27	
117-A	0.06		SSD-2-A-X	N/A	HVY EQP
164-A	0.21		015-A-X	2.12	
136-A-S	0.17		SSD-16-A-X	0.74	
163-A	-0.42		SSD-3-A-X	0.16	
121-B	0.00		SSD-22-A	0.03	
162-A	N/A	HVY EQP	SSD-21-A	0.05	
136-A-N	0.11		SSD-20-A	-0.02	
136-A	-0.01		SSD-19-A	0.01	
161-A	0.05				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	NA	NA	NA	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	Yes	Yes	~30 gal	Yes	
Exhaust Stack Sump	Yes	Yes	~3 gal	Yes	
PS-1-A	No	-	-	Yes	
PS-2-A	No	-	-	Yes	
PS-3-A	No	-	-	Yes	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Grn	Grn	Grn	
Life status color of the GAC Filter (F-2)?	Grn	Grn	Grn	
Life status color of the Post-Filter (F-3)?	Grn	Grn	Grn	
Was the Pre-Filter (F-1) replaced?	~~Brwn~~ No	No	No	
Was the GAC Filter (F-2) replaced?	No	No	No	
Was the Post-Filter (F-3) replaced?	No	No	No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: J. M. Nelly **TIME:** _____

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 2-8-17 **Time:** 1255 **Personnel:** JMW

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC change out?** (YES) NO
9. **How many GAC units are at this location?** NEW 1 SPENT 0
10. **Do the these fall to zero when system is turned off?**
    Flow Gauge (YES) NO
    Pressure Gauge (YES) NO
    Vacuum Gauges (YES) NO
11. **Do the temp. gauges fall when system is turned off?** (YES) NO
12. **Does the heat-exchanger have dust on the underside?** (YES) NO
13. **Was the underside of the heat-exchanger vacuumed?** (YES) NO

Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
20	28	8	118	76	10	200	6701.6

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	1.23	192	16.8 *	X	N/A	
South	3.74	849	74.0 *	X		
Basement North	18.65	608	53.1 *	✓		Var Var
Basement South	0.35	456	39.8 *	X		
SSD-34-A	21.9	~~4,094~~ 409	42.8.9 **	X		
SSD-35-A	21.6	404	8.8 **	X		
SSD-36-A	1.28	1018	22.2 **	X		
SSD-37-A	2.75	865	18.9 **	X		
SSD-38-A	10.16	2804	61.1 **	X		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.07		160-A	0.07	
079-A	-0.01	Destroyed	SSD-1-A	0.00	
167-A	0.02		SSD-12-A-X	0.76	
119-A	0.01		SSD-11-A-X	NA	Destroyed
165-A	0.12		SSD-13-A-X	0.22	
117-A	0.06		SSD-2-A-X	2.71	
164-A	0.22		015-A-X	1.93	
136-A-S	1.72		SSD-16-A-X	0.64	
163-A	-2.77		SSD-3-A-X	0.14	
121-B	0.00		SSD-22-A	0.06	
162-A	NA	PERM. (NE	SSD-21-A	0.06	
136-A-N	0.00		SSD-20-A	0.06	
136-A	0.00		SSD-19-A	0.01	
161-A	0.05				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	~~A-INFLUENT~~ EFFLUENT	A-MID GAC	~~A-EFFLUENT~~ INFLUENT	Comments
Time	1430	1435	1440	
Summa Canister ID	10496	11165	11557	
Flow Contr. ID	10904	09569	10930	
Start Vacuum (in. Hg)	28.5	29	29	
Stop Vacuum (in. Hg)	0.5			

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	Yes	Yes	39 gal	Yes	
Exhaust Stack Sump	Yes	Yes	2 gal	Yes	
PS-1-A	No	–	–	Yes	
PS-2-A	No	–	–	Yes	
PS-3-A	No	–	–	Yes	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	~~Yes~~ 6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Grn	Grn	Grn	
Life status color of the GAC Filter (F-2)?	Grn	Grn	Grn	
Life status color of the Post-Filter (F-3)?	Grn	Grn	Grn	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	No	No	No	
Was the Post-Filter (F-3) replaced?	No	No	No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: J. Wilkes **TIME:** _____

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 2-27-17 **Time:** 1215 **Personnel:** JMW

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC change out?** YES (NO)
9. **How many GAC units are at this location?** NEW 1 SPENT 0
10. **Do the these fall to zero when system is turned off?**

Flow Gauge	YES	NO
Pressure Gauge	YES	NO
Vacuum Gauges	YES	NO

11. **Do the temp. gauges fall when system is turned off?** YES NO
12. **Does the heat-exchanger have dust on the underside?** (YES) NO
13. **Was the underside of the heat-exchanger vacuumed?** (YES) NO

Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
28	28	28	110	62	10	205	6997.5

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	1.24	202	17.6 *	No	N/A	
South	3.83	864	75.4 *	No		
Basement North	18.73	1472	128.5 *	Yes		VGR VAC
Basement South	0.34	408	35.6 *	No		
SSD-34-A	22.5	1012	22.1 **	No		
SSD-35-A	22.5	720	15.7 **	No		
SSD-36-A	1.24	1018	22.2 **	No		
SSD-37-A	2.75	862	18.8 **	No		
SSD-38-A	18.37	2853	62.2 **	No		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.07		160-A	0.06	
079-A	0.00	Destroyed	SSD-1-A	0.00	
167-A	0.03		SSD-12-A-X	0.79	
119-A	0.00		SSD-11-A-X	N/A	HVY EQP
165-A	0.11		SSD-13-A-X	0.24	
117-A	0.05		SSD-2-A-X	N/A	COULD NOT TE
164-A	0.20		015-A-X	1.96	
136-A-S	1.75		SSD-16-A-X	0.64	
163-A	-0.61		SSD-3-A-X	0.16	
121-B	0.00		SSD-22-A	0.07	
162-A	N/A	(INVISIBLE)	SSD-21-A	0.08	
136-A-N	0.00		SSD-20-A	-0.01	
136-A	0.00		SSD-19-A	0.02	
161-A	0.04				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID				
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	Yes	Yes	2.0 gal	Yes	
Exhaust Stack Sump	Yes	Yes	2.5 gal	Yes	
PS-1-A	No	N/A -	-	Yes	
PS-2-A	No	-	-	Yes	
PS-3-A	No	-	-	Yes	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Grn	Grn	Grn	
Life status color of the GAC Filter (F-2)?	Grn	Grn	Grn	
Life status color of the Post-Filter (F-3)?	Grn	Grn	Grn	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	No	No	No	
Was the Post-Filter (F-3) replaced?	No	No	No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: M Miller **TIME:** _____

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 3-8-17 **Time:** 1130 **Personnel:** DMW

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC change out?** YES (NO)
9. **How many GAC units are at this location?** NEW 1 SPENT 0
10. **Do the these fall to zero when system is turned off?**
    Flow Gauge (YES) NO
    Pressure Gauge (YES) NO
    Vacuum Gauges (YES) NO
11. **Do the temp. gauges fall when system is turned off?** (YES) NO
12. **Does the heat-exchanger have dust on the underside?** (YES) NO
13. **Was the underside of the heat-exchanger vacuumed?** (YES) NO
    Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
20	30	10	114	78	2.6	360	7303.6

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	16.07	597	52.1 *	Yes	None	
South	2.69	1774	154.9 *	No		
Basement North	3.69	1094	95.5 *	No		
Basement South	5.11	815	71.1 *	No		
SSD-34-A	21.4	1305	6.6 **	No		var vel
SSD-35-A	21.3	420	9.2 **	No		
SSD-36-A	1.21	452	20.8 **	No		
SSD-37-A	2.62	847	18.5 **	No		
SSD-38-A	9.06	2738	59.7 **	No		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.06		160-A	N/A	HV4 ERP
079-A	0.00	Destroyed	SSD-1-A	1.00	
167-A	0.12		SSD-12-A-X	2.08	
119-A	1.00		SSD-11-A-X	0.00	
165-A	0.12		SSD-13-A-X	0.45	
117-A	0.04		SSD-2-A-X	N/A	covered
164-A	0.21		015-A-X	2.72	
136-A-S	1.66		SSD-16-A-X	0.87	
163-A	1.74		SSD-3-A-X	0.19	
121-B	0.00		SSD-22-A	0.32	
162-A	N/A		SSD-21-A	0.34	
136-A-N	0.00		SSD-20-A	1.03	
136-A	0.00		SSD-19-A	0.02	
161-A	0.04				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	1431	1426	1421	
Summa Canister ID	11520	11543	09582	
Flow Contr. ID	09958	10911	09569	
Start Vacuum (in. Hg)	28.5	28.5	31	
Stop Vacuum (in. Hg)	0	0	0	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	Yes	Yes	23 gal	Yes	
Exhaust Stack Sump	Yes	Yes	3 gal	Yes	
PS-1-A	No	NA	—	Yes	
PS-2-A	No	—	—	Yes	
PS-3-A	No	—	—	Yes	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/3011	6/3000	6/3000	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Grn	Grn	Grn	
Life status color of the GAC Filter (F-2)?	Grn	Grn	Grn	
Life status color of the Post-Filter (F-3)?	Grn	Grn	Grn	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	No	No	No	
Was the Post-Filter (F-3) replaced?	No	No	No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: J. Miller **TIME:** _____

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 3/23/17 **Time:** 12:00 pm **Personnel:** AS

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** YES (NO)

Comment: _____

3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC change out?** YES (NO)
9. **How many GAC units are at this location?** NEW 21 SPENT 0
10. **Do the these fall to zero when system is turned off?**
    - Flow Gauge (YES) NO
    - Pressure Gauge (YES) NO
    - Vacuum Gauges (YES) NO
11. **Do the temp. gauges fall when system is turned off?** (YES) NO
12. **Does the heat-exchanger have dust on the underside?** YES (NO)
13. **Was the underside of the heat-exchanger vacuumed?** (YES) NO

Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
7.0	~~32~~	17	112	66	24	360	7661.0

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	*3.65	17.35	1.5 *	NO		
South	5.10	11.74	1.0 *	NO		
Basement North	*15.85	2789	243.5 *	NO		
Basement South	2.18	1990	173.7 *	NO		
SSD-34-A	21.96	1940	42.3 **	NO		
SSD-35-A	21.90	2408	52.5 **	NO		
SSD-36-A	*1.32	1166	25.4 **	NO		
SSD-37-A	2.60	1128	24.6 **	NO		
SSD-38-A	10.04	3803	82.9 **	NO		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	-.06		160-A	N/A	Covered
079-A	*Destroyed*		SSD-1-A	-.02	
167-A	-.02		SSD-12-A-X	-2.09	
119-A	Could not	access	SSD-11-A-X	—	Covered
165-A	-.10		SSD-13-A-X	-.45	
117-A	-.05		SSD-2-A-X	—	Covered
164-A	-.21		015-A-X	-2.80	
136-A-S	-0.68		SSD-16-A-X	-.88	
163-A	N/A	Covered	SSD-3-A-X	~~Cannot find~~	-.19
121-B	-0.09		SSD-22-A	0.00	
162-A	Can't find		SSD-21-A	-.30	
136-A-N	Can't find		SSD-20-A	-.97	
136-A	3.08		SSD-19-A	-.02	
161-A	-0.04				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time				
Summa Canister ID				
Flow Contr. ID				
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	~~Yes~~	~~Yes~~	~~trace~~	~~yes~~	Yes | Yes | 22 gal. | Yes
Exhaust Stack Sump	Yes	yes	trace	yes	
PS-1-A	NO	—	—	yes	
PS-2-A	NO	—	—	yes	
PS-3-A	NO	—	—	yes	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	yes			
Was the fan running upon arrival?				
Fan speed/airflow setting (#/cfm)				
Is there damage to unit or signs of tampering?				
Is the "do not turn off filter" warning sign in place?				
Life status color of the Pre-Filter (F-1)?				
Life status color of the GAC Filter (F-2)?				
Life status color of the Post-Filter (F-3)?				
Was the Pre-Filter (F-1) replaced?				
Was the GAC Filter (F-2) replaced?				
Was the Post-Filter (F-3) replaced?				

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS: All green lights on air filters in basement

PERSONNEL SIGNATURE: Andrew S. Smith **TIME:** 2:00

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 10-5-16 **Time:** 1000 **Personnel:** JMV

1. **Was the system running upon arrival?** YES / NO
2. **Where there any alarm conditions upon arrival?** YES / NO
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES / NO
4. **Is the dilution valve open?** YES / NO % Open: _____
5. **Are there any leaks or damage to system hoses?** YES / NO
6. **Is there any damage to system components?** YES / NO
7. **Are all locks and zip-ties secure?** YES / NO
8. **Was there a GAC or PPZ change out?** YES / NO Comment: _____
9. **How many GAC and PPZ units are at this location?**
   GAC: NEW 1 SPENT 1
   PPZ: NEW 1 SPENT 0
11. **Do the these fall to zero when system is turned off?**
   Flow Gauge YES NO
   Pressure Gauge YES NO
   Vacuum Gauges YES NO
12. **Do the temp. gauges fall when system is turned off?** YES / NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
35	43	8	160	110	42	18.5	27946.9

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	12.75	1025	22.3	✓	None	Var Vac
SSD-23-C						CLOSED
SSD-30-C	21.7	545	11.9	X		
SSD-26-C	9.61	277	6.0	X		
SSD-31-C	29.8	>MAX	/	✓		Var Vac
SSD-27-C	0.98	1004	21.9	X		
SSD-32-C	2.04	1135	24.7	X		
SSD-28-C	1.32	1556	33.9	X		
SSD-33-C	9.16	1225	26.7	X		
SSD-29-C	20.8	3720	81.1	X		
SSD-34-C	29.8	343	7.5	X	↓	

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	4.68		111-C	0.09	
135-C	1.21		155-C	0.12	
157-C	0.0		133-C	0.50	
113-C	0.35	Variable	154-C	0.03	
156-C	0.20		153-C	0.11	
151-C	0.02		158-C	0.05	
126-C	0.09		001-C	0.25	
149-C	0.38		SSD-22-C	N/A	HVY EQP
050-C	0.00		SSD-2-C	0.33	
141-C	-0.98		SSD-4-C	N/A	HVY EQP
127-C	2.45		SSD-24-C	0.02	
150-C	0.00		SSD-3-C	-0.76	
152-C	1.75		SSD-25-C	0.00	
060-C	N/A	HVY EQP			

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separators					
MS-1	No	N/A	N/A	Yes	
MS-2	No	N/A	N/A	Yes	
Pipe Sumps					
PS-1	No	N/A	N/A	Yes	
PS-2	↓	↓	↓	↓	
PS-3	↓	↓	↓	↓	
PS-4	↓	↓	↓	↓	
PS-5	↓	↓	↓	↓	
System Sumps					
Exhaust Stack	No	N/A	N/A	Yes	
GAC and PPZ Drains					
Lead GAC	No	N/A	N/A	Yes	
Lag GAC	No	N/A	N/A	Yes	
PPZ	No	N/A	N/A	Yes	

13. How many empty drums are on-site? 2

14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 8

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 8

16. How many filter drums are on-site? PART FULL 1 FULL 1

17. Are waste drums labeled and in good condition?

YES NO Comment: _____

18. Is the secondary containment pad in good condition?

YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: John Wilder **TIME:** 1200

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 10/21/16 **Time:** 1111 **Personnel:** _____

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC or PPZ change out?** YES (NO) Comment: _____
9. **How many GAC and PPZ units are at this location?**
   GAC: NEW 3 SPENT 0
   PPZ: NEW 1 SPENT 0
11. **Do the these fall to zero when system is turned off?**
    Flow Gauge YES NO
    Pressure Gauge YES NO
    Vacuum Gauges YES NO
12. **Do the temp. gauges fall when system is turned off?** YES NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
30	38	8	161	110	42	182	28331.7

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	13.65	990	21.6	No	None	
SSD-23-C			CLOSED			
SSD-30-C	17.01	711	15.5	No	None	
SSD-26-C	7.96	328 DUM	7.2	No	None	
SSD-31-C	26.1	>max	N/A	Yes	None	
SSD-27-C	1.10	1077	23.5	No	None	
SSD-32-C	2.09	1152	25.1	No	None	
SSD-28-C	1.13	1720	37.5	No	None	
SSD-33-C	9.64	1420	31.0	No	None	
SSD-29-C	17.43	3439	75.0	No	None	
SSD-34-C	27.4	214	4.7	No	None	

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	2.10		111-C	0.00	
135-C	1.28		155-C	0.11	
157-C	0.00		133-C	0.56	
113-C	1.13		154-C	0.04	
156-C	0.24		153-C	0.10	
151-C	0.02		158-C	0.03	
126-C	0.00		001-C	0.22	
149-C	0.37		SSD-22-C	0.02	
050-C	0.00		SSD-2-C	0.07	
141-C	N/A	Heavy Equip	SSD-4-C	N/A	Heavy Equip
127-C	2.89		SSD-24-C	0.02	
150-C	0.00		SSD-3-C	0.52	
152-C	1.93		SSD-25-C	0.00	
060-C	0.29				

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**C-INFLUENT**	**C-MID GAC**	**C-EFFLUENT**	**Comments**
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separators					
MS-1	No	—	—	Yes	
MS-2	No	—	—	Yes	
Pipe Sumps					
PS-1	No	—	—	Yes	
PS-2	No	—	—	Yes	
PS-3	No	—	—	Yes	
PS-4	No	—	—	Yes	
PS-5	No	—	—	Yes	
System Sumps					
Exhaust Stack	No	—	—	Yes	
GAC and PPZ Drains					
Lead GAC	No	—	—	Yes	
Lag GAC	No	—	—	Yes	
PPZ	No	—	—	Yes	

13. How many empty drums are on-site? 2

14. How many Bldg. A water drums are on-site? PART FULL 0 FULL 0

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 1 FULL 1

17. Are waste drums labeled and in good condition?

(YES) NO Comment: _____

18. Is the secondary containment pad in good condition?

(YES) NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: David L Munn **TIME:** _____

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 11/3/16 **Time:** 0930 **Personnel:** JMW, DLM

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC or PPZ change out?** YES (NO) Comment: _____
9. **How many GAC and PPZ units are at this location?**
   GAC: NEW 2 SPENT _____
   PPZ: NEW 1 SPENT _____
11. **Do the these fall to zero when system is turned off?**
   Flow Gauge (YES) NO
   Pressure Gauge (YES) NO
   Vacuum Gauges (YES) NO
12. **Do the temp. gauges fall when system is turned off?** (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
32	40	8	156	110	43	185	28642.1

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	12.77	1181	25.7	No	None	
SSD-23-C			CLOSED			
SSD-30-C	16.70	450	9.8	X	X	VAC VAC
SSD-26-C	5.89	210	4.6	X	X	
SSD-31-C	24.1	1810	39.5	✓	X	VAC VAC, VEL
SSD-27-C	0.99	943	20.6	No	None	
SSD-32-C	2.11	1104	24.1	No	None	
SSD-28-C	1.25	1628	35.5	No	None	
SSD-33-C	8.67	1212	26.4	No	None	
SSD-29-C	17.58	3455	75.3	No	None	VAC VAC
SSD-34-C	25.20	575	12.5	No	None	

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.48		111-C	0.09	
135-C	0.52		155-C	0.12	
157-C	0.00		133-C	0.51	
113-C	0.56	VAC	154-C	0.03	
156-C	0.26		153-C	0.05	
151-C	0.01		158-C	0.01	
126-C	0.00		001-C	0.21	
149-C	0.28		SSD-22-C	~~NA~~ 0.01	~~HVY EQP~~
050-C	0.00		SSD-2-C	0.04	
141-C	1.06		SSD-4-C	NA	HVY EQP
127-C	2.04		SSD-24-C	0.01	
150-C	0.00		SSD-3-C	0.58	
152-C	1.28		SSD-25-C	0.00	
060-C	N/A	covered by shelter			

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**C-INFLUENT**	**C-MID GAC**	**C-EFFLUENT**	**Comments**
Time	1059	1057	1055	
Summa Canister ID	09666	11281	11107	
Flow Contr. ID	139	99	74	
Start Vacuum (in. Hg)	-30	-30	-29.5	
Stop Vacuum (in. Hg)	0	8	15	

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separators					
MS-1					
MS-2					
Pipe Sumps					
PS-1					
PS-2					
PS-3					
PS-4					
PS-5					
System Sumps					
Exhaust Stack	Yes	Yes	~25mL	Yes	
GAC and PPZ Drains					
Lead GAC	No	—	—	Yes	
Lag GAC	—	—	—	—	
PPZ	No	—	—	Yes	

13. How many empty drums are on-site? 2

14. How many Bldg. A water drums are on-site? PART FULL 0 FULL 0

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 1 FULL 1

17. Are waste drums labeled and in good condition?

(YES) NO Comment: _____

18. Is the secondary containment pad in good condition?

(YES) NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____ **TIME:** _____

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 11/17/16 Time: _____ Personnel: JMW

1. Was the system running upon arrival?
   YES NO
2. Where there any alarm conditions upon arrival?
   YES NO
   Comment: _____
3. Is the blower vacuum relief valve open?
   YES NO
4. Is the dilution valve open?
   YES NO % Open: _____
5. Are there any leaks or damage to system hoses?
   YES NO
6. Is there any damage to system components?
   YES NO
7. Are all locks and zip-ties secure?
   YES NO
8. Was there a GAC or PPZ change out?
   YES NO Comment: _____
9. How many GAC and PPZ units are at this location?
   GAC: NEW 2 SPENT 0
   PPZ: NEW 1 SPENT 0
11. Do the these fall to zero when system is turned off?
   Flow Gauge YES NO
   Pressure Gauge YES NO
   Vacuum Gauges YES NO
12. Do the temp. gauges fall when system is turned off?
   YES NO

GENERAL SYSTEM MONITORING							
Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
30	41	11	154	110	44	185	28978.3

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING						
Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	11.45	1135				
SSD-23-C	CLOSED					
SSD-30-C	15.78	704				
SSD-26-C	4.11	176				
SSD-31-C	24.1	1826				
SSD-27-C	1.02 ~~17.03~~	972 ~~3385~~				
SSD-32-C	2.17	1106				
SSD-28-C	1.09	1511				
SSD-33-C	8.58	1224				
SSD-29-C	17.03	3385				
SSD-34-C	24.42	381				

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING					
VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.39		111-C	0.00	
135-C	0.35		155-C	0.11	
157-C	0.00		133-C	N/A	← Am maintenance
113-C	2.93		154-C	0.03	
156-C	0.25		153-C	0.09	
151-C	0.01		158-C	0.00	
126-C	0.00		001-C	0.18	
149-C	0.24		SSD-22-C	0.01	
050-C	0.00		SSD-2-C	+0.22	
141-C	-1.09		SSD-4-C	~~0.01~~ N/A	
127-C	1.85		SSD-24-C	0.01	
150-C	1.00		SSD-3-C	0.00	
152-C	1.25		SSD-25-C	0.00	
060-C	N/A	HVY BOP			

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**C-INFLUENT**	**C-MID GAC**	**C-EFFLUENT**	**Comments**
Time	NA	NA	NA	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID				
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separators					
MS-1	No	-	-	Yes	
MS-2	No	-	-	Yes	
Pipe Sumps					
PS-1	No	-	-	Yes	
PS-2	No	-	-	Yes	
PS-3	No	-	-	Yes	
PS-4	No	-	-	Yes	
PS-5	No	-	-	Yes	
System Sumps					
Exhaust Stack	Yes	Yes	~130ml	Yes	
GAC and PPZ Drains					
Lead GAC	No	-	-	Yes	
Lag GAC	No	-	-	Yes	
PPZ	No	-	-	Yes	

13. How many empty drums are on-site? 1

14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 0

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 1 FULL 0

17. Are waste drums labeled and in good condition?

(YES) NO Comment: _____

18. Is the secondary containment pad in good condition?

(YES) NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: M. Wilson **TIME:** _____

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 12/1/16 **Time:** 1130 **Personnel:** DLM

1. Was the system running upon arrival? (YES) NO
2. Where there any alarm conditions upon arrival? YES (NO)
   Comment: _____
3. Is the blower vacuum relief valve open? YES (NO)
4. Is the dilution valve open? YES (NO) % Open: _____
5. Are there any leaks or damage to system hoses? YES (NO)
6. Is there any damage to system components? YES (NO)
7. Are all locks and zip-ties secure? (YES) NO
8. Was there a GAC or PPZ change out? YES (NO) Comment: _____
9. How many GAC and PPZ units are at this location?
   GAC: NEW 2 SPENT 0
   PPZ: NEW 1 SPENT 0
11. Do the these fall to zero when system is turned off?
   Flow Gauge (YES) NO
   Pressure Gauge (YES) NO
   Vacuum Gauges (YES) NO
12. Do the temp. gauges fall when system is turned off? (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
26	36	10	152	94	44	182	29313.7

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	10.10	1140	24.9	No	None	
SSD-23-C			CLOSED			
SSD-30-C	13.07	304	6.6	No	None	
SSD-26-C	2.73	132	2.9	No	None	
SSD-31-C	20.8	2349	51.2	No	None	
SSD-27-C	1.06	935	20.4	No	None	
SSD-32-C	1.87	1059	23.1	No	None	
SSD-28-C	1.20	1630	35.5	No	None	
SSD-33-C	7.84	1182	25.8	No	None	
SSD-29-C	15.44	3291	71.7	No	None	
SSD-34-C	22.3	97	2.1	No	None	

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.36		111-C	0.00	
135-C	0.17		155-C	0.12	
157-C	0.00		133-C	0.56	
113-C	2.43		154-C	0.04	
156-C	N/A	Heavy Equip.	153-C	0.04	
151-C	0.00		158-C	0.00	
126-C	0.00		001-C	0.13	
149-C	0.17		SSD-22-C	0.00	
050-C	0.00		SSD-2-C	-0.33	
141-C	-0.91		SSD-4-C	N/A	Heavy Equip.
127-C	1.52		SSD-24-C	0.38	
150-C	0.00		SSD-3-C	~~0.33~~ 0.42	

152-C	1.05		SSD-25-C	0.00	
060-C	N/A	Heavy Equip			

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**C-INFLUENT**	**C-MID GAC**	**C-EFFLUENT**	**Comments**
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separators					
MS-1	No	—	—	Yes	
MS-2	No	—	—	Yes	
Pipe Sumps					
PS-1	No	—	—	Yes	
PS-2	No	—	—	Yes	
PS-3	No	—	—	Yes	
PS-4	No	—	—	Yes	
PS-5	No	—	—	Yes	
System Sumps					
Exhaust Stack	Yes	Yes ~~8oz~~ 0dm	8oz	Yes	
GAC and PPZ Drains					
Lead GAC	No	—	—	Yes	
Lag GAC	N/A	—	—	—	
PPZ	No	—	—	Yes	

13. How many empty drums are on-site? 1

14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 0

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 1 FULL 0

17. Are waste drums labeled and in good condition?

YES NO Comment: _____

18. Is the secondary containment pad in good condition?

YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____ **TIME:** _____

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 12-14-16 **Time:** 0915 **Personnel:** JML

1. Was the system running upon arrival? (YES) NO
2. Where there any alarm conditions upon arrival? YES (NO)
   Comment: _____
3. Is the blower vacuum relief valve open? YES (NO)
4. Is the dilution valve open? YES (NO) % Open: _____
5. Are there any leaks or damage to system hoses? YES (NO)
6. Is there any damage to system components? YES (NO)
7. Are all locks and zip-ties secure? (YES) NO
8. Was there a GAC or PPZ change out? YES (NO) Comment: _____
9. How many GAC and PPZ units are at this location?
   GAC: NEW _____ SPENT _____
   PPZ: NEW _____ SPENT _____
11. Do the these fall to zero when system is turned off?
   Flow Gauge (YES) NO
   Pressure Gauge (YES) NO
   Vacuum Gauges (YES) NO
12. Do the temp. gauges fall when system is turned off? (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
25	36	11	146	86	43	190	29575.1

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	18.92	1127	24.5		N/A	
SSD-23-C	21.05	ED				
SSD-30-C	12.19	322	7.0	X		
SSD-26-C	1.84	131	2.9	√		Very Vel
SSD-31-C	18.94	2518	54.9	X		
SSD-27-C	1.07	904	19.7			
SSD-32-C	1.61	967	21.1			
SSD-28-C	0.98	1439	31.4			
SSD-33-C	7.34	1238	27.0	X		
SSD-29-C	14.52	3216	70.1	X		
SSD-34-C	20.90	498	10.9	X	↓	

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.07		111-C	0.00	
135-C	0.06		155-C	0.09	
157-C	0.00		133-C	0.48	
113-C	1.21		154-C	0.02	
156-C	NA	HVY EQP	153-C	0.07	
151-C	0.01		158-C	0.00	
126-C	0.00		001-C	0.10	
149-C	0.06		SSD-22-C	0.00	
050-C	0.01		SSD-2-C	-0.13	
141-C	-0.89		SSD-4-C	NA	HVY EQP
127-C	0.14		SSD-24-C	0.00	
150-C	0.01		SSD-3-C	-0.45	
152-C	0.50		SSD-25-C	0.00	
060-C	NA	HVY EQP			

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**C-INFLUENT**	**C-MID GAC**	**C-EFFLUENT**	**Comments**
Time				
Summa Canister ID				
Flow Contr. ID				
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separators					
MS-1	No	✓	✓	Yes	
MS-2	No	✓	✓	Yes	
Pipe Sumps					
PS-1	No	✓	✓	Yes	
PS-2	↓	✓	✓	↓	
PS-3		✓	✓		
PS-4		✓	✓		
PS-5		✓	✓		
System Sumps					
Exhaust Stack	Yes	Yes	~300mL	Yes	
GAC and PPZ Drains					
Lead GAC	No	✓	✓	Yes	
Lag GAC	↓	✓	✓	↓	
PPZ	↓	✓	✓	↓	

13. How many empty drums are on-site? 1

14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 0

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 1 FULL 1

17. Are waste drums labeled and in good condition?

YES NO Comment: _____

18. Is the secondary containment pad in good condition?

YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____ **TIME:** _____

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 12-29-16 **Time:** 0930 **Personnel:** JHW

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC or PPZ change out?** YES (NO) Comment: _____
9. **How many GAC and PPZ units are at this location?**
   GAC: NEW 3 SPENT 0
   PPZ: NEW 1 SPENT 0
11. **Do the these fall to zero when system is turned off?**
    Flow Gauge YES NO
    Pressure Gauge YES NO
    Vacuum Gauges YES NO
12. **Do the temp. gauges fall when system is turned off?** YES NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
25	35	10	152	96	4.6	1911	24924.6

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	9.89	1208	26.3	No	No	
SSD-23-C		CLOSED				
SSD-30-C	12.94	388	8.5	No		
SSD-26-C	2.89	185	4.0	No		
SSD-31-C	19.69	2375	51.8	No		
SSD-27-C	1.14	928	20.2	No		
SSD-32-C	1.89	1014	22.1	No		
SSD-28-C	1.05	1488	32.4	No		
SSD-33-C	6.82	1242	27.1	No		
SSD-29-C	14.90	3333	72.4	No		
SSD-34-C	21.3	254	~~5.5~~ 5.5	No		

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.22		111-C	0.00	
135-C	0.17		155-C	0.11	
157-C	0.00		133-C	0.50	
113-C	2.02		154-C	0.02	
156-C	0.20		153-C	0.09	
151-C	0.00		158-C	0.00	
126-C	0.00		001-C	0.11	
149-C	0.11		SSD-22-C	0.01	
050-C	0.00		SSD-2-C	-0.30	
141-C	-1.42		SSD-4-C	N/A	HVY EQP
127-C	1.12		SSD-24-C	0.00	
150-C	0.00		SSD-3-C	0.00	
152-C	0.88		SSD-25-C	0.00	
060-C	N/A	HVY EQP			

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**C-INFLUENT**	**C-MID GAC**	**C-EFFLUENT**	**Comments**
Time	NA	NA	NA	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separators					
MS-1	No	-	-	Yes	
MS-2	No	-	-	Yes	
Pipe Sumps					
PS-1	No	-	-	Yes	
PS-2	No	-	-	Yes	
PS-3	No	-	-	Yes	
PS-4	No	-	-	Yes	
PS-5	No	-	-	Yes	
System Sumps					
Exhaust Stack	Yes	Yes	500ml	Yes	
GAC and PPZ Drains					
Lead GAC	No	-	-	Yes	
Lag GAC	No	-	-	Yes	
PPZ	No	-	-	Yes	

13. How many empty drums are on-site? 1

14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 0

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 1 FULL 0

17. Are waste drums labeled and in good condition?

YES NO Comment: _____

18. Is the secondary containment pad in good condition?

YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: M. M. Miller **TIME:** _____

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 11/2/17 **Time:** 1100 **Personnel:** JMW

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC or PPZ change out?** YES (NO) Comment: _____
9. **How many GAC and PPZ units are at this location?**
   GAC: NEW 2 SPENT 0
   PPZ: NEW 1 SPENT 0
11. **Do the these fall to zero when system is turned off?**
    Flow Gauge YES NO
    Pressure Gauge YES NO
    Vacuum Gauges YES NO
12. **Do the temp. gauges fall when system is turned off?** YES NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
28	3.6	8	151	95	46	185	30261.6

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	9.46	1239	27.1	No	No	
SSD-23-C						
SSD-30-C	14.96	599	13.1	No		
SSD-26-C	2.16	141	3.1	No		
SSD-31-C	19.35	2415	52.6	Yes		
SSD-27-C	1.15	947	20.6	No		
SSD-32-C	1.91	1063	23.2	No		
SSD-28-C	1.22	1443	31.5	No		
SSD-33-C	6.22	1255	27.4	No		
SSD-29-C	14.73	3345	72.9	No		
SSD-34-C	21.4	523	11.4	No		

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.15		111-C	0.00	
135-C	0.06		155-C	0.10	
157-C	0.00		133-C	0.47	
113-C	1.44		154-C	0.01	
156-C	0.17		153-C	0.07	
151-C	0.01		158-C	0.00	
126-C	0.00		001-C	0.07	
149-C	N/A	HVY EQP	SSD-22-C	0.11	
050-C	0.00		SSD-2-C	-0.14	
141-C	3.12		SSD-4-C	N/A	HVY EQP
127-C	0.99		SSD-24-C	0.10	
150-C	0.00		SSD-3-C	0.00	
152-C	0.56		SSD-25-C	0.00	
060-C	N/A	HVY EQP			

250mL

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**C-INFLUENT**	**C-MID GAC**	**C-EFFLUENT**	**Comments**
Time	1301	1258	1255	
Summa Canister ID	10339	09635	10319	
Flow Contr. ID	10911	10930	09958	
Start Vacuum (in. Hg)	29	29.5	30	
Stop Vacuum (in. Hg)	0	0	1	

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separators					
MS-1	No	—	—	Yes	
MS-2	No	—	—	Yes	
Pipe Sumps					
PS-1	No	—	—	Yes	
PS-2	No	—	—	Yes	
PS-3	No	—	—	Yes	
PS-4	No	—	—	Yes	
PS-5	No	—	—	Yes	
System Sumps					
Exhaust Stack	~~No~~ Yes	Yes	~250mL	Yes	
GAC and PPZ Drains					
Lead GAC	No	—	—	Yes	
Lag GAC	No	—	—	Yes	
PPZ	No	—	—	Yes	

13. How many empty drums are on-site? 0

14. How many Bldg. A water drums are on-site? PART FULL 0 FULL 2

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 0 FULL 1

17. Are waste drums labeled and in good condition?

YES NO Comment: _____

18. Is the secondary containment pad in good condition?

YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____ **TIME:** _____

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 1-23-17 **Time:** 1030 **Personnel:** JMW

1. **Was the system running upon arrival?**
   YES (NO) (power)
2. **Where there any alarm conditions upon arrival?**
   YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?**
   YES (NO)
4. **Is the dilution valve open?**
   YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?**
   YES (NO)
6. **Is there any damage to system components?**
   YES (NO)
7. **Are all locks and zip-ties secure?**
   (YES) NO
8. **Was there a GAC or PPZ change out?**
   YES (NO) Comment: _____
9. **How many GAC and PPZ units are at this location?**
   GAC: NEW 2 SPENT _____
   PPZ: NEW 1 SPENT _____
11. **Do the these fall to zero when system is turned off?**
   Flow Gauge (YES) NO
   Pressure Gauge (YES) NO
   Vacuum Gauges (YES) NO
12. **Do the temp. gauges fall when system is turned off?**
   (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
28	35	7	145	92	45	185	30,462.8

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	1086	9.85	23.7	No		
SSD-23-C			CLOSED			
SSD-30-C	680	13.13	14.8	No		
SSD-26-C	129	2.85	2.8	No		
SSD-31-C	2218	19.62	48.4	No Yes		
SSD-27-C	929	1.07	20.3	No		
SSD-32-C	1028	1.63	22.4	No		
SSD-28-C	1424	1.07	31.0	No		
SSD-33-C	1170	6.24	25.5	No		
SSD-29-C	3285	14.62	71.6	No		
SSD-34-C	395	21.2	6.6	No		

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.18		111-C	0.00	
135-C	0.14		155-C	0.09	
157-C	0.00		133-C	0.50	
113-C	2.34		154-C	0.01	
156-C	0.23		153-C	0.08	
151-C	0.01		158-C	0.00	
126-C	0.00		001-C	0.06	
149-C	HWY NA	HWY EQP	SSD-22-C	0.01	
050-C	0.00		SSD-2-C	-0.17	
141-C	-0.34		SSD-4-C	NA	HWY EQP
127-C	1.06		SSD-24-C	0.00	
150-C	0.00		SSD-3-C	0.01	
152-C	JMW 0.58		SSD-25-C	0.00	
060-C	0.58 NA	HWY EQP			

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separators					
MS-1	No	-	-	Yes	
MS-2	No	-	-	Yes	
Pipe Sumps					
PS-1	No	-	-	Yes	
PS-2	No	-	-	Yes	
PS-3	No	-	-	Yes	
PS-4	No	-	-	Yes	
PS-5	No	-	-	Yes	
System Sumps					
Exhaust Stack	Yes	Yes	~275 mL	Yes	
GAC and PPZ Drains					
Lead GAC	No	-	-	Yes	
Lag GAC	No	-	-	Yes	
PPZ	No	-	-	Yes	

13. How many empty drums are on-site? 3

14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 0

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 0 FULL 0

17. Are waste drums labeled and in good condition?

(YES) NO Comment: _____

18. Is the secondary containment pad in good condition?

(YES) NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: J M. Willis **TIME:** _____

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 2-7-17 **Time:** 0915 **Personnel:** JMW

1. Was the system running upon arrival?
(YES) NO

2. Where there any alarm conditions upon arrival?
YES (NO)

Comment: _____

3. Is the blower vacuum relief valve open?
YES (NO)

4. Is the dilution valve open?
YES (NO) % Open: _____

5. Are there any leaks or damage to system hoses?
YES (NO)

6. Is there any damage to system components?
YES (NO)

7. Are all locks and zip-ties secure?
(YES) NO

8. Was there a GAC or PPZ change out?
YES (NO) Comment: _____

9. How many GAC and PPZ units are at this location?
GAC: NEW _____ SPENT _____
PPZ: NEW _____ SPENT _____

11. Do the these fall to zero when system is turned off?

Flow Gauge	YES	NO
Pressure Gauge	YES	NO
Vacuum Gauges	YES	NO

12. Do the temp. gauges fall when system is turned off?
YES NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
26	36	10	151	92	46	180	30840.5

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	9.92	1176	25.6	No	No	
SSD-23-C			CLOSED			
SSD-30-C	13.61	1081	23.6	No	No	
SSD-26-C	2.68	253	5.6	No		
SSD-31-C	19.78	2388	52.8	No		
SSD-27-C	1.07	901	19.6	No		
SSD-32-C	1.90	471	21.2	No		
SSD-28-C	1.10	1389	30.3	Yes		
SSD-33-C	5.91	1048	22.8	No		
SSD-29-C	14.82	3239	70.6	No	√	
SSD-34-C	21.1	720	15.7	No		VAC VEL

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.19		111-C	0.00	
135-C	0.12		155-C	0.08	
157-C	0.00		133-C	0.37	
113-C	2.15		154-C	0.03	
156-C	0.22		153-C	0.05	
151-C	N/A	Room Locked	158-C	0.11	
126-C	0.00		001-C	0.04	
149-C	0.11		SSD-22-C	0.07	
050-C	0.00		SSD-2-C	-0.12	
141-C	-0.84		SSD-4-C	N/A	HVY EQP
127-C	1.18		SSD-24-C	0.00	
150-C	0.02		SSD-3-C	0.00	
152-C	0.38		SSD-25-C	0.00	
060-C	N/A	HVY EQP			

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	NA	NA	NA	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separators					
MS-1	No	-	-	Yes	
MS-2	No	-	-	Yes	
Pipe Sumps					
PS-1	No	-	-	Yes	
PS-2	No	-	-	Yes	
PS-3	No	-	-	Yes	
PS-4	No	-	-	Yes	
PS-5	No	-	-	Yes	
System Sumps					
Exhaust Stack	Yes	Yes	0.07gal	Yes	
GAC and PPZ Drains					
Lead GAC	No	-	-	Yes	
Lag GAC	No	-	-	Yes	
PPZ	No	-	-	Yes	

13. How many empty drums are on-site? _____

14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 1

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 1 FULL 0

17. Are waste drums labeled and in good condition?

YES NO Comment: _____

18. Is the secondary containment pad in good condition?

YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____ TIME: _____

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 2-21-17 **Time:** 1000 **Personnel:** JMW

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC or PPZ change out?** YES (NO) Comment: _____
9. **How many GAC and PPZ units are at this location?**
   GAC: NEW 2 SPENT 0
   PPZ: NEW 1 SPENT 0
11. **Do the these fall to zero when system is turned off?**
    Flow Gauge (YES) NO
    Pressure Gauge (YES) NO
    Vacuum Gauges (YES) NO
12. **Do the temp. gauges fall when system is turned off?** (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
23	33	10	150	96	48	125	3177.0

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C			(LOST)			
SSD-23-C	10.54	1794	39.11	No	N/A	
SSD-30-C	13.21	379	8.3	No		
SSD-26-C	3.11	146	3.2	No		
SSD-31-C	18.98	2020	44.0	No		
SSD-27-C	0.96	863	18.8	No		
SSD-32-C	6.71	1014	22.1	No		
SSD-28-C	0.98	1388	30.3	No		
SSD-33-C	5.69	1172	25.5	No		
SSD-29-C	13.99	3276	71.4	No		
SSD-34-C	20.1	275	6.0	No	↓	Var VP1

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.38		111-C	0.10	
135-C	0.18		155-C	0.08	
157-C	0.0		133-C	0.49	
113-C	2.41		154-C	0.03	
156-C	0.28		153-C	0.05	
151-C	N/A	LOCKED (NR)	158-C	0.00	
126-C	0.00		001-C	0.13	
149-C	0.12		SSD-22-C	0.01	
050-C	0.00		SSD-2-C	0.00	
141-C	-0.86		SSD-4-C	N/A	HVY EQP
127-C	1.14		SSD-24-C	0.11	
150-C	0.02		SSD-3-C	0.00	
152-C	0.52		SSD-25-C	-0.16	
060-C	N/A	HVY EQP			

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separators					
MS-1	N/A	-	-	Yes	
MS-2	No	-	-	Yes	
Pipe Sumps					
PS-1	No	-	-	Yes	
PS-2	No	-	-	Yes	
PS-3	No	-	-	Yes	
PS-4	No	-	-	Yes	
PS-5	No	-	-	Yes	
System Sumps					
Exhaust Stack	Yes	Yes	~250 ml	Yes	
GAC and PPZ Drains					
Lead GAC	No	-	-	Yes	
Lag GAC	No	-	-	Yes	
PPZ	No	-	-	Yes	

13. How many empty drums are on-site? 0

14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 2

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 1 FULL 0

17. Are waste drums labeled and in good condition?

(YES) NO Comment: _____

18. Is the secondary containment pad in good condition?

(YES) NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____ **TIME:** _____

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 3-8-17 **Time:** 0915 **Personnel:** JMW

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC or PPZ change out?** YES (NO) Comment: _____
9. **How many GAC and PPZ units are at this location?**
   GAC: NEW 2 SPENT 0
   PPZ: NEW 1 SPENT 0
11. **Do the these fall to zero when system is turned off?**
   Flow Gauge (YES) NO
   Pressure Gauge (YES) NO
   Vacuum Gauges (YES) NO
12. **Do the temp. gauges fall when system is turned off?** (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
23	34	11	150	92	46	185	31502.3

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C			CLOSED			
SSD-23-C	9.87	2016	43.95	No	None	
SSD-30-C	12.85	345	7.5	No	↓	Vor Var
SSD-26-C	2.22	133	2.9	No		
SSD-31-C	18.18	2209	48.2	No		
SSD-27-C	18.98	920	20.1	No		
SSD-32-C	1.84	992	21.6	No		
SSD-28-C	1.00	1395	30.4	No		
SSD-33-C	5.48	1187	25.9	No		
SSD-29-C	13.57	3133	68.3	No		
SSD-34-C	19.74	180	3.9	No	↓	

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.30		111-C	0.00	
135-C	0.12		155-C	0.19	
157-C	0.00		133-C	0.47	
113-C	1.67		154-C	0.03	
156-C	0.21		153-C	0.08	
151-C	N/A	No Access	158-C	-0.01	
126-C	0.00		001-C	0.13	
149-C	0.12		SSD-22-C	0.02	
050-C	0.00		SSD-2-C	0.12	
141-C	≈0.42		SSD-4-C	N/A	COVERED
127-C	1.10		SSD-24-C	0.07	
150-C	0.00		SSD-3-C	0.00	
152-C	0.45		SSD-25-C	-0.17	
060-C	0.24				

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	1350	1345	1341	
Summa Canister ID	10752	11167	09639	
Flow Contr. ID	10911	10104	10930	
Start Vacuum (in. Hg)	31	29	29	
Stop Vacuum (in. Hg)	0	0	0	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separators					
MS-1	No	-	-	Yes	
MS-2	No	-	-	Yes	
Pipe Sumps					
PS-1	No	-	-	Yes	
PS-2	No	-	-	Yes	
PS-3	No	-	-	Yes	
PS-4	No	-	-	Yes	
PS-5	No	-	-	Yes	
System Sumps					
Exhaust Stack	No	-	-	Yes	
GAC and PPZ Drains					
Lead GAC	No	-	-	Yes	
Lag GAC	No	-	-	Yes	
PPZ	No	-	-	Yes	

13. How many empty drums are on-site? 0

14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 3

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 0 FULL 1

17. Are waste drums labeled and in good condition?

(YES) NO Comment: _____

18. Is the secondary containment pad in good condition?

(YES) NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____ **TIME:** _____

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 3/23/17 Time: 9:04 Personnel: AS

1. Was the system running upon arrival?
   YES NO
2. Where there any alarm conditions upon arrival?
   YES NO
   Comment: _____
3. Is the blower vacuum relief valve open?
   YES NO
4. Is the dilution valve open?
   YES NO % Open: _____
5. Are there any leaks or damage to system hoses?
   YES NO
6. Is there any damage to system components?
   YES NO
7. Are all locks and zip-ties secure?
   YES NO
8. Was there a GAC or PPZ change out?
   YES NO Comment: _____
9. How many GAC and PPZ units are at this location?
   GAC: NEW 32 SPENT 0
   PPZ: NEW 1 SPENT 0
11. Do the these fall to zero when system is turned off?
   Flow Gauge YES NO
   Pressure Gauge YES NO
   Vacuum Gauges YES NO
12. Do the temp. gauges fall when system is turned off?
   YES NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
72	34	72	146	92°	48	190	31859.0

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C			CLOSED			
SSD-23-C	9.43	1839	40.09	NO		
SSD-30-C	12.70	1308	28.3	NO		
SSD-26-C	13.62	3638	79.3	NO		
SSD-31-C	18.14	2620	57.1	NO		
SSD-27-C	1.04	997	21.7	NO		
SSD-32-C	1.61	1040	22.7	NO		
SSD-28-C	.97	1664	36.3	NO		
SSD-33-C	5.05	1288	28.1	NO		
SSD-29-C	2.17	242	5.3	NO		
SSD-34-C	19.70	2095	45.7	NO		

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	1.27		111-C	0.00	
135-C	-.11		155-C	0.00	
157-C	0.00		133-C	0.00	
113-C	-1.59		154-C	0.00	
156-C	-.24		153-C	-.08	
151-C	0.02		158-C	.13	
126-C	0.00		001-C	.17	
149-C	0.06		SSD-22-C	.02	
050-C	0.00		SSD-2-C	.28	
141-C	0.58		SSD-4-C	covered	Heavy Equip
127-C	1.00		SSD-24-C	2.98	
150-C	0.01		SSD-3-C	.01	
152-C	-0.35		SSD-25-C	.01	
060-C	0.28				

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time				
Summa Canister ID				
Flow Contr. ID				
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separators					
MS-1	NO	NO	—	yes	
MS-2	No	No	—	yes	
Pipe Sumps					
PS-1	NO	NO	—	yes	
PS-2	NO	NO	—	yes	
PS-3	NO	NO	—	yes	
PS-4	NO	NO	—	yes	
PS-5	NO	NO	—	yes	
System Sumps					
Exhaust Stack	Yes	Yes	Trace	yes	
GAC and PPZ Drains					
Lead GAC	NO	No	—	yes	
Lag GAC	NO	NO	—	yes	
PPZ	NO	NO	—	yes	

13. How many empty drums are on-site? 0

14. How many Bldg. A water drums are on-site? PART FULL _____ FULL 3

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 0 FULL 1

17. Are waste drums labeled and in good condition?

(YES) NO Comment: _____

18. Is the secondary containment pad in good condition?

(YES) NO Comment: _____

MAINTENANCE RECORD			
Issue Requiring Maintenance	Maintenance Conducted	Issue Status	
		OPEN	CLOSED
		OPEN	CLOSED
		OPEN	CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: Andrew J. Smith **TIME:** 11:40

QUARTERLY SSD SYSTEM CHECK - BUILDING A

LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Date: 12-12-16 **Time:** 0930 **Quarter:** 4 **Personnel:** JHW, DSCSES)

GENERAL SYSTEM MONITORING

1. Are all system components in good condition?
   (YES) NO Comments: _____
2. Are there any leaks in the system pipes?
   YES (NO) Comments: _____
3. Does the demister media need cleaned or replaced?
   YES NO Comments: _____
4. Does the dilution valve air filter need replaced?
   YES (NO) Comments: _____
5. Does the vacuum relief valve activate upon high vacuum?
   (YES) NO Comments: _____
6. What is the amperage draw on the blower?

Wire Color	Amperage
Black	18.68
Red	19.33
White	17.68

Comments: _____

7. Is the fire extinguisher located near the system?
   (YES) NO Comments: _____
8. Was the area around the system cleaned?
   (YES) NO Comments: _____

AUTO-DIALER AND ALARM SWITCH MONITORING

Zone	Alarm	Switch Functioning Properly		Auto-Dialer Call-Out Triggered		Comments
Zone 1	High Liquid Level	YES	NO	YES	NO	
Zone 2	High Pressure	(YES)	NO	(YES)	NO	
Zone 3	High Temperature 1	(YES)	NO	(YES)	NO	
Zone 4	High Temperature 2	(YES)	NO	(YES)	NO	
Zone 7	Low Vacuum	(YES)	NO	(YES)	NO	

Do the Auto-Dialer Batteries Need Replaced? YES (NO)

GAC UNIT MONITORING

1. Are there any signs of corrosion and/or leaks in any of the GAC units?
   YES (NO) Comments: _____
2. Are the sample ports in good condition?
   (YES) NO Comments: _____
3. Are there any warn spots or holes in the flexible hoses?
   YES (NO) Comments: _____

QUARTERLY SSD SYSTEM CHECK - BUILDING A

LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

VMP MONITORING

Vapor Pins

1. Are all secure covers in good condition?
   (YES) NO Comments: _____
2. Are all secure covers flush with the ground?
   (YES) NO Comments: _____
3. Are all vapor pins firmly installed in the concrete slab with little wiggle room?
   (YES) NO Comments: _____
4. Are all VMPs properly labeled?
   (YES) NO Comments: _____

Classic Vapor Monitoring Points

5. Are all well lids in good condition?
   (YES) NO Comments: _____
6. Do all well lids have the proper number of bolts?
   (YES) NO Comments: _____
7. Is the tubing inside the point in good condition?
   (YES) NO Comments: _____
8. Is the tubing capped?
   (YES) NO Comments: _____

INDOOR AIR FILTER MONITORING

AF-N

Date of quarterly HEPA filter change: 12/29/16
Date of quarterly GAC filter change: ↓
Date of quarterly filter sleeve change: _____
Was the filter housing cleaned? (YES) NO

AF-M

Date of quarterly HEPA filter change: 12/29/16
Date of quarterly GAC filter change: ↓
Date of quarterly filter sleeve change: _____
Was the filter housing cleaned? (YES) NO

AF-S

Date of quarterly HEPA filter change: 12/29/16
Date of quarterly GAC filter change: ↓
Date of quarterly filter sleeve change: _____
Was the filter housing cleaned? (YES) NO

Personnel's Signature: Michael Nelles Date: 12-12-16

QUARTERLY SSD SYSTEM CHECK - BUILDING A

LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Date: 3-15-17 **Time:** 0930 **Quarter:** 1 **Personnel:** JMV(TT), MS(SLS)

GENERAL SYSTEM MONITORING

1. Are all system components in good condition?
   (YES) NO Comments: _____

2. Are there any leaks in the system pipes?
   YES (NO) Comments: _____

3. Does the demister media need cleaned or replaced?
   YES (NO) Comments: _____

4. Does the dilution valve air filter need replaced?
   YES (NO) Comments: _____

5. Does the vacuum relief valve activate upon high vacuum?
   (YES) NO Comments: _____

6. What is the amperage draw on the blower?

Wire Color	Amperage
Red	16.20
White	16.81
Black	12.12

Comments: _____

7. Is the fire extinguisher located near the system?
   (YES) NO Comments: _____

8. Was the area around the system cleaned?
   (YES) NO Comments: _____

AUTO-DIALER AND ALARM SWITCH MONITORING

Zone	Alarm	Limit	Switch Functioning Properly		Auto-Dialer Call-Out Triggered		Comments
Zone 1	High Liquid Level	Full	(YES)	NO	(YES)	NO	
Zone 2	High Pressure	55" WC	(YES)	NO	(YES)	NO	
Zone 3	High Temperature 1	220 °F	(YES)	NO	(YES)	NO	
Zone 4	High Temperature 2	140 °F	(YES)	NO	(YES)	NO	
Zone 7	Low Vacuum	3" WC	(YES)	NO	(YES)	NO	

Do the Auto-Dialer Batteries Need Replaced? YES (NO)

GAC UNIT MONITORING

1. Are there any signs of corrosion and/or leaks in any of the GAC units?

YES (NO) Comments: _____

2. Are the sample ports in good condition?

(YES) NO Comments: _____

3. Are there any warn spots or holes in the flexible hoses?

YES (NO) Comments: _____

QUARTERLY SSD SYSTEM CHECK - BUILDING A

LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

VMP MONITORING

Vapor Pins

1. Are all secure covers in good condition?

(YES) NO Comments: _____

2. Are all secure covers flush with the ground?

YES NO Comments: _____

3. Are all vapor pins firmly installed in the concrete slab with little wiggle room?

(YES) NO Comments: _____

4. Are all VMPs properly labeled?

(YES) NO Comments: _____

Classic Vapor Monitoring Points

5. Are all well lids in good condition?

(YES) NO Comments: _____

6. Do all well lids have the proper number of bolts?

(YES) NO Comments: _____

7. Is the tubing inside the point in good condition?

(YES) NO Comments: _____

8. Is the tubing capped?

(YES) NO Comments: _____

INDOOR AIR FILTER MONITORING

AF-N

Date of quarterly HEPA filter change: 3-15-17
Date of quarterly GAC filter change: 3-15-17
Date of quarterly filter sleeve change: 3-15-17
Was the filter housing cleaned? (YES) NO

AF-M

Date of quarterly HEPA filter change: 3-15-17
Date of quarterly GAC filter change: 3-15-17
Date of quarterly filter sleeve change: 3-15-17
Was the filter housing cleaned? (YES) NO

AF-S

Date of quarterly HEPA filter change: 3-15-17
Date of quarterly GAC filter change: 3-15-17
Date of quarterly filter sleeve change: 3-15-17
Was the filter housing cleaned? (YES) NO

Personnel's Signature: M. Villa Date: 3-16-17

QUARTERLY SSD SYSTEM CHECK - BUILDING C

LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Date: 12-14-16 **Time:** 0745 **Quarter:** 4 **Personnel:** JMW, D3 (615)

GENERAL SYSTEM

Checked System Components? (YES) NO Comments: _____

Checked System Pipes for Leaks? (YES) NO Comments: _____

Visually Inspected Air Filter? (YES) NO Need Replaced? YES NO
(replace filter when AP = 2-3 in. Hg)

Visually Inspected Intake Air Filter? (YES) NO Need Replaced? YES NO

Checked Vacuum Relief Valve? (YES) NO Comments: _____

Measured and Recorded Amperage Draw on Blower? White Yellow = 13.05 Yellow Orange = 11.73 Black Brown = 11.08

Are all components returned to system operating position? (YES) NO

Vacuumed dirt/dust from Heat Exchanger vent? YES NO

Cleaned System and Area Around System? (YES) NO Comments: _____

Checked that Fire Extinguisher Near System? (YES) NO

SYSTEM ALARM SWITCHES AND AUTO-DIALER

Checked Post-Blower Temp Switch? (YES) NO Did Auto-Dialer Indicate Zone 1 Alarm? (YES) NO

Checked Post-HEX Temp Switch? (YES) NO Did Auto-Dialer Indicate Zone 2 Alarm? (YES) NO

Checked MS-1 Water Level Switch? (YES) NO Did Auto-Dialer Indicate Zone 3 Alarm? (YES) NO

Checked MS-2 Water Level Switch? (YES) NO Did Auto-Dialer Indicate Zone 4 Alarm? (YES) NO

Checked High-Pressure Switch? YES NO Did Auto-Dialer Indicate Zone 5 Alarm? (YES) NO

Checked Low-Vacuum Switch? (YES) NO Did Auto-Dialer Indicate Zone 6 Alarm? (YES) NO

Do the Auto-Dialer Batteries Need Replaced? YES NO

GRANULAR ACTIVATED-CARBON (GAC) & POTASSIUM PERMANGANATE ZEOLITE (PPZ) UNITS

Checked GAC Units for Corrosion and Leaks? (YES) NO Comments: _____

Checked Condition of Sample Ports? (YES) NO Comments: _____

Number of used GAC/PPZ Units On-site: 0 / 0 Contain Non-Haz Waste Labels? (YES) NO

Number of Unused GAC/PPZ Units On-site: 2 / 1

VAPOR MONITORING POINTS (VMPs)

Checked Condition of Well Lids and Bolts? (YES) NO Comments: _____

Checked Condition of Tubing and Seal? (YES) NO Comments: _____

ADDITIONAL COMMENTS

Main disconnect replacement installed

Personnel's Signature: _____ Date: 12-14-16

QUARTERLY SSD SYSTEM CHECK - BUILDING C

LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Date: 3-15-17 **Time:** 0845 **Quarter:** 1 **Personnel:** JMW (CTT), MS (565)

GENERAL SYSTEM

Checked System Components? (YES) NO Comments: _____

Checked System Pipes for Leaks? (YES) NO Comments: _____

Visually Inspected Air Filter? (YES) NO Need Replaced? YES (NO)
(replace filter when AP = 2-3 in. Hg)

Visually Inspected Intake Air Filter? (YES) NO Need Replaced? YES (NO)

Checked Vacuum Relief Valve? (YES) NO Comments: _____

Measured and Recorded Amperage Draw on Blower? Yellow = 9.13 Orange = 11.65 Brown = 10.25

Are all components returned to system operating position? (YES) NO

Vacuumed dirt/dust from Heat Exchanger vent? (YES) NO

Cleaned System and Area Around System? (YES) NO Comments: _____

Checked that Fire Extinguisher Near System? (YES) NO

SYSTEM ALARM SWITCHES AND AUTO-DIALER

Checked Post-Blower Temp Switch? (YES) NO Did Auto-Dialer Indicate Zone 1 Alarm? (YES) NO
Limit: 215 °F

Checked Post-HEX Temp Switch? (YES) NO Did Auto-Dialer Indicate Zone 2 Alarm? (YES) NO
Limit: 140 °F

Checked MS-1 Water Level Switch? (YES) NO Did Auto-Dialer Indicate Zone 3 Alarm? (YES) NO

Checked MS-2 Water Level Switch? (YES) NO Did Auto-Dialer Indicate Zone 4 Alarm? (YES) NO

Checked High-Pressure Switch? (YES) NO Did Auto-Dialer Indicate Zone 5 Alarm? (YES) NO
Limit: 60" WC

Checked Low-Vacuum Switch? (YES) NO Did Auto-Dialer Indicate Zone 6 Alarm? (YES) NO
Limit: 10" WC

Do the Auto-Dialer Batteries Need Replaced? YES (NO)

GRANULAR ACTIVATED-CARBON (GAC) & POTASSIUM PERMANGANATE ZEOLITE (PPZ) UNITS

Checked GAC Units for Corrosion and Leaks? (YES) NO Comments: _____

Checked Condition of Sample Ports? (YES) NO Comments: _____

Number of used GAC/PPZ Units On-site: 0 / 0 Contain Non-Haz Waste Labels? YES NO N/A

Number of Unused GAC/PPZ Units On-site: 2 / 1

VAPOR MONITORING POINTS (VMPs)

Checked Condition of Well Lids and Bolts? (YES) NO Comments: _____

Checked Condition of Tubing and Seal? (YES) NO Comments: _____

ADDITIONAL COMMENTS

Personnel's Signature: _____ Date: 3-15-17

APPENDIX B— ANALYTICAL REPORTS FOR SYSTEM SAMPLES

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

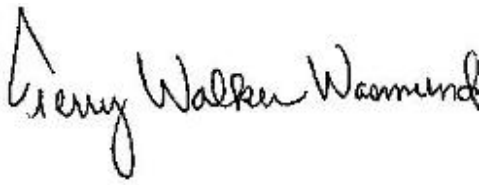
ANALYTICAL REPORT

Job Number: 140-6042-1

Job Description: LMMRC, Bldg A, Middle River

For:
Tetra Tech GEO
51 Franklin Street
Suite 400
Annapolis, MD 21401

Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
10/17/2016 10:18 AM

Terry Walker Wasmund, Project Manager II
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10/17/2016

cc: Belssi Chang
Ms. Dawn Monico
Amy Thomson
Michael Wilks

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Table of Contents

Cover Title Page 1

Data Summaries 4

Definitions 4

Case Narrative 5

Detection Summary 6

Client Sample Results 8

Default Detection Limits 14

Surrogate Summary 15

QC Sample Results 16

QC Association 19

Chronicle 20

Method Summary 21

Sample Summary 22

Organic Sample Data 23

Air - GC/MS VOA 23

Method TO15 Low Level 23

Method TO15 Low Level QC Summary 24

Method TO15 Low Level Sample Data 31

Standards Data 89

Method TO15 Low Level ICAL Data 89

Method TO15 Low Level CCAL Data 155

Raw QC Data 169

Method TO15 Low Level Tune Data 169

Method TO15 Low Level Blank Data 177

Method TO15 Low Level LCS/LCSD Data 182

Method TO15 Low Level Run Logs 188

Table of Contents

Clean Canister Certification 195
Clean Canister Data 195
Shipping and Receiving Documents 201
Client Chain of Custody 202
Sample Receipt Checklist 204

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-6042-1

Receipt
The samples were received on 10/6/2016 at 10:30 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA
Method(s) TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

Method TO 15 LL: The continuing calibration verification (CCV) associated with batch 140-6849 exhibited % difference of > 30% for 1,2,4-Trichlorobenzene; however, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments
No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LMMRC, Bldg A, Middle River

TestAmerica Job ID: 140-6042-1

Client Sample ID: BLDG-A INFLUENT — Lab Sample ID: 140-6042-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.47	J	2.0	0.38	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	20		2.0	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	3.4		2.0	0.25	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	17		2.0	0.35	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	75		2.0	0.30	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	120		1.0	0.35	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.7	J	7.1	1.3	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	81		7.9	2.4	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	14		8.1	1.0	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	68		7.9	1.4	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	410		11	1.6	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	630		5.4	1.9	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A MID — Lab Sample ID: 140-6042-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	3.4		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.11	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.44		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.83		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	56		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	7.5		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,2-Dichloroethane	0.36	J	0.40	0.095	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	26		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.79	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.81		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.88		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	150	E	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	13		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane - DL	160		1.3	0.20	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	11		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.69	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.6		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	4.1		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	220		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	30		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,2-Dichloroethane	1.5	J	1.6	0.38	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	100		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.8	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	3.0		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	3.5		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	810	E	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	67		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane - DL	890		7.3	1.1	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-6042-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.3		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.47		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.70		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	19		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.43		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	9.9		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	29		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.0		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.38	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	120	E	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.8		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane - DL	160		1.0	0.15	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	4.0		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.7		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	3.4		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	77		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.1		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	40		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	110		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.5		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	1.5	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	660	E	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	9.8		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane - DL	850		5.5	0.82	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-6042-1

Date Collected: 10/05/16 14:29

Matrix: Air

Date Received: 10/06/16 10:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0	0.58	ppb v/v			10/10/16 00:20	1
Carbon tetrachloride	ND		2.0	0.38	ppb v/v			10/10/16 00:20	1
Chlorodifluoromethane	**0.47**	**J**	2.0	0.38	ppb v/v			10/10/16 00:20	1
Chloroform	ND		2.0	0.38	ppb v/v			10/10/16 00:20	1
cis-1,2-Dichloroethene	**20**		2.0	0.60	ppb v/v			10/10/16 00:20	1
Dichlorodifluoromethane	ND		2.0	0.68	ppb v/v			10/10/16 00:20	1
1,1-Dichloroethane	**3.4**		2.0	0.25	ppb v/v			10/10/16 00:20	1
1,2-Dichloroethane	ND		2.0	0.48	ppb v/v			10/10/16 00:20	1
1,1-Dichloroethene	**17**		2.0	0.35	ppb v/v			10/10/16 00:20	1
Ethylbenzene	ND		2.0	0.68	ppb v/v			10/10/16 00:20	1
Methylene Chloride	ND		5.0	3.3	ppb v/v			10/10/16 00:20	1
Methyl tert-butyl ether	ND		10	1.7	ppb v/v			10/10/16 00:20	1
Naphthalene	ND		1.0	1.0	ppb v/v			10/10/16 00:20	1
Tetrachloroethene	ND		2.0	0.40	ppb v/v			10/10/16 00:20	1
Toluene	ND		3.0	3.0	ppb v/v			10/10/16 00:20	1
trans-1,2-Dichloroethene	ND		2.0	0.50	ppb v/v			10/10/16 00:20	1
1,2,4-Trichlorobenzene	ND		2.0	0.98	ppb v/v			10/10/16 00:20	1
1,1,1-Trichloroethane	**75**		2.0	0.30	ppb v/v			10/10/16 00:20	1
1,1,2-Trichloroethane	ND		2.0	0.53	ppb v/v			10/10/16 00:20	1
Trichloroethene	**120**		1.0	0.35	ppb v/v			10/10/16 00:20	1
1,2,3-Trimethylbenzene	ND		2.0	0.85	ppb v/v			10/10/16 00:20	1
1,2,4-Trimethylbenzene	ND		2.0	0.63	ppb v/v			10/10/16 00:20	1
1,3,5-Trimethylbenzene	ND		2.0	0.65	ppb v/v			10/10/16 00:20	1
Vinyl chloride	ND		1.0	0.73	ppb v/v			10/10/16 00:20	1
Xylenes, Total	ND		4.0	0.60	ppb v/v			10/10/16 00:20	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		6.4	1.8	ug/m3			10/10/16 00:20	1
Carbon tetrachloride	ND		13	2.4	ug/m3			10/10/16 00:20	1
Chlorodifluoromethane	**1.7**	**J**	7.1	1.3	ug/m3			10/10/16 00:20	1
Chloroform	ND		9.8	1.8	ug/m3			10/10/16 00:20	1
cis-1,2-Dichloroethene	**81**		7.9	2.4	ug/m3			10/10/16 00:20	1
Dichlorodifluoromethane	ND		9.9	3.3	ug/m3			10/10/16 00:20	1
1,1-Dichloroethane	**14**		8.1	1.0	ug/m3			10/10/16 00:20	1
1,2-Dichloroethane	ND		8.1	1.9	ug/m3			10/10/16 00:20	1
1,1-Dichloroethene	**68**		7.9	1.4	ug/m3			10/10/16 00:20	1
Ethylbenzene	ND		8.7	2.9	ug/m3			10/10/16 00:20	1
Methylene Chloride	ND		17	11	ug/m3			10/10/16 00:20	1
Methyl tert-butyl ether	ND		36	6.1	ug/m3			10/10/16 00:20	1
Naphthalene	ND		5.2	5.2	ug/m3			10/10/16 00:20	1
Tetrachloroethene	ND		14	2.7	ug/m3			10/10/16 00:20	1
Toluene	ND		11	11	ug/m3			10/10/16 00:20	1
trans-1,2-Dichloroethene	ND		7.9	2.0	ug/m3			10/10/16 00:20	1
1,2,4-Trichlorobenzene	ND		15	7.2	ug/m3			10/10/16 00:20	1
1,1,1-Trichloroethane	**410**		11	1.6	ug/m3			10/10/16 00:20	1
1,1,2-Trichloroethane	ND		11	2.9	ug/m3			10/10/16 00:20	1
Trichloroethene	**630**		5.4	1.9	ug/m3			10/10/16 00:20	1
1,2,3-Trimethylbenzene	ND		9.8	4.2	ug/m3			10/10/16 00:20	1
1,2,4-Trimethylbenzene	ND		9.8	3.1	ug/m3			10/10/16 00:20	1

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-6042-1

Date Collected: 10/05/16 14:29

Matrix: Air

Date Received: 10/06/16 10:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		9.8	3.2	ug/m3			10/10/16 00:20	1
Vinyl chloride	ND		2.6	1.9	ug/m3			10/10/16 00:20	1
Xylenes, Total	ND		17	2.6	ug/m3			10/10/16 00:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*60 - 140*		*10/10/16 00:20*	*1*

Client Sample ID: BLDG-A MID

Lab Sample ID: 140-6042-2

Date Collected: 10/05/16 14:33

Matrix: Air

Date Received: 10/06/16 10:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**3.4**		0.40	0.12	ppb v/v			10/10/16 01:13	1
Carbon tetrachloride	**0.11**	**J**	0.40	0.075	ppb v/v			10/10/16 01:13	1
Chlorodifluoromethane	**0.44**		0.40	0.075	ppb v/v			10/10/16 01:13	1
Chloroform	**0.83**		0.40	0.075	ppb v/v			10/10/16 01:13	1
cis-1,2-Dichloroethene	**56**		0.40	0.12	ppb v/v			10/10/16 01:13	1
Dichlorodifluoromethane	**0.45**		0.40	0.14	ppb v/v			10/10/16 01:13	1
1,1-Dichloroethane	**7.5**		0.40	0.050	ppb v/v			10/10/16 01:13	1
1,2-Dichloroethane	**0.36**	**J**	0.40	0.095	ppb v/v			10/10/16 01:13	1
1,1-Dichloroethene	**26**		0.40	0.070	ppb v/v			10/10/16 01:13	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			10/10/16 01:13	1
Methylene Chloride	**0.79**	**J**	1.0	0.65	ppb v/v			10/10/16 01:13	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			10/10/16 01:13	1
Naphthalene	ND		0.20	0.20	ppb v/v			10/10/16 01:13	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			10/10/16 01:13	1
Toluene	**0.81**		0.60	0.60	ppb v/v			10/10/16 01:13	1
trans-1,2-Dichloroethene	**0.88**		0.40	0.10	ppb v/v			10/10/16 01:13	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			10/10/16 01:13	1
1,1,1-Trichloroethane	**150**	**E**	0.40	0.060	ppb v/v			10/10/16 01:13	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			10/10/16 01:13	1
Trichloroethene	**13**		0.20	0.070	ppb v/v			10/10/16 01:13	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			10/10/16 01:13	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			10/10/16 01:13	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			10/10/16 01:13	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			10/10/16 01:13	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			10/10/16 01:13	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**11**		1.3	0.37	ug/m3			10/10/16 01:13	1
Carbon tetrachloride	**0.69**	**J**	2.5	0.47	ug/m3			10/10/16 01:13	1
Chlorodifluoromethane	**1.6**		1.4	0.27	ug/m3			10/10/16 01:13	1
Chloroform	**4.1**		2.0	0.37	ug/m3			10/10/16 01:13	1
cis-1,2-Dichloroethene	**220**		1.6	0.48	ug/m3			10/10/16 01:13	1
Dichlorodifluoromethane	**2.2**		2.0	0.67	ug/m3			10/10/16 01:13	1
1,1-Dichloroethane	**30**		1.6	0.20	ug/m3			10/10/16 01:13	1
1,2-Dichloroethane	**1.5**	**J**	1.6	0.38	ug/m3			10/10/16 01:13	1
1,1-Dichloroethene	**100**		1.6	0.28	ug/m3			10/10/16 01:13	1
Ethylbenzene	ND		1.7	0.59	ug/m3			10/10/16 01:13	1
Methylene Chloride	**2.8**	**J**	3.5	2.3	ug/m3			10/10/16 01:13	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			10/10/16 01:13	1
Naphthalene	ND		1.0	1.0	ug/m3			10/10/16 01:13	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			10/10/16 01:13	1
Toluene	**3.0**		2.3	2.3	ug/m3			10/10/16 01:13	1
trans-1,2-Dichloroethene	**3.5**		1.6	0.40	ug/m3			10/10/16 01:13	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			10/10/16 01:13	1
1,1,1-Trichloroethane	**810**	**E**	2.2	0.33	ug/m3			10/10/16 01:13	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			10/10/16 01:13	1
Trichloroethene	**67**		1.1	0.38	ug/m3			10/10/16 01:13	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			10/10/16 01:13	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			10/10/16 01:13	1

Client Sample ID: BLDG-A MID
Lab Sample ID: 140-6042-2

Date Collected: 10/05/16 14:33
Matrix: Air
Date Received: 10/06/16 10:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			10/10/16 01:13	1
Vinyl chloride	ND		0.51	0.37	ug/m3			10/10/16 01:13	1
Xylenes, Total	ND		3.5	0.52	ug/m3			10/10/16 01:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*		*10/10/16 01:13*	*1*

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**160**		1.3	0.20	ppb v/v			10/10/16 10:17	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**890**		7.3	1.1	ug/m3			10/10/16 10:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*		*10/10/16 10:17*	*1*

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-6042-3

Date Collected: 10/05/16 14:41

Matrix: Air

Date Received: 10/06/16 10:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.3**		0.40	0.12	ppb v/v			10/10/16 02:07	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			10/10/16 02:07	1
Chlorodifluoromethane	**0.47**		0.40	0.075	ppb v/v			10/10/16 02:07	1
Chloroform	**0.70**		0.40	0.075	ppb v/v			10/10/16 02:07	1
cis-1,2-Dichloroethene	**19**		0.40	0.12	ppb v/v			10/10/16 02:07	1
Dichlorodifluoromethane	**0.43**		0.40	0.14	ppb v/v			10/10/16 02:07	1
1,1-Dichloroethane	**9.9**		0.40	0.050	ppb v/v			10/10/16 02:07	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			10/10/16 02:07	1
1,1-Dichloroethene	**29**		0.40	0.070	ppb v/v			10/10/16 02:07	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			10/10/16 02:07	1
Methylene Chloride	**1.0**		1.0	0.65	ppb v/v			10/10/16 02:07	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			10/10/16 02:07	1
Naphthalene	ND		0.20	0.20	ppb v/v			10/10/16 02:07	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			10/10/16 02:07	1
Toluene	ND		0.60	0.60	ppb v/v			10/10/16 02:07	1
trans-1,2-Dichloroethene	**0.38**	**J**	0.40	0.10	ppb v/v			10/10/16 02:07	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			10/10/16 02:07	1
1,1,1-Trichloroethane	**120**	**E**	0.40	0.060	ppb v/v			10/10/16 02:07	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			10/10/16 02:07	1
Trichloroethene	**1.8**		0.20	0.070	ppb v/v			10/10/16 02:07	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			10/10/16 02:07	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			10/10/16 02:07	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			10/10/16 02:07	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			10/10/16 02:07	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			10/10/16 02:07	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**4.0**		1.3	0.37	ug/m3			10/10/16 02:07	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			10/10/16 02:07	1
Chlorodifluoromethane	**1.7**		1.4	0.27	ug/m3			10/10/16 02:07	1
Chloroform	**3.4**		2.0	0.37	ug/m3			10/10/16 02:07	1
cis-1,2-Dichloroethene	**77**		1.6	0.48	ug/m3			10/10/16 02:07	1
Dichlorodifluoromethane	**2.1**		2.0	0.67	ug/m3			10/10/16 02:07	1
1,1-Dichloroethane	**40**		1.6	0.20	ug/m3			10/10/16 02:07	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			10/10/16 02:07	1
1,1-Dichloroethene	**110**		1.6	0.28	ug/m3			10/10/16 02:07	1
Ethylbenzene	ND		1.7	0.59	ug/m3			10/10/16 02:07	1
Methylene Chloride	**3.5**		3.5	2.3	ug/m3			10/10/16 02:07	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			10/10/16 02:07	1
Naphthalene	ND		1.0	1.0	ug/m3			10/10/16 02:07	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			10/10/16 02:07	1
Toluene	ND		2.3	2.3	ug/m3			10/10/16 02:07	1
trans-1,2-Dichloroethene	**1.5**	**J**	1.6	0.40	ug/m3			10/10/16 02:07	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			10/10/16 02:07	1
1,1,1-Trichloroethane	**660**	**E**	2.2	0.33	ug/m3			10/10/16 02:07	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			10/10/16 02:07	1
Trichloroethene	**9.8**		1.1	0.38	ug/m3			10/10/16 02:07	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			10/10/16 02:07	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			10/10/16 02:07	1

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-6042-3

Date Collected: 10/05/16 14:41

Matrix: Air

Date Received: 10/06/16 10:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			10/10/16 02:07	1
Vinyl chloride	ND		0.51	0.37	ug/m3			10/10/16 02:07	1
Xylenes, Total	ND		3.5	0.52	ug/m3			10/10/16 02:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*10/10/16 02:07*	*1*

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**160**		1.0	0.15	ppb v/v			10/10/16 11:12	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**850**		5.5	0.82	ug/m3			10/10/16 11:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*60 - 140*		*10/10/16 11:12*	*1*

Default Detection Limits

Client: Tetra Tech GEO
Project/Site: LMMRC, Bldg A, Middle River

TestAmerica Job ID: 140-6042-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.20	0.13	ppb v/v	TO 15 LL
Methylene Chloride	0.69	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: LMMRC, Bldg A, Middle River

TestAmerica Job ID: 140-6042-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(60-140)
140-6042-1	BLDG-A INFLUENT	98
140-6042-2	BLDG-A MID	103
140-6042-2 - DL	BLDG-A MID	103
140-6042-3	BLDG-A EFFLUENT	101
140-6042-3 - DL	BLDG-A EFFLUENT	98
LCS 140-6849/1002	Lab Control Sample	106
MB 140-6849/4	Method Blank	100

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-6849/4
Matrix: Air
Analysis Batch: 6849

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			10/09/16 15:24	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			10/09/16 15:24	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			10/09/16 15:24	1
Chloroform	ND		0.080	0.015	ppb v/v			10/09/16 15:24	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			10/09/16 15:24	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			10/09/16 15:24	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			10/09/16 15:24	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			10/09/16 15:24	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			10/09/16 15:24	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			10/09/16 15:24	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			10/09/16 15:24	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			10/09/16 15:24	1
Naphthalene	ND		0.040	0.040	ppb v/v			10/09/16 15:24	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			10/09/16 15:24	1
Toluene	ND		0.12	0.12	ppb v/v			10/09/16 15:24	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			10/09/16 15:24	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			10/09/16 15:24	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			10/09/16 15:24	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			10/09/16 15:24	1
Trichloroethene	ND		0.040	0.014	ppb v/v			10/09/16 15:24	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			10/09/16 15:24	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			10/09/16 15:24	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			10/09/16 15:24	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			10/09/16 15:24	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			10/09/16 15:24	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			10/09/16 15:24	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			10/09/16 15:24	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			10/09/16 15:24	1
Chloroform	ND		0.39	0.073	ug/m3			10/09/16 15:24	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			10/09/16 15:24	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			10/09/16 15:24	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			10/09/16 15:24	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			10/09/16 15:24	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			10/09/16 15:24	1
Ethylbenzene	ND		0.35	0.12	ug/m3			10/09/16 15:24	1
Methylene Chloride	ND		0.69	0.45	ug/m3			10/09/16 15:24	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			10/09/16 15:24	1
Naphthalene	ND		0.21	0.21	ug/m3			10/09/16 15:24	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			10/09/16 15:24	1
Toluene	ND		0.45	0.45	ug/m3			10/09/16 15:24	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			10/09/16 15:24	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			10/09/16 15:24	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			10/09/16 15:24	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			10/09/16 15:24	1
Trichloroethene	ND		0.21	0.075	ug/m3			10/09/16 15:24	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			10/09/16 15:24	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-6849/4
Matrix: Air
Analysis Batch: 6849

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			10/09/16 15:24	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			10/09/16 15:24	1
Vinyl chloride	ND		0.10	0.074	ug/m3			10/09/16 15:24	1
Xylenes, Total	ND		0.69	0.10	ug/m3			10/09/16 15:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*60 - 140*		*10/09/16 15:24*	*1*

Lab Sample ID: LCS 140-6849/1002
Matrix: Air
Analysis Batch: 6849

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	2.20		ppb v/v		110	70 - 130
Carbon tetrachloride	2.00	2.26		ppb v/v		113	70 - 130
Chlorodifluoromethane	2.00	2.15		ppb v/v		107	60 - 140
Chloroform	2.00	2.04		ppb v/v		102	70 - 130
cis-1,2-Dichloroethene	2.00	2.15		ppb v/v		107	70 - 130
Dichlorodifluoromethane	2.00	2.15		ppb v/v		107	60 - 140
1,1-Dichloroethane	2.00	2.10		ppb v/v		105	70 - 130
1,2-Dichloroethane	2.00	2.18		ppb v/v		109	70 - 130
1,1-Dichloroethene	2.00	2.22		ppb v/v		111	70 - 130
Ethylbenzene	2.00	2.12		ppb v/v		106	70 - 130
Methylene Chloride	2.00	2.02		ppb v/v		101	70 - 130
Methyl tert-butyl ether	2.00	1.93		ppb v/v		96	60 - 140
Naphthalene	2.00	2.60		ppb v/v		130	60 - 140
Tetrachloroethene	2.00	2.24		ppb v/v		112	70 - 130
Toluene	2.00	2.18		ppb v/v		109	70 - 130
trans-1,2-Dichloroethene	2.00	2.19		ppb v/v		109	70 - 130
1,2,4-Trichlorobenzene	2.00	2.68		ppb v/v		134	60 - 140
1,1,1-Trichloroethane	2.00	2.08		ppb v/v		104	70 - 130
1,1,2-Trichloroethane	2.00	2.16		ppb v/v		108	70 - 130
Trichloroethene	2.00	2.16		ppb v/v		108	70 - 130
1,2,3-Trimethylbenzene	2.00	2.40		ppb v/v		120	70 - 130
1,2,4-Trimethylbenzene	2.00	2.28		ppb v/v		114	70 - 130
1,3,5-Trimethylbenzene	2.00	2.22		ppb v/v		111	70 - 130
Vinyl chloride	2.00	2.20		ppb v/v		110	70 - 130
Xylenes, Total	6.00	6.40		ppb v/v		107	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	7.02		ug/m3		110	70 - 130
Carbon tetrachloride	13	14.2		ug/m3		113	70 - 130
Chlorodifluoromethane	7.1	7.60		ug/m3		107	60 - 140
Chloroform	9.8	9.98		ug/m3		102	70 - 130
cis-1,2-Dichloroethene	7.9	8.53		ug/m3		107	70 - 130
Dichlorodifluoromethane	9.9	10.6		ug/m3		107	60 - 140
1,1-Dichloroethane	8.1	8.48		ug/m3		105	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-6849/1002
Matrix: Air
Analysis Batch: 6849

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2-Dichloroethane			8.1	8.84		ug/m3		109	70 - 130		
1,1-Dichloroethene			7.9	8.81		ug/m3		111	70 - 130		
Ethylbenzene			8.7	9.21		ug/m3		106	70 - 130		
Methylene Chloride			7.0	7.01		ug/m3		101	70 - 130		
Methyl tert-butyl ether			7.2	6.96		ug/m3		96	60 - 140		
Naphthalene			10	13.6		ug/m3		130	60 - 140		
Tetrachloroethene			14	15.2		ug/m3		112	70 - 130		
Toluene			7.5	8.22		ug/m3		109	70 - 130		
trans-1,2-Dichloroethene			7.9	8.68		ug/m3		109	70 - 130		
1,2,4-Trichlorobenzene			15	19.9		ug/m3		134	60 - 140		
1,1,1-Trichloroethane			11	11.4		ug/m3		104	70 - 130		
1,1,2-Trichloroethane			11	11.8		ug/m3		108	70 - 130		
Trichloroethene			11	11.6		ug/m3		108	70 - 130		
1,2,3-Trimethylbenzene			9.8	11.8		ug/m3		120	70 - 130		
1,2,4-Trimethylbenzene			9.8	11.2		ug/m3		114	70 - 130		
1,3,5-Trimethylbenzene			9.8	10.9		ug/m3		111	70 - 130		
Vinyl chloride			5.1	5.63		ug/m3		110	70 - 130		
Xylenes, Total			26	27.8		ug/m3		107	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*60 - 140*

Air - GC/MS VOA

Analysis Batch: 6849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-6042-1	BLDG-A INFLUENT	Total/NA	Air	TO 15 LL	
140-6042-2	BLDG-A MID	Total/NA	Air	TO 15 LL	
140-6042-2 - DL	BLDG-A MID	Total/NA	Air	TO 15 LL	
140-6042-3	BLDG-A EFFLUENT	Total/NA	Air	TO 15 LL	
140-6042-3 - DL	BLDG-A EFFLUENT	Total/NA	Air	TO 15 LL	
MB 140-6849/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-6849/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: LMMRC, Bldg A, Middle River

TestAmerica Job ID: 140-6042-1

Client Sample ID: BLDG-A INFLUENT
Lab Sample ID: 140-6042-1
Date Collected: 10/05/16 14:29
Matrix: Air
Date Received: 10/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	20 mL	500 mL	6849	10/10/16 00:20	AFB	TAL KNX
	Instrument ID: MJ									

Client Sample ID: BLDG-A MID
Lab Sample ID: 140-6042-2
Date Collected: 10/05/16 14:33
Matrix: Air
Date Received: 10/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	6849	10/10/16 01:13	AFB	TAL KNX
	Instrument ID: MJ									
Total/NA	Analysis	TO 15 LL	DL	1	30 mL	500 mL	6849	10/10/16 10:17	AFB	TAL KNX
	Instrument ID: MJ									

Client Sample ID: BLDG-A EFFLUENT
Lab Sample ID: 140-6042-3
Date Collected: 10/05/16 14:41
Matrix: Air
Date Received: 10/06/16 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	6849	10/10/16 02:07	AFB	TAL KNX
	Instrument ID: MJ									
Total/NA	Analysis	TO 15 LL	DL	1	40 mL	500 mL	6849	10/10/16 11:12	AFB	TAL KNX
	Instrument ID: MJ									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-6849/4
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	6849	10/09/16 15:24	AFB	TAL KNX
	Instrument ID: MJ									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-6849/1002
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	6849	10/09/16 12:50	AFB	TAL KNX
	Instrument ID: MJ									

Laboratory References:
TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: LMMRC, Bldg A, Middle River

TestAmerica Job ID: 140-6042-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: LMMRC, Bldg A, Middle River

TestAmerica Job ID: 140-6042-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-6042-1	BLDG-A INFLUENT	Air	10/05/16 14:29	10/06/16 10:30
140-6042-2	BLDG-A MID	Air	10/05/16 14:33	10/06/16 10:30
140-6042-3	BLDG-A EFFLUENT	Air	10/05/16 14:41	10/06/16 10:30

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
BLDG-A INFLUENT	140-6042-1	98
BLDG-A MID	140-6042-2	103
BLDG-A MID DL	140-6042-2 DL	103
BLDG-A EFFLUENT	140-6042-3	101
BLDG-A EFFLUENT DL	140-6042-3 DL	98
	MB 140-6849/4	100
	LCS 140-6849/1002	106

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1

SDG No.:

Matrix: Air Level: Low Lab File ID: JCCVJ09-LCS.d

Lab ID: LCS 140-6849/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.20	110	70-130	
Carbon tetrachloride	2.00	2.26	113	70-130	
Chlorodifluoromethane	2.00	2.15	107	60-140	
Chloroform	2.00	2.04	102	70-130	
cis-1,2-Dichloroethene	2.00	2.15	107	70-130	
Dichlorodifluoromethane	2.00	2.15	107	60-140	
1,1-Dichloroethane	2.00	2.10	105	70-130	
1,2-Dichloroethane	2.00	2.18	109	70-130	
1,1-Dichloroethene	2.00	2.22	111	70-130	
Ethylbenzene	2.00	2.12	106	70-130	
Methylene Chloride	2.00	2.02	101	70-130	
Methyl tert-butyl ether	2.00	1.93	96	60-140	
Naphthalene	2.00	2.60	130	60-140	
Tetrachloroethene	2.00	2.24	112	70-130	
Toluene	2.00	2.18	109	70-130	
trans-1,2-Dichloroethene	2.00	2.19	109	70-130	
1,2,4-Trichlorobenzene	2.00	2.68	134	60-140	
1,1,1-Trichloroethane	2.00	2.08	104	70-130	
1,1,2-Trichloroethane	2.00	2.16	108	70-130	
Trichloroethene	2.00	2.16	108	70-130	
1,2,3-Trimethylbenzene	2.00	2.40	120	70-130	
1,2,4-Trimethylbenzene	2.00	2.28	114	70-130	
1,3,5-Trimethylbenzene	2.00	2.22	111	70-130	
Vinyl chloride	2.00	2.20	110	70-130	
Xylenes, Total	6.00	6.40	107	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1

SDG No.:

Lab File ID: JMB500J09.D Lab Sample ID: MB 140-6849/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MJ Date Analyzed: 10/09/2016 15:24

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-6849/1002	JCCVJ09-LCS.d	10/09/2016 12:50
BLDG-A INFLUENT	140-6042-1	JJ09P109.D	10/10/2016 00:20
BLDG-A MID	140-6042-2	JJ09P110.D	10/10/2016 01:13
BLDG-A EFFLUENT	140-6042-3	JJ09P111.D	10/10/2016 02:07
BLDG-A MID DL	140-6042-2 DL	JJ09P110DL.D	10/10/2016 10:17
BLDG-A EFFLUENT DL	140-6042-3 DL	JJ09P111DL.D	10/10/2016 11:12

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1

SDG No.:

Lab File ID: JBFBJ08.D BFB Injection Date: 10/08/2016

Instrument ID: MJ BFB Injection Time: 17:39

Analysis Batch No.: 6845

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.4	
75	30.0 - 60.0 % of mass 95	53.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	110.4	
175	5.0 - 9.0 % of mass 174	8.5	(7.7) 1
176	95.0 - 101.0 % of mass 174	108.2	(98.0) 1
177	5.0 - 9.0 % of mass 176	6.9	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-6845/3	JJ08ICAL01.D	10/08/2016	19:01
	IC 140-6845/4	JJ08ICAL02.D	10/08/2016	19:54
	IC 140-6845/5	JJ08ICAL03.D	10/08/2016	20:47
	IC 140-6845/6	JJ08ICAL04.D	10/08/2016	21:41
	IC 140-6845/7	JJ08ICAL05.D	10/08/2016	22:36
	ICIS 140-6845/8	JJ08ICAL06.D	10/08/2016	23:29
	IC 140-6845/9	JJ08ICAL07.D	10/09/2016	00:23
	IC 140-6845/10	JJ08ICAL08.D	10/09/2016	01:17
	IC 140-6845/11	JJ07ICAL09.D	10/09/2016	02:10
	ICV 140-6845/17	JJ08LCS.D	10/09/2016	07:04

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1

SDG No.:

Lab File ID: JBFBJ09.D BFB Injection Date: 10/09/2016

Instrument ID: MJ BFB Injection Time: 12:23

Analysis Batch No.: 6849

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.3	
75	30.0 - 60.0 % of mass 95	53.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.6	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	101.6	
175	5.0 - 9.0 % of mass 174	7.8	(7.7) 1
176	95.0 - 101.0 % of mass 174	99.2	(97.7) 1
177	5.0 - 9.0 % of mass 176	6.6	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-6849/2	JCCVJ09.D	10/09/2016	12:50
	LCS 140-6849/1002	JCCVJ09-LCS.d	10/09/2016	12:50
	MB 140-6849/4	JMB500J09.D	10/09/2016	15:24
BLDG-A INFLUENT	140-6042-1	JJ09P109.D	10/10/2016	00:20
BLDG-A MID	140-6042-2	JJ09P110.D	10/10/2016	01:13
BLDG-A EFFLUENT	140-6042-3	JJ09P111.D	10/10/2016	02:07
BLDG-A MID DL	140-6042-2 DL	JJ09P110DL.D	10/10/2016	10:17
BLDG-A EFFLUENT DL	140-6042-3 DL	JJ09P111DL.D	10/10/2016	11:12

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1

SDG No.:

Sample No.: ICIS 140-6845/8 Date Analyzed: 10/08/2016 23:29

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JJ08ICAL06.D Heated Purge: (Y/N) N

Calibration ID: 771

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		292093	9.30	1340770	11.46	1141838	16.13
UPPER LIMIT		408930	9.63	1877078	11.79	1598573	16.46
LOWER LIMIT		175256	8.97	804462	11.13	685103	15.80
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-6845/17		290428	9.30	1211046	11.46	1042574	16.13

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1

SDG No.:

Sample No.: CCVIS 140-6849/2 Date Analyzed: 10/09/2016 12:50

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JCCVJ09.D Heated Purge: (Y/N) N

Calibration ID: 771

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		279785	9.30	1199916	11.46	984160	16.13
UPPER LIMIT		391699	9.63	1679882	11.79	1377824	16.46
LOWER LIMIT		167871	8.97	719950	11.13	590496	15.80
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-6849/1002		279785	9.30	1199916	11.46	984160	16.13
MB 140-6849/4		289203	9.31	1341366	11.46	1102997	16.13
140-6042-1	BLDG-A INFLUENT	307249	9.30	1458624	11.46	1240618	16.12
140-6042-2	BLDG-A MID	267002	9.30	1230186	11.46	1041270	16.13
140-6042-3	BLDG-A EFFLUENT	275451	9.30	1290443	11.46	1120088	16.13
140-6042-2 DL	BLDG-A MID DL	246140	9.29	1092498	11.45	919392	16.13
140-6042-3 DL	BLDG-A EFFLUENT DL	230176	9.30	1011729	11.46	825642	16.13

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6042-1

SDG No.:

Client Sample ID: BLDG-A INFLUENT | Lab Sample ID: 140-6042-1

Matrix: Air | Lab File ID: JJ09P109.D

Analysis Method: TO 15 LL | Date Collected: 10/05/2016 14:29

Sample wt/vol: 20(mL) | Date Analyzed: 10/10/2016 00:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6849 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		2.0	0.58
56-23-5	Carbon tetrachloride	153.81	ND		2.0	0.38
75-45-6	Chlorodifluoromethane	86.47	0.47	J	2.0	0.38
67-66-3	Chloroform	119.38	ND		2.0	0.38
156-59-2	cis-1,2-Dichloroethene	96.94	20		2.0	0.60
75-71-8	Dichlorodifluoromethane	120.91	ND		2.0	0.68
75-34-3	1,1-Dichloroethane	98.96	3.4		2.0	0.25
107-06-2	1,2-Dichloroethane	98.96	ND		2.0	0.48
75-35-4	1,1-Dichloroethene	96.94	17		2.0	0.35
100-41-4	Ethylbenzene	106.17	ND		2.0	0.68
75-09-2	Methylene Chloride	84.93	ND		5.0	3.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		10	1.7
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.0	0.40
108-88-3	Toluene	92.14	ND		3.0	3.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		2.0	0.50
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		2.0	0.98
71-55-6	1,1,1-Trichloroethane	133.41	75		2.0	0.30
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.0	0.53
79-01-6	Trichloroethene	131.39	120		1.0	0.35
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.85
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.63
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.65
75-01-4	Vinyl chloride	62.50	ND		1.0	0.73
1330-20-7	Xylenes, Total	106.17	ND		4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6042-1

SDG No.:

Client Sample ID: BLDG-A INFLUENT | Lab Sample ID: 140-6042-1

Matrix: Air | Lab File ID: JJ09P109.D

Analysis Method: TO 15 LL | Date Collected: 10/05/2016 14:29

Sample wt/vol: 20(mL) | Date Analyzed: 10/10/2016 00:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6849 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		13	2.4
75-45-6	Chlorodifluoromethane	86.47	1.7	J	7.1	1.3
67-66-3	Chloroform	119.38	ND		9.8	1.8
156-59-2	cis-1,2-Dichloroethene	96.94	81		7.9	2.4
75-71-8	Dichlorodifluoromethane	120.91	ND		9.9	3.3
75-34-3	1,1-Dichloroethane	98.96	14		8.1	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.1	1.9
75-35-4	1,1-Dichloroethene	96.94	68		7.9	1.4
100-41-4	Ethylbenzene	106.17	ND		8.7	2.9
75-09-2	Methylene Chloride	84.93	ND		17	11
1634-04-4	Methyl tert-butyl ether	88.15	ND		36	6.1
91-20-3	Naphthalene	128.17	ND		5.2	5.2
127-18-4	Tetrachloroethene	165.83	ND		14	2.7
108-88-3	Toluene	92.14	ND		11	11
156-60-5	trans-1,2-Dichloroethene	96.94	ND		7.9	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		15	7.2
71-55-6	1,1,1-Trichloroethane	133.41	410		11	1.6
79-00-5	1,1,2-Trichloroethane	133.41	ND		11	2.9
79-01-6	Trichloroethene	131.39	630		5.4	1.9
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		9.8	4.2
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		9.8	3.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		9.8	3.2
75-01-4	Vinyl chloride	62.50	ND		2.6	1.9
1330-20-7	Xylenes, Total	106.17	ND		17	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P109.D				
Lims ID:	140-6042-A-1				
Client ID:	BLDG-A INFLUENT				
Sample Type:	Client				
Inject. Date:	10-Oct-2016 00:20:30	ALS Bottle#:	9	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003510-014				
Misc. Info.:	140-6042-a-1				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Oct-2016 12:15:54	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK033				
First Level Reviewer: barlozhetskayaa		Date:	12-Oct-2016 12:15:54		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.295	9.302	-0.007	96	307249	4.00	
* 2 1,4-Difluorobenzene	114	11.457	11.463	-0.006	95	1458624	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.124	16.131	-0.007	88	1240618	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.753	17.755	-0.002	89	733084	3.92	
6 Chlorodifluoromethane	67	3.928	3.919	0.009	91	593	0.0190	
27 1,1-Dichloroethene	96	6.316	6.323	-0.007	97	66138	0.6851	
31 Methylene Chloride	84	6.682	6.683	-0.001	93	11976	0.1227	
37 1,1-Dichloroethane	63	7.951	7.957	-0.006	99	24310	0.1378	
42 cis-1,2-Dichloroethene	96	8.956	8.963	-0.007	95	76395	0.8151	
47 1,1,1-Trichloroethane	97	10.349	10.350	-0.001	96	594697	3.00	
59 Trichloroethene	130	12.161	12.163	-0.002	95	505776	4.67	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

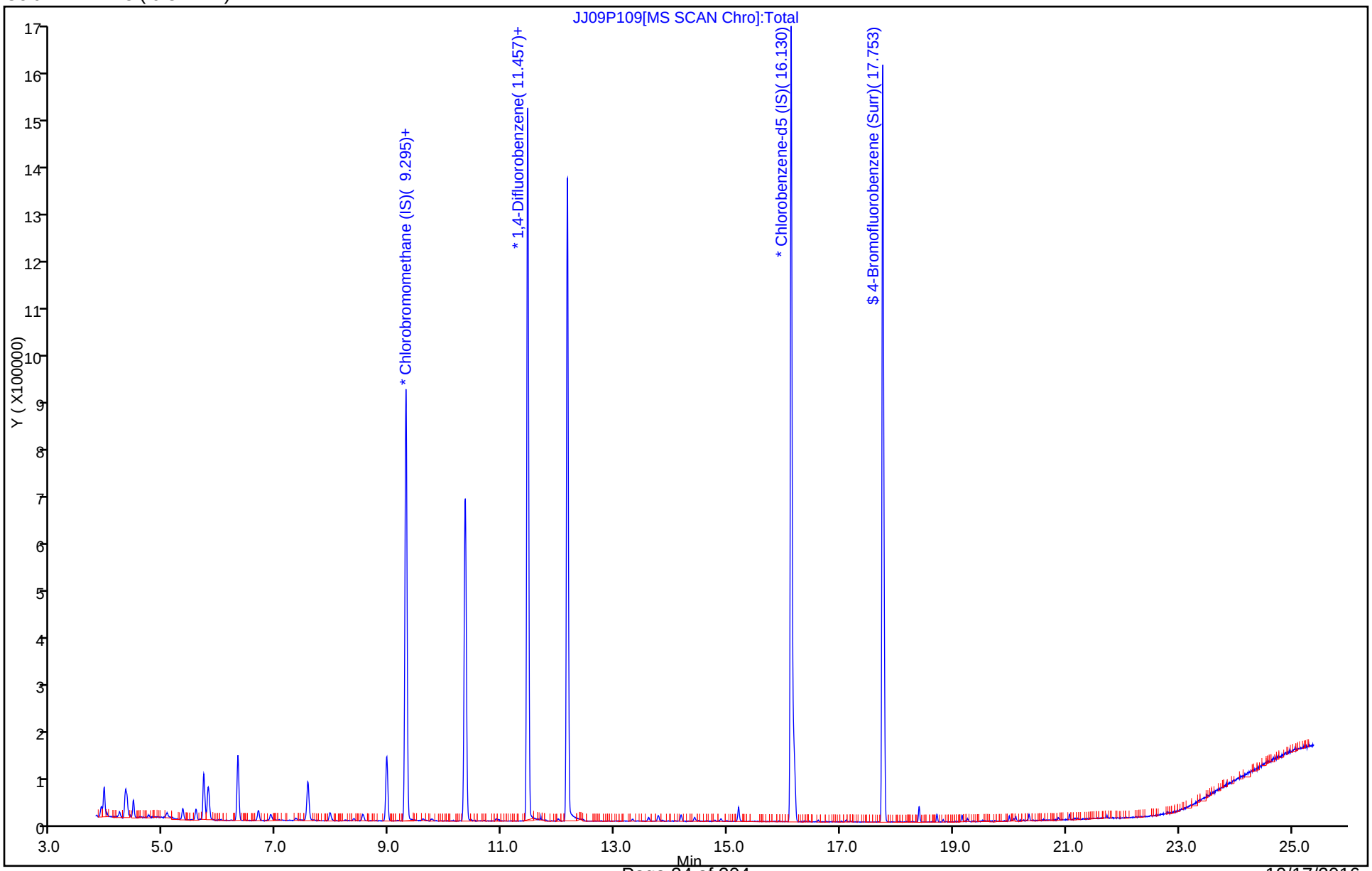
Report Date: 12-Oct-2016 12:15:57 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P109.D

Injection Date:	10-Oct-2016 00:20:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-6042-A-1	Lab Sample ID:	140-6042-1	Worklist Smp#:	14
Client ID:	BLDG-A INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P109.D				
Lims ID:	140-6042-A-1				
Client ID:	BLDG-A INFLUENT				
Sample Type:	Client				
Inject. Date:	10-Oct-2016 00:20:30	ALS Bottle#:	9	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003510-014				
Misc. Info.:	140-6042-a-1				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Oct-2016 12:15:54	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK033				

First Level Reviewer: barlozhetskayaa Date: 12-Oct-2016 12:15:54

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.92	97.99

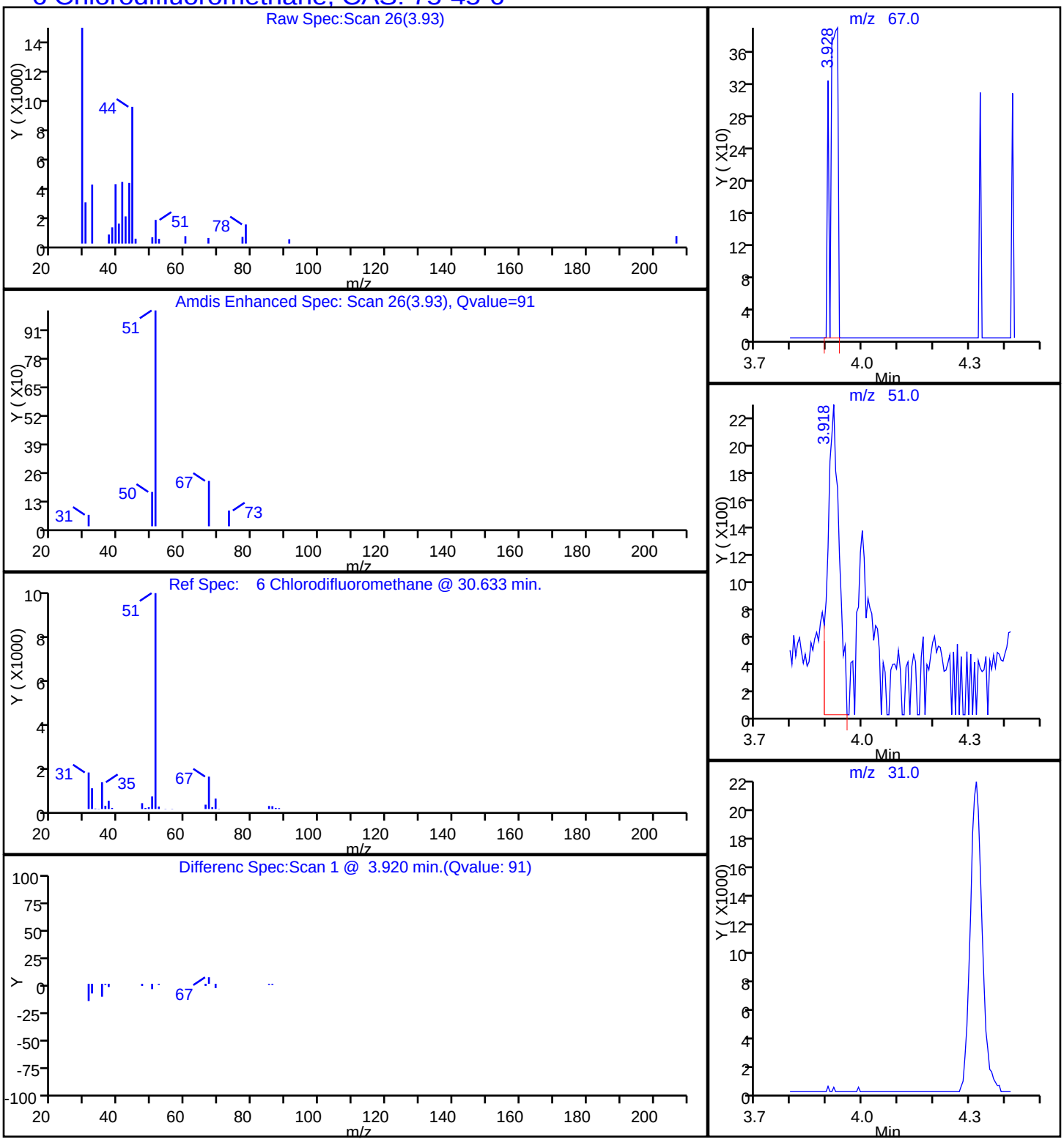
Report Date: 12-Oct-2016 12:15:57 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P109.D

Injection Date:	10-Oct-2016 00:20:30	Instrument ID:	MJ		
Lims ID:	140-6042-A-1	Lab Sample ID:	140-6042-1		
Client ID:	BLDG-A INFLUENT				
Operator ID:	403648	ALS Bottle#:	9	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6



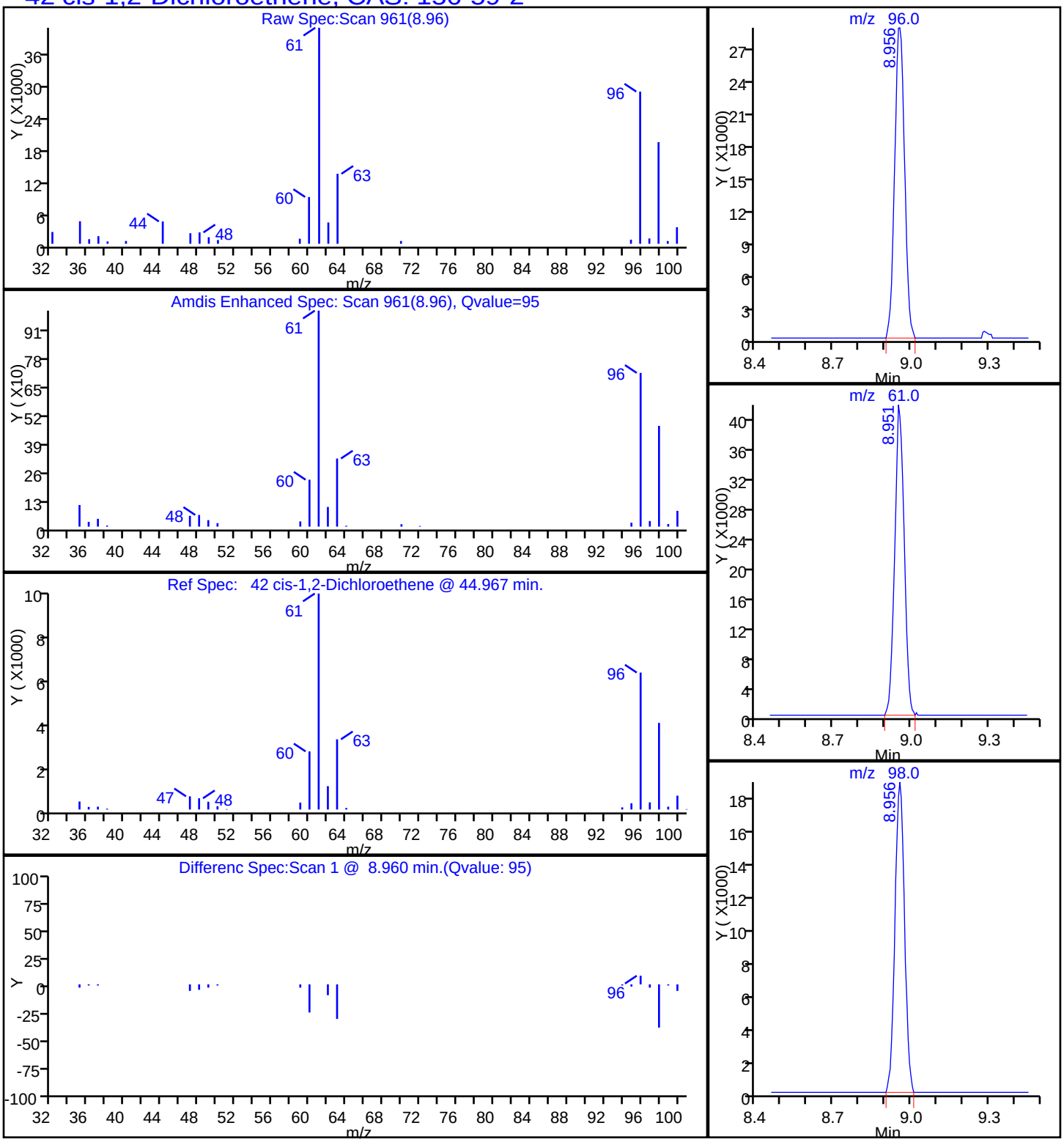
Report Date: 12-Oct-2016 12:15:58 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P109.D

Injection Date:	10-Oct-2016 00:20:30	Instrument ID:	MJ		
Lims ID:	140-6042-A-1	Lab Sample ID:	140-6042-1		
Client ID:	BLDG-A INFLUENT				
Operator ID:	403648	ALS Bottle#:	9	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

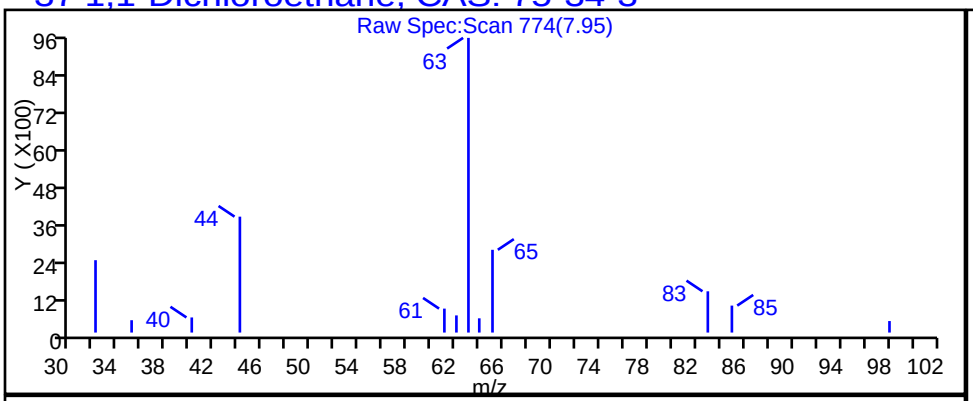
42 cis-1,2-Dichloroethene, CAS: 156-59-2

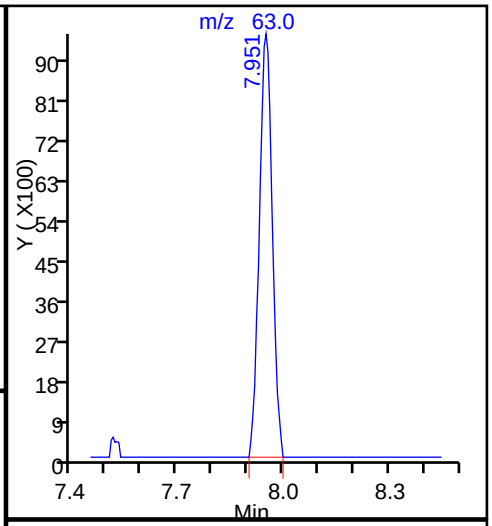


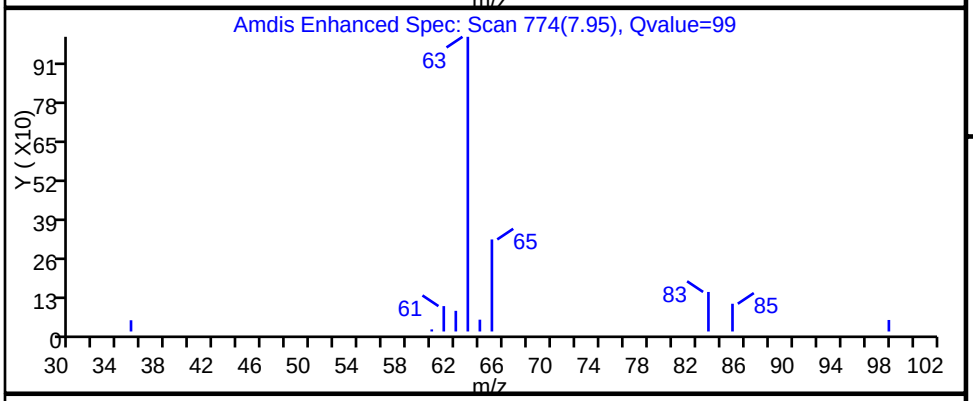
TestAmerica Knoxville

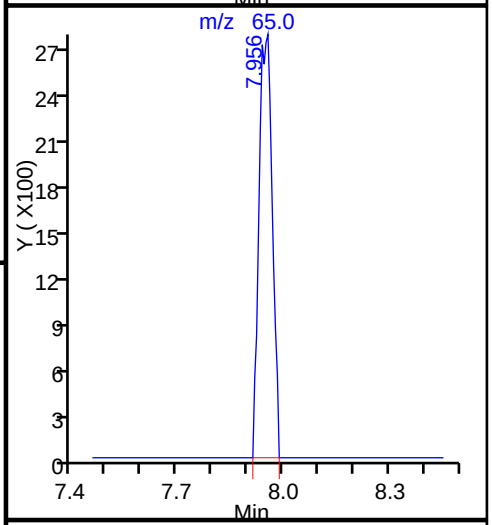
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P109.D				
Injection Date:	10-Oct-2016 00:20:30	Instrument ID:	MJ		
Lims ID:	140-6042-A-1	Lab Sample ID:	140-6042-1		
Client ID:	BLDG-A INFLUENT				
Operator ID:	403648	ALS Bottle#:	9	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

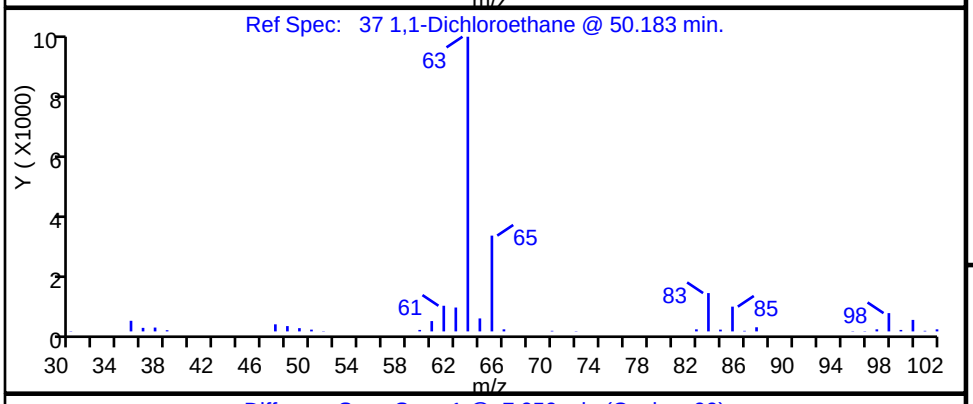
37 1,1-Dichloroethane, CAS: 75-34-3

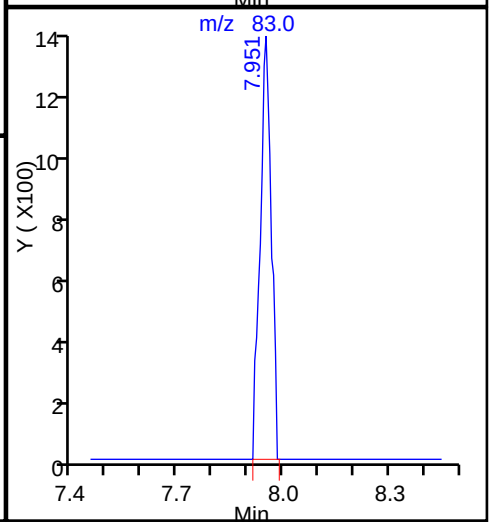


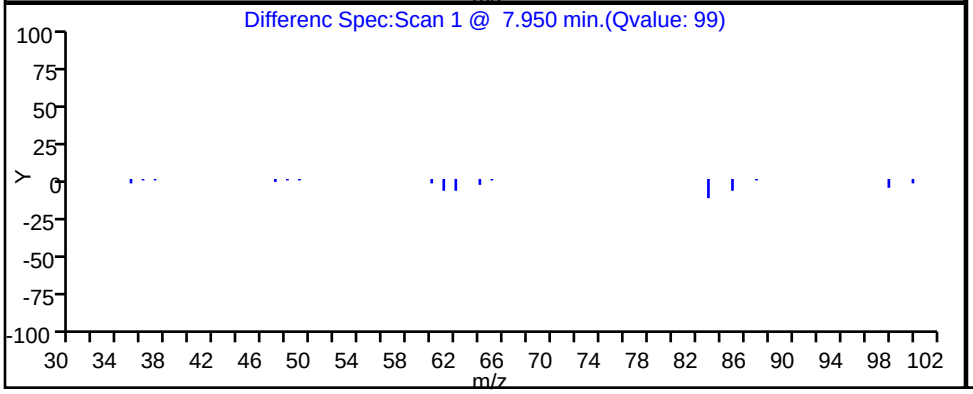








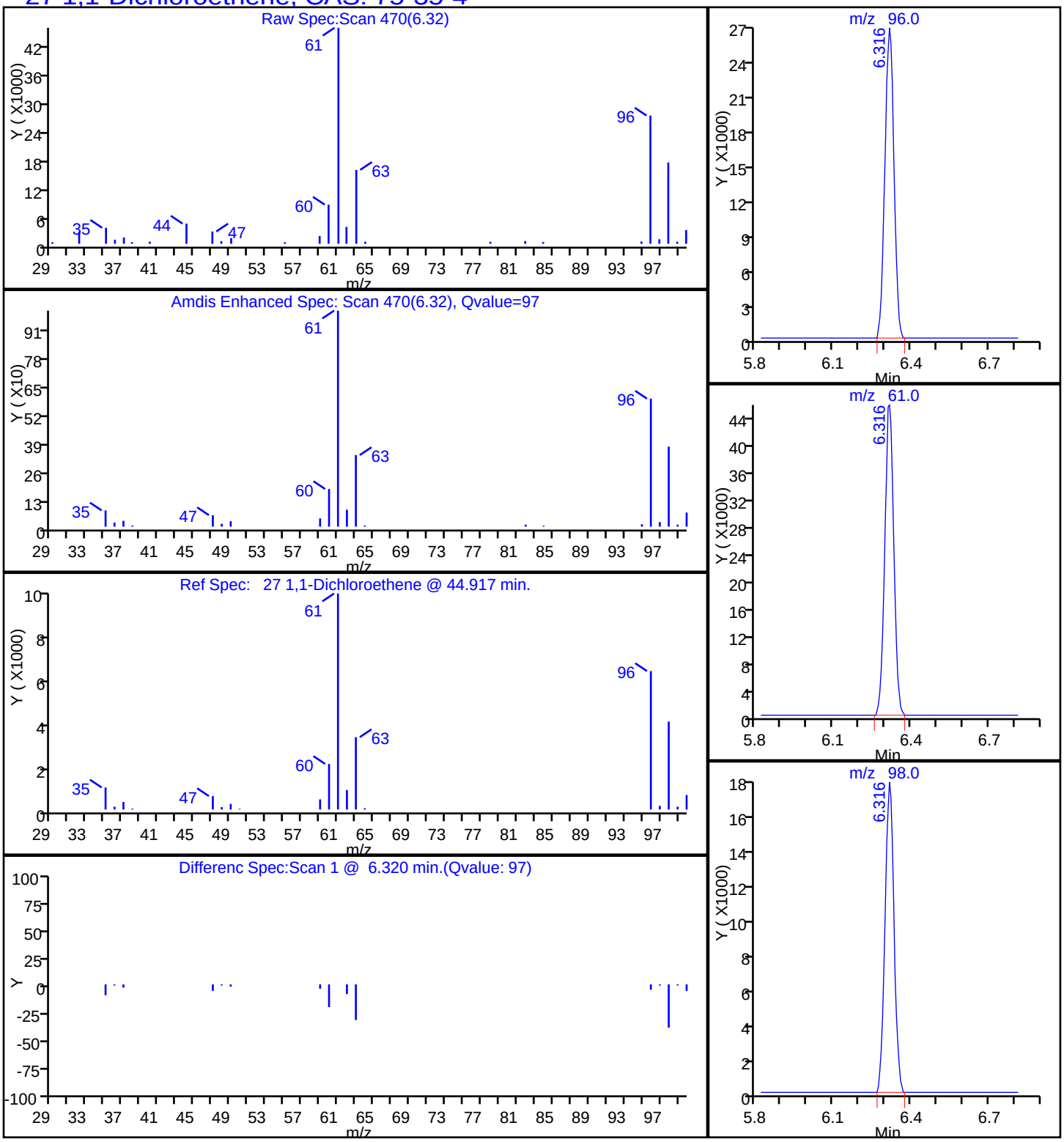




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P109.D		
Injection Date:	10-Oct-2016 00:20:30	Instrument ID:	MJ
Lims ID:	140-6042-A-1	Lab Sample ID:	140-6042-1
Client ID:	BLDG-A INFLUENT		
Operator ID:	403648	ALS Bottle#:	9 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4

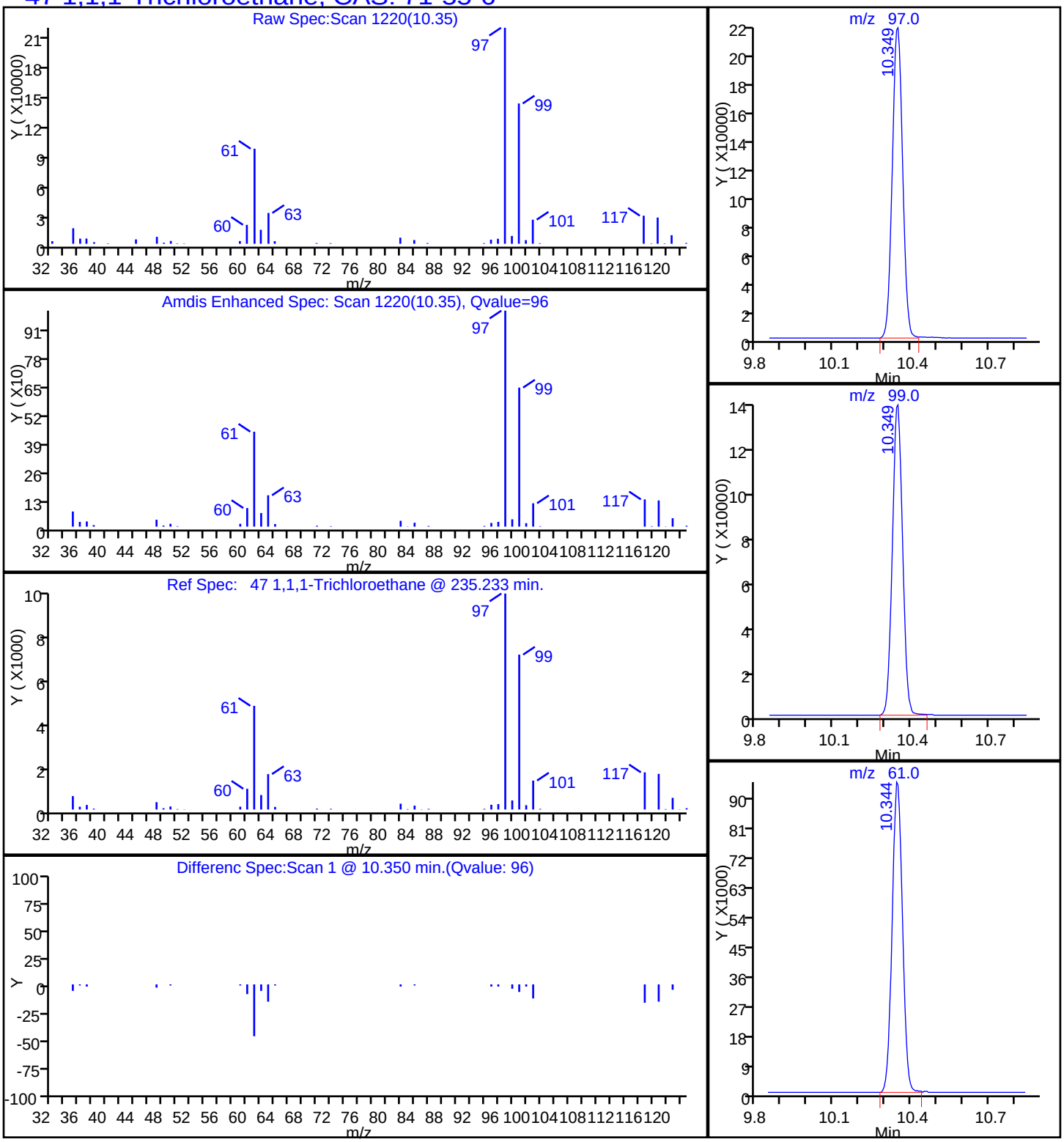


Report Date: 12-Oct-2016 12:15:58 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P109.D				
Injection Date:	10-Oct-2016 00:20:30	Instrument ID:	MJ		
Lims ID:	140-6042-A-1	Lab Sample ID:	140-6042-1		
Client ID:	BLDG-A INFLUENT				
Operator ID:	403648	ALS Bottle#:	9	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

47 1,1,1-Trichloroethane, CAS: 71-55-6



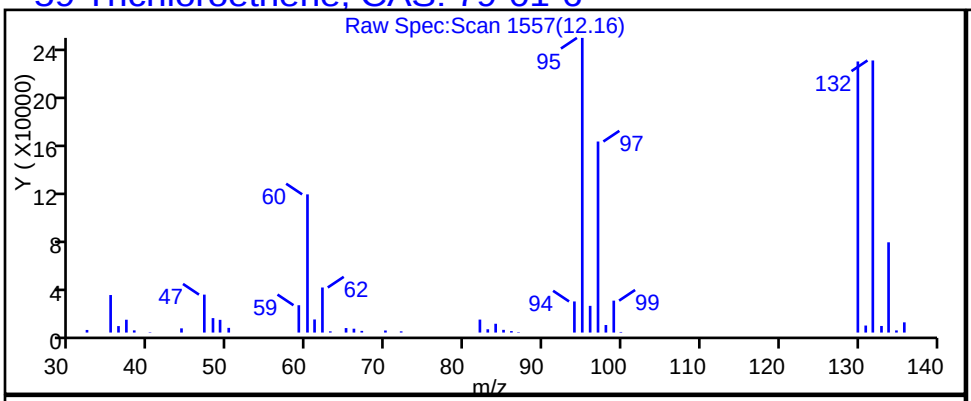
Report Date: 12-Oct-2016 12:15:58 Chrom Revision: 2.2 08-Sep-2016 14:45:52

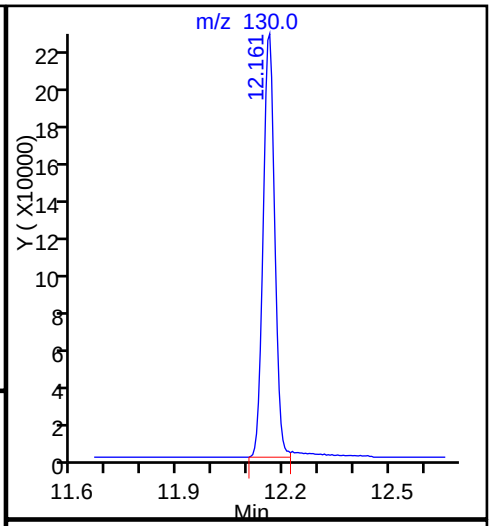
TestAmerica Knoxville

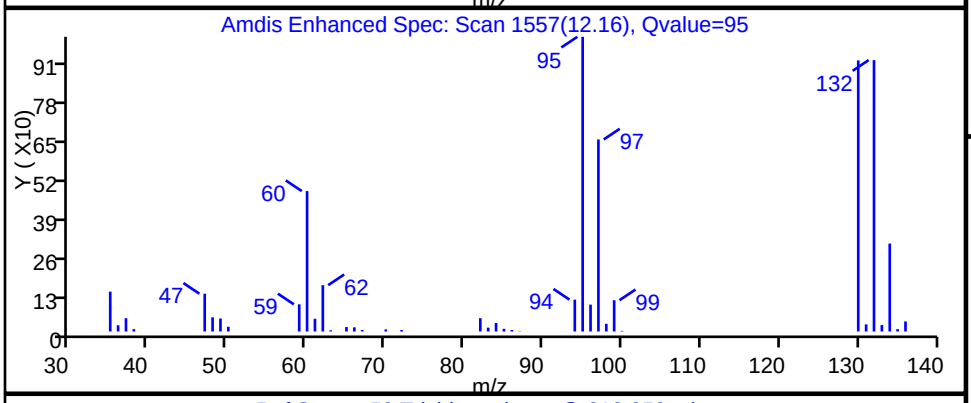
Data File: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P109.D

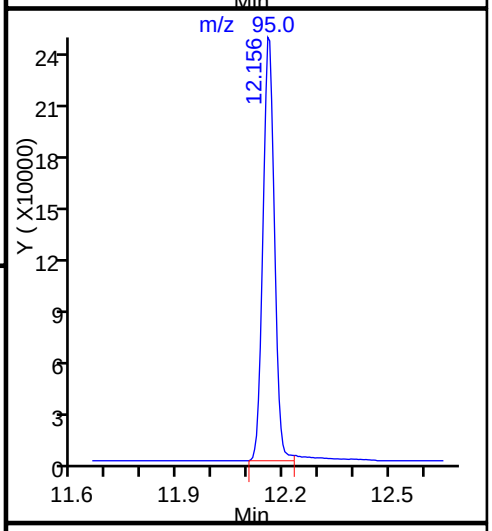
Injection Date:	10-Oct-2016 00:20:30	Instrument ID:	MJ
Lims ID:	140-6042-A-1	Lab Sample ID:	140-6042-1
Client ID:	BLDG-A INFLUENT		
Operator ID:	403648	ALS Bottle#:	9 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

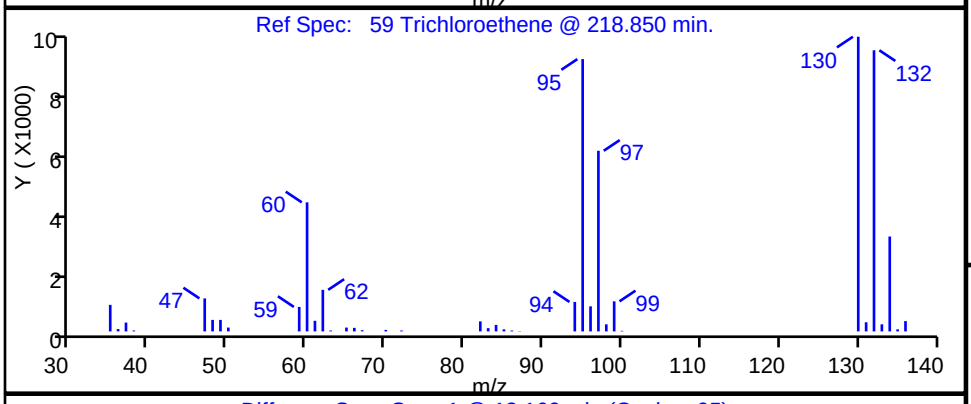
59 Trichloroethene, CAS: 79-01-6

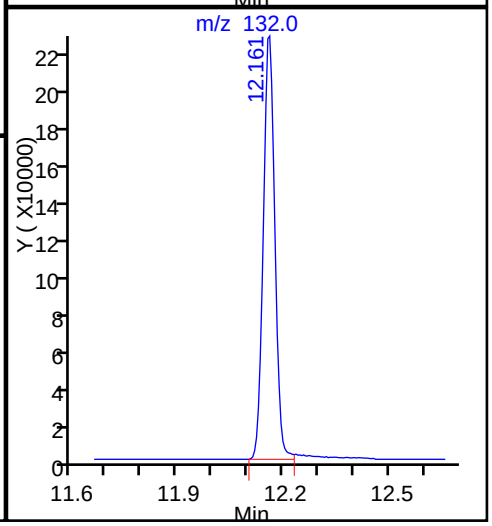


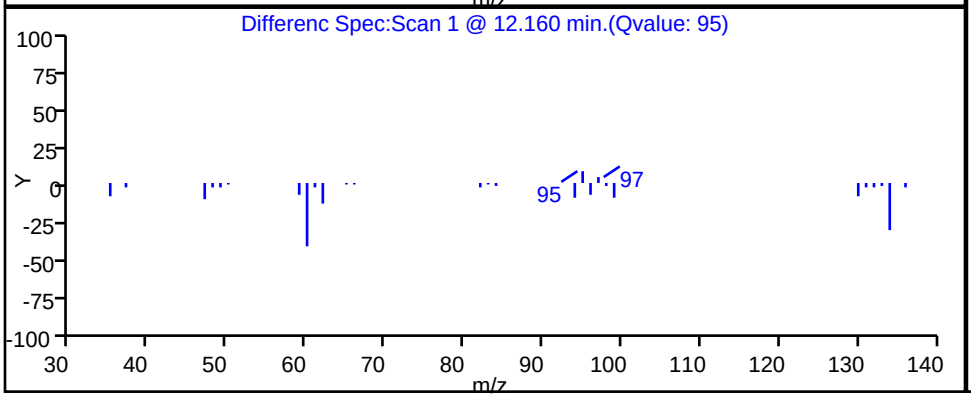












FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6042-1

SDG No.:

Client Sample ID: BLDG-A MID | Lab Sample ID: 140-6042-2

Matrix: Air | Lab File ID: JJ09P110.D

Analysis Method: TO 15 LL | Date Collected: 10/05/2016 14:33

Sample wt/vol: 100(mL) | Date Analyzed: 10/10/2016 01:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6849 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	3.4		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.11	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.44		0.40	0.075
67-66-3	Chloroform	119.38	0.83		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	56		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	7.5		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	0.36	J	0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	26		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.79	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.81		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.88		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	*1,1,1-Trichloroethane*	*133.41*	*150*	*E*	*0.40*	*0.060*
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	13		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6042-1

SDG No.:

Client Sample ID: BLDG-A MID | Lab Sample ID: 140-6042-2

Matrix: Air | Lab File ID: JJ09P110.D

Analysis Method: TO 15 LL | Date Collected: 10/05/2016 14:33

Sample wt/vol: 100(mL) | Date Analyzed: 10/10/2016 01:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6849 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	11		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.69	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6		1.4	0.27
67-66-3	Chloroform	119.38	4.1		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	220		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	30		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	1.5	J	1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	100		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	3.5		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	*1,1,1-Trichloroethane*	*133.41*	*810*	*E*	*2.2*	*0.33*
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	67		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P110.D				
Lims ID:	140-6042-A-2				
Client ID:	BLDG-A MID				
Sample Type:	Client				
Inject. Date:	10-Oct-2016 01:13:30	ALS Bottle#:	10	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003510-015				
Misc. Info.:	140-6042-a-2				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	11-Oct-2016 12:42:39	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				
First Level Reviewer: barlozhetskayaa		Date:	11-Oct-2016 12:42:39		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.301	9.302	-0.001	95	267002	4.00	
* 2 1,4-Difluorobenzene	114	11.457	11.463	-0.006	95	1230186	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.130	16.131	-0.001	89	1041270	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.754	17.755	-0.001	88	645526	4.11	
6 Chlorodifluoromethane	67	3.912	3.919	-0.007	96	2386	0.0878	
8 Dichlorodifluoromethane	85	3.982	3.989	-0.007	100	23666	0.0900	
27 1,1-Dichloroethene	96	6.316	6.323	-0.007	97	429571	5.12	
31 Methylene Chloride	84	6.676	6.683	-0.007	95	13475	0.1588	
34 trans-1,2-Dichloroethene	96	7.515	7.522	-0.007	96	14547	0.1759	
37 1,1-Dichloroethane	63	7.951	7.957	-0.006	100	229063	1.49	
42 cis-1,2-Dichloroethene	96	8.956	8.963	-0.007	95	905301	11.1	
44 Chloroform	83	9.306	9.313	-0.007	93	27899	0.1662	
47 1,1,1-Trichloroethane	97	10.349	10.350	-0.001	98	5100927	29.6	E
48 1,2-Dichloroethane	62	10.457	10.463	-0.006	90	7688	0.0729	
51 Benzene	78	10.935	10.936	-0.001	96	153261	0.6735	
52 Carbon tetrachloride	117	10.962	10.963	-0.001	96	3831	0.0219	
59 Trichloroethene	130	12.161	12.163	-0.002	95	229251	2.51	
68 Toluene	91	14.178	14.179	-0.001	93	36928	0.1618	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

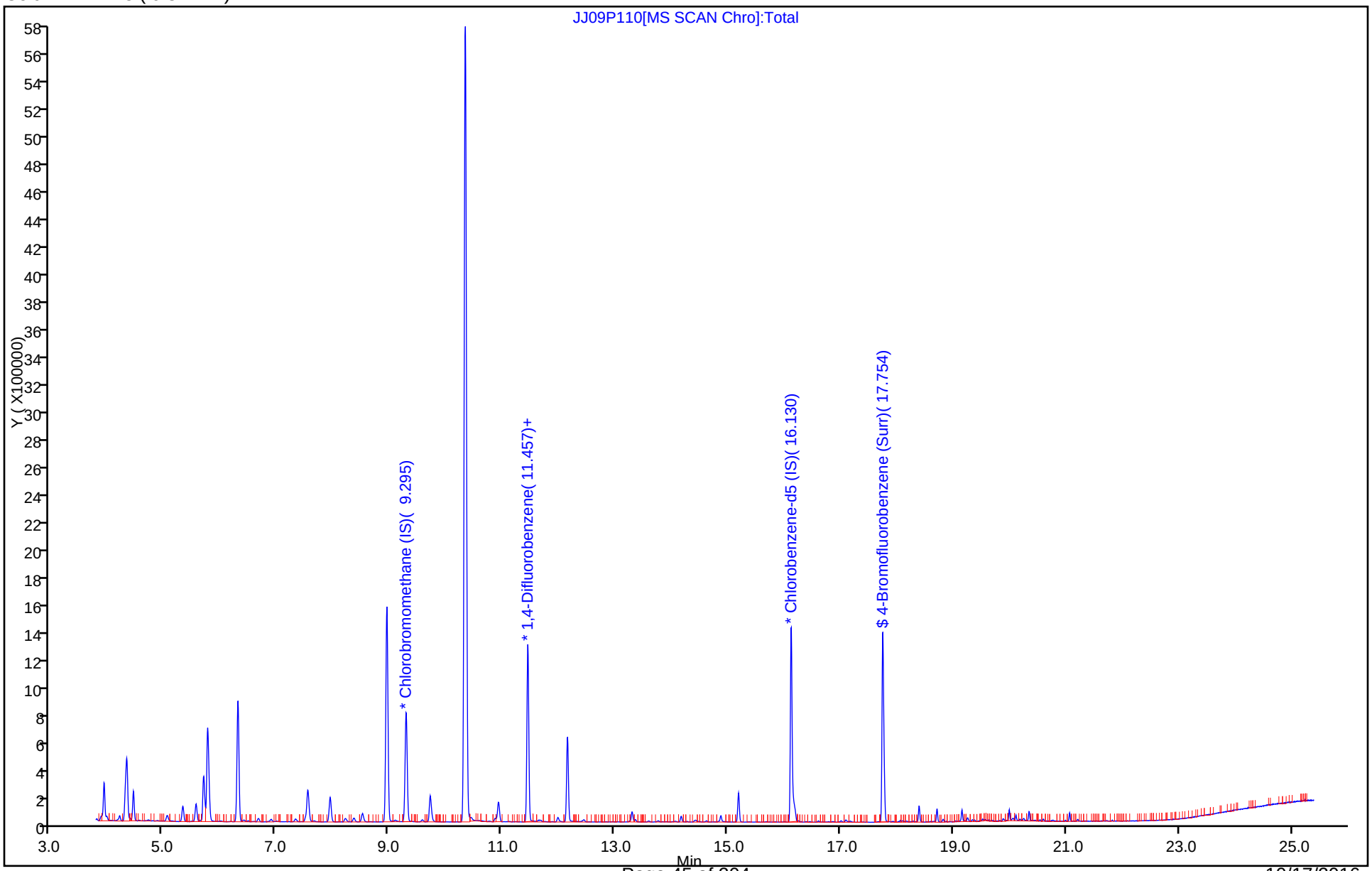
Report Date: 11-Oct-2016 12:42:40 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P110.D

Injection Date:	10-Oct-2016 01:13:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-6042-A-2	Lab Sample ID:	140-6042-2	Worklist Smp#:	15
Client ID:	BLDG-A MID				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P110.D				
Lims ID:	140-6042-A-2				
Client ID:	BLDG-A MID				
Sample Type:	Client				
Inject. Date:	10-Oct-2016 01:13:30	ALS Bottle#:	10	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003510-015				
Misc. Info.:	140-6042-a-2				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	11-Oct-2016 12:42:39	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				

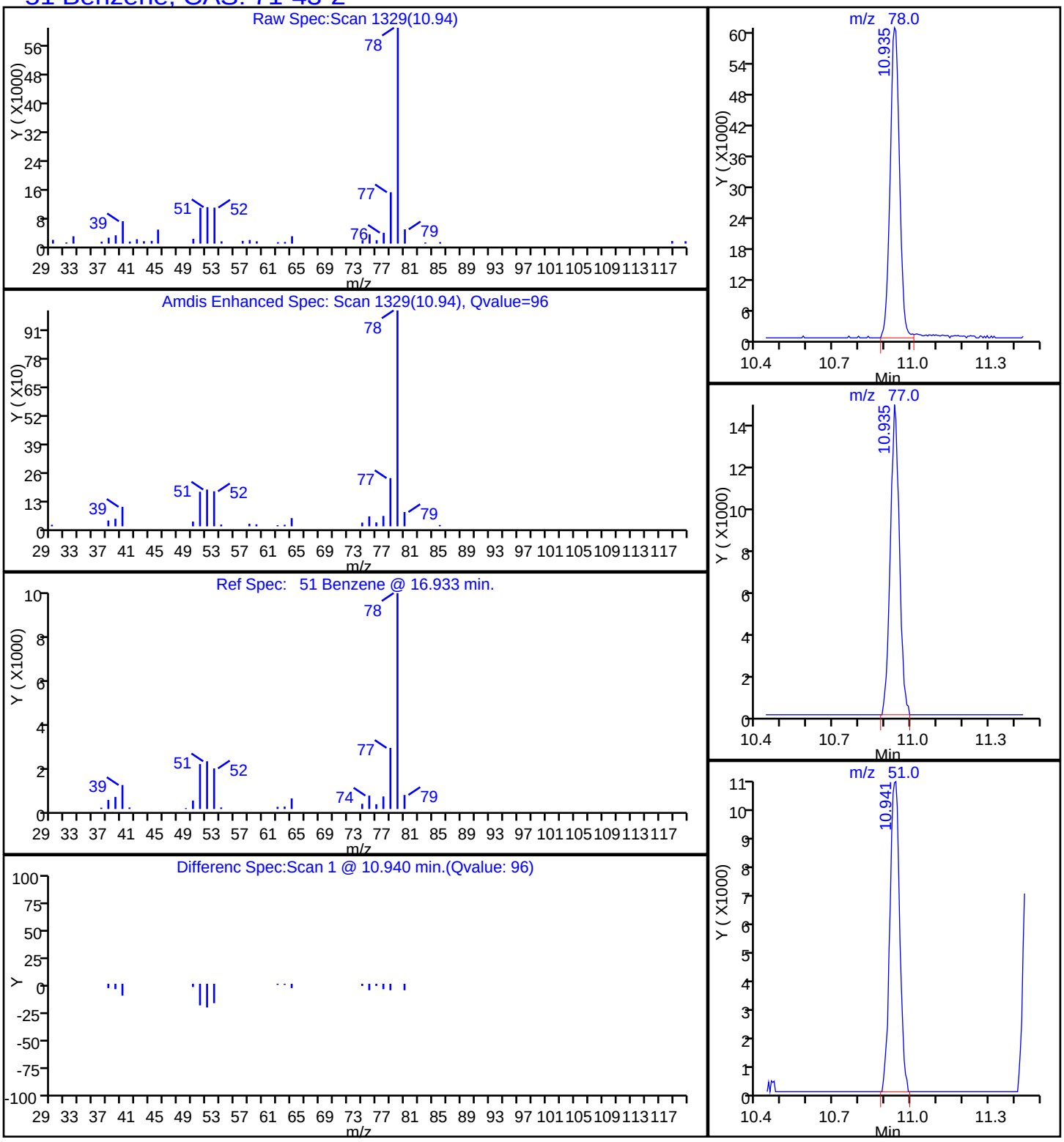
First Level Reviewer: barlozhetskayaa Date: 11-Oct-2016 12:42:39

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.11	102.80

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P110.D				
Injection Date:	10-Oct-2016 01:13:30	Instrument ID:	MJ		
Lims ID:	140-6042-A-2	Lab Sample ID:	140-6042-2		
Client ID:	BLDG-A MID				
Operator ID:	403648	ALS Bottle#:	10	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

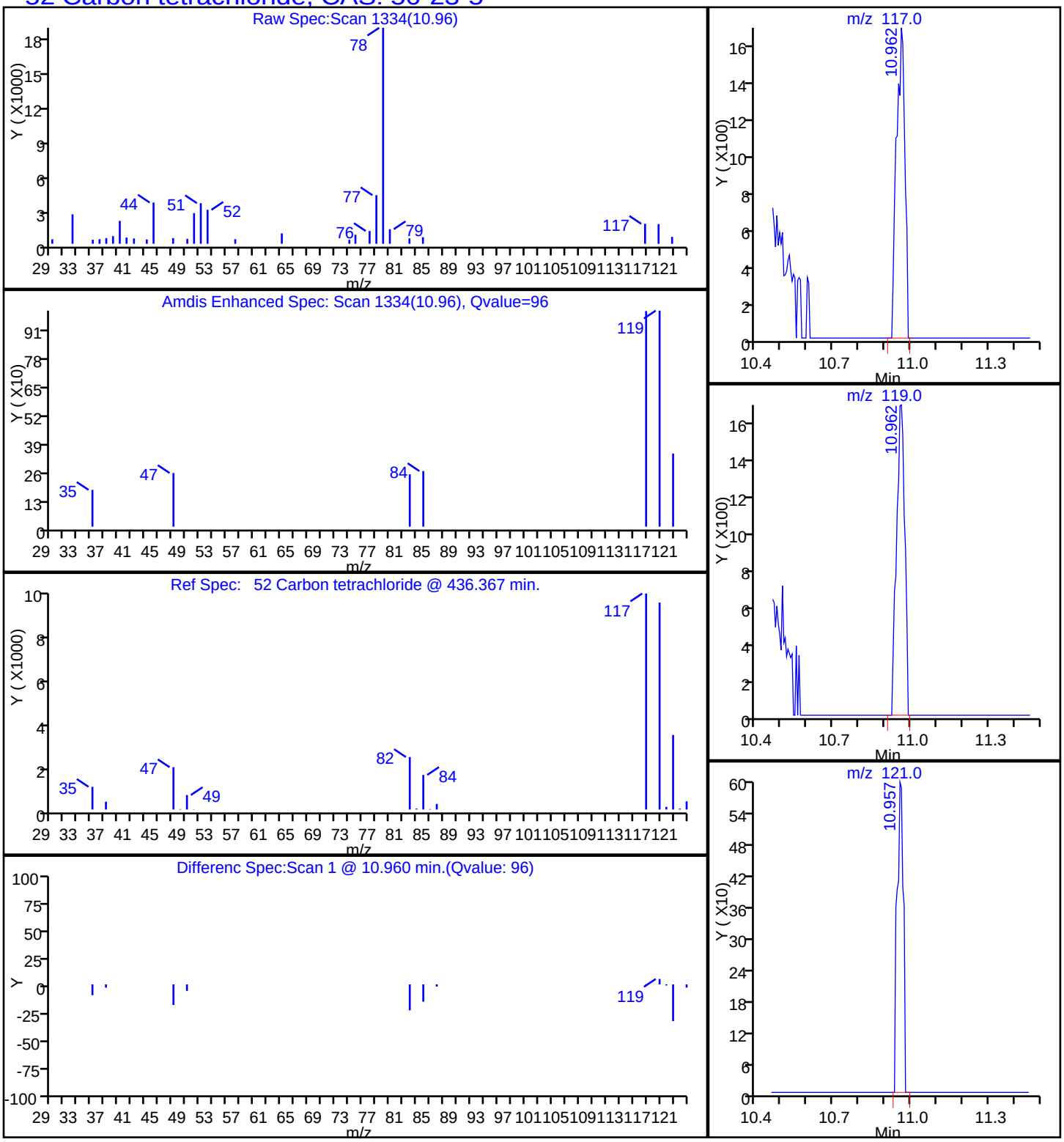
51 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P110.D				
Injection Date:	10-Oct-2016 01:13:30	Instrument ID:	MJ		
Lims ID:	140-6042-A-2	Lab Sample ID:	140-6042-2		
Client ID:	BLDG-A MID				
Operator ID:	403648	ALS Bottle#:	10	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

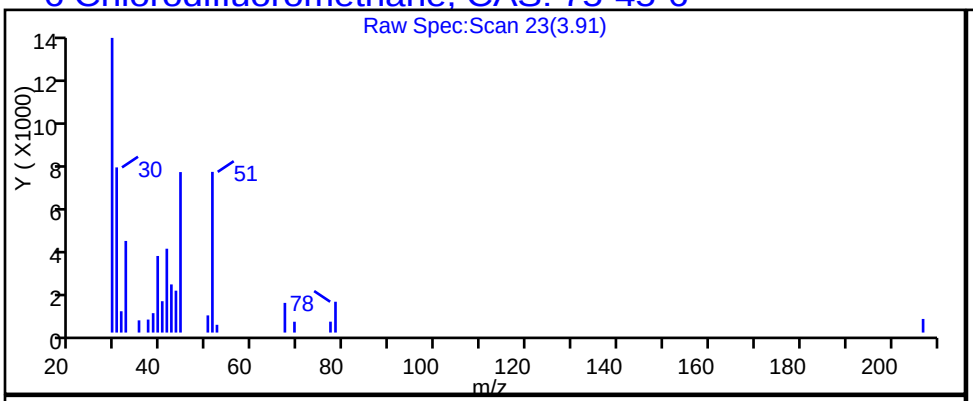
52 Carbon tetrachloride, CAS: 56-23-5

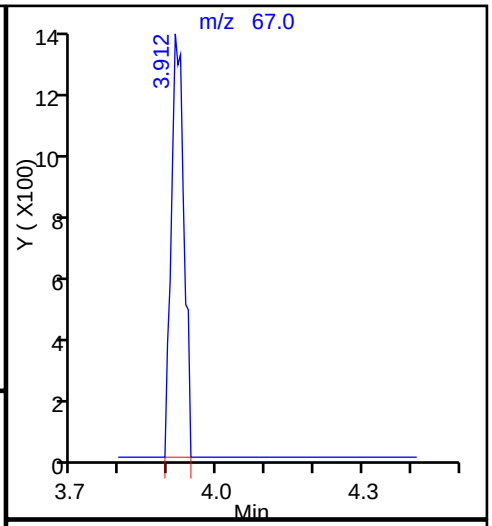


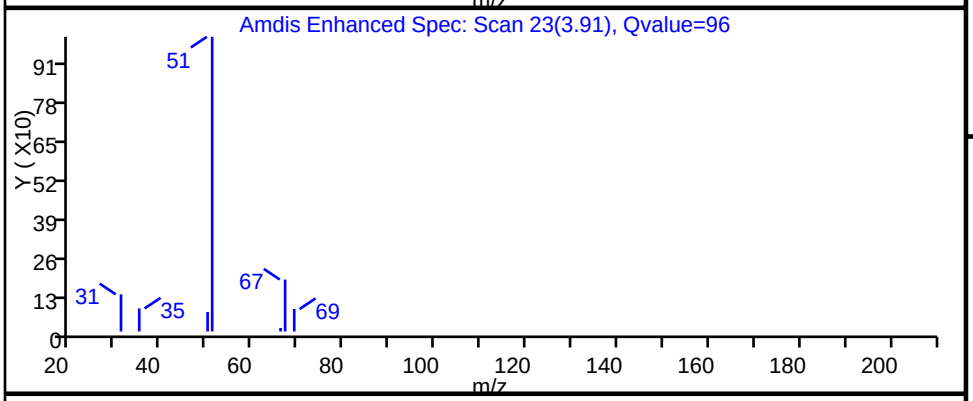
TestAmerica Knoxville

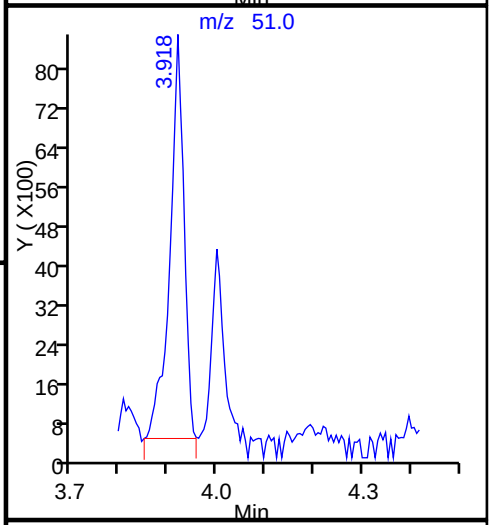
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P110.D				
Injection Date:	10-Oct-2016 01:13:30	Instrument ID:	MJ		
Lims ID:	140-6042-A-2	Lab Sample ID:	140-6042-2		
Client ID:	BLDG-A MID				
Operator ID:	403648	ALS Bottle#:	10	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

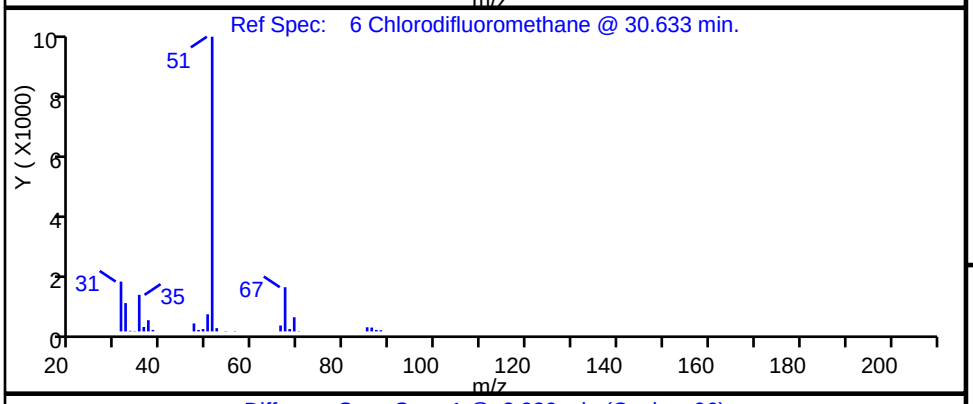
6 Chlorodifluoromethane, CAS: 75-45-6

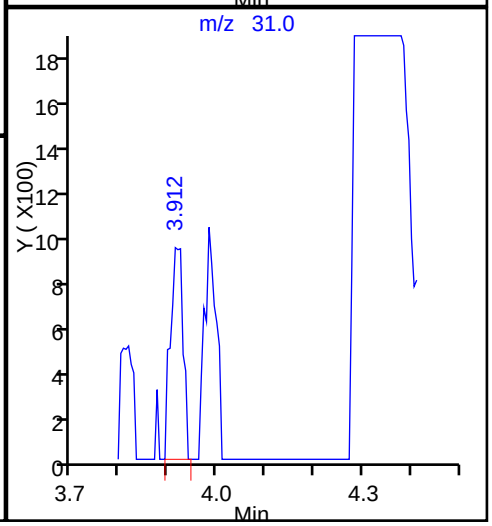


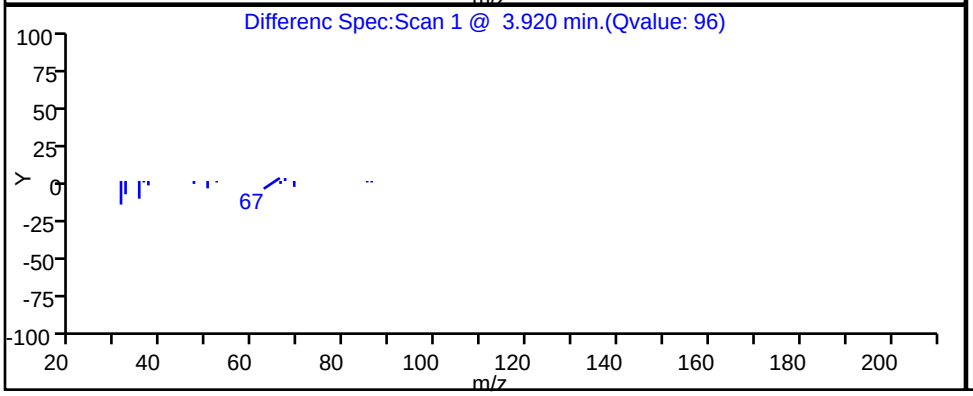








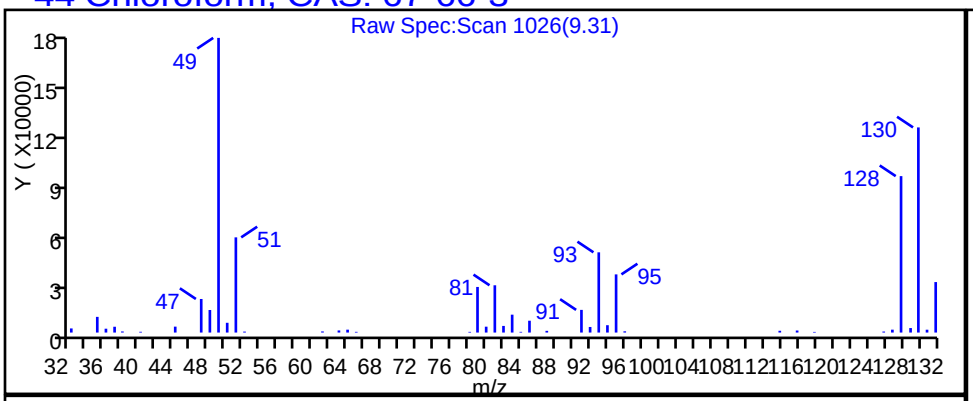


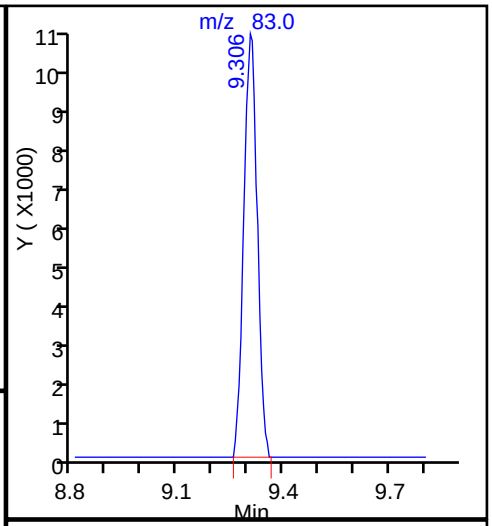


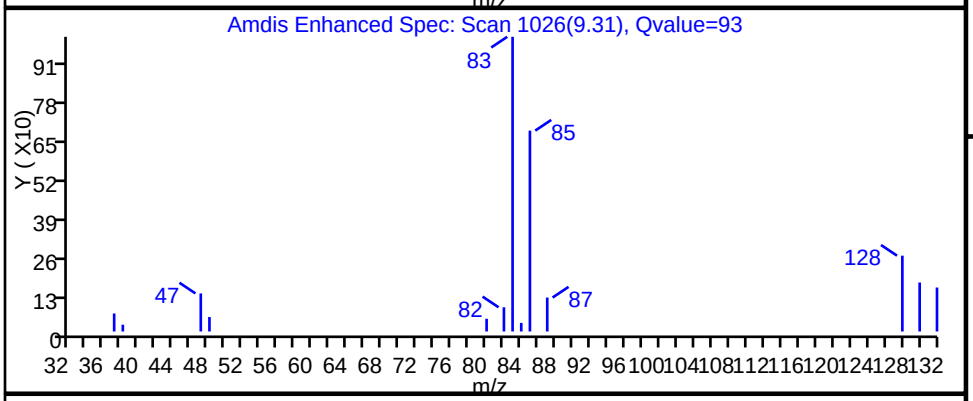
TestAmerica Knoxville

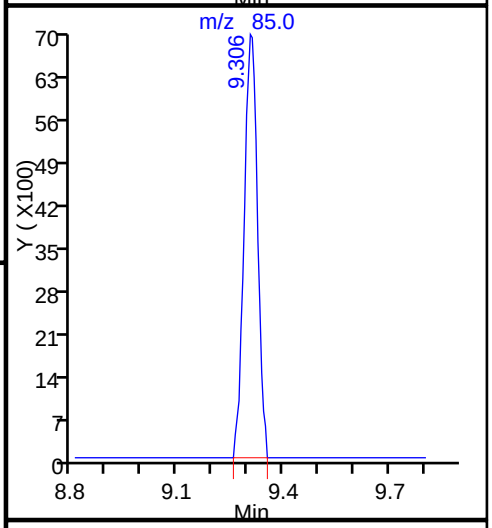
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P110.D		
Injection Date:	10-Oct-2016 01:13:30	Instrument ID:	MJ
Lims ID:	140-6042-A-2	Lab Sample ID:	140-6042-2
Client ID:	BLDG-A MID		
Operator ID:	403648	ALS Bottle#:	10 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

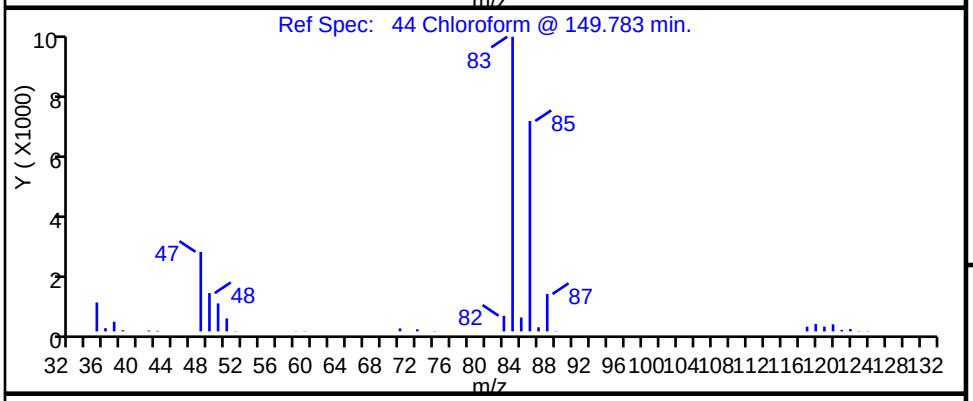
44 Chloroform, CAS: 67-66-3

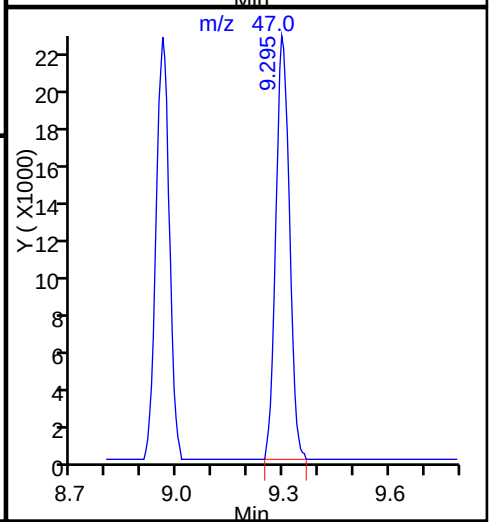


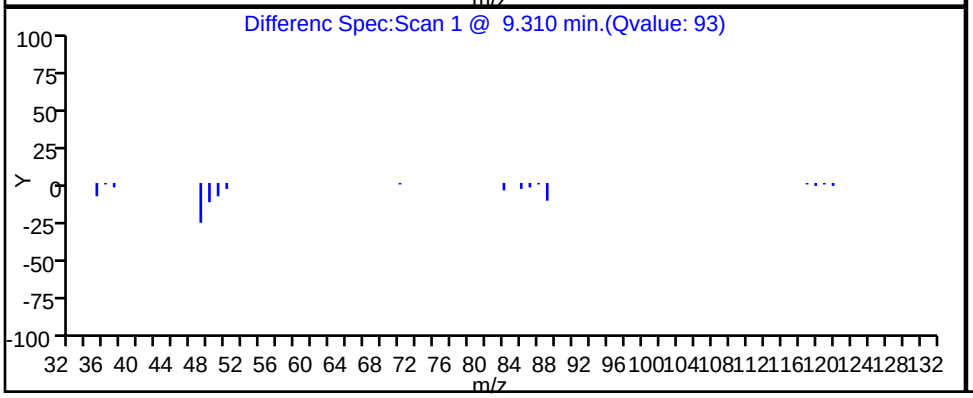








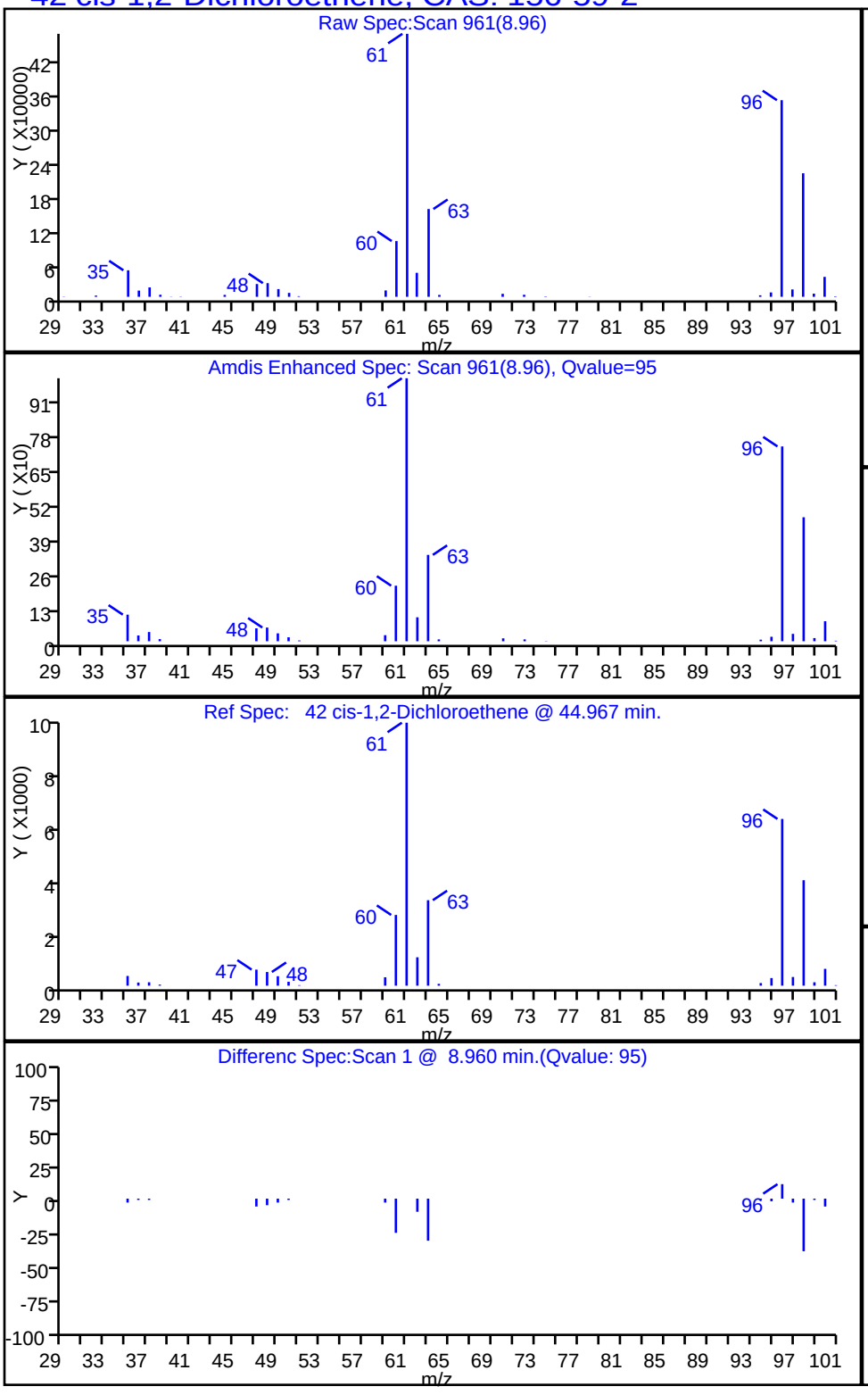


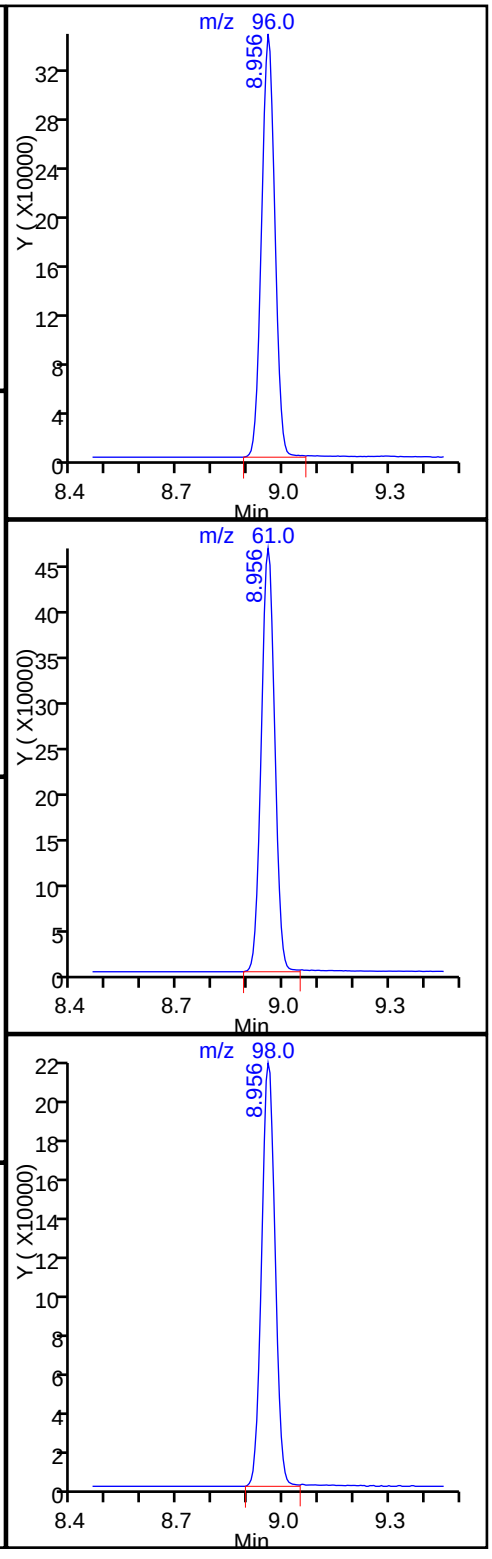


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P110.D				
Injection Date:	10-Oct-2016 01:13:30	Instrument ID:	MJ		
Lims ID:	140-6042-A-2	Lab Sample ID:	140-6042-2		
Client ID:	BLDG-A MID				
Operator ID:	403648	ALS Bottle#:	10	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

42 cis-1,2-Dichloroethene, CAS: 156-59-2

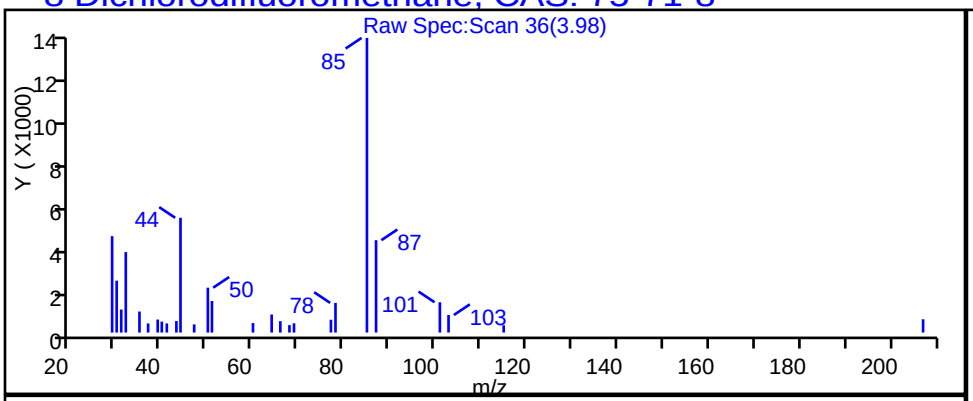


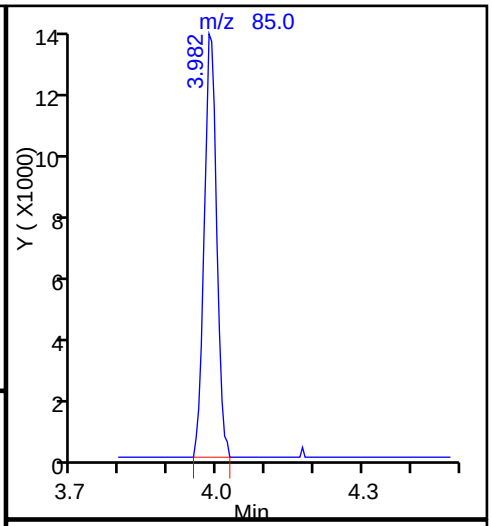


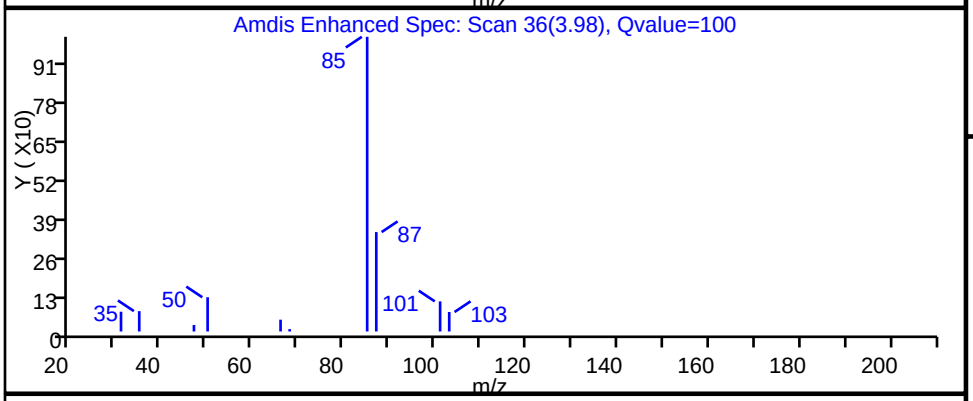
TestAmerica Knoxville

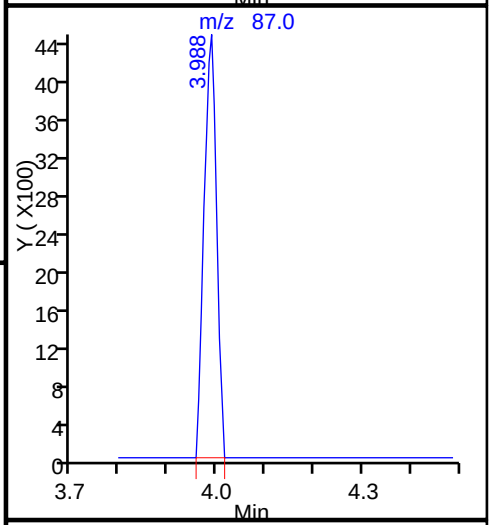
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P110.D				
Injection Date:	10-Oct-2016 01:13:30	Instrument ID:	MJ		
Lims ID:	140-6042-A-2	Lab Sample ID:	140-6042-2		
Client ID:	BLDG-A MID				
Operator ID:	403648	ALS Bottle#:	10	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

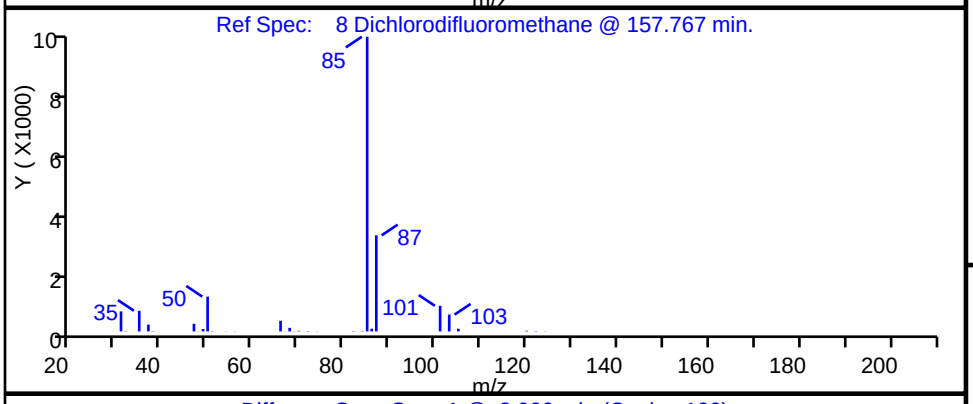
8 Dichlorodifluoromethane, CAS: 75-71-8

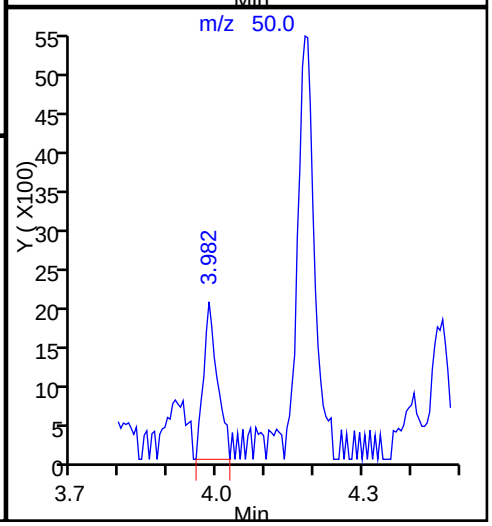


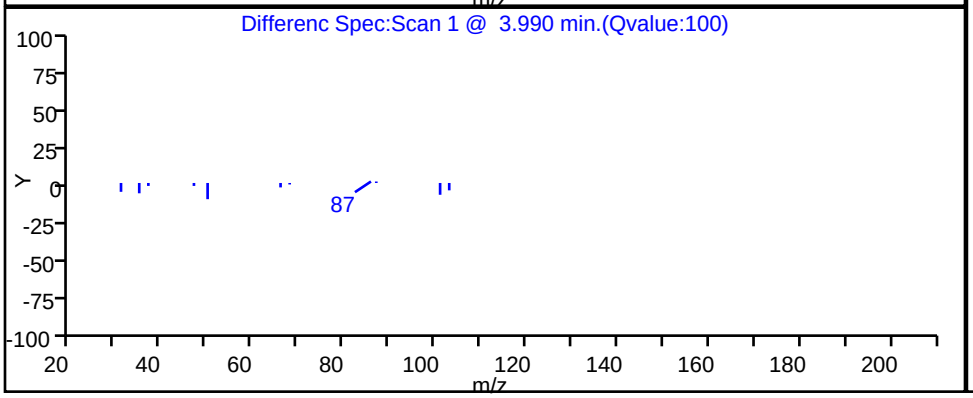








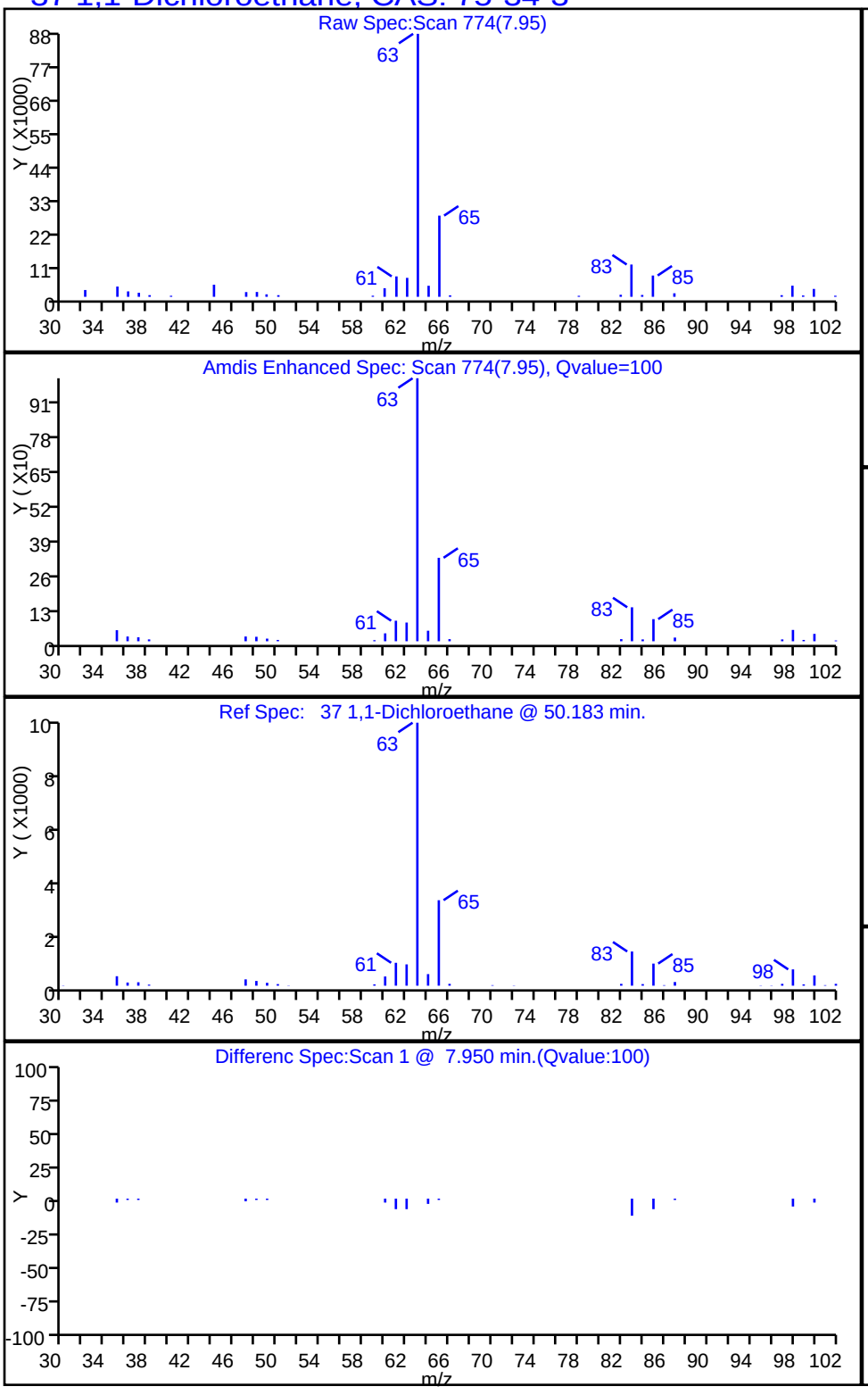


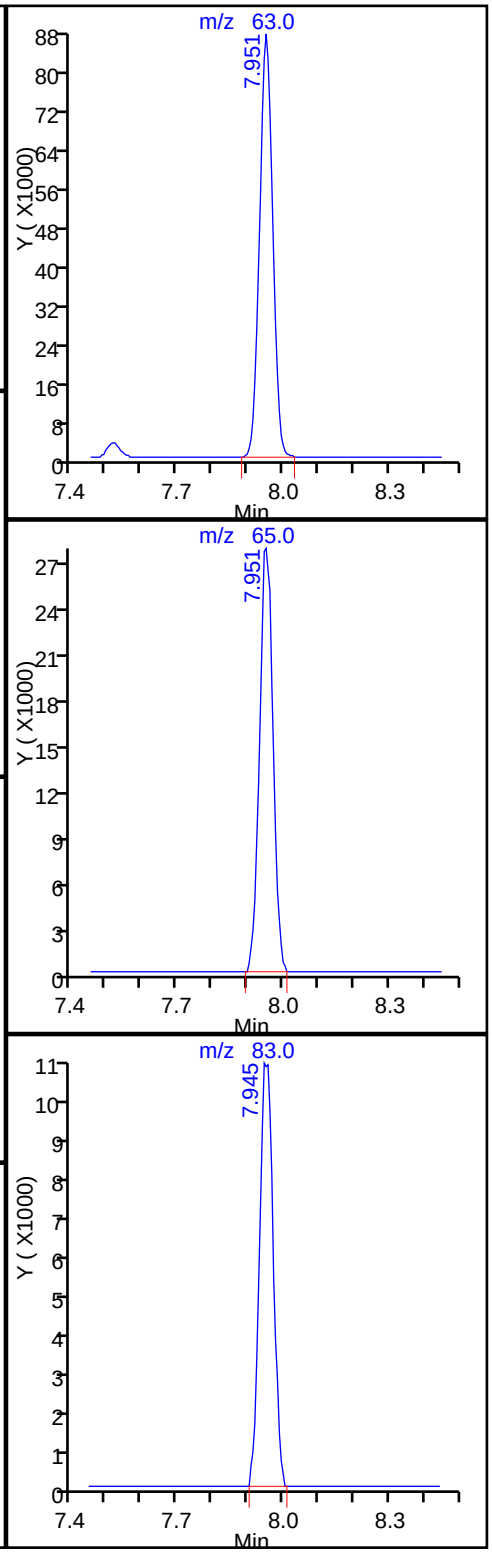


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P110.D		
Injection Date:	10-Oct-2016 01:13:30	Instrument ID:	MJ
Lims ID:	140-6042-A-2	Lab Sample ID:	140-6042-2
Client ID:	BLDG-A MID		
Operator ID:	403648	ALS Bottle#:	10 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3

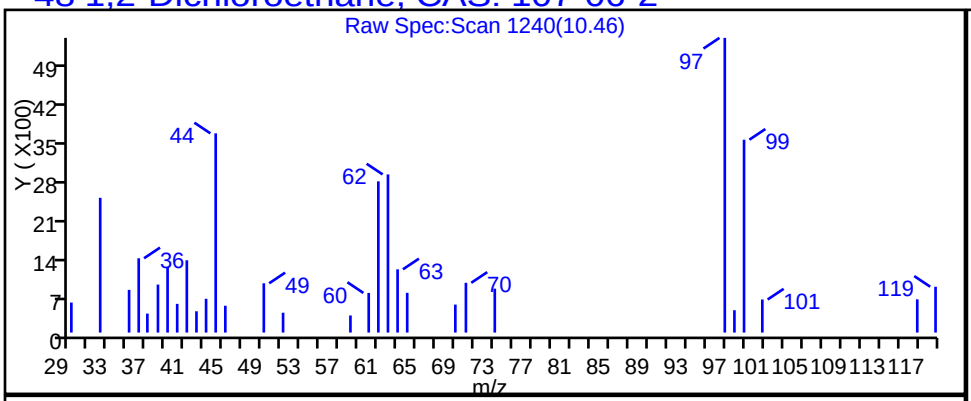


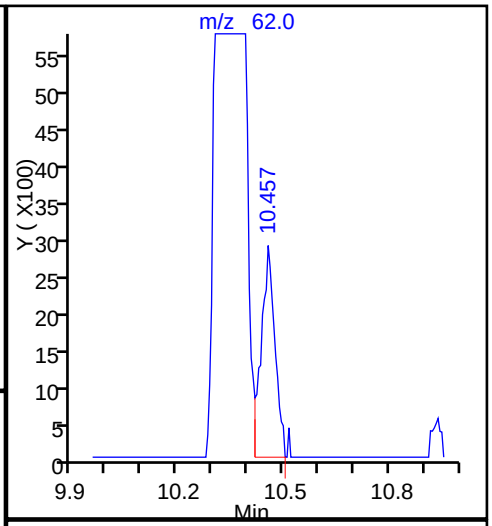


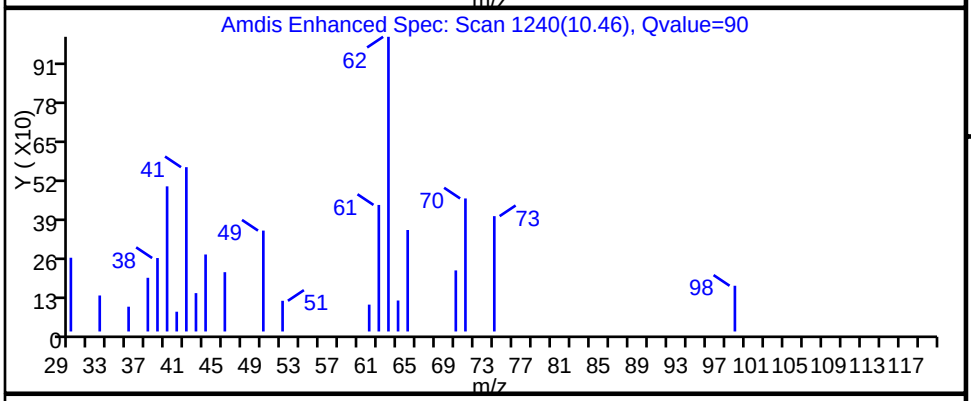
TestAmerica Knoxville

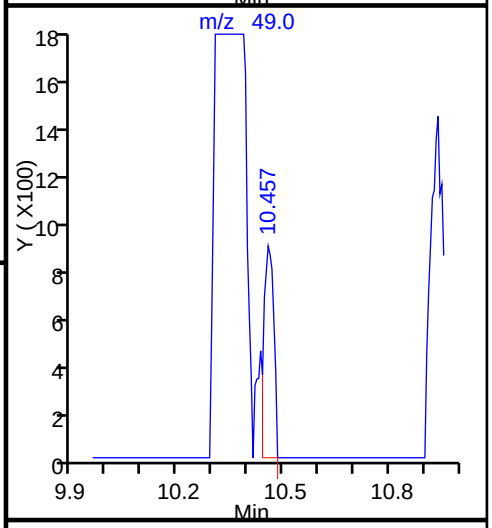
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P110.D				
Injection Date:	10-Oct-2016 01:13:30	Instrument ID:	MJ		
Lims ID:	140-6042-A-2	Lab Sample ID:	140-6042-2		
Client ID:	BLDG-A MID				
Operator ID:	403648	ALS Bottle#:	10	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

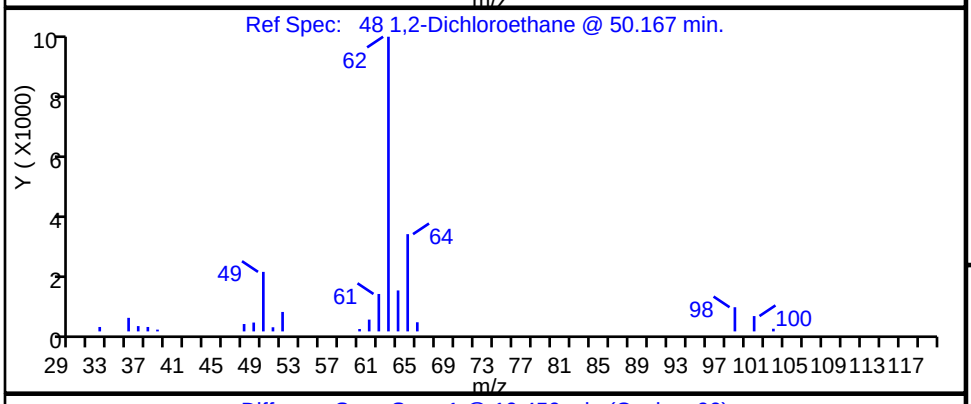
48 1,2-Dichloroethane, CAS: 107-06-2

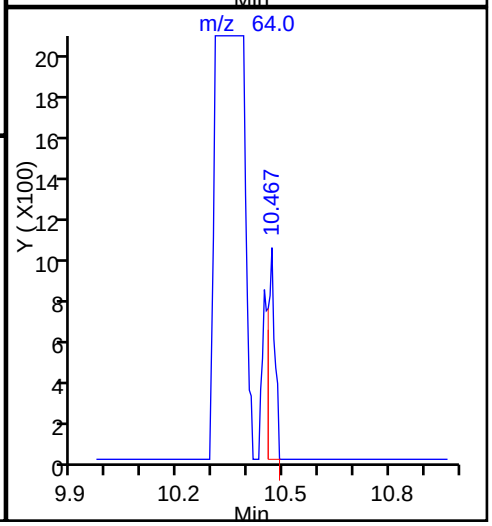


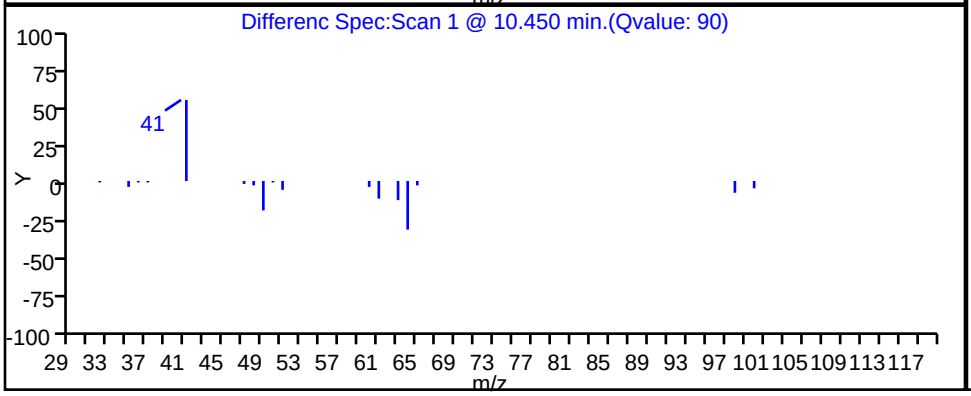








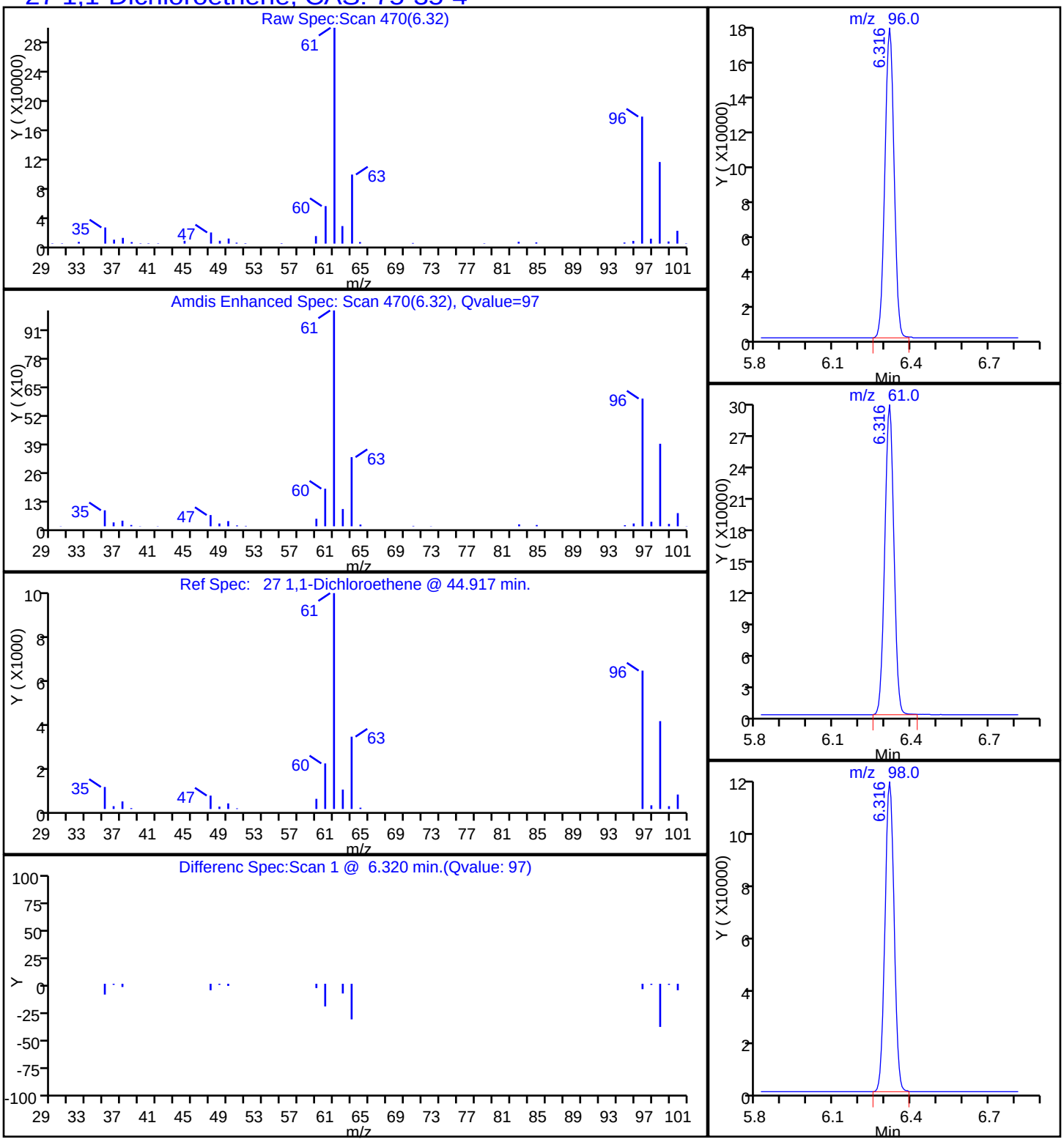




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P110.D		
Injection Date:	10-Oct-2016 01:13:30	Instrument ID:	MJ
Lims ID:	140-6042-A-2	Lab Sample ID:	140-6042-2
Client ID:	BLDG-A MID		
Operator ID:	403648	ALS Bottle#:	10 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

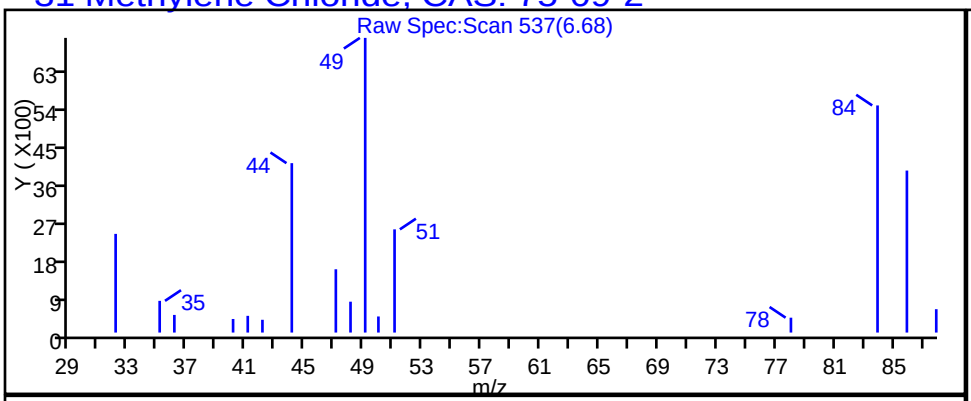
27 1,1-Dichloroethene, CAS: 75-35-4

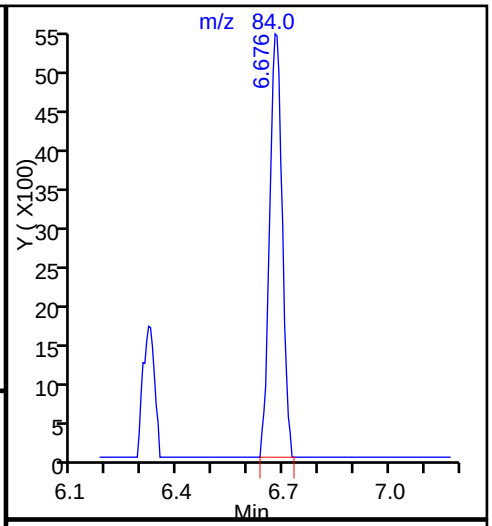


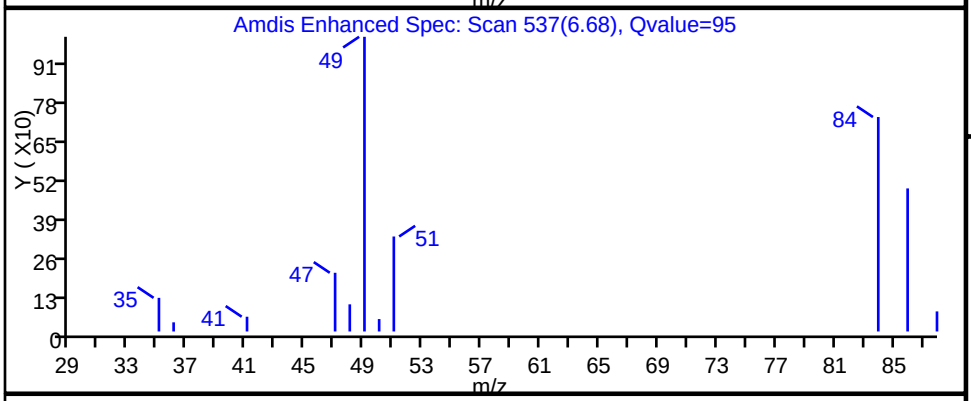
TestAmerica Knoxville

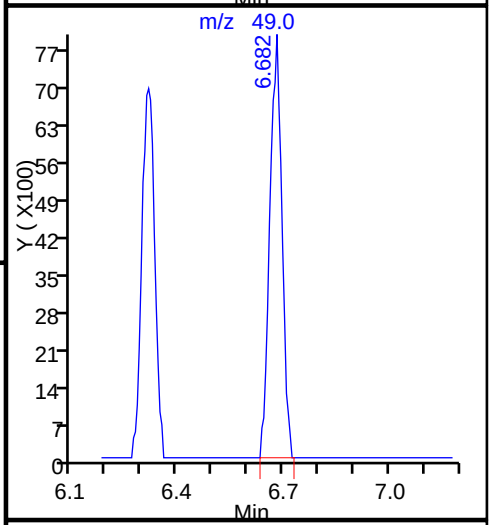
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P110.D				
Injection Date:	10-Oct-2016 01:13:30	Instrument ID:	MJ		
Lims ID:	140-6042-A-2	Lab Sample ID:	140-6042-2		
Client ID:	BLDG-A MID				
Operator ID:	403648	ALS Bottle#:	10	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

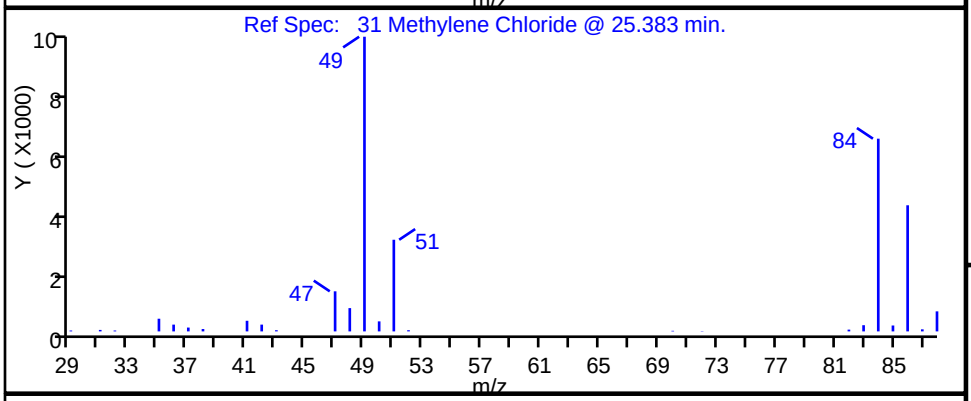
31 Methylene Chloride, CAS: 75-09-2

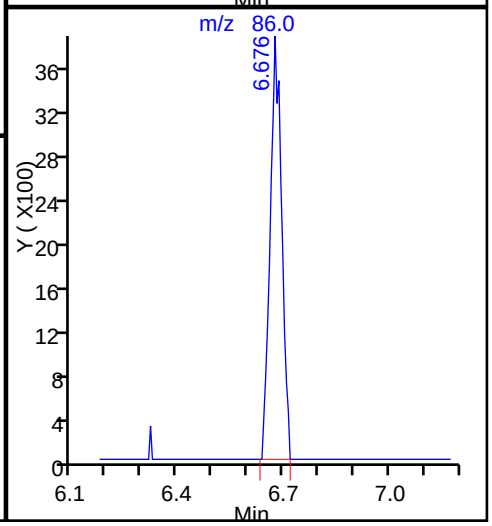


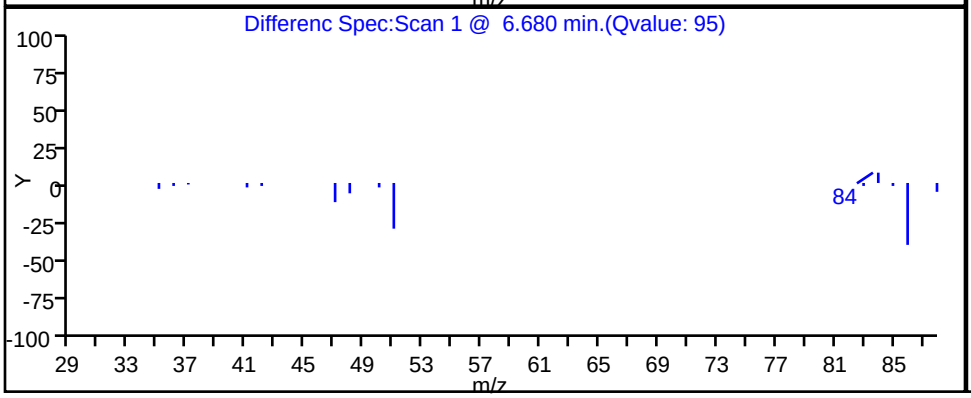








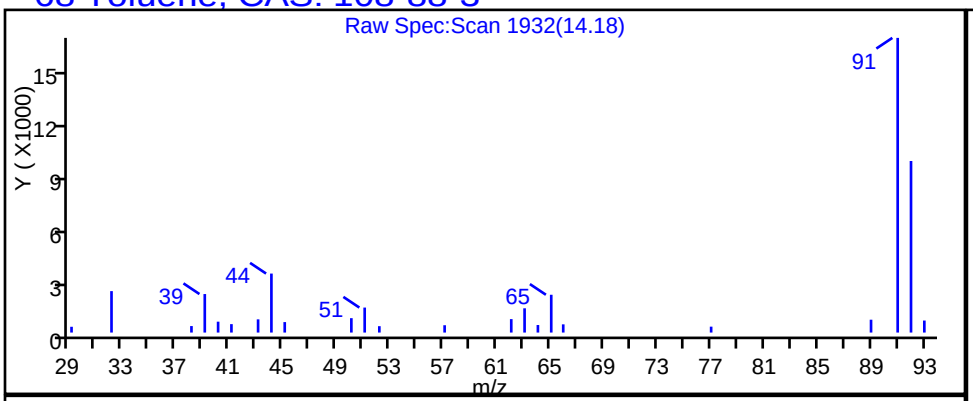


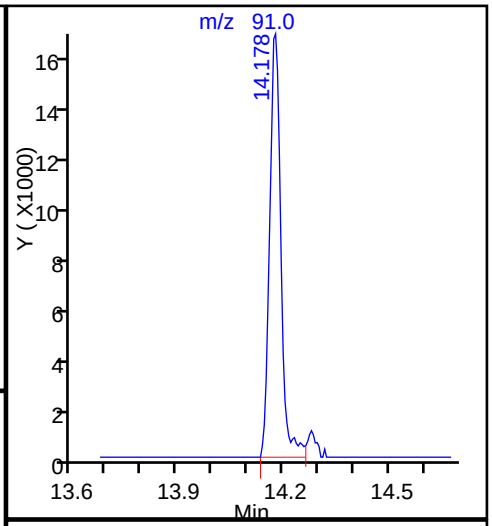


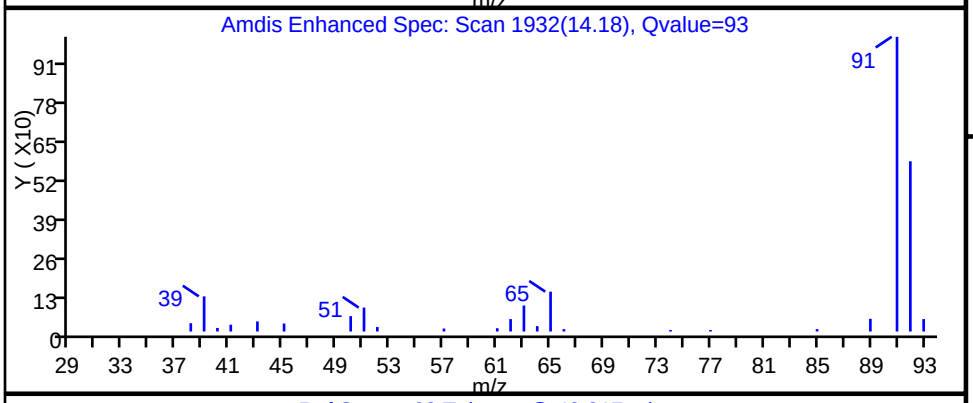
TestAmerica Knoxville

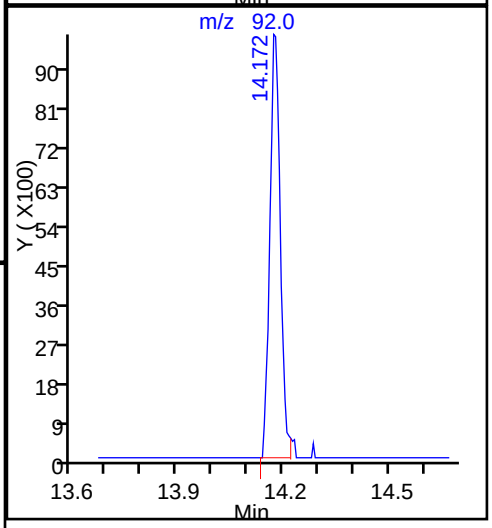
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P110.D				
Injection Date:	10-Oct-2016 01:13:30	Instrument ID:	MJ		
Lims ID:	140-6042-A-2	Lab Sample ID:	140-6042-2		
Client ID:	BLDG-A MID				
Operator ID:	403648	ALS Bottle#:	10	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

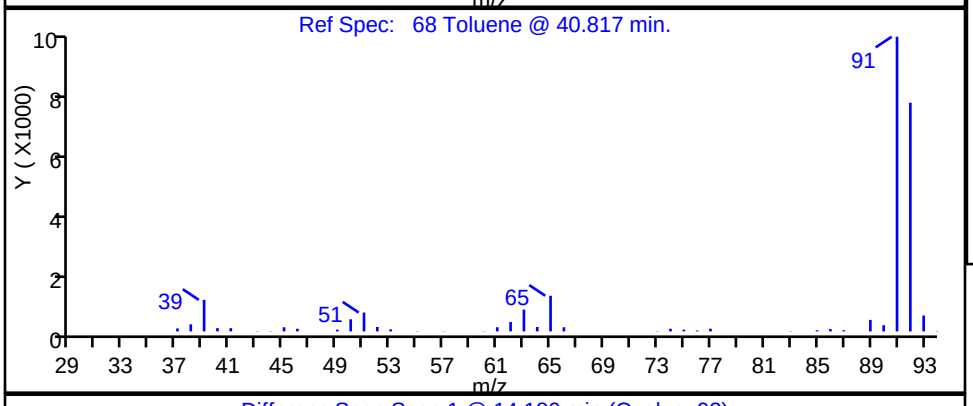
68 Toluene, CAS: 108-88-3

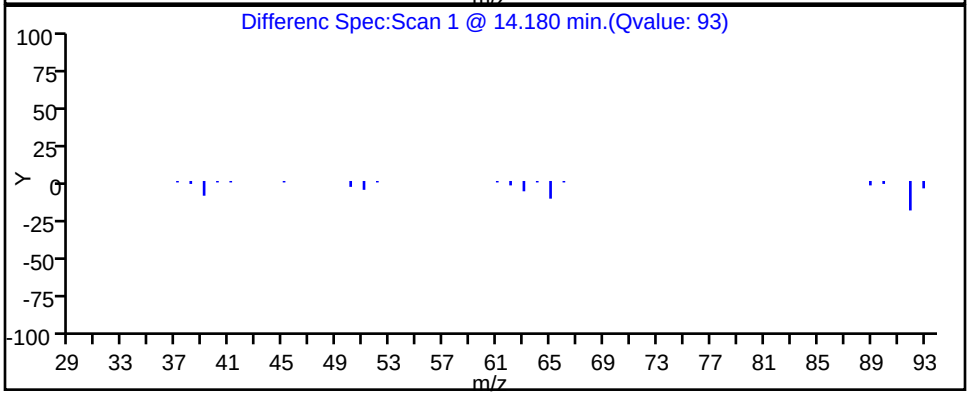








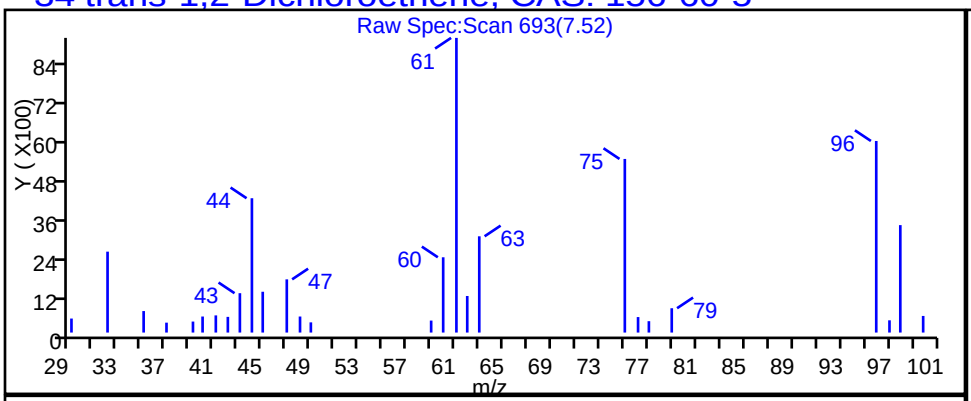


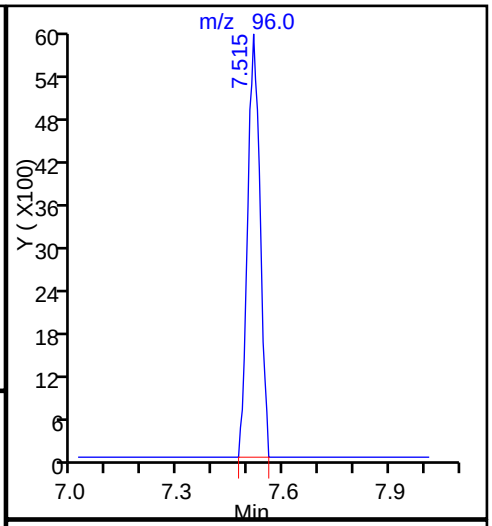


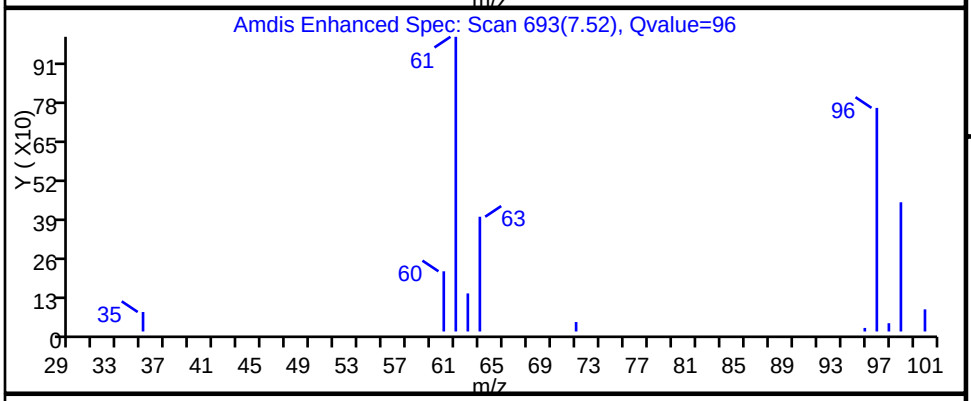
TestAmerica Knoxville

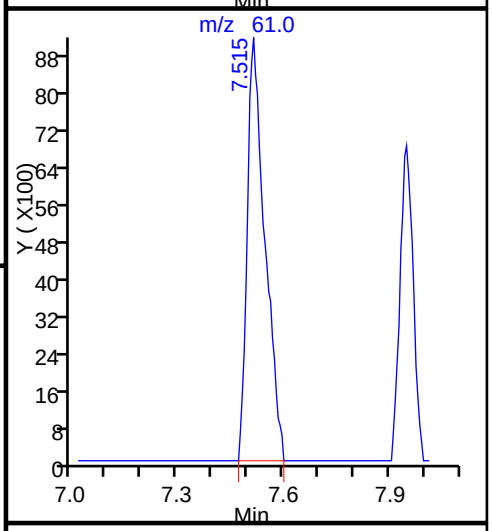
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P110.D		
Injection Date:	10-Oct-2016 01:13:30	Instrument ID:	MJ
Lims ID:	140-6042-A-2	Lab Sample ID:	140-6042-2
Client ID:	BLDG-A MID		
Operator ID:	403648	ALS Bottle#:	10 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

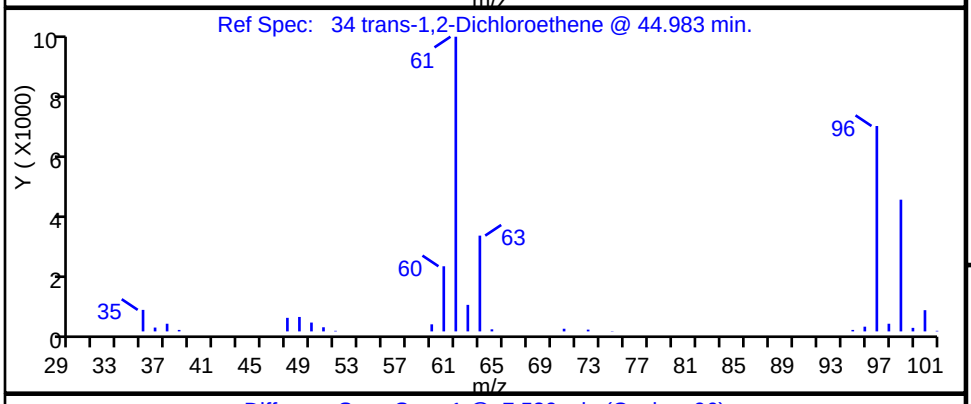
34 trans-1,2-Dichloroethene, CAS: 156-60-5

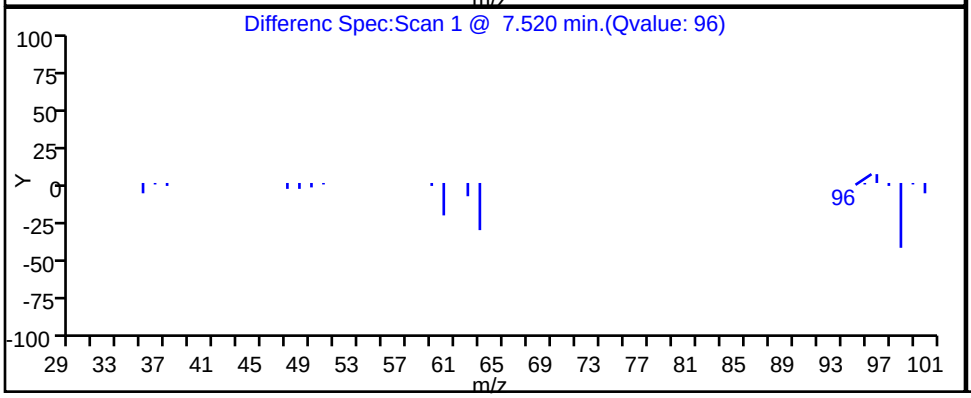


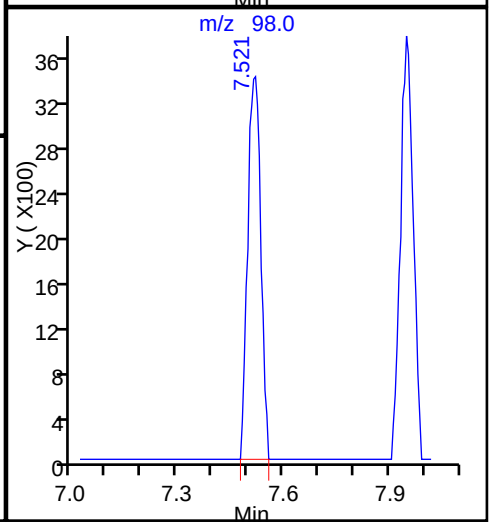








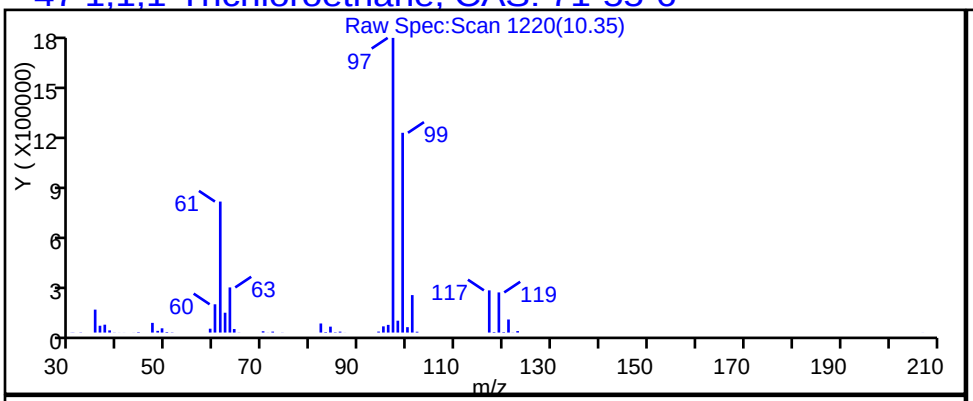


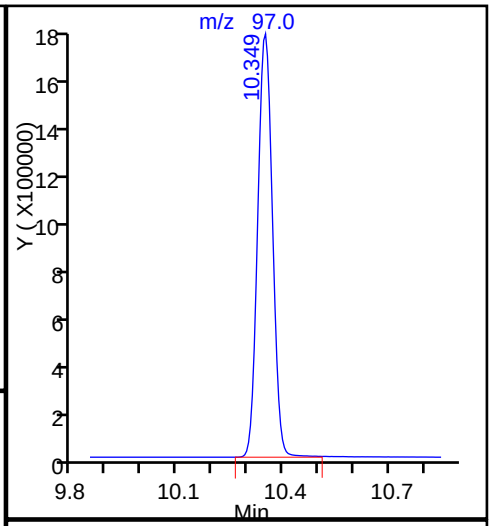


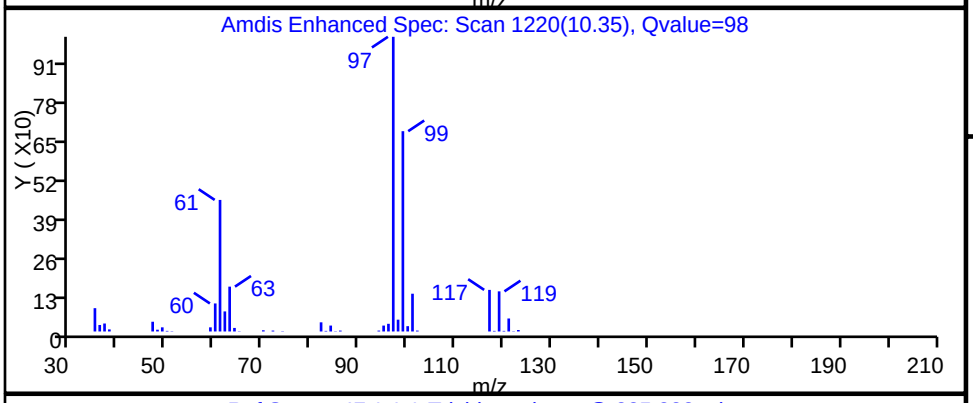
TestAmerica Knoxville

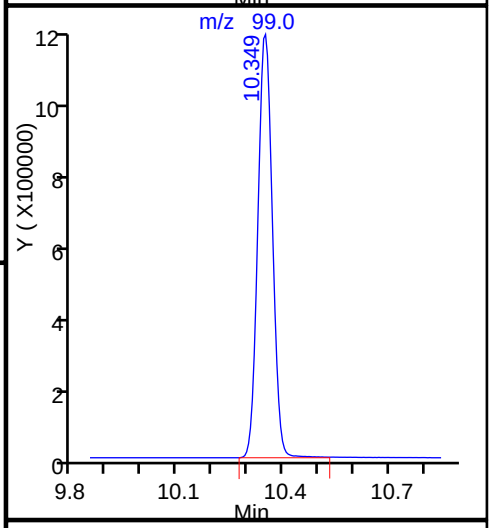
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P110.D		
Injection Date:	10-Oct-2016 01:13:30	Instrument ID:	MJ
Lims ID:	140-6042-A-2	Lab Sample ID:	140-6042-2
Client ID:	BLDG-A MID		
Operator ID:	403648	ALS Bottle#:	10 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

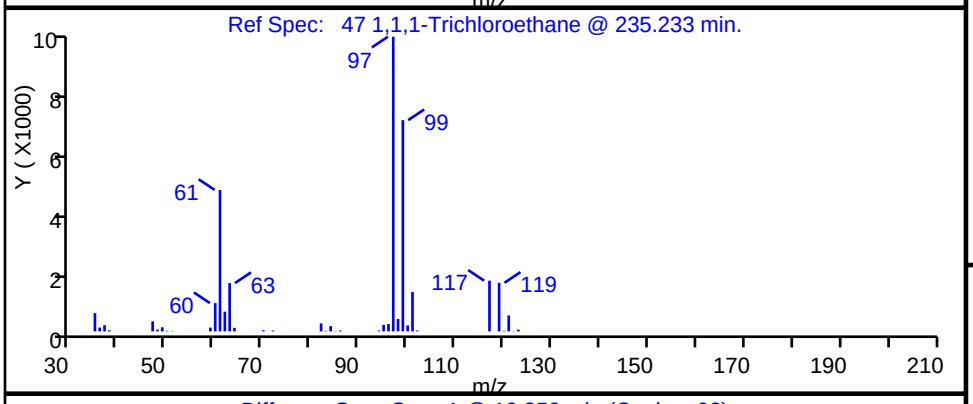
47 1,1,1-Trichloroethane, CAS: 71-55-6

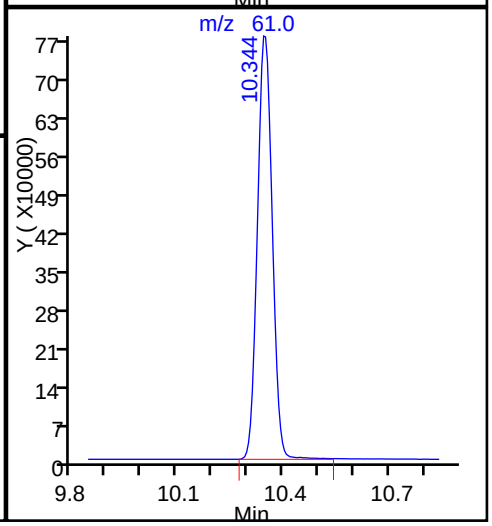


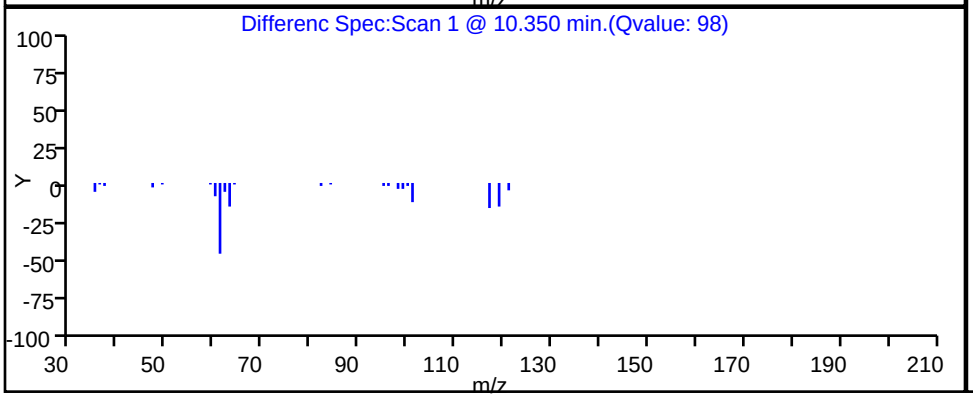








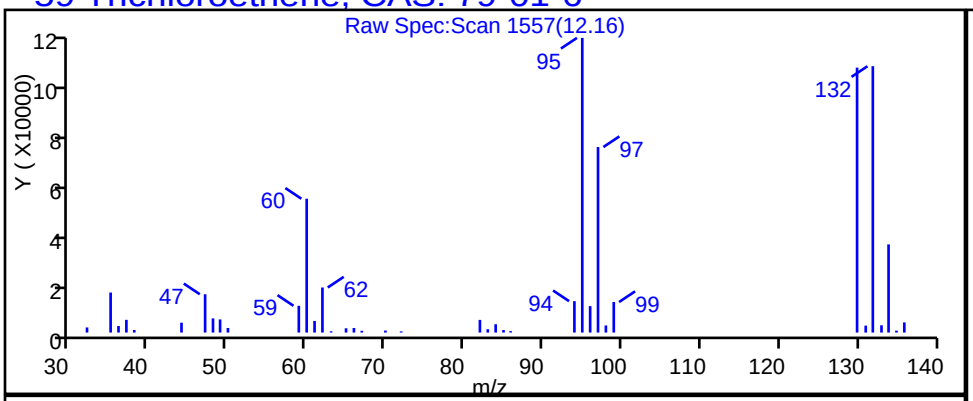


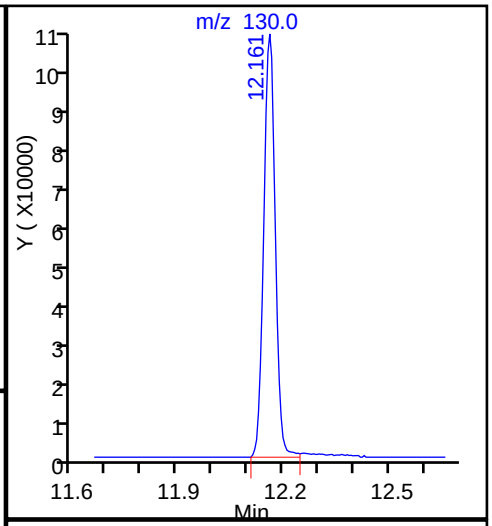


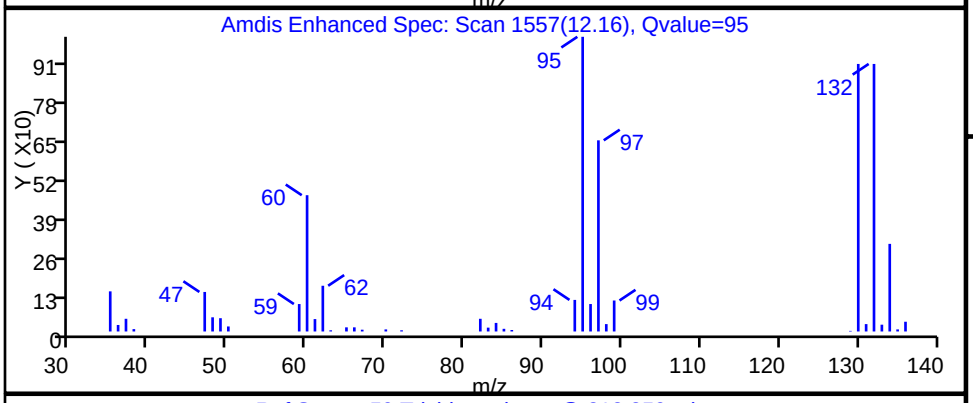
TestAmerica Knoxville

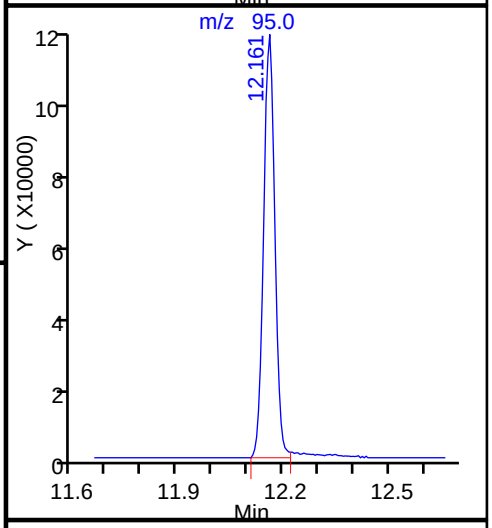
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P110.D		
Injection Date:	10-Oct-2016 01:13:30	Instrument ID:	MJ
Lims ID:	140-6042-A-2	Lab Sample ID:	140-6042-2
Client ID:	BLDG-A MID		
Operator ID:	403648	ALS Bottle#:	10 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

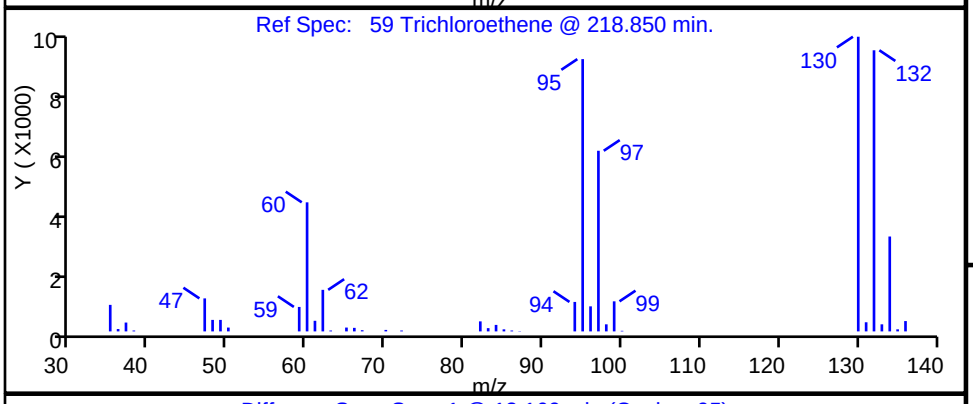
59 Trichloroethene, CAS: 79-01-6

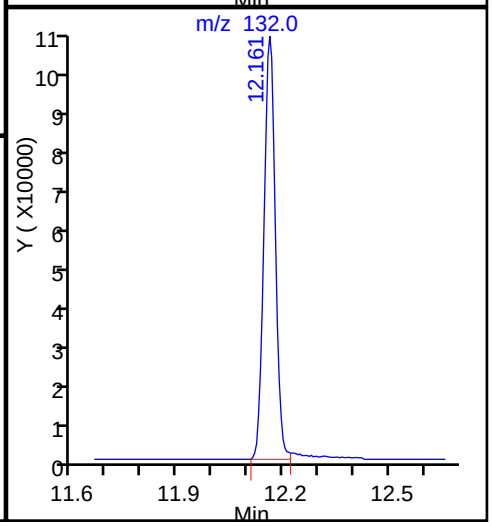


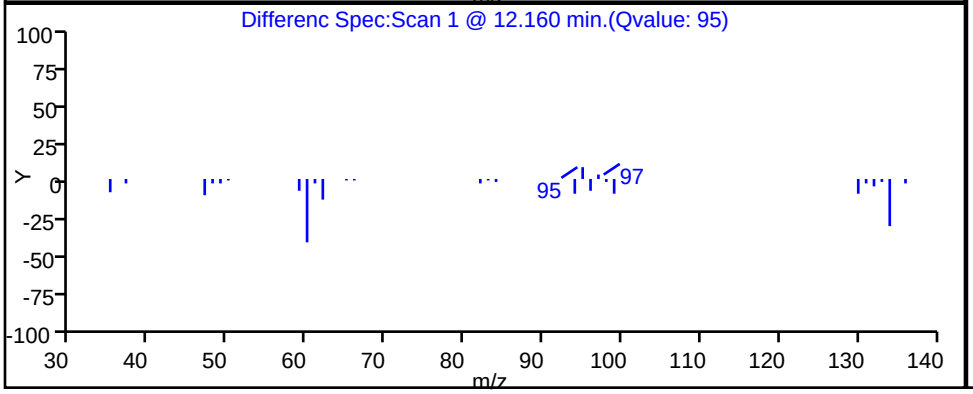












FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1

SDG No.:

Client Sample ID: BLDG-A MID DL Lab Sample ID: 140-6042-2 DL

Matrix: Air Lab File ID: JJ09P110DL.D

Analysis Method: TO 15 LL Date Collected: 10/05/2016 14:33

Sample wt/vol: 30(mL) Date Analyzed: 10/10/2016 10:17

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6849 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	133.41	160		1.3	0.20

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1

SDG No.:

Client Sample ID: BLDG-A MID DL Lab Sample ID: 140-6042-2 DL

Matrix: Air Lab File ID: JJ09P110DL.D

Analysis Method: TO 15 LL Date Collected: 10/05/2016 14:33

Sample wt/vol: 30(mL) Date Analyzed: 10/10/2016 10:17

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6849 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	133.41	890		7.3	1.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P110DL.D
Lims ID: 140-6042-A-2
Client ID: BLDG-A MID
Sample Type: Client
Inject. Date: 10-Oct-2016 10:17:30 ALS Bottle#: 10 Worklist Smp#: 25
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003510-015
Misc. Info.: 140-6042-a-2
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 13:07:15 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 11-Oct-2016 13:07:15

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.291	9.302	-0.011	96	246140	4.00	
* 2 1,4-Difluorobenzene	114	11.453	11.463	-0.010	95	1092498	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.126	16.131	-0.005	89	919392	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.750	17.755	-0.005	88	570178	4.11	
6 Chlorodifluoromethane	67	3.925	3.919	0.006	95	762	0.0304	
8 Dichlorodifluoromethane	85	3.984	3.989	-0.005	97	6757	0.0279	
27 1,1-Dichloroethene	96	6.312	6.323	-0.011	96	117135	1.51	
31 Methylene Chloride	84	6.672	6.683	-0.011	96	10390	0.1329	
34 trans-1,2-Dichloroethene	96	7.517	7.522	-0.005	97	3896	0.0511	
37 1,1-Dichloroethane	63	7.947	7.957	-0.010	100	63209	0.4472	
42 cis-1,2-Dichloroethene	96	8.952	8.963	-0.011	95	253743	3.38	
44 Chloroform	83	9.302	9.313	-0.011	28	7840	0.0507	
47 1,1,1-Trichloroethane	97	10.340	10.350	-0.010	96	1559957	9.81	
51 Benzene	78	10.931	10.936	-0.005	97	43964	0.2176	
59 Trichloroethene	130	12.157	12.163	-0.006	94	61850	0.7623	
68 Toluene	91	14.179	14.179	0.000	92	10934	0.0542	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

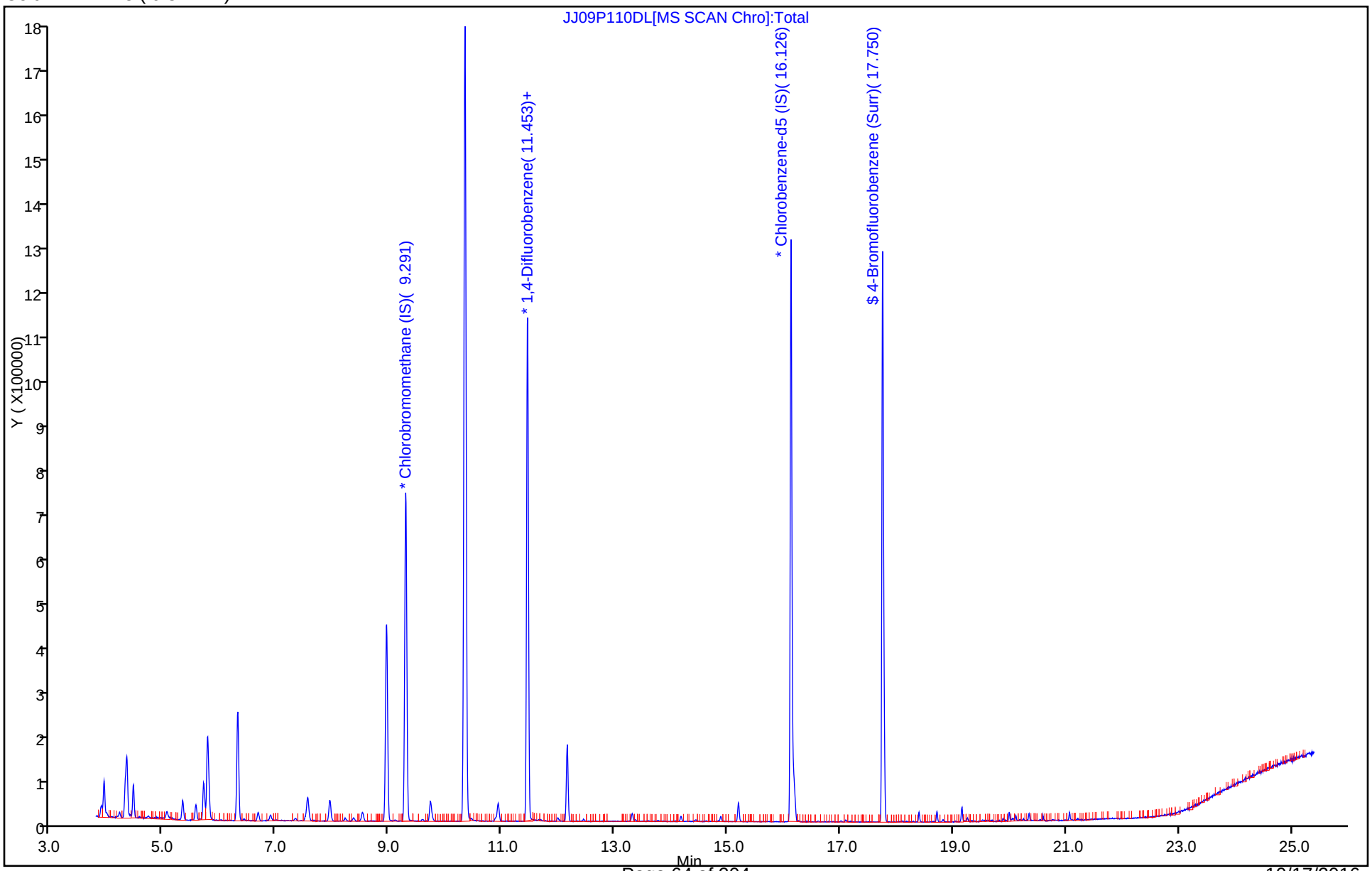
Report Date: 11-Oct-2016 13:07:16 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P110DL.D

Injection Date:	10-Oct-2016 10:17:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-6042-A-2	Lab Sample ID:	140-6042-2	Worklist Smp#:	25
Client ID:	BLDG-A MID				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P110DL.D				
Lims ID:	140-6042-A-2				
Client ID:	BLDG-A MID				
Sample Type:	Client				
Inject. Date:	10-Oct-2016 10:17:30	ALS Bottle#:	10	Worklist Smp#:	25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003510-015				
Misc. Info.:	140-6042-a-2				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	11-Oct-2016 13:07:15	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				

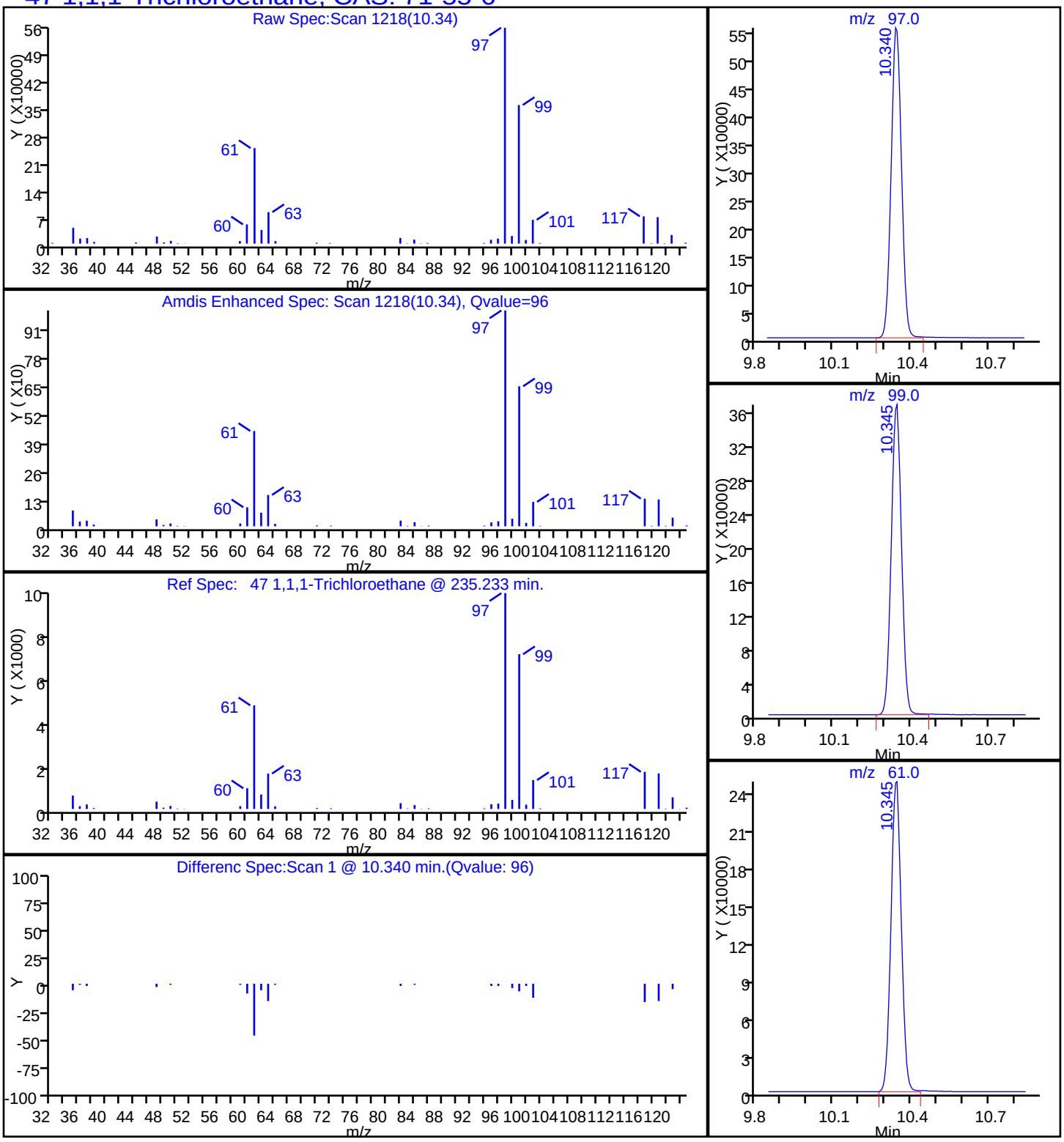
First Level Reviewer: barlozhetskayaa Date: 11-Oct-2016 13:07:15

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.11	102.84

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P110DL.D				
Injection Date:	10-Oct-2016 10:17:30	Instrument ID:	MJ		
Lims ID:	140-6042-A-2	Lab Sample ID:	140-6042-2		
Client ID:	BLDG-A MID				
Operator ID:	403648	ALS Bottle#:	10	Worklist Smp#:	25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

47 1,1,1-Trichloroethane, CAS: 71-55-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6042-1

SDG No.:

Client Sample ID: BLDG-A EFFLUENT | Lab Sample ID: 140-6042-3

Matrix: Air | Lab File ID: JJ09P111.D

Analysis Method: TO 15 LL | Date Collected: 10/05/2016 14:41

Sample wt/vol: 100(mL) | Date Analyzed: 10/10/2016 02:07

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6849 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.3		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.47		0.40	0.075
67-66-3	Chloroform	119.38	0.70		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	19		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.43		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	9.9		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	29		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.38	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	*1,1,1-Trichloroethane*	*133.41*	*120*	*E*	*0.40*	*0.060*
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.8		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6042-1

SDG No.:

Client Sample ID: BLDG-A EFFLUENT | Lab Sample ID: 140-6042-3

Matrix: Air | Lab File ID: JJ09P111.D

Analysis Method: TO 15 LL | Date Collected: 10/05/2016 14:41

Sample wt/vol: 100(mL) | Date Analyzed: 10/10/2016 02:07

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6849 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	4.0		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	3.4		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	77		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	40		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	110		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.5	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	*1,1,1-Trichloroethane*	*133.41*	*660*	*E*	*2.2*	*0.33*
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	9.8		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P111.D				
Lims ID:	140-6042-A-3				
Client ID:	BLDG-A EFFLUENT				
Sample Type:	Client				
Inject. Date:	10-Oct-2016 02:07:30	ALS Bottle#:	11	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003510-016				
Misc. Info.:	140-6042-a-3				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	11-Oct-2016 12:43:29	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				
First Level Reviewer: barlozhetskayaa		Date:	11-Oct-2016 12:43:29		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.301	9.302	-0.001	95	275451	4.00	
* 2 1,4-Difluorobenzene	114	11.457	11.463	-0.006	95	1290443	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.130	16.131	-0.001	89	1120088	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.754	17.755	-0.001	92	681090	4.03	
6 Chlorodifluoromethane	67	3.913	3.919	-0.006	95	2637	0.0940	
8 Dichlorodifluoromethane	85	3.983	3.989	-0.006	100	23329	0.0860	
27 1,1-Dichloroethene	96	6.316	6.323	-0.007	98	494315	5.71	
31 Methylene Chloride	84	6.682	6.683	-0.001	98	17707	0.2023	
34 trans-1,2-Dichloroethene	96	7.521	7.522	-0.001	95	6567	0.0770	
37 1,1-Dichloroethane	63	7.951	7.957	-0.006	100	313888	1.98	
42 cis-1,2-Dichloroethene	96	8.957	8.963	-0.006	95	325987	3.88	
44 Chloroform	83	9.301	9.313	-0.012	29	24286	0.1402	
47 1,1,1-Trichloroethane	97	10.344	10.350	-0.006	98	4302194	24.2	E
51 Benzene	78	10.930	10.936	-0.006	97	60299	0.2526	
59 Trichloroethene	130	12.162	12.163	-0.001	94	34980	0.3650	
68 Toluene	91	14.178	14.179	-0.001	93	28766	0.1171	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

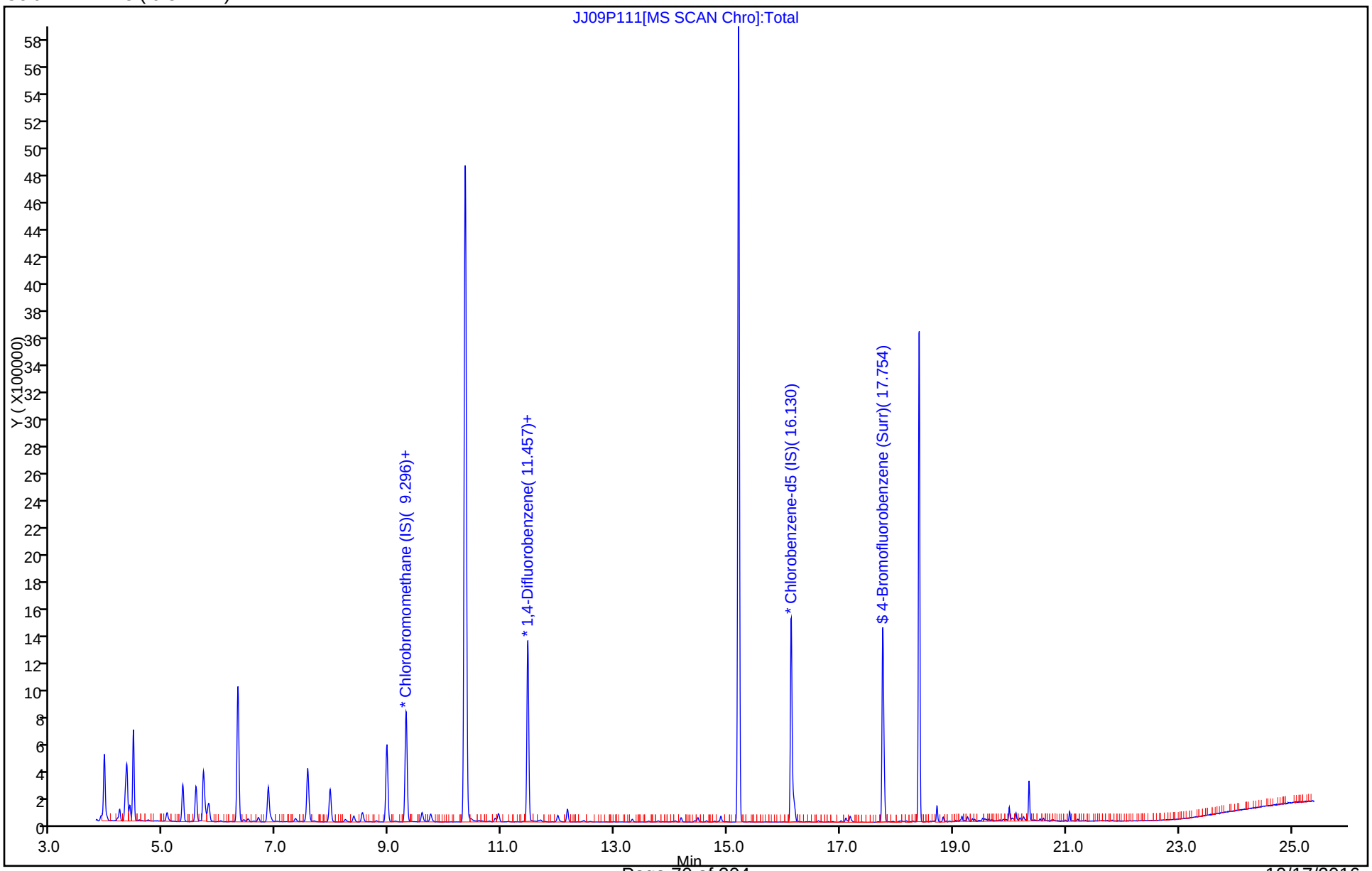
Report Date: 11-Oct-2016 12:43:30 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P111.D

Injection Date:	10-Oct-2016 02:07:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-6042-A-3	Lab Sample ID:	140-6042-3	Worklist Smp#:	16
Client ID:	BLDG-A EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P111.D				
Lims ID:	140-6042-A-3				
Client ID:	BLDG-A EFFLUENT				
Sample Type:	Client				
Inject. Date:	10-Oct-2016 02:07:30	ALS Bottle#:	11	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003510-016				
Misc. Info.:	140-6042-a-3				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	11-Oct-2016 12:43:29	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				

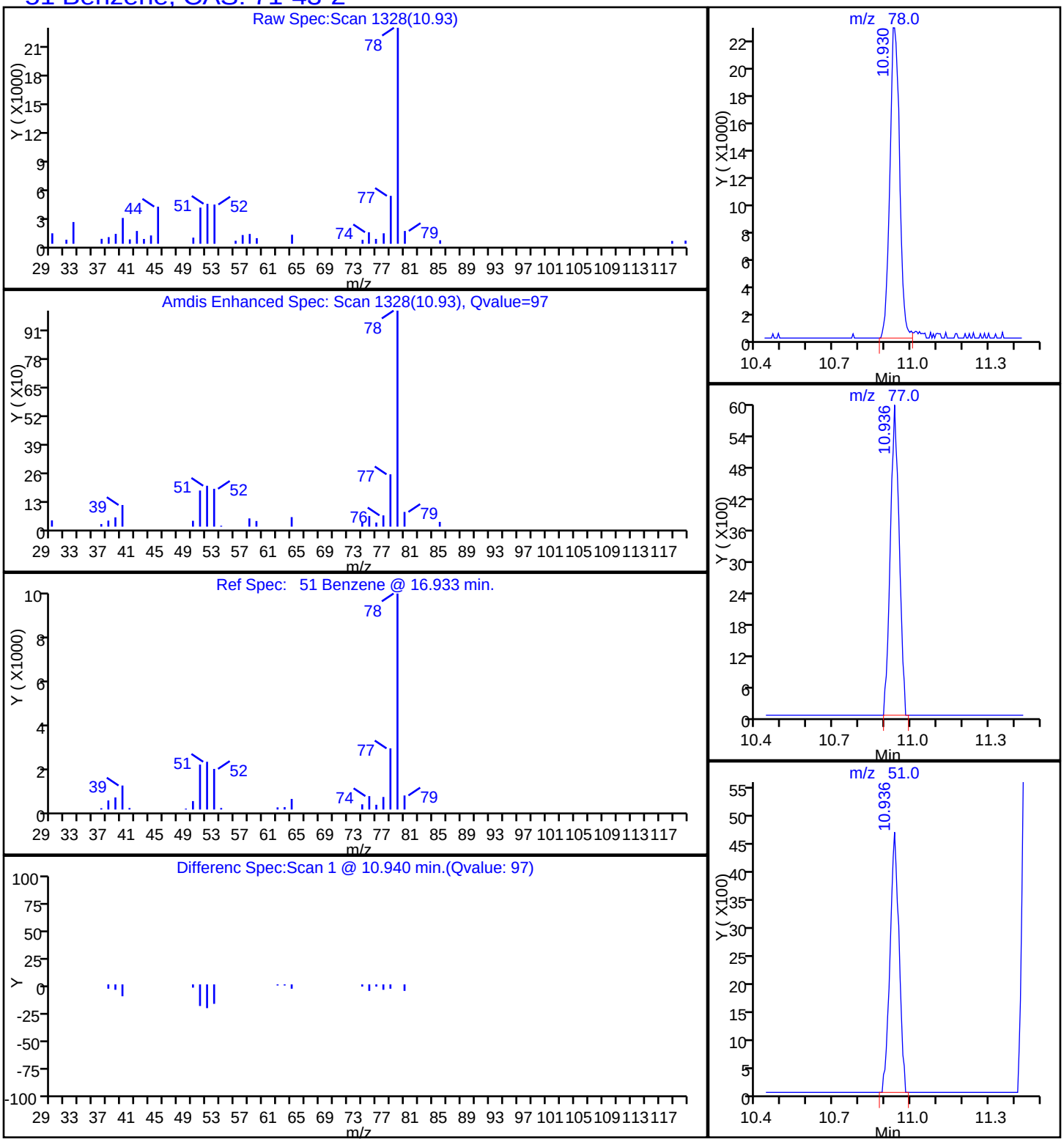
First Level Reviewer: barlozhetskayaa Date: 11-Oct-2016 12:43:29

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.03	100.83

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P111.D		
Injection Date:	10-Oct-2016 02:07:30	Instrument ID:	MJ
Lims ID:	140-6042-A-3	Lab Sample ID:	140-6042-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:	403648	ALS Bottle#:	11 Worklist Smp#: 16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

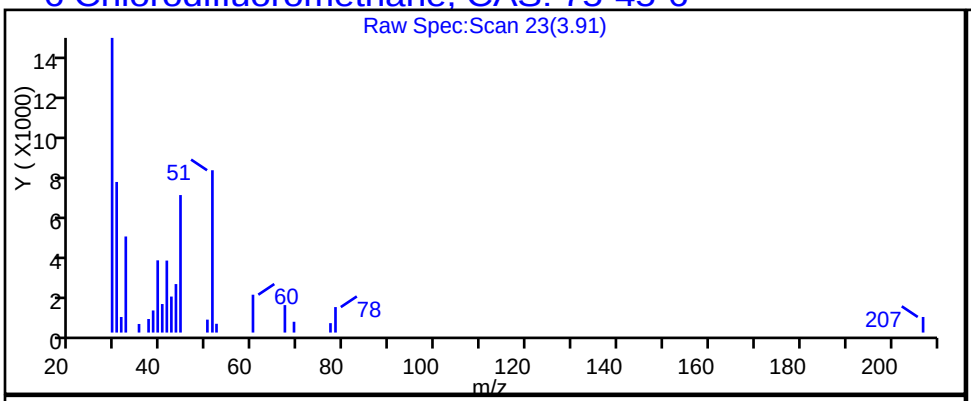
51 Benzene, CAS: 71-43-2

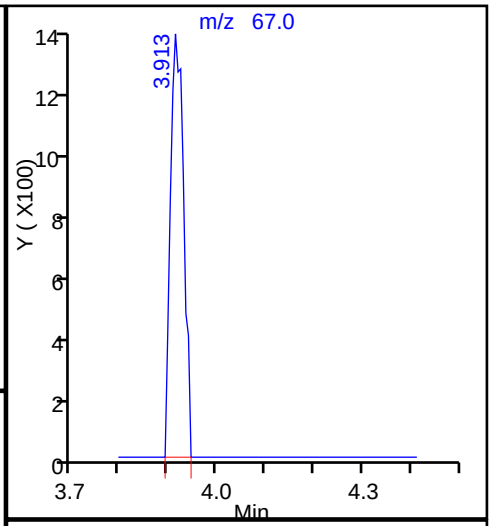


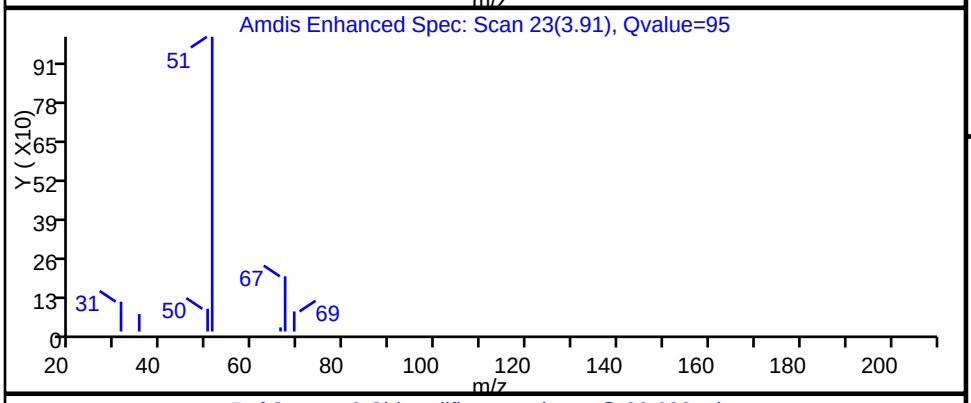
TestAmerica Knoxville

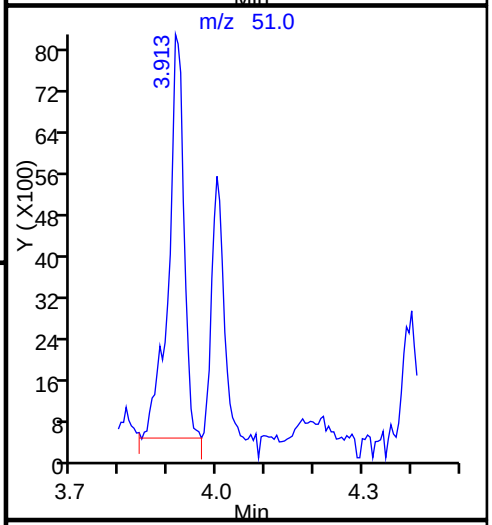
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P111.D				
Injection Date:	10-Oct-2016 02:07:30	Instrument ID:	MJ		
Lims ID:	140-6042-A-3	Lab Sample ID:	140-6042-3		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	403648	ALS Bottle#:	11	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

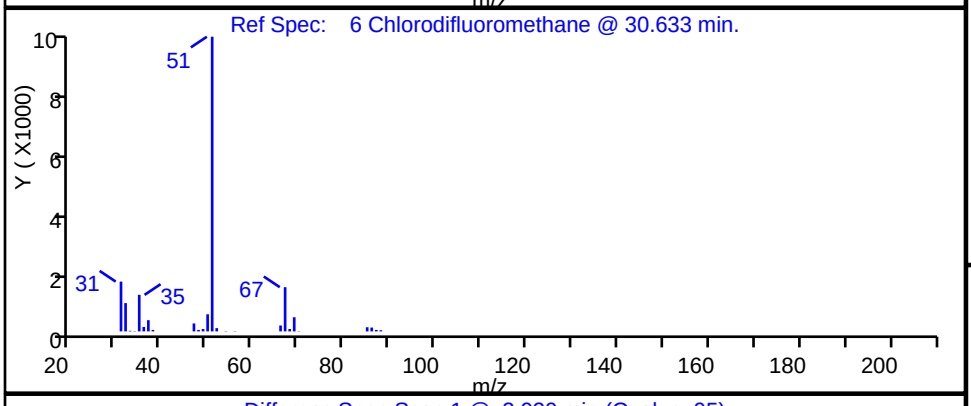
6 Chlorodifluoromethane, CAS: 75-45-6

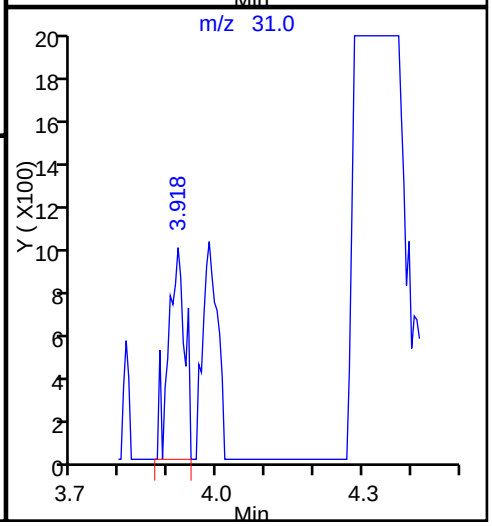


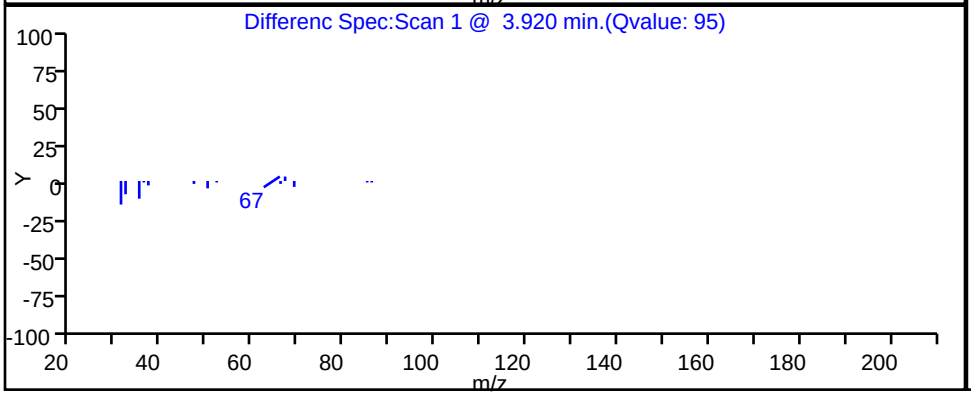








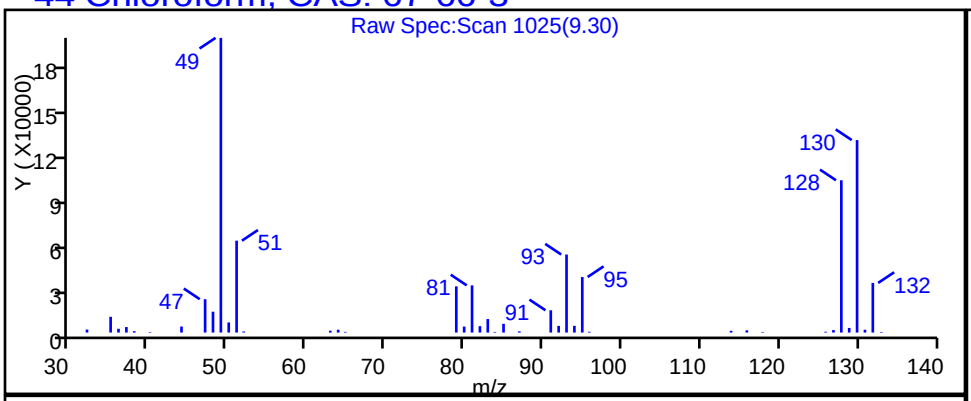


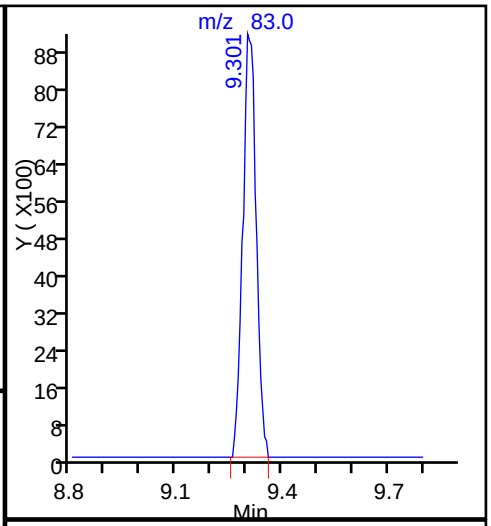


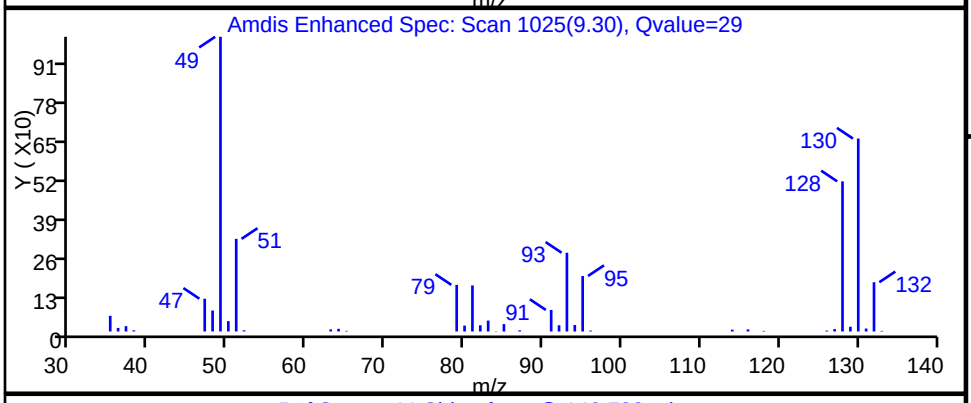
TestAmerica Knoxville

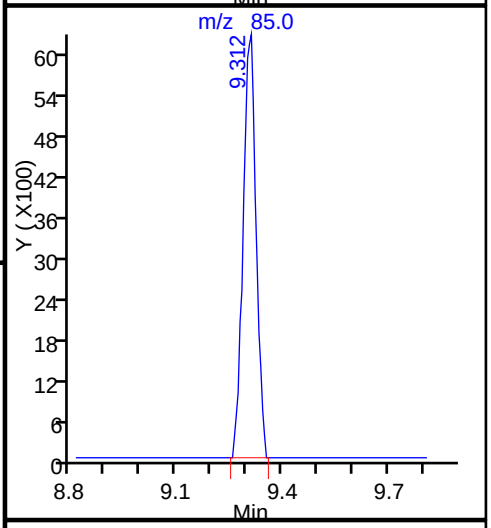
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P111.D		
Injection Date:	10-Oct-2016 02:07:30	Instrument ID:	MJ
Lims ID:	140-6042-A-3	Lab Sample ID:	140-6042-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:	403648	ALS Bottle#:	11 Worklist Smp#: 16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

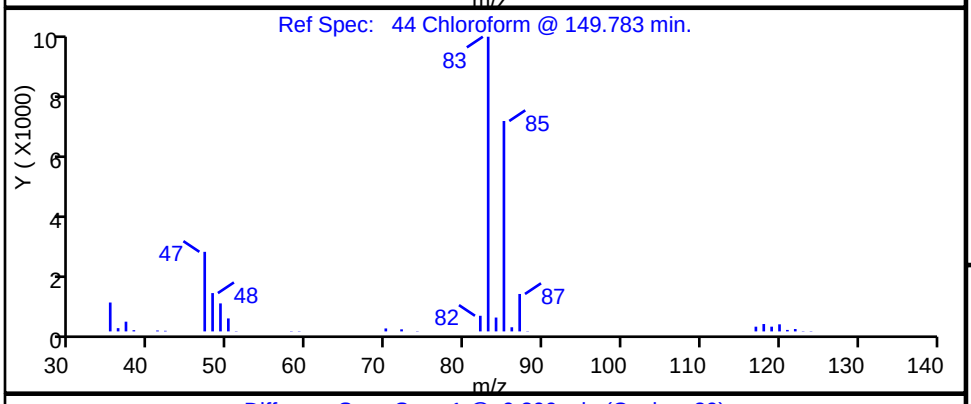
44 Chloroform, CAS: 67-66-3

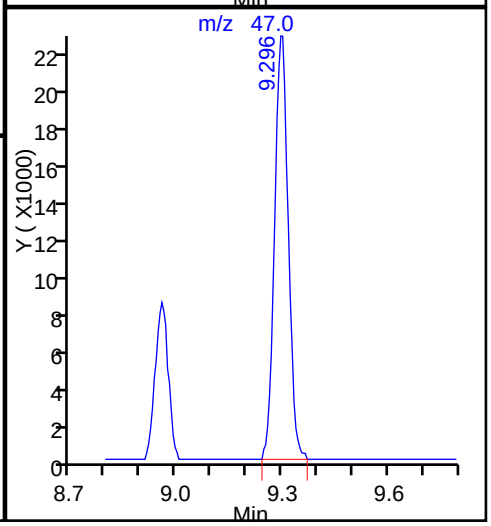


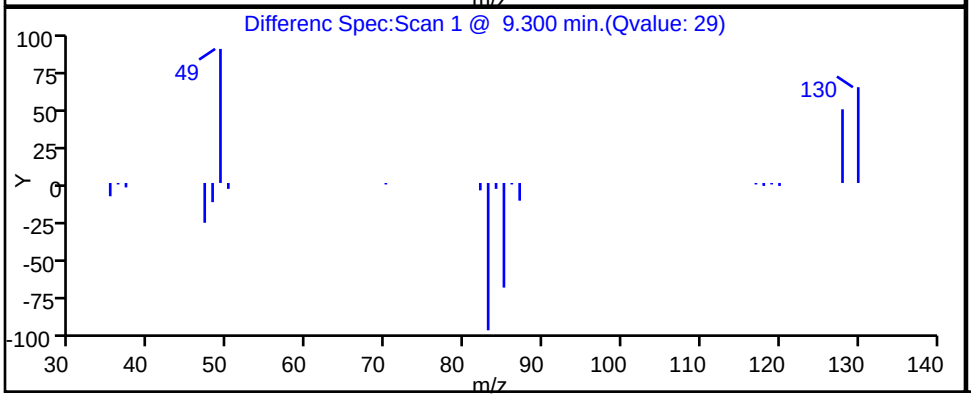








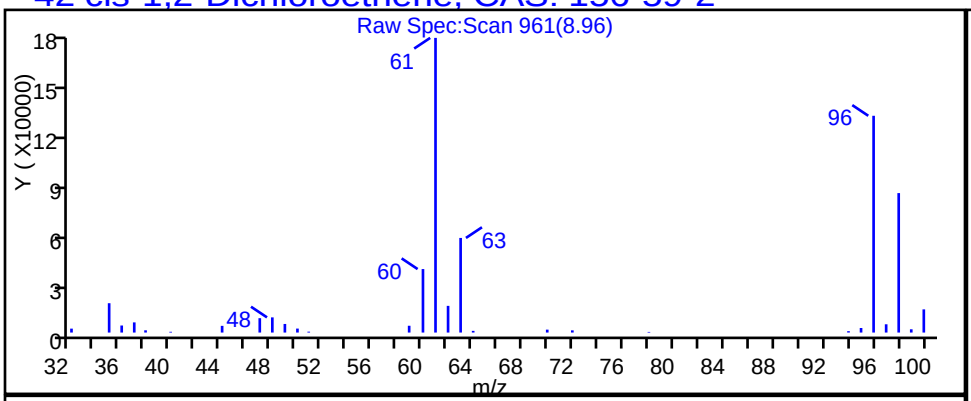


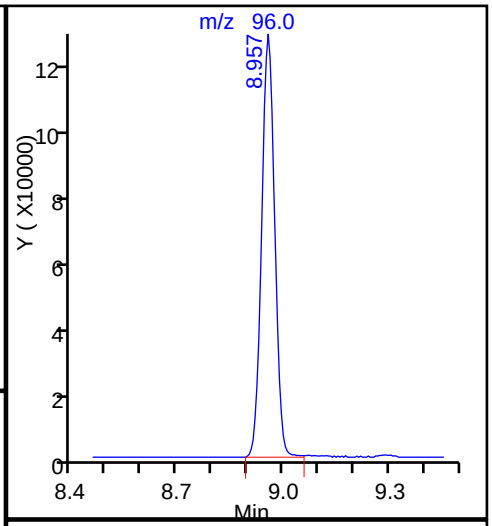


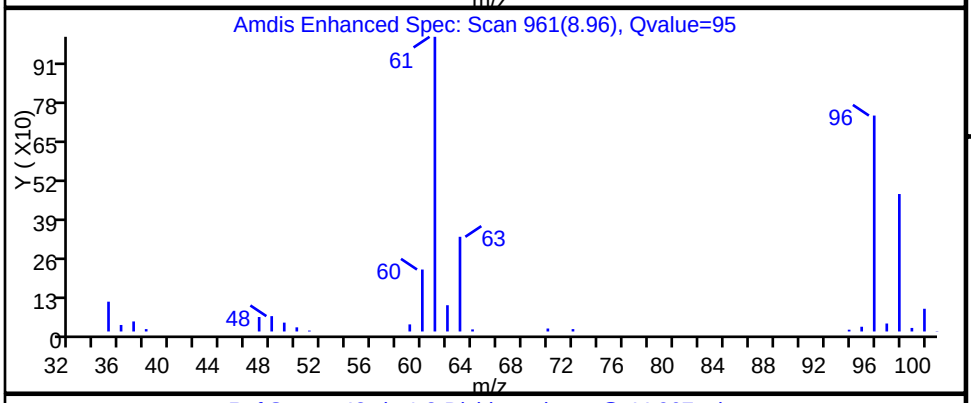
TestAmerica Knoxville

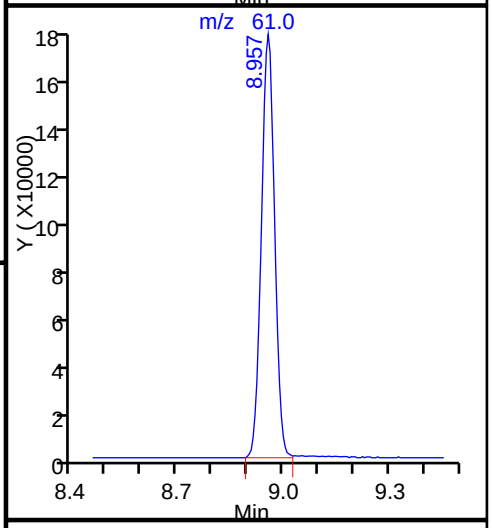
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P111.D				
Injection Date:	10-Oct-2016 02:07:30	Instrument ID:	MJ		
Lims ID:	140-6042-A-3	Lab Sample ID:	140-6042-3		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	403648	ALS Bottle#:	11	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

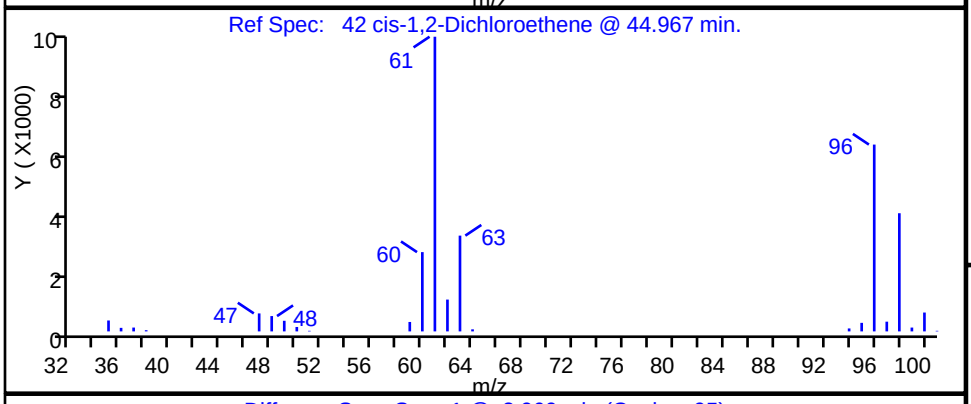
42 cis-1,2-Dichloroethene, CAS: 156-59-2

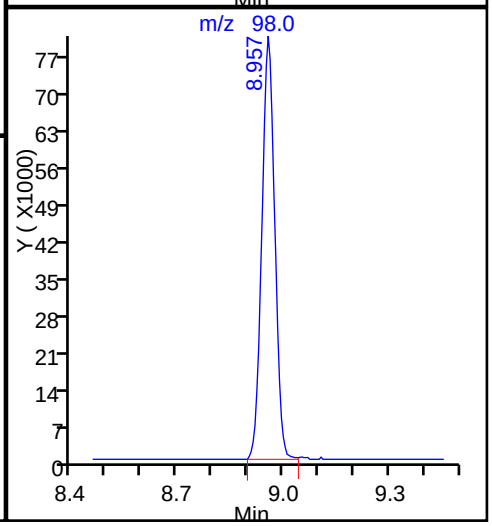


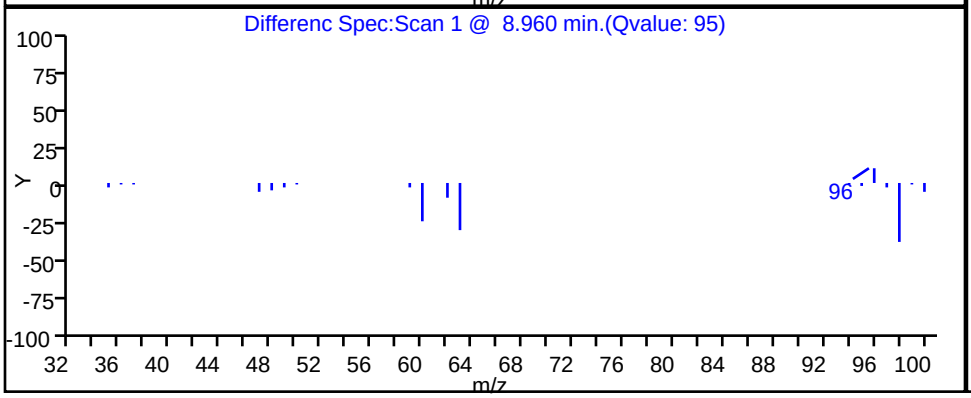








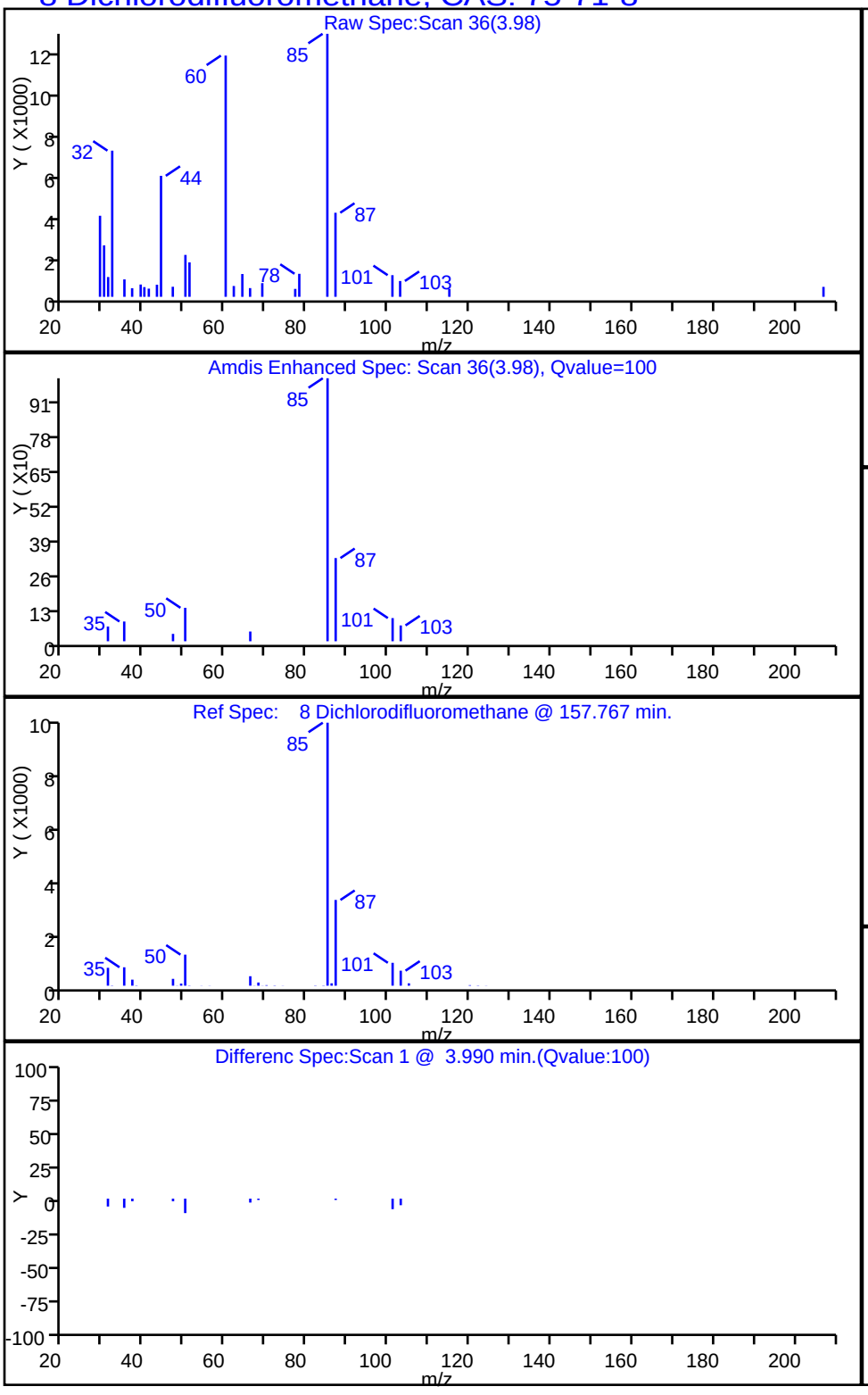


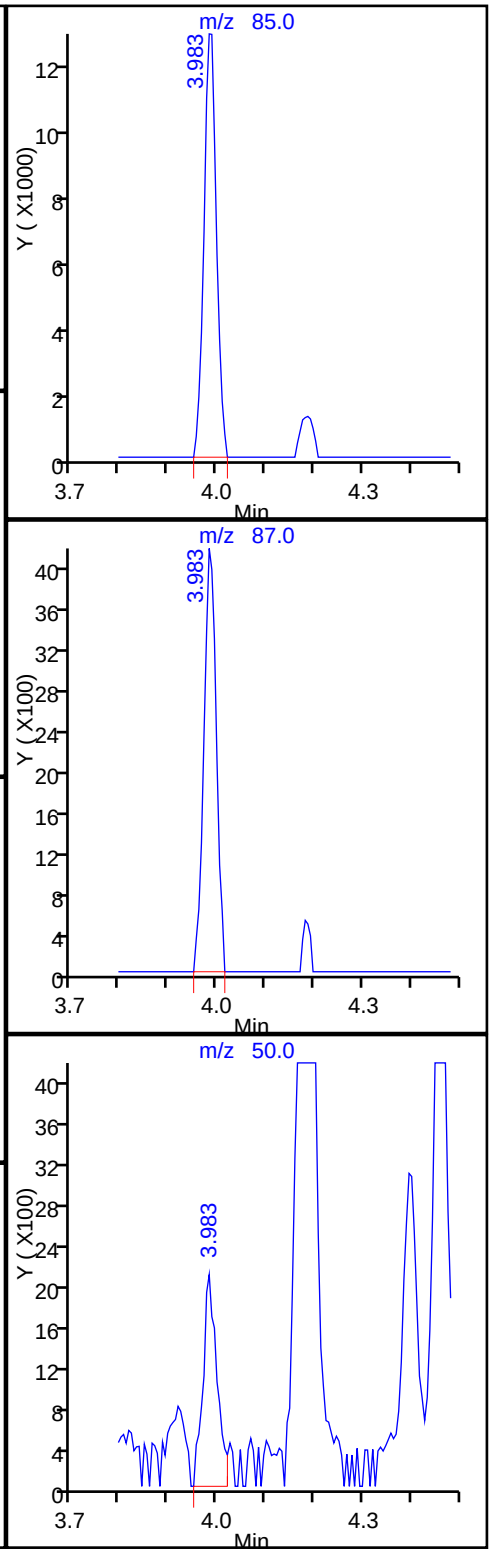


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P111.D		
Injection Date:	10-Oct-2016 02:07:30	Instrument ID:	MJ
Lims ID:	140-6042-A-3	Lab Sample ID:	140-6042-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:	403648	ALS Bottle#:	11 Worklist Smp#: 16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

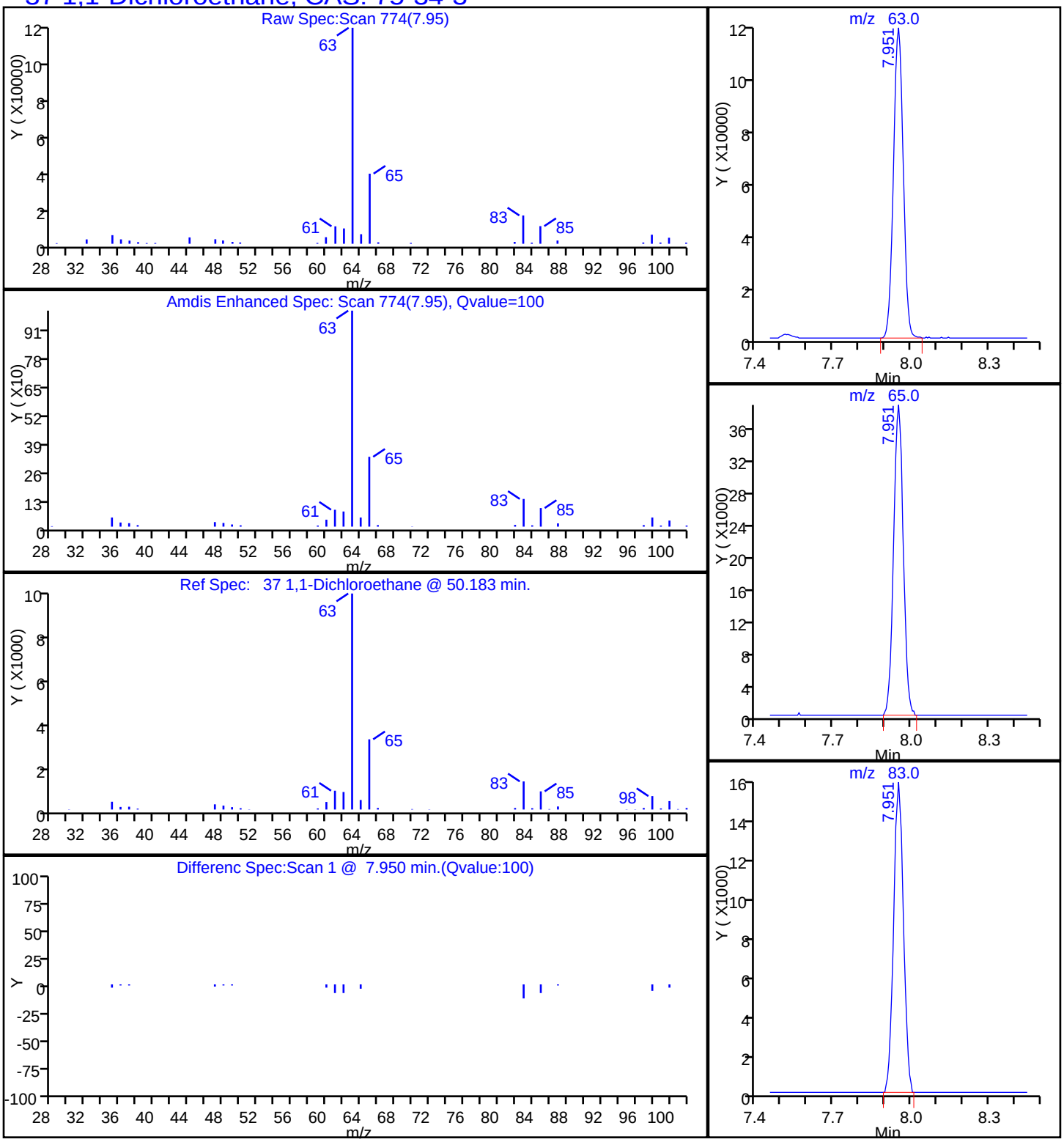
8 Dichlorodifluoromethane, CAS: 75-71-8





Data File: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P111.D
Injection Date: 10-Oct-2016 02:07:30 Instrument ID: MJ
Lims ID: 140-6042-A-3 Lab Sample ID: 140-6042-3
Client ID: BLDG-A EFFLUENT
Operator ID: 403648 ALS Bottle#: 11 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

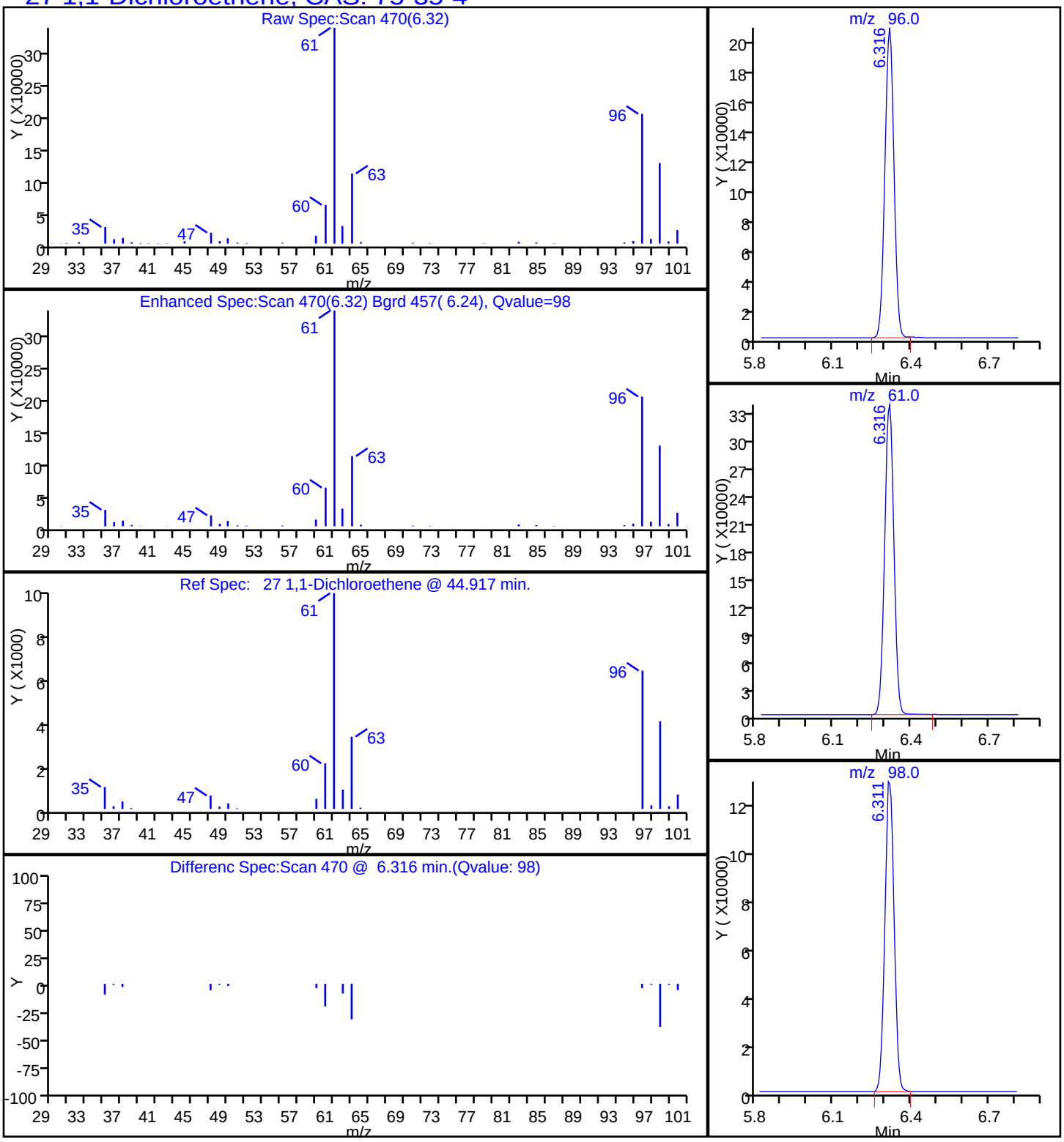
37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P111.D				
Injection Date:	10-Oct-2016 02:07:30	Instrument ID:	MJ		
Lims ID:	140-6042-A-3	Lab Sample ID:	140-6042-3		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	403648	ALS Bottle#:	11	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

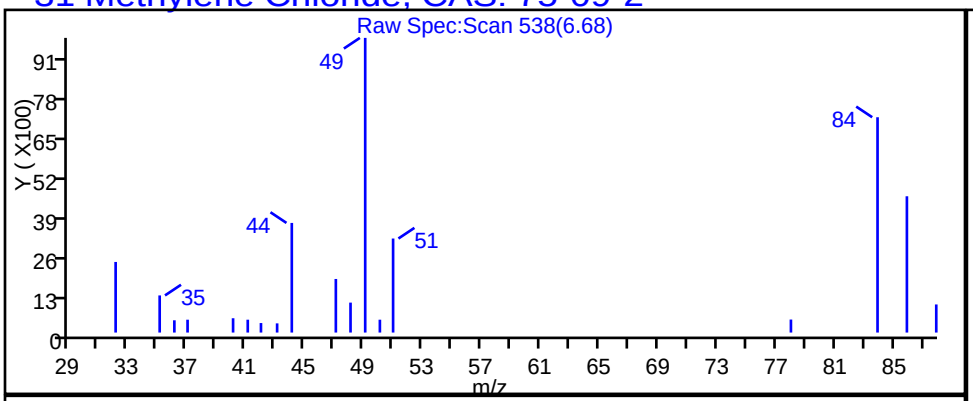
27 1,1-Dichloroethene, CAS: 75-35-4

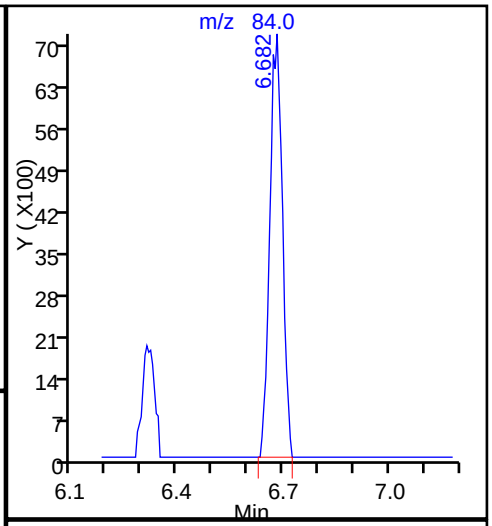


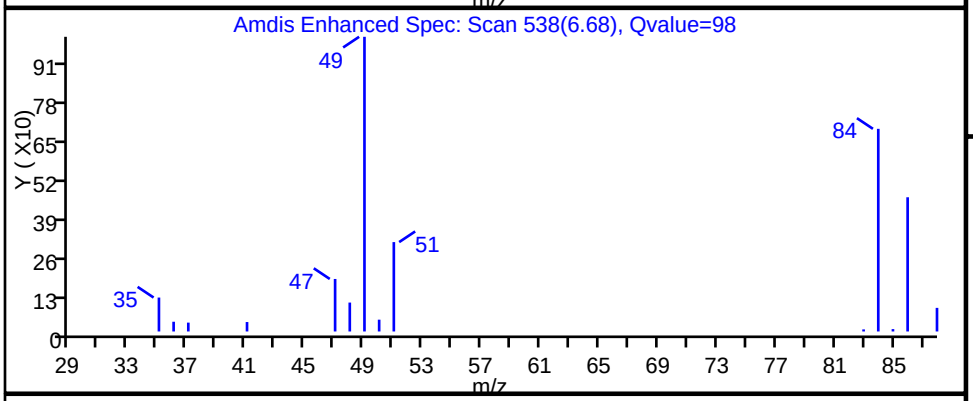
TestAmerica Knoxville

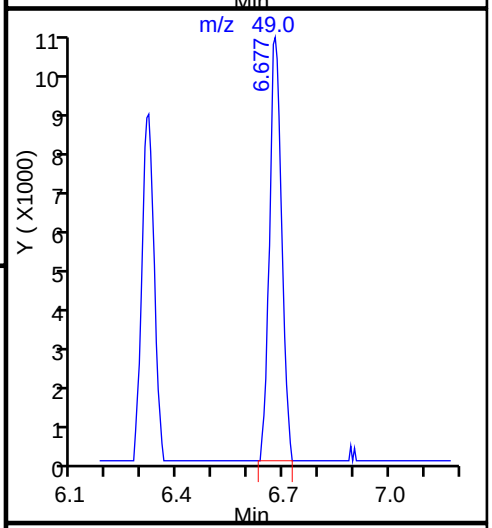
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P111.D				
Injection Date:	10-Oct-2016 02:07:30	Instrument ID:	MJ		
Lims ID:	140-6042-A-3	Lab Sample ID:	140-6042-3		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	403648	ALS Bottle#:	11	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

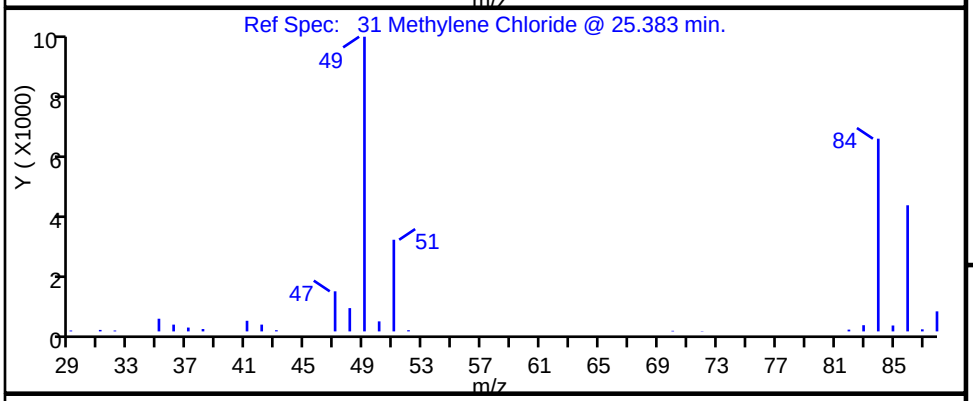
31 Methylene Chloride, CAS: 75-09-2

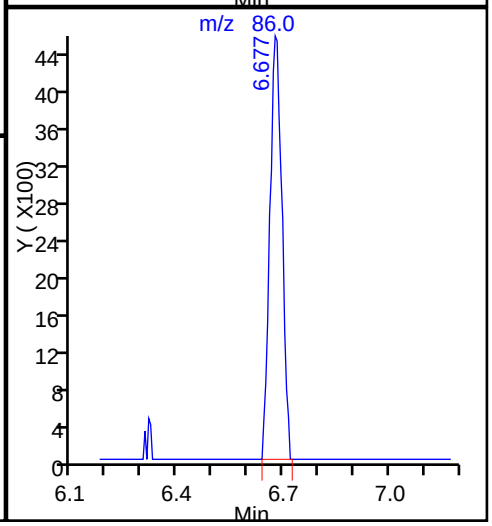


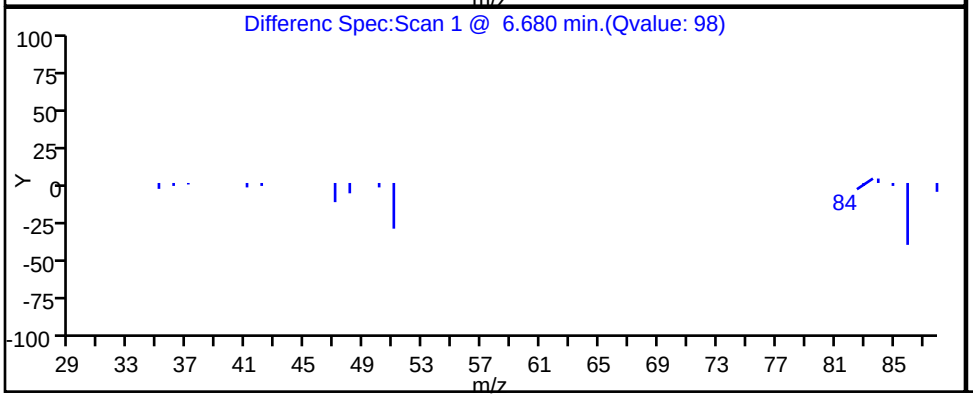






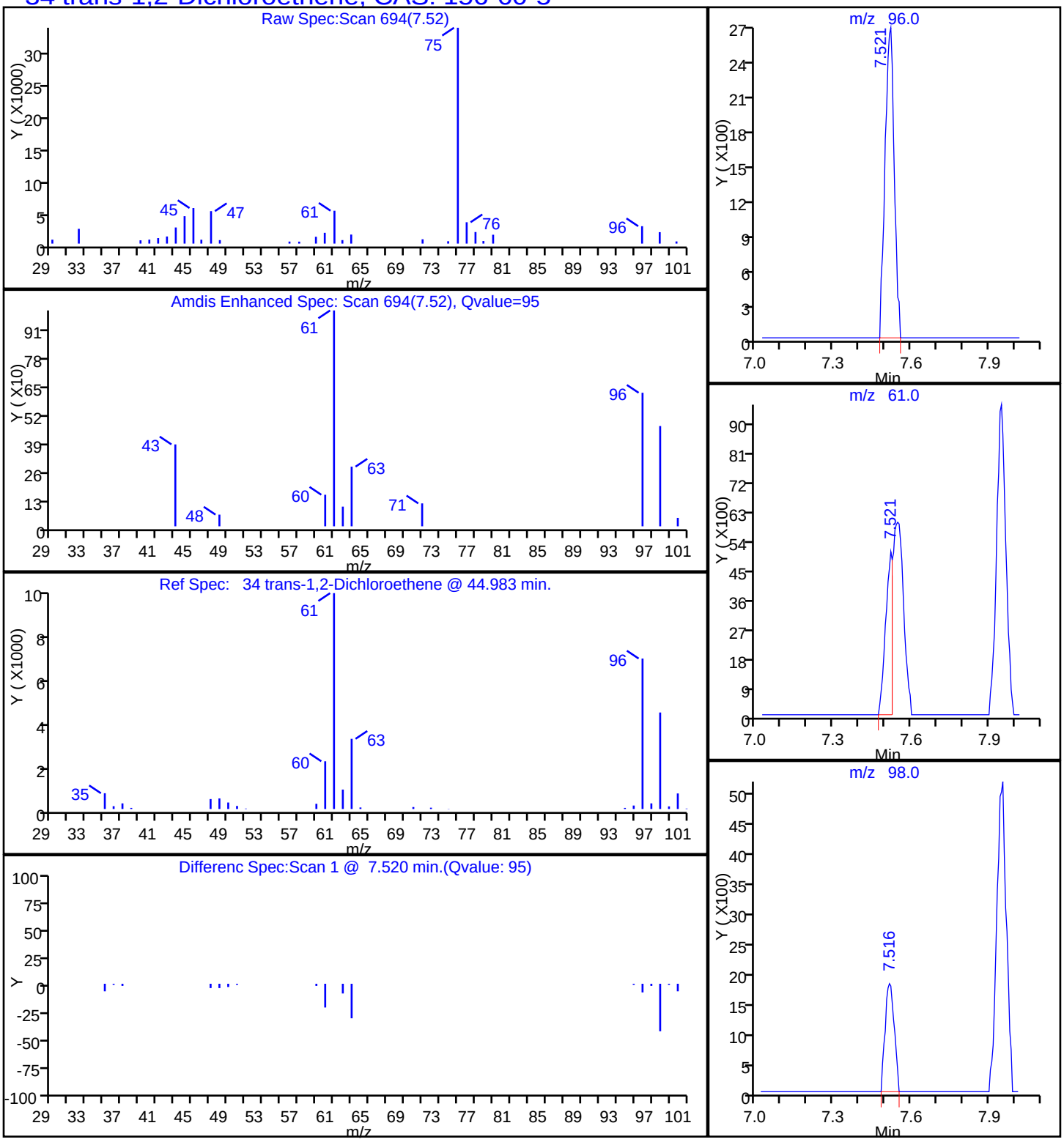






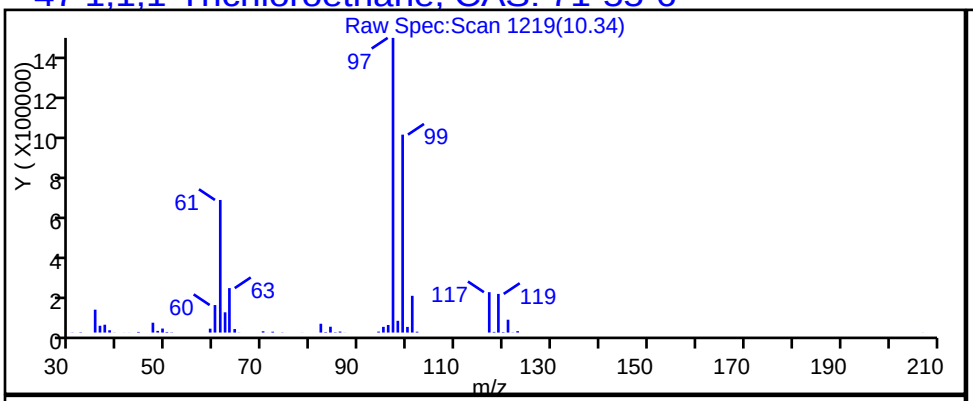
Data File: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P111.D
Injection Date: 10-Oct-2016 02:07:30 Instrument ID: MJ
Lims ID: 140-6042-A-3 Lab Sample ID: 140-6042-3
Client ID: BLDG-A EFFLUENT
Operator ID: 403648 ALS Bottle#: 11 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

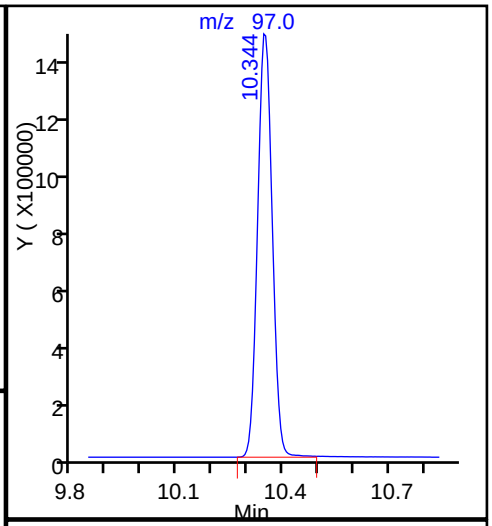
34 trans-1,2-Dichloroethene, CAS: 156-60-5

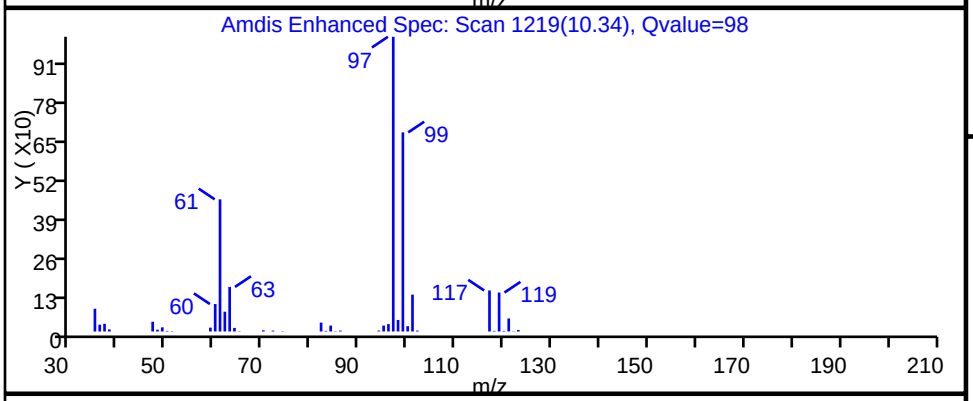


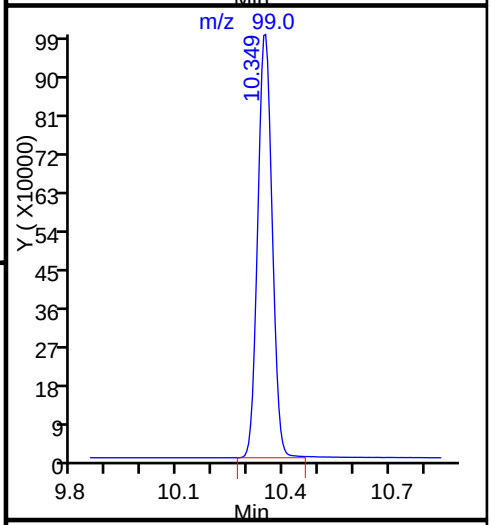
Data File: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P111.D
Injection Date: 10-Oct-2016 02:07:30 Instrument ID: MJ
Lims ID: 140-6042-A-3 Lab Sample ID: 140-6042-3
Client ID: BLDG-A EFFLUENT
Operator ID: 403648 ALS Bottle#: 11 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

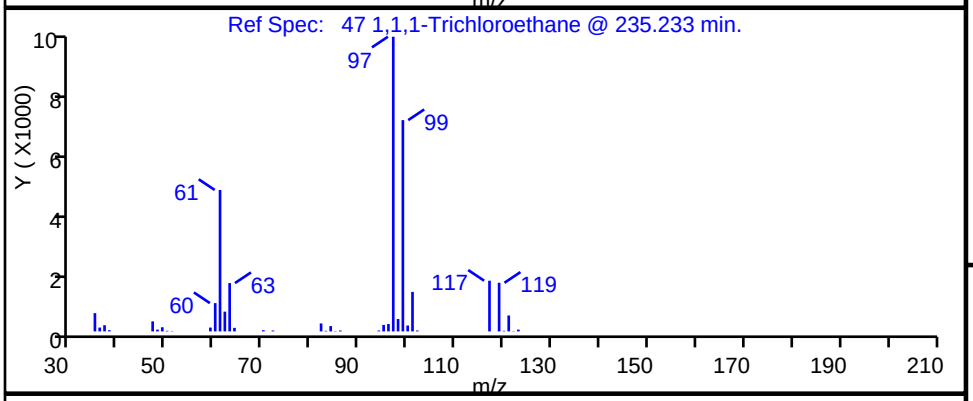
47 1,1,1-Trichloroethane, CAS: 71-55-6

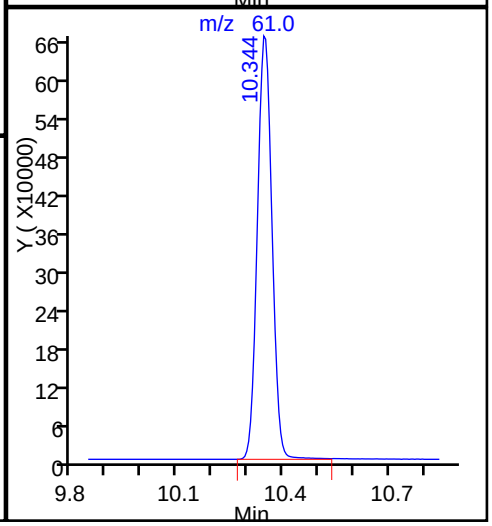


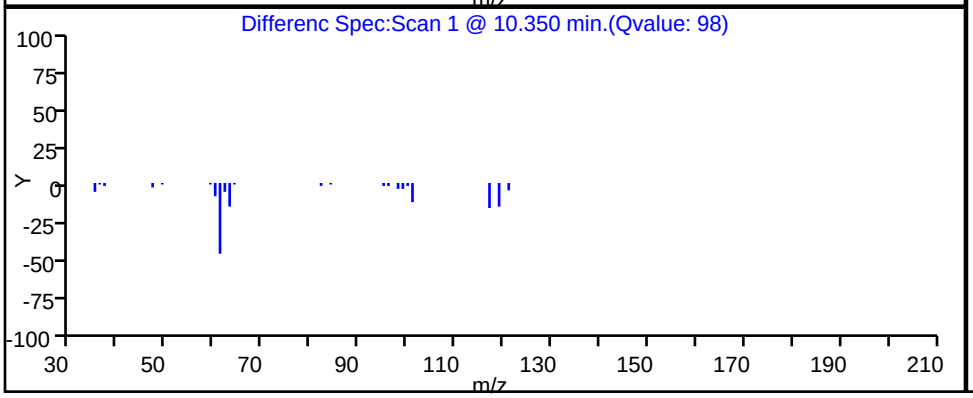








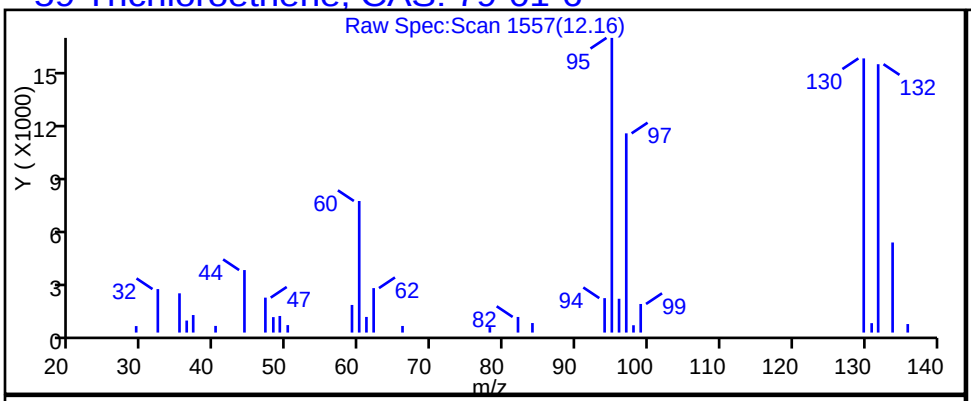


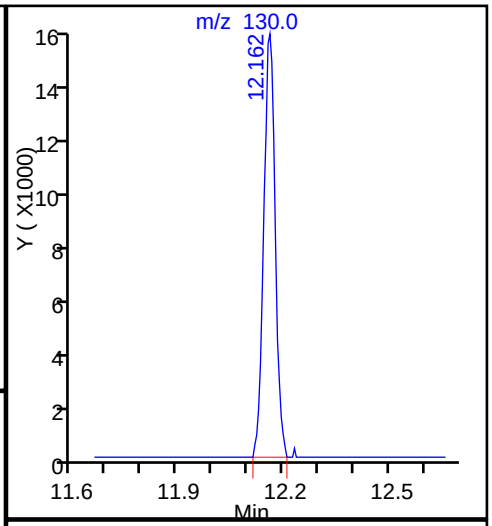


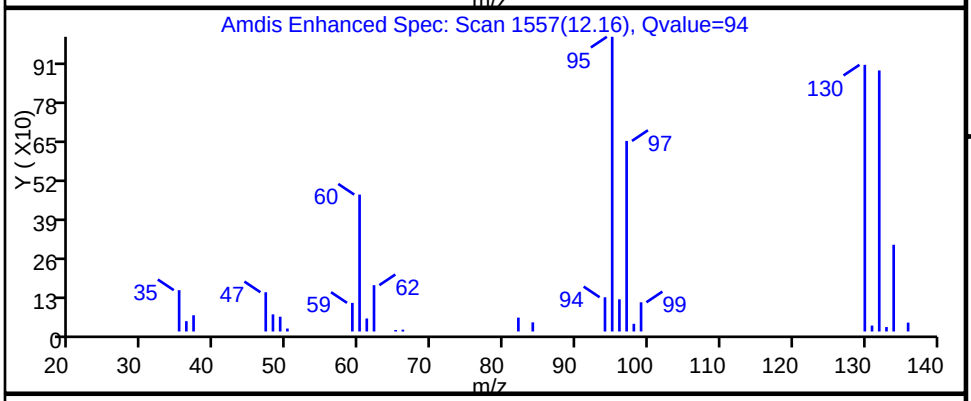
TestAmerica Knoxville

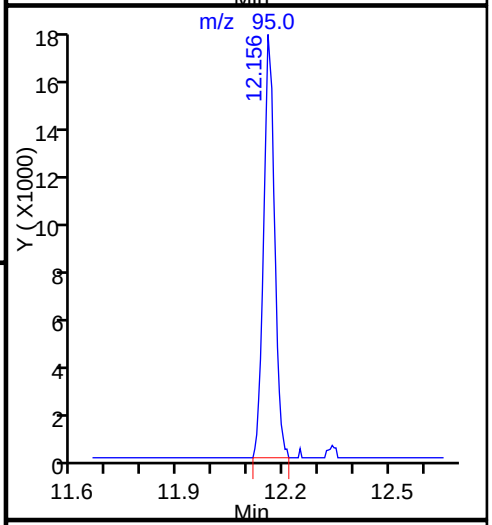
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P111.D		
Injection Date:	10-Oct-2016 02:07:30	Instrument ID:	MJ
Lims ID:	140-6042-A-3	Lab Sample ID:	140-6042-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:	403648	ALS Bottle#:	11 Worklist Smp#: 16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

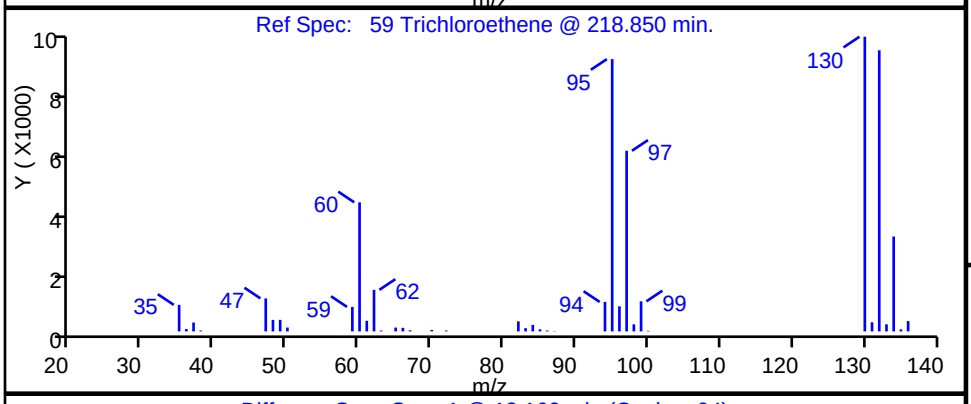
59 Trichloroethene, CAS: 79-01-6

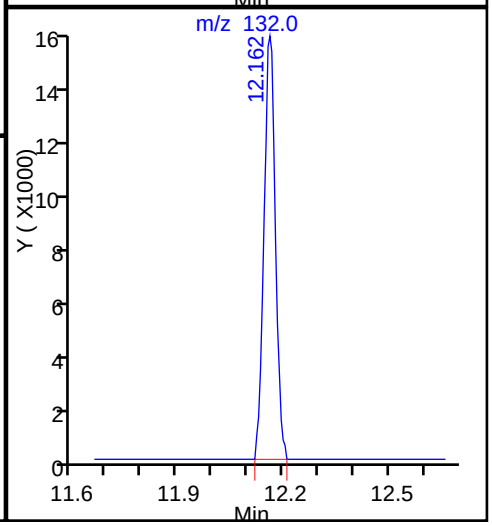


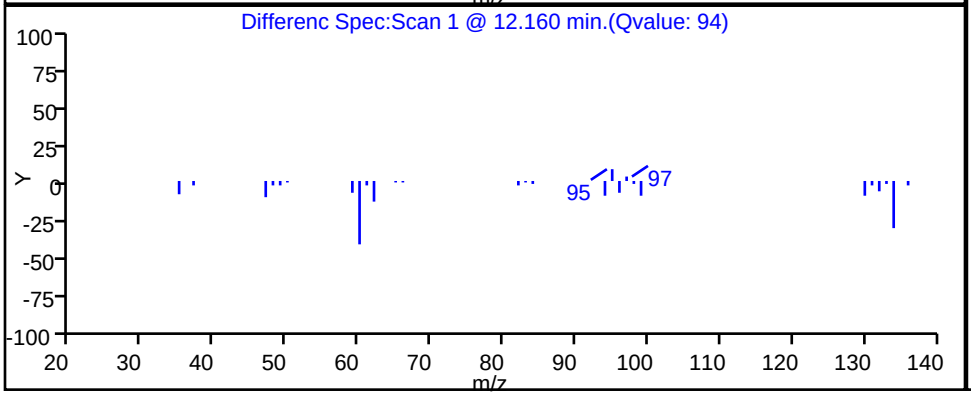












FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1

SDG No.:

Client Sample ID: BLDG-A EFFLUENT DL Lab Sample ID: 140-6042-3 DL

Matrix: Air Lab File ID: JJ09P111DL.D

Analysis Method: TO 15 LL Date Collected: 10/05/2016 14:41

Sample wt/vol: 40(mL) Date Analyzed: 10/10/2016 11:12

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6849 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	133.41	160		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1

SDG No.:

Client Sample ID: BLDG-A EFFLUENT DL Lab Sample ID: 140-6042-3 DL

Matrix: Air Lab File ID: JJ09P111DL.D

Analysis Method: TO 15 LL Date Collected: 10/05/2016 14:41

Sample wt/vol: 40(mL) Date Analyzed: 10/10/2016 11:12

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6849 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	133.41	850		5.5	0.82

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P111DL.D				
Lims ID:	140-6042-A-3				
Client ID:	BLDG-A EFFLUENT				
Sample Type:	Client				
Inject. Date:	10-Oct-2016 11:12:30	ALS Bottle#:	11	Worklist Smp#:	26
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003510-016				
Misc. Info.:	140-6042-a-3				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	11-Oct-2016 13:07:46	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				
First Level Reviewer: barlozhetskayaa		Date:	11-Oct-2016 13:07:46		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.300	9.302	-0.002	96	230176	4.00	
* 2 1,4-Difluorobenzene	114	11.456	11.463	-0.007	95	1011729	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.129	16.131	-0.002	89	825642	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.753	17.755	-0.002	97	487352	3.92	
6 Chlorodifluoromethane	67	3.922	3.919	0.003	94	914	0.0390	
8 Dichlorodifluoromethane	85	3.987	3.989	-0.002	99	9379	0.0414	
27 1,1-Dichloroethene	96	6.315	6.323	-0.008	97	193823	2.68	
31 Methylene Chloride	84	6.681	6.683	-0.002	96	16786	0.2295	
34 trans-1,2-Dichloroethene	96	7.520	7.522	-0.002	31	2486	0.0349	
37 1,1-Dichloroethane	63	7.950	7.957	-0.007	100	127940	0.9680	
42 cis-1,2-Dichloroethene	96	8.956	8.963	-0.007	96	132531	1.89	
44 Chloroform	83	9.305	9.313	-0.008	36	10106	0.0698	
47 1,1,1-Trichloroethane	97	10.348	10.350	-0.002	97	1844008	12.4	
51 Benzene	78	10.934	10.936	-0.002	97	25177	0.1345	
59 Trichloroethene	130	12.166	12.163	0.003	94	13810	0.1838	
68 Toluene	91	14.177	14.179	-0.002	92	11403	0.0630	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

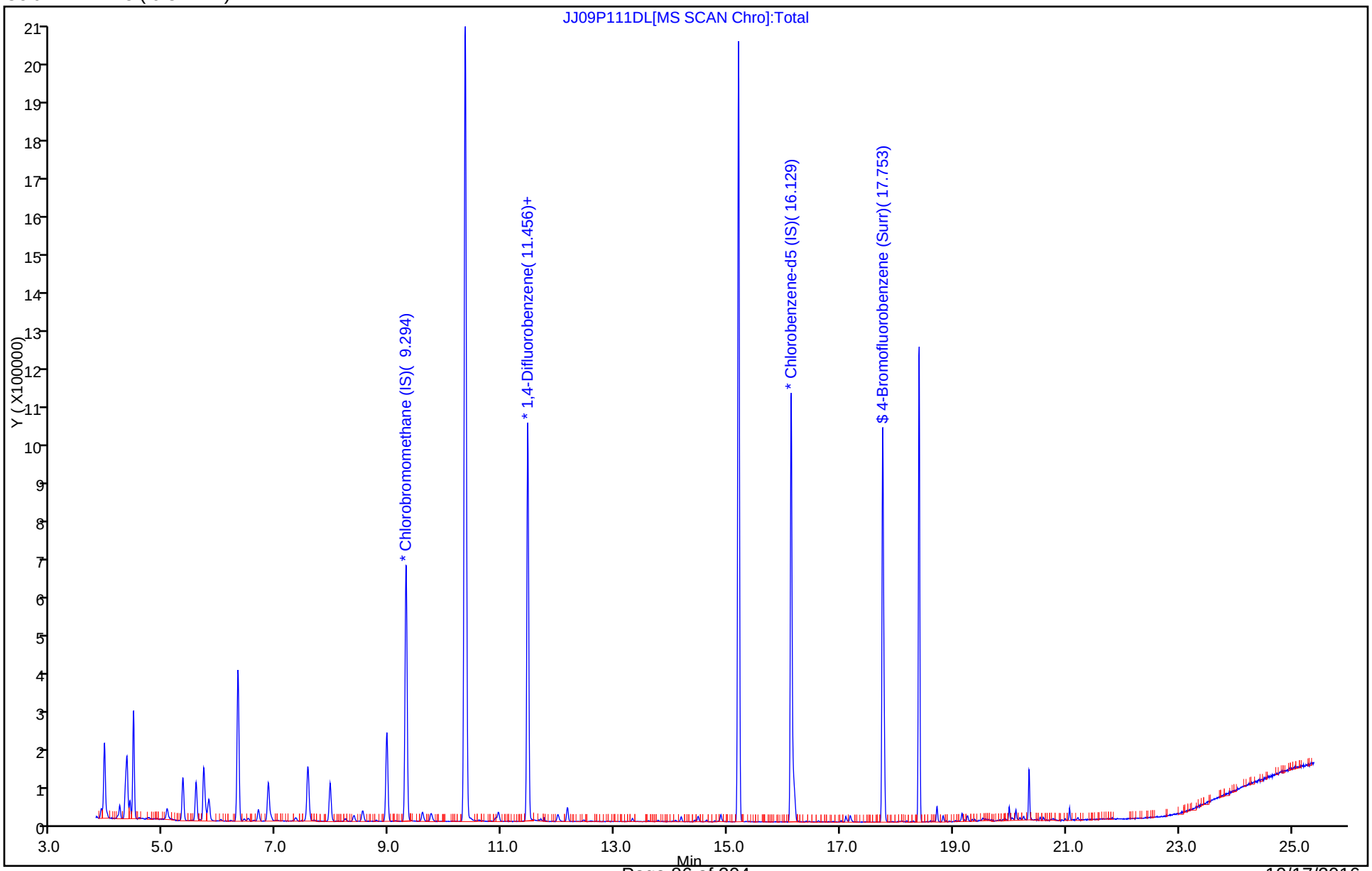
Report Date: 11-Oct-2016 13:07:47 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P111DL.D

Injection Date:	10-Oct-2016 11:12:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-6042-A-3	Lab Sample ID:	140-6042-3	Worklist Smp#:	26
Client ID:	BLDG-A EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P111DL.D				
Lims ID:	140-6042-A-3				
Client ID:	BLDG-A EFFLUENT				
Sample Type:	Client				
Inject. Date:	10-Oct-2016 11:12:30	ALS Bottle#:	11	Worklist Smp#:	26
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003510-016				
Misc. Info.:	140-6042-a-3				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	11-Oct-2016 13:07:46	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				

First Level Reviewer: barlozhetskayaa Date: 11-Oct-2016 13:07:46

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.92	97.88

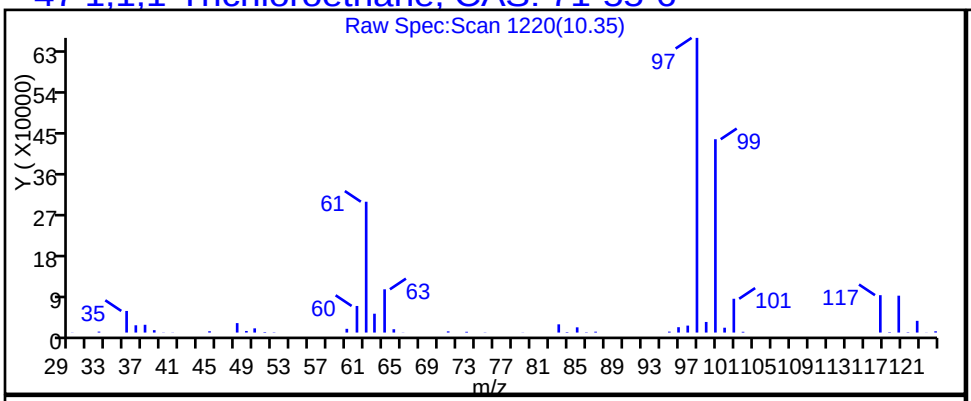
Report Date: 11-Oct-2016 13:07:47 Chrom Revision: 2.2 08-Sep-2016 14:45:52

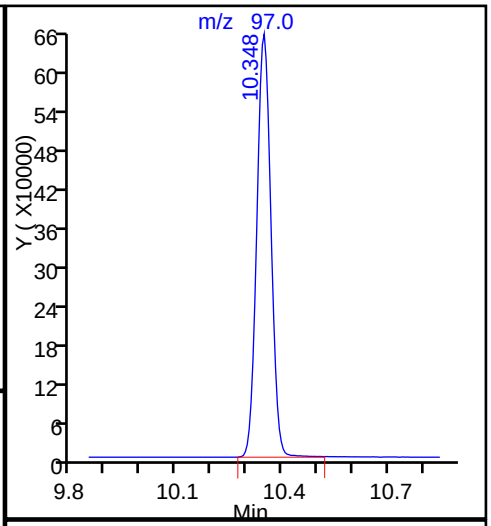
TestAmerica Knoxville

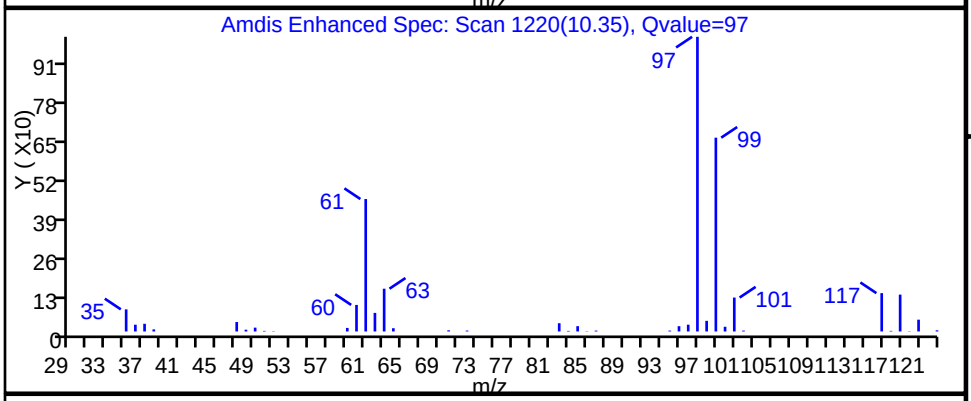
Data File: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JJ09P111DL.D

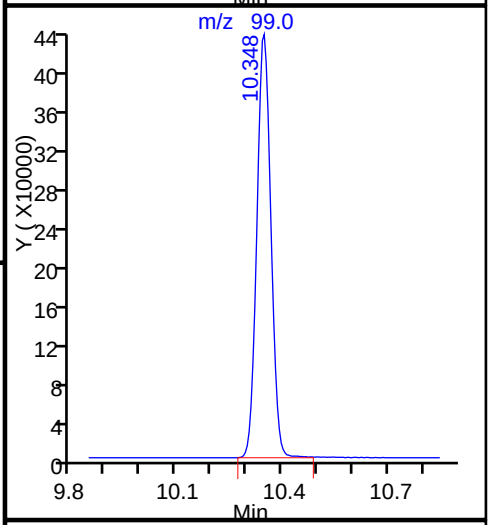
Injection Date:	10-Oct-2016 11:12:30	Instrument ID:	MJ		
Lims ID:	140-6042-A-3	Lab Sample ID:	140-6042-3		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	403648	ALS Bottle#:	11	Worklist Smp#:	26
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

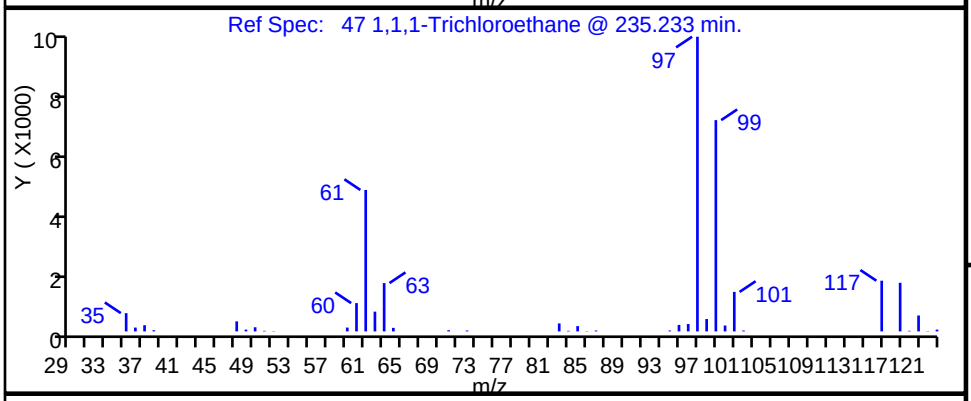
47 1,1,1-Trichloroethane, CAS: 71-55-6

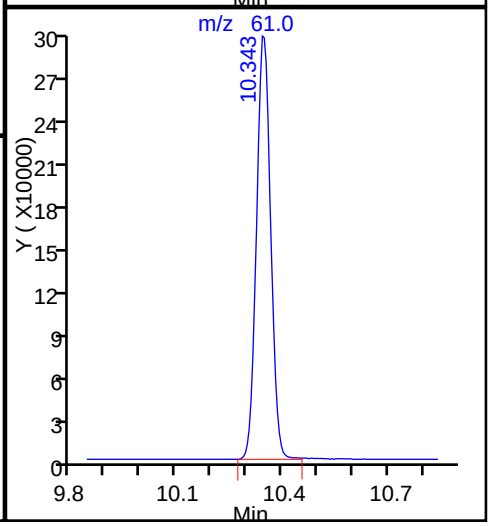


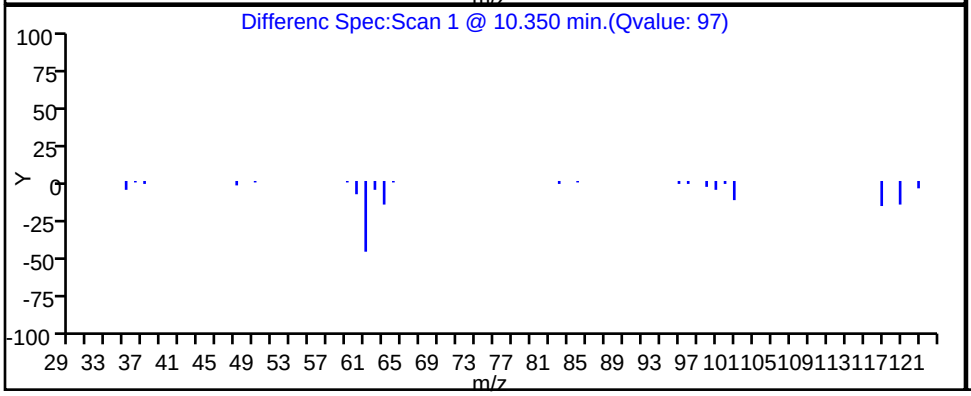












FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-6845/3	JJ08ICAL01.D
Level 2	IC 140-6845/4	JJ08ICAL02.D
Level 3	IC 140-6845/5	JJ08ICAL03.D
Level 4	IC 140-6845/6	JJ08ICAL04.D
Level 5	IC 140-6845/7	JJ08ICAL05.D
Level 6	ICIS 140-6845/8	JJ08ICAL06.D
Level 7	IC 140-6845/9	JJ08ICAL07.D
Level 8	IC 140-6845/10	JJ08ICAL08.D
Level 9	IC 140-6845/11	JJ07ICAL09.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.4186	0.4157 0.4125	0.4022 0.4084	0.3928 0.4079	0.4000	Ave		0.4073				2.1		30.0			
Propene	+++++ 1.3470	1.7441 1.3443	1.5319 1.3038	1.3837 1.1977	1.3404	Ave		1.3991				12.0		30.0			
Dichlorodifluoromethane	4.3867 4.0555	4.0039 3.9541	3.9227 3.7496	3.9004 3.4402	4.0262	Ave		3.9377				6.4		30.0			
Chloromethane	+++++ 0.4472	+++++ 0.4268	0.5613 0.4031	0.4830 0.3656	0.4732	Ave		0.4515				14.0		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.2403 2.2928	2.0622 1.9867	2.1683 1.7832	2.0958 1.9912	2.0349	Ave		2.0728				7.3		30.0			
Acetaldehyde	+++++ 0.4506	+++++ 0.3641	+++++ 0.3895	0.4878 0.3853	0.4261	Ave		0.4172				11.1		30.0			
Vinyl chloride	1.5467 1.3770	1.3347 1.3400	1.3544 1.2722	1.3770 1.2231	1.4068	Ave		1.3591				6.6		30.0			
1,3-Butadiene	+++++ 1.0385	1.0584 1.0045	1.0178 0.9583	1.0175 0.9273	1.0615	Ave		1.0105				4.7		30.0			
Butane	+++++ 1.9704	2.1676 1.8993	2.0666 1.8058	2.0727 1.7180	2.0660	Ave		1.9708				7.8		30.0			
Bromomethane	+++++ 1.2454	1.2520 1.2333	1.2480 1.1935	1.1949 1.2009	1.2700	Ave		1.2298				2.4		30.0			
Chloroethane	+++++ 0.5869	0.5567 0.5785	0.5646 0.5517	0.5564 0.5592	0.5960	Ave		0.5688				2.9		30.0			
Ethanol	+++++ 0.4132	+++++ 0.3546	0.4099 0.3813	0.4155 0.3046	0.3890	Ave		0.3812				10.5		30.0			
Vinyl bromide	+++++ 1.3173	1.2295 1.3057	1.2524 1.2595	1.2344 1.3070	1.3088	Ave		1.2768				2.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	+++++ 1.6787	+++++ 1.6188	1.7660 1.5052	1.6389 1.4899	1.6551	Ave		1.6218				6.0		30.0			
Trichlorofluoromethane	+++++ 3.6044	3.3732 3.4877	3.4768 3.2913	3.4028 3.2746	3.5545	Ave		3.4332				3.5		30.0			
Acrolein	+++++ 0.3422	+++++ 0.3024	0.3857 0.3812	0.3729 0.3583	0.3170	Ave		0.3514				9.2		30.0			
Acetonitrile	+++++ 0.5163	+++++ 0.3937	0.3667 0.4816	0.4178 0.4326	0.4204	Ave		0.4327				11.8		30.0			
Acetone	+++++ 0.4741	+++++ 0.3542	+++++ 0.4443	0.5513 0.3573	0.4148	Ave		0.4327				17.3		30.0			
Isopropyl alcohol	+++++ 1.6271	+++++ 1.4436	1.5685 1.4524	1.6082 1.2370	1.5364	Ave		1.4962				9.0		30.0			
Pentane	+++++ 0.2082	+++++ 0.2022	0.1944 0.1942	0.1976 0.1947	0.2085	Ave		0.2000				3.2		30.0			
Ethyl ether	+++++ 1.3842	+++++ 1.1056	1.2065 1.3336	1.3602 1.2216	1.2100	Ave		1.2602				8.0		30.0			
1,1-Dichloroethene	+++++ 1.3083	1.2437 1.2904	1.2431 1.2390	1.1766 1.2776	1.2750	Ave		1.2567				3.2		30.0			
tert-Butyl alcohol	+++++ 2.0739	1.9778 1.8957	1.9349 1.9623	1.9180 1.8923	1.8857	Ave		1.9426				3.2		30.0			
Acrylonitrile	+++++ 0.8206	+++++ 0.6262	0.6700 0.7884	0.7911 0.6932	0.6619	Ave		0.7216				10.6		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++ 2.8222	2.6127 2.7177	2.6947 2.5337	2.6183 2.4890	2.8021	Ave		2.6613				4.5		30.0			
Methylene Chloride	+++++ 1.2505	+++++ 1.1812	1.6551 1.1049	1.3333 1.0821	1.2891	Ave		1.2709				15.2		30.0			
3-Chloropropene	+++++ 1.2310	1.3666 1.1542	1.2758 1.1214	1.1838 1.0626	1.1910	Ave		1.1983				7.8		30.0			
Carbon disulfide	+++++ 4.1094	3.8928 3.8963	3.9099 3.6597	3.9253 3.7186	3.9321	Ave		3.8805				3.6		30.0			
trans-1,2-Dichloroethene	+++++ 1.3121	1.2366 1.2781	1.2286 1.2045	1.2164 1.1454	1.2894	Ave		1.2389				4.3		30.0			
2-Methylpentane	+++++ 2.8638	2.8718 2.7004	2.8813 2.4925	2.7507 2.3412	2.8676	Ave		2.7212				7.5		30.0			
Methyl tert-butyl ether	+++++ 2.9186	+++++ 2.2934	2.4189 2.8242	2.8315 2.4194	2.4363	Ave		2.5917				9.9		30.0			
1,1-Dichloroethane	+++++ 2.4921	2.4104 2.2051	2.3161 2.2519	2.2784 2.1313	2.2888	Ave		2.2968				4.9		30.0			
Vinyl acetate	+++++ 2.8860	+++++ 2.1312	2.3151 2.8848	2.6963 2.4666	2.2996	Ave		2.5257				11.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.4587	+++++ 0.3792	0.4404 0.4775	0.4574 0.3717	0.3871	Ave		0.4246				10.3		30.0			
Hexane	+++++ 1.0592	1.0744 0.9805	1.0500 0.9642	1.0026 0.9024	1.0397	Ave		1.0091				5.8		30.0			
Isopropyl ether	3.6585 3.8039	4.1325 3.0167	3.2889 3.5892	3.7210 2.9568	3.2520	Ave		3.4911				11.1		30.0			
cis-1,2-Dichloroethene	+++++ 1.3103	1.2673 1.1822	1.2254 1.2263	1.1796 1.1622	1.2083	Ave		1.2202				4.0		30.0			
Ethyl acetate	+++++ 2.1111	+++++ 1.7369	1.8467 2.1266	2.0366 1.7664	1.7678	Ave		1.9131				9.0		30.0			
Chloroform	+++++ 2.7285	2.6649 2.3181	2.5664 2.5048	2.4949 2.3514	2.4902	Ave		2.5149				5.6		30.0			
Tert-butyl ethyl ether	2.9714 3.1339	3.2822 2.5245	2.6210 3.0336	3.0431 2.5249	2.6452	Ave		2.8644				10.0		30.0			
Tetrahydrofuran	+++++ 1.1757	+++++ 0.9192	1.0120 1.1874	1.1292 1.0403	0.9632	Ave		1.0610				9.9		30.0			
1,1,1-Trichloroethane	+++++ 2.8004	2.5440 2.4811	2.6857 2.5817	2.5828 2.3960	2.5988	Ave		2.5838				4.7		30.0			
1,2-Dichloroethane	+++++ 0.3729	0.3517 0.3238	0.3603 0.3452	0.3394 0.3100	0.3382	Ave		0.3427				5.8		30.0			
1-Butanol	+++++ 0.1028	+++++ 0.0974	0.0929 0.1029	0.0801 0.0974	0.0872	Ave		0.0944				8.9		30.0			
Cyclohexane	0.1458 0.1376	0.1245 0.1259	0.1370 0.1165	0.1244 0.0987	0.1365	Ave		0.1274				11.0		30.0			
Benzene	+++++ 0.8021	0.8407 0.6741	0.8260 0.7057	0.7545 0.5845	0.7314	Ave		0.7399				11.6		30.0			
Carbon tetrachloride	0.6556 0.6175	0.5523 0.5488	0.5883 0.5437	0.5376 0.4674	0.5976	Ave		0.5676				9.6		30.0			
2,3-Dimethylpentane	+++++ 0.1834	0.1733 0.1619	0.1797 0.1675	0.1693 0.1496	0.1719	Ave		0.1696				6.2		30.0			
Thiophene	0.4726 0.4434	0.4160 0.3821	0.4232 0.4159	0.3991 0.3675	0.3942	Ave		0.4127				7.7		30.0			
Tert-amyl methyl ether	0.6538 0.7324	0.7284 0.5781	0.6755 0.6850	0.6888 0.5211	0.6147	Ave		0.6531				10.7		30.0			
2,2,4-Trimethylpentane	+++++ 1.3053	1.3743 1.0944	1.3317 1.1189	1.1928 0.9582	1.1802	Ave		1.1945				11.6		30.0			
Heptane	0.3049 0.2761	0.2634 0.2381	0.2681 0.2558	0.2417 0.2313	0.2433	Ave		0.2581				8.9		30.0			
1,2-Dichloropropane	0.3403 0.3068	0.2858 0.2582	0.2870 0.2838	0.2693 0.2480	0.2678	Ave		0.2830				9.8		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.3627 0.3172	0.3027 0.2712	0.3023 0.2920	0.2777 0.2605	0.2872	Ave		0.2971				10.1		30.0			
Dibromomethane	0.3337 0.3141	0.2804 0.2673	0.2956 0.2945	0.2715 0.2625	0.2784	Ave		0.2887				8.1		30.0			
Bromodichloromethane	0.5666 0.5741	0.5086 0.4858	0.5089 0.5400	0.4770 0.4862	0.4945	Ave		0.5158				7.0		30.0			
1,4-Dioxane	+++++ 0.0924	+++++ 0.0873	0.0762 0.0884	0.0778 0.0763	0.0847	Ave		0.0833				7.9		30.0			
Methyl methacrylate	0.2389 0.2514	0.2477 0.2091	0.2751 0.2608	0.2192 0.2109	0.2069	Ave		0.2356				10.6		30.0			
Methylcyclohexane	+++++ 0.6101	0.5548 0.5232	0.6037 0.5301	0.5406 0.4577	0.5619	Ave		0.5478				8.8		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.4940	+++++ 0.4525	0.4771 0.4903	0.4607 0.4131	0.4233	Ave		0.4587				6.9		30.0			
cis-1,3-Dichloropropene	+++++ 0.4251	0.3760 0.3505	0.3545 0.4070	0.3512 0.3703	0.3450	Ave		0.3725				7.9		30.0			
trans-1,3-Dichloropropene	+++++ 0.4044	0.3180 0.3365	0.3166 0.4085	0.3254 0.3668	0.3361	Ave		0.3515				10.6		30.0			
Toluene	+++++ 0.9935	0.9647 0.7890	0.9176 0.8879	0.8461 0.7618	0.8548	Ave		0.8769				9.2		30.0			
Toluene Range	+++++ 2.2197	+++++ 1.7946	2.0093 2.1871	1.9431 1.8111	1.9108	Ave		1.9822				8.5		30.0			
1,1,2-Trichloroethane	0.2932 0.3078	0.2834 0.2448	0.2714 0.2802	0.2705 0.2446	0.2638	Ave		0.2733				7.6		30.0			
2-Methylthiophene	0.8146 0.8152	0.6557 0.6571	0.6731 0.7234	0.6973 0.6213	0.7059	Ave		0.7071				9.7		30.0			
3-Methylthiophene	0.7286 0.7701	0.6979 0.6205	0.6971 0.6981	0.6011 0.6098	0.6600	Ave		0.6759				8.5		30.0			
2-Hexanone	+++++ 0.2764	+++++ 0.2408	0.2181 0.2631	0.2057 0.2248	0.2348	Ave		0.2377				10.5		30.0			
C8 Range	+++++ 3.0891	+++++ 2.4712	+++++ 2.6546	2.7258 2.2296	2.7558	Ave		2.6543				10.9		30.0			
Octane	0.3344 0.3234	0.2947 0.2623	0.3166 0.2883	0.2833 0.2473	0.2837	Ave		0.2927				9.7		30.0			
Dibromochloromethane	0.4978 0.5925	0.4561 0.4839	0.5118 0.5535	0.4577 0.4840	0.4926	Ave		0.5033				8.8		30.0			
1,2-Dibromoethane (EDB)	0.3923 0.5003	0.4178 0.4094	0.4494 0.4807	0.4177 0.4265	0.4242	Ave		0.4354				8.0		30.0			
Tetrachloroethene	0.3873 0.3598	0.3396 0.2842	0.3682 0.3107	0.3167 0.2667	0.3225	Ave		0.3284				12.0		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2,3-Dimethylheptane	+++++ 0.9545	1.0278 0.7543	1.0752 0.7481	0.9073 0.5735	0.8691	Ave		0.8637				19.1		30.0			
Chlorobenzene	0.6540 0.6898	0.6488 0.5569	0.6679 0.6251	0.5842 0.5256	0.5874	Ave		0.6155				8.9		30.0			
Ethylbenzene	1.0369 1.1165	1.0061 0.8450	0.9685 1.0340	0.9593 0.8469	0.9044	Ave		0.9686				9.4		30.0			
2-Ethylthiophene	0.7221 0.7933	0.6809 0.6225	0.6893 0.7581	0.6594 0.6422	0.6545	Ave		0.6914				8.2		30.0			
m-Xylene & p-Xylene	0.7975 0.8326	0.7783 0.6224	0.7480 0.7322	0.7454 0.5750	0.6919	Ave		0.7248				11.4		30.0			
Nonane	0.5955 0.6515	0.5791 0.5307	0.5909 0.5706	0.5741 0.4727	0.5858	Ave		0.5723				8.5		30.0			
Bromoform	0.3161 0.4607	0.2848 0.4032	0.3239 0.4967	0.3091 0.4509	0.3629	Ave		0.3787				20.3		30.0			
Styrene	0.3749 0.5815	0.3610 0.4561	0.4078 0.5845	0.4200 0.4811	0.4530	Ave		0.4578				17.6		30.0			
o-Xylene	0.8722 0.8939	0.8716 0.6618	0.8252 0.8094	0.8165 0.6533	0.7476	Ave		0.7946				11.2		30.0			
1,1,2,2-Tetrachloroethane	0.5544 0.6657	0.5575 0.5314	0.5721 0.6447	0.5681 0.5326	0.5561	Ave		0.5758				8.2		30.0			
1,2,3-Trichloropropane	0.1139 0.1517	0.1284 0.1217	0.1317 0.1553	0.1289 0.1327	0.1277	Ave		0.1324				10.0		30.0			
Isopropylbenzene	+++++ 1.1771	+++++ 0.8812	1.0596 1.0647	1.0626 0.8458	0.9717	Ave		1.0089				11.5		30.0			
Propylbenzene	+++++ 0.2895	+++++ 0.2252	0.2304 0.2936	0.2354 0.2455	0.2248	Ave		0.2492				12.0		30.0			
2-Chlorotoluene	0.2255 0.2807	0.2426 0.2222	0.2362 0.2744	0.2286 0.2384	0.2384	Ave		0.2430				8.5		30.0			
4-Ethyltoluene	+++++ 1.0203	+++++ 0.7867	0.7969 0.9812	0.8226 0.7942	0.8068	Ave		0.8584				11.5		30.0			
1,3,5-Trimethylbenzene	0.4012 0.4982	0.4570 0.3776	0.4234 0.4677	0.4452 0.3864	0.4090	Ave		0.4295				9.4		30.0			
Alpha Methyl Styrene	+++++ 0.3705	+++++ 0.3087	0.2123 0.4203	0.2250 0.3623	0.2694	Ave		0.3098				25.3		30.0			
Decane	+++++ 0.7019	+++++ 0.5485	0.5700 0.6164	0.6005 0.4900	0.5836	Ave		0.5873				11.1		30.0			
tert-Butylbenzene	+++++ 0.9675	+++++ 0.7326	0.8703 0.8661	0.8931 0.6883	0.8080	Ave		0.8323				11.6		30.0			
1,2,4-Trimethylbenzene	0.6720 0.8683	0.7359 0.6694	0.7226 0.7970	0.7494 0.6317	0.7140	Ave		0.7289				9.8		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	1.0812 1.3235	1.2299 1.0158	1.1697 1.1914	1.2077 0.9224	1.1219	Ave		1.1404				10.6		30.0			
1,3-Dichlorobenzene	0.3042 0.3988	0.2488 0.3396	0.3111 0.4504	0.2778 0.4007	0.3178	Ave		0.3388				19.3		30.0			
Benzyl chloride	+++++ 0.4137	+++++ 0.3879	0.2767 0.5417	0.2353 0.4910	0.3060	Ave		0.3789				29.8		30.0			
1,4-Dichlorobenzene	0.2369 0.3351	0.2227 0.2924	0.2556 0.4086	0.2246 0.3737	0.2617	Ave		0.2901				23.3		30.0			
4-Isopropyltoluene	0.7601 0.9782	0.8524 0.7688	0.8171 0.8965	0.8275 0.7200	0.8265	Ave		0.8275				9.3		30.0			
1,2,3-Trimethylbenzene	0.5253 0.6467	0.5863 0.5050	0.5730 0.6154	0.5714 0.5047	0.5391	Ave		0.5630				8.7		30.0			
Butylcyclohexane	+++++ 0.8395	0.8197 0.6568	0.7836 0.7208	0.7644 0.5891	0.7454	Ave		0.7399				11.3		30.0			
Indane	0.5863 0.7062	0.5662 0.5539	0.6014 0.6799	0.5659 0.5488	0.5774	Ave		0.5985				9.4		30.0			
1,2-Dichlorobenzene	0.2967 0.4151	0.2907 0.3436	0.3383 0.4379	0.3135 0.3755	0.3383	Ave		0.3500				14.5		30.0			
Butylbenzene	0.5990 0.8374	0.5748 0.6931	0.6820 0.8102	0.6323 0.6592	0.6837	Ave		0.6858				12.8		30.0			
Indene	+++++ 0.4221	+++++ 0.3594	0.2909 0.4649	0.2818 0.3932	0.3289	Ave		0.3630				18.7		30.0			
Undecane	+++++ 0.6214	+++++ 0.5053	0.5591 0.6002	0.4661 0.4838	0.5178	Ave		0.5362				11.0		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 0.6250	0.4772 0.5259	0.5086 0.6148	0.4656 0.5289	0.5163	Ave		0.5328				10.9		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.1294	0.0646 0.1212	0.0845 +++++	0.0747 +++++	0.0973	Ave		0.0953				27.1		30.0			
1,2,4,5-Tetramethylbenzene	0.5376 0.7346	0.5764 0.6284	0.6177 0.7200	0.5605 0.6193	0.6246	Ave		0.6244				10.6		30.0			
1,2,3,5-Tetramethylbenzene	0.3759 0.4705	0.3845 0.3885	0.3856 0.4452	0.3482 0.3903	0.3986	Ave		0.3986				9.3		30.0			
1,2,3,4-Tetramethylbenzene	0.4543 0.5872	0.4507 0.4875	0.5159 0.5678	0.4265 0.5028	0.4911	Ave		0.4982				10.7		30.0			
Dodecane	+++++ 0.5426	+++++ 0.4614	0.5226 0.4842	0.3050 0.4318	0.4752	Ave		0.4604				16.9		30.0			
1,2,4-Trichlorobenzene	0.0661 0.1102	0.0530 0.1122	0.0745 +++++	0.0560 +++++	0.0873	Ave		0.0799				30.4	*	30.0			
Naphthalene	0.1965 0.3183	0.1595 0.3046	0.2368 +++++	0.1613 +++++	0.2567	Ave		0.2334				27.6		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	+++++ 0.1112	+++++ 0.1141	0.0940 +++++	0.0575 +++++	0.0947	Ave		0.0943				23.9		30.0			
Hexachlorobutadiene	0.3283 0.4113	0.3541 0.3265	0.4058 0.4016	0.3257 0.3566	0.3583	Ave		0.3631				9.6		30.0			
1,2,3-Trichlorobenzene	0.0822 0.1233	0.0609 0.1155	0.1040 +++++	0.0671 +++++	0.1060	Ave		0.0941				25.8		30.0			
2-Methylnaphthalene	+++++ 0.0121	+++++ 0.0136	0.0127 0.0155	0.0054 +++++	0.0128	Ave		0.0120				28.8		50.0			
1-Methylnaphthalene	+++++ 0.0176	+++++ 0.0181	0.0191 0.0192	0.0058 +++++	0.0169	Ave		0.0161				31.9		50.0			
4-Bromofluorobenzene (Surr)	0.5601 0.6012	0.5859 0.6226	0.5756 0.6286	0.6091 0.6240	0.6203	Ave		0.6030				4.0		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-6845/3	JJ08ICAL01.D
Level 2	IC 140-6845/4	JJ08ICAL02.D
Level 3	IC 140-6845/5	JJ08ICAL03.D
Level 4	IC 140-6845/6	JJ08ICAL04.D
Level 5	IC 140-6845/7	JJ08ICAL05.D
Level 6	ICIS 140-6845/8	JJ08ICAL06.D
Level 7	IC 140-6845/9	JJ08ICAL07.D
Level 8	IC 140-6845/10	JJ08ICAL08.D
Level 9	IC 140-6845/11	JJ07ICAL09.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 61051	2638 118016	5039 232629	12104 435440	29990	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propene	CBM	Ave	+++++ 196459	11069 384576	19193 742703	42644 1278552	100490	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	13591 591503	25411 1131161	49148 2135941	120201 3672524	301850	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	+++++ 65224	+++++ 122109	7032 229632	14884 390327	35473	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	6941 334403	13088 568337	27167 1015771	64587 2125671	152559	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 328610	+++++ 520734	+++++ 1109442	75172 2056351	159716	+++++ 9.99	+++++ 20.0	+++++ 40.0	2.00 80.0	5.01
Vinyl chloride	CBM	Ave	4792 200832	8471 383339	16970 724665	42435 1305672	105472	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	+++++ 151466	6717 287374	12752 545901	31358 989900	79582	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butane	CBM	Ave	+++++ 287380	13757 543330	25893 1028652	63876 1833996	154888	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	+++++ 181639	7946 352830	15636 679891	36824 1281974	95216	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	+++++ 85607	3533 165501	7074 314274	17148 596998	44680	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	+++++ 301353	+++++ 507219	25681 1085964	64022 1625717	145811	+++++ 9.99	+++++ 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl bromide	CBM	Ave	+++++ 192126	7803 373522	15692 717438	38043 1395283	98119	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	+++++ 244836	+++++ 463108	22126 857434	50507 1590512	124087	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Trichlorofluoromethane	CBM	Ave	+++++ 525714	21408 997746	43561 1874869	104867 3495723	266484	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrolein	CBM	Ave	+++++ 49912	+++++ 86518	4832 217138	11492 382502	23762	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 75306	+++++ 112623	4594 274355	12877 461794	31521	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 207471	+++++ 304007	+++++ 759323	50972 1144445	93302	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.01
Isopropyl alcohol	CBM	Ave	+++++ 712005	+++++ 1238996	58959 2482177	148690 3961946	345581	+++++ 5.99	+++++ 12.0	0.476 24.0	1.20 48.0	3.01
Pentane	CBM	Ave	+++++ 30363	+++++ 57831	2436 110628	6090 207814	15634	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl ether	CBM	Ave	+++++ 201882	+++++ 316288	15116 759662	41918 1304099	90717	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	+++++ 190825	7893 369158	15575 705786	36261 1363879	95585	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butyl alcohol	CBM	Ave	+++++ 302486	12552 542301	24242 1117829	59107 2020125	141369	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	+++++ 119684	+++++ 179147	8395 449131	24380 739993	49621	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	+++++ 411617	16582 777472	33762 1443316	80689 2657038	210076	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 182390	+++++ 337926	20737 629410	41089 1155194	96642	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	+++++ 179546	8673 330186	15985 638806	36483 1134376	89293	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	+++++ 599369	24706 1114641	48987 2084710	120970 3969758	294789	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	+++++ 191375	7848 365640	15393 686121	37486 1222745	96669	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylpentane	CBM	Ave	+++++ 417695	18226 772529	36100 1419823	84772 2499321	214982	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	+++++ 425689	+++++ 656085	30306 1608749	87262 2582783	182647	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	+++++ 363477	15298 630813	29019 1282760	70214 2275244	171595	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	+++++ 420925	+++++ 609691	29006 1643291	83094 2633160	172403	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
2-Butanone (MEK)	CBM	Ave	+++++ 66905	+++++ 108487	5518 272011	14095 396756	29020	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Hexane	CBM	Ave	+++++ 154493	6819 280492	13156 549243	30899 963328	77947	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isopropyl ether	CBM	Ave	11335 554804	26227 862998	41207 2044544	114673 3156431	243807	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	+++++ 191110	8043 338207	15353 698544	36353 1240681	90586	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	+++++ 307905	+++++ 496876	23137 1211378	62762 1885712	132536	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Chloroform	CBM	Ave	+++++ 397963	16913 663152	32155 1426851	76886 2510211	186688	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	9206 457083	20831 722189	32839 1728031	93782 2695405	198310	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	+++++ 171477	+++++ 262975	12679 676405	34798 1110580	72211	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	+++++ 408450	16146 709770	33649 1470609	79596 2557765	194833	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFBZ	Ave	+++++ 249655	10433 422239	20012 914302	49288 1621122	116411	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1-Butanol	DFBZ	Ave	+++++ 68834	+++++ 127066	5158 272506	11630 509145	30007	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Cyclohexane	DFBZ	Ave	2042 92091	3694 164249	7611 308561	18070 516001	46974	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzene	DFBZ	Ave	+++++ 536994	24939 879174	45872 1869237	109572 3056544	251778	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFBZ	Ave	9181 413385	16383 715806	32675 1440199	78074 2444049	205702	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylpentane	DFBZ	Ave	+++++ 122807	5141 211129	9980 443680	24581 782517	59164	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Thiophene	DFBZ	Ave	6618 296880	12339 498367	23502 1101723	57959 1921978	135687	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-amyl methyl ether	CBZd5	Ave	7379 417595	18197 661965	29936 1626808	84309 2536568	177159	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 873863	40767 1427378	73960 2963724	173210 5010864	406239	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Heptane	DFBZ	Ave	4270 184827	7814 310519	14892 677602	35102 1209602	83748	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFBZ	Ave	4766 205421	8477 336735	15940 751794	39101 1297014	92168	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Trichloroethene	DFBZ	Ave	5079 212389	8979 353658	16787 773499	40331 1362381	98859	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromomethane	DFBZ	Ave	4674 210316	8317 348638	16419 780137	39421 1372684	95834	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromodichloromethane	DFBZ	Ave	7935 384377	15087 633628	28262 1430339	69273 2542594	170211	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DFBZ	Ave	+++++ 61859	+++++ 113820	4230 234207	11296 399104	29141	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Methyl methacrylate	DFBZ	Ave	3346 168295	7348 272756	15280 690931	31834 1102637	71233	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylcyclohexane	DFBZ	Ave	+++++ 408489	16458 682362	33529 1404210	78499 2393729	193416	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	+++++ 330708	+++++ 590218	26499 1298660	66898 2160191	145694	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFBZ	Ave	+++++ 284607	11154 457130	19690 1078107	50995 1936451	118765	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZd 5	Ave	+++++ 230569	7945 385334	14032 970039	39823 1785545	96862	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene	CBZd 5	Ave	+++++ 566445	24101 903425	40667 2108567	103555 3708453	246370	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene Range	CBZd 5	Ave	+++++ 1265569	+++++ 2054791	89052 5193956	237815 8816266	550707	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZd 5	Ave	3309 175475	7080 280309	12026 665355	33101 1190782	76042	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylthiophene	CBZd 5	Ave	9194 464807	16381 752389	29831 1718039	85346 3024608	203436	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
3-Methylthiophene	CBZd 5	Ave	8224 439094	17436 710507	30896 1657917	73571 2968551	190205	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Hexanone	CBZd 5	Ave	+++++ 157568	+++++ 275764	9665 624917	25177 1094375	67673	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
C8 Range	CBZd 5	Ave	+++++ 1761285	+++++ 2829479	+++++ 6304355	333608 10853398	794228	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Octane	CBZd 5	Ave	3774 184411	7363 300317	14033 684728	34674 1203931	81751	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZd 5	Ave	5619 337791	11396 554019	22682 1314407	56014 2356036	141975	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	4428 285225	10438 468707	19919 1141646	51123 2076091	122262	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZd 5	Ave	4371 205117	8484 325398	16317 737763	38757 1298341	92953	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylheptane	CBZd 5	Ave	+++++ 544214	25678 863711	47652 1776582	111048 2791997	250479	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chlorobenzene	CBZd 5	Ave	7382 393318	16210 637698	29601 1484475	71495 2558548	169300	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethylbenzene	CBZd 5	Ave	11703 636564	25136 967485	42924 2455584	117415 4122632	260654	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Ethylthiophene	CBZd 5	Ave	8150 452306	17012 712797	30549 1800351	80706 3126145	188635	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m-Xylene & p-Xylene	CBZd 5	Ave	18003 949395	38891 1425239	66297 3477596	182466 5598414	398815	0.0784 3.99	0.157 8.00	0.317 16.0	0.800 32.0	2.00
Nonane	CBZd 5	Ave	6721 371467	14468 607688	26189 1354981	70266 2301308	168829	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromoform	CBZd 5	Ave	3568 262668	7115 461674	14356 1179650	37833 2195036	104598	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Styrene	CBZd 5	Ave	4232 331575	9020 522211	18072 1388066	51409 2341796	130563	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
o-Xylene	CBZd 5	Ave	9845 509651	21775 757783	36573 1922232	99937 3180197	215453	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	6258 379555	13928 608436	25353 1531082	69531 2592834	160274	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZd 5	Ave	1286 86518	3208 139309	5836 368725	15771 646183	36811	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Isopropylbenzene	CBZd 5	Ave	+++++ 671114	+++++ 1008946	46960 2528390	130051 4117496	280044	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Propylbenzene	CBZd 5	Ave	+++++ 165071	+++++ 257802	10213 697239	28816 1195062	64778	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZd 5	Ave	2545 160028	6062 254370	10469 651542	27973 1160412	68698	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZd 5	Ave	+++++ 581752	+++++ 900723	35318 2330147	100681 3866352	232530	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZd 5	Ave	4528 284025	11417 432339	18765 1110666	54490 1880990	117867	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZd 5	Ave	+++++ 211230	+++++ 353509	9408 998190	27543 1763503	77630	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Decane	CBZd 5	Ave	+++++ 400184	+++++ 627966	25264 1463837	73499 2385192	168207	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butylbenzene	CBZd 5	Ave	+++++ 551609	+++++ 838868	38571 2056871	109302 3350611	232863	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZd 5	Ave	7585 495080	18385 766460	32026 1892775	91716 3075224	205772	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZd 5	Ave	12204 754625	30727 1163047	51842 2829320	147815 4490227	323335	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Dichlorobenzene	CBZd 5	Ave	3434 227357	6217 388834	13786 1069569	33997 1950364	91599	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzyl chloride	CBZd 5	Ave	+++++ 235854	+++++ 444170	12262 1286505	28804 2389971	88177	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,4-Dichlorobenzene	CBZd 5	Ave	2674 191069	5564 334767	11326 970323	27489 1819109	75433	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Isopropyltoluene	CBZd 5	Ave	8579 557746	21296 880317	36212 2129135	101281 3504694	238195	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZd 5	Ave	5929 368722	14647 578208	25395 1461513	69930 2457067	155360	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylcyclohexane	CBZd 5	Ave	+++++ 478656	20480 752044	34728 1711828	93553 2867784	214826	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indane	CBZd 5	Ave	6618 402661	14146 634195	26653 1614772	69259 2671703	166405	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorobenzene	CBZd 5	Ave	3349 236698	7263 393466	14992 1039844	38368 1828104	97487	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylbenzene	CBZd 5	Ave	6761 477429	14360 793620	30226 1924163	77391 3209166	197055	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indene	CBZd 5	Ave	+++++ 240660	+++++ 411536	12894 1104068	34494 1914125	94798	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Undecane	CBZd 5	Ave	+++++ 354292	+++++ 578505	24778 1425412	57043 2355117	149237	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	Ave	+++++ 356341	11922 602152	22541 1459951	56986 2574855	148792	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	+++++ 73775	1615 138821	3744 +++++	9138 +++++	28029	+++++ 2.00	0.0784 4.00	0.159 +++++	0.400 +++++	1.00
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	6068 418851	14401 719532	27377 1709923	68600 3014619	180026	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	4243 268243	9607 444831	17088 1057205	42619 1900079	114877	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	5128 334774	11261 558141	22862 1348346	52196 2447419	141541	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dodecane	CBZd 5	Ave	+++++ 309370	+++++ 528290	23162 1149872	37327 2101742	136966	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZd 5	Ave	746 62804	1324 128473	3301 +++++	6853 +++++	25163	0.0392 2.00	0.0784 4.00	0.159 +++++	0.400 +++++	1.00
Naphthalene	CBZd 5	Ave	2218 181491	3986 348810	10494 +++++	19745 +++++	73981	0.0392 2.00	0.0784 4.00	0.159 +++++	0.400 +++++	1.00
Benzo(b)thiophene	CBZd 5	Ave	+++++ 63388	+++++ 130640	4165 +++++	7041 +++++	27289	+++++ 2.00	+++++ 4.00	0.159 +++++	0.400 +++++	1.00
Hexachlorobutadiene	CBZd 5	Ave	3706 234515	8846 373791	17985 953838	39860 1735997	103265	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZd 5	Ave	928 70305	1521 132264	4611 +++++	8210 +++++	30545	0.0392 2.00	0.0784 4.00	0.159 +++++	0.400 +++++	1.00
2-Methylnaphthalene	CBZd 5	Ave	+++++ 21556	+++++ 48712	1760 114956	2050 +++++	11518	+++++ 6.24	+++++ 12.5	0.496 25.0	1.25 +++++	3.13
1-Methylnaphthalene	CBZd 5	Ave	+++++ 31380	+++++ 64798	2651 142356	2215 +++++	15193	+++++ 6.24	+++++ 12.5	0.496 25.0	1.25 +++++	3.13
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	645028 686528	746842 712827	643066 746473	745431 759449	713913	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

Curve Type Legend:
Ave = Average ISTD

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL01.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 08-Oct-2016 19:01:30 ALS Bottle#: 1 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003509-003
Misc. Info.: 059244
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 11:30:28 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2016 19:42:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.299	9.302	-0.003	95	316146	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.456	11.461	-0.005	95	1429056	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.128	16.131	-0.003	89	1151730	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.752	17.753	-0.001	96	645028	4.00	3.71	
6 Chlorodifluoromethane	67	3.917	3.918	-0.001	96	1445	0.0392	0.0449	
7 Propene	41	3.933	3.933	0.000	98	5658	0.0392	0.0512	
8 Dichlorodifluoromethane	85	3.986	3.987	-0.001	100	13591	0.0392	0.0437	
9 Chloromethane	52	4.185	4.183	0.002	61	2222	0.0392	0.0623	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.185	4.188	-0.003	93	6941	0.0392	0.0424	
11 Acetaldehyde	44	4.352	4.349	0.003	99	11285	0.1960	0.3422	
12 Vinyl chloride	62	4.368	4.369	-0.001	93	4792	0.0392	0.0446	
14 Butadiene	54	4.465	4.463	0.002	67	3828	0.0392	0.0479	
13 Butane	43	4.465	4.465	0.000	84	9524	0.0392	0.0611	
15 Bromomethane	94	4.815	4.815	0.000	94	4835	0.0392	0.0497	
16 Chloroethane	64	4.965	4.964	0.001	92	1962	0.0392	0.0436	
17 Ethanol	31	5.062	5.063	-0.001	97	9618	0.1960	0.3193	
18 Vinyl bromide	106	5.282	5.290	-0.008	94	4683	0.0392	0.0464	
19 2-Methylbutane	43	5.342	5.341	0.001	92	6850	0.0392	0.0534	
20 Trichlorofluoromethane	101	5.578	5.576	0.002	98	12527	0.0392	0.0462	
21 Acrolein	56	5.583	5.586	-0.003	58	2380	0.0392	0.0857	
22 Acetonitrile	40	5.653	5.657	-0.004	97	1404	0.0392	0.0411	
23 Acetone	58	5.718	5.712	0.006	98	6999	0.1176	0.2047	
24 Isopropyl alcohol	45	5.799	5.793	0.006	75	16075	0.1176	0.1359	
26 Ethyl ether	31	6.003	5.987	0.016	95	4338	0.0392	0.0436	
27 1,1-Dichloroethene	96	6.320	6.319	0.001	96	4590	0.0392	0.0462	
28 2-Methyl-2-propanol	59	6.433	6.419	0.014	92	6291	0.0392	0.0410	
29 Acrylonitrile	53	6.422	6.429	-0.007	87	2499	0.0392	0.0438	
30 1,1,2-Trichloro-1,2,2-trif	101	6.498	6.499	-0.001	94	9768	0.0392	0.0464	
31 Methylene Chloride	84	6.680	6.682	-0.002	96	10424	0.0392	0.1038	
32 3-Chloro-1-propene	39	6.697	6.698	-0.001	93	5003	0.0392	0.0528	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.858	6.857	0.001	98	15422	0.0392	0.0503	
34 trans-1,2-Dichloroethene	96	7.519	7.521	-0.002	96	4504	0.0392	0.0460	
35 2-Methylpentane	43	7.530	7.532	-0.002	94	10566	0.0392	0.0491	
36 Methyl tert-butyl ether	73	7.670	7.653	0.017	95	8946	0.0392	0.0437	
37 1,1-Dichloroethane	63	7.950	7.955	-0.005	95	8526	0.0392	0.0470	
38 Vinyl acetate	43	8.057	8.055	0.002	99	8589	0.0392	0.0430	
39 2-Butanone (MEK)	72	8.536	8.524	0.012	81	1154	0.0392	0.0344	
40 Hexane	56	8.536	8.537	-0.001	79	3796	0.0392	0.0476	
41 Isopropyl ether	45	8.718	8.702	0.016	96	11335	0.0392	0.0411	
42 cis-1,2-Dichloroethene	96	8.960	8.961	-0.001	91	4341	0.0392	0.0450	
43 Ethyl acetate	43	9.154	9.146	0.008	93	6219	0.0392	0.0411	
44 Chloroform	83	9.310	9.310	0.000	28	9722	0.0392	0.0489	
45 Tert-butyl ethyl ether	59	9.407	9.392	0.015	94	9206	0.0392	0.0407	
46 Tetrahydrofuran	42	9.756	9.738	0.018	89	3994	0.0392	0.0476	
47 1,1,1-Trichloroethane	97	10.353	10.352	0.001	95	9570	0.0392	0.0469	
48 1,2-Dichloroethane	62	10.461	10.461	0.000	94	5789	0.0392	0.0473	
49 n-Butanol	31	10.907	10.884	0.023	32	987	0.0392	0.0293	
50 Cyclohexane	69	10.945	10.937	0.008	70	2042	0.0392	0.0449	
51 Benzene	78	10.934	10.939	-0.005	96	14269	0.0392	0.0540	
52 Carbon tetrachloride	117	10.961	10.963	-0.002	94	9181	0.0392	0.0453	
53 2,3-Dimethylpentane	71	11.047	11.044	0.003	90	3123	0.0392	0.0515	
54 Thiophene	84	11.208	11.210	-0.002	93	6618	0.0392	0.0449	
55 Tert-amyl methyl ether	73	11.407	11.396	0.011	90	7379	0.0392	0.0392	
56 Isooctane	57	11.671	11.670	0.001	97	24401	0.0392	0.0572	
57 n-Heptane	71	12.031	12.033	-0.002	92	4270	0.0392	0.0463	
58 1,2-Dichloropropane	63	12.128	12.130	-0.002	89	4766	0.0392	0.0471	
59 Trichloroethene	130	12.165	12.163	0.002	91	5079	0.0392	0.0479	
60 Dibromomethane	93	12.246	12.252	-0.006	92	4674	0.0392	0.0453	
62 Dichlorobromomethane	83	12.380	12.388	-0.008	97	7935	0.0392	0.0431	
63 Methyl methacrylate	41	12.472	12.470	0.002	85	3346	0.0392	0.0398	
64 Methylcyclohexane	83	12.924	12.919	0.005	96	9976	0.0392	0.0510	
65 4-Methyl-2-pentanone (MIBK	43	13.316	13.310	0.006	94	6775	0.0392	0.0413	
66 cis-1,3-Dichloropropene	75	13.364	13.369	-0.005	92	5710	0.0392	0.0429	
67 trans-1,3-Dichloropropene	75	14.047	14.051	-0.004	89	3206	0.0392	0.0317	
68 Toluene	91	14.176	14.180	-0.004	94	11915	0.0392	0.0472	
69 1,1,2-Trichloroethane	83	14.246	14.253	-0.007	90	3309	0.0392	0.0421	
70 2-Methylthiophene	97	14.332	14.332	0.000	96	9194	0.0392	0.0452	
71 3-Methylthiophene	97	14.526	14.530	-0.004	97	8224	0.0392	0.0423	
72 2-Hexanone	58	14.634	14.624	0.010	88	1850	0.0392	0.0270	
73 n-Octane	85	14.838	14.841	-0.003	93	3774	0.0392	0.0448	
74 Chlorodibromomethane	129	14.951	14.954	-0.003	95	5619	0.0392	0.0388	
75 Ethylene Dibromide	107	15.247	15.245	0.002	95	4428	0.0392	0.0353	
76 Tetrachloroethene	129	15.311	15.312	-0.001	94	4371	0.0392	0.0462	
77 2,3-Dimethylheptane	43	16.177	16.176	0.001	92	13751	0.0392	0.0553	
78 Chlorobenzene	112	16.182	16.180	0.002	58	7382	0.0392	0.0417	
79 Ethylbenzene	91	16.456	16.458	-0.002	95	11703	0.0392	0.0420	
80 2-Ethylthiophene	97	16.559	16.563	-0.004	96	8150	0.0392	0.0409	
81 m-Xylene & p-Xylene	91	16.612	16.616	-0.004	97	18003	0.0784	0.0863	
82 n-Nonane	57	17.016	17.015	0.001	92	6721	0.0392	0.0408	
83 Bromoform	173	17.080	17.077	0.003	85	3568	0.0392	0.0327	
84 Styrene	104	17.080	17.082	-0.002	91	4232	0.0392	0.0321	
85 o-Xylene	91	17.145	17.142	0.003	98	9845	0.0392	0.0430	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 1,1,2,2-Tetrachloroethane	83	17.462	17.462	0.000	94	6258	0.0392	0.0377	
87 1,2,3-Trichloropropane	110	17.618	17.623	-0.005	94	1286	0.0392	0.0337	
88 Isopropylbenzene	105	17.715	17.719	-0.004	88	13574	0.0392	0.0467	
89 N-Propylbenzene	120	18.242	18.237	0.005	98	2446	0.0392	0.0341	
90 2-Chlorotoluene	126	18.285	18.287	-0.002	96	2545	0.0392	0.0364	
91 4-Ethyltoluene	105	18.387	18.382	0.005	96	8596	0.0392	0.0348	
92 1,3,5-Trimethylbenzene	120	18.457	18.452	0.005	91	4528	0.0392	0.0366	
93 Alpha Methyl Styrene	118	18.677	18.678	-0.001	89	2239	0.0392	0.0251	
94 n-Decane	57	18.715	18.716	-0.001	90	5972	0.0392	0.0353	
95 tert-Butylbenzene	119	18.866	18.865	0.001	87	9542	0.0392	0.0398	
96 1,2,4-Trimethylbenzene	105	18.876	18.879	-0.003	93	7585	0.0392	0.0361	
97 sec-Butylbenzene	105	19.124	19.127	-0.003	97	12204	0.0392	0.0372	
98 1,3-Dichlorobenzene	146	19.156	19.151	0.005	57	3434	0.0392	0.0352	
99 Benzyl chloride	91	19.226	19.222	0.004	92	2566	0.0392	0.0235	
100 1,4-Dichlorobenzene	146	19.237	19.236	0.001	83	2674	0.0392	0.0320	
101 4-Isopropyltoluene	119	19.280	19.283	-0.003	96	8579	0.0392	0.0360	
102 1,2,3-Trimethylbenzene	105	19.339	19.340	-0.001	95	5929	0.0392	0.0366	
103 Butylcyclohexane	83	19.387	19.387	0.000	90	9090	0.0392	0.0427	
104 2,3-Dihydroindene	117	19.586	19.585	0.001	90	6618	0.0392	0.0384	
105 1,2-Dichlorobenzene	146	19.591	19.588	0.003	71	3349	0.0392	0.0332	
106 n-Butylbenzene	91	19.704	19.706	-0.002	95	6761	0.0392	0.0342	
107 Indene	116	19.710	19.711	-0.001	60	2594	0.0392	0.0248	
108 Undecane	57	20.000	19.997	0.003	91	5785	0.0392	0.0375	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.070	20.071	-0.001	95	4942	0.0392	0.0322	
110 1,2-Dibromo-3-Chloropropan	157	20.178	20.176	0.002	76	616	0.0392	0.0225	
111 1,2,4,5-Tetramethylbenzene	119	20.457	20.454	0.003	93	6068	0.0392	0.0338	
112 1,2,3,5-Tetramethylbenzene	119	20.506	20.509	-0.003	92	4243	0.0392	0.0370	
113 1,2,3,4-Tetramethylbenzene	119	20.925	20.922	0.003	93	5128	0.0392	0.0357	
114 Dodecane	57	21.065	21.067	-0.002	89	4792	0.0392	0.0361	
115 1,2,4-Trichlorobenzene	180	21.296	21.300	-0.004	66	746	0.0392	0.0324	
116 Naphthalene	128	21.447	21.446	0.001	93	2218	0.0392	0.0330	
117 Benzo(b)thiophene	134	21.549	21.545	0.004	94	1009	0.0392	0.0372	
118 Hexachlorobutadiene	225	21.629	21.631	-0.002	91	3706	0.0392	0.0354	
119 1,2,3-Trichlorobenzene	180	21.699	21.697	0.002	74	928	0.0392	0.0342	
121 1-Methylnaphthalene	142	22.377	22.359	0.018	1	384	0.1225	0.0827	
A 124 Toluene Range	1	14.176	(14.146-14.206)		0	27423	0.0392	0.0480	
S 126 Xylenes, Total	100				0		0.1176	0.1293	
S 127 1,2-Dichloroethene, Total	1				0		0.0784	0.0910	

Reagents:

40L12DNP_00007	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

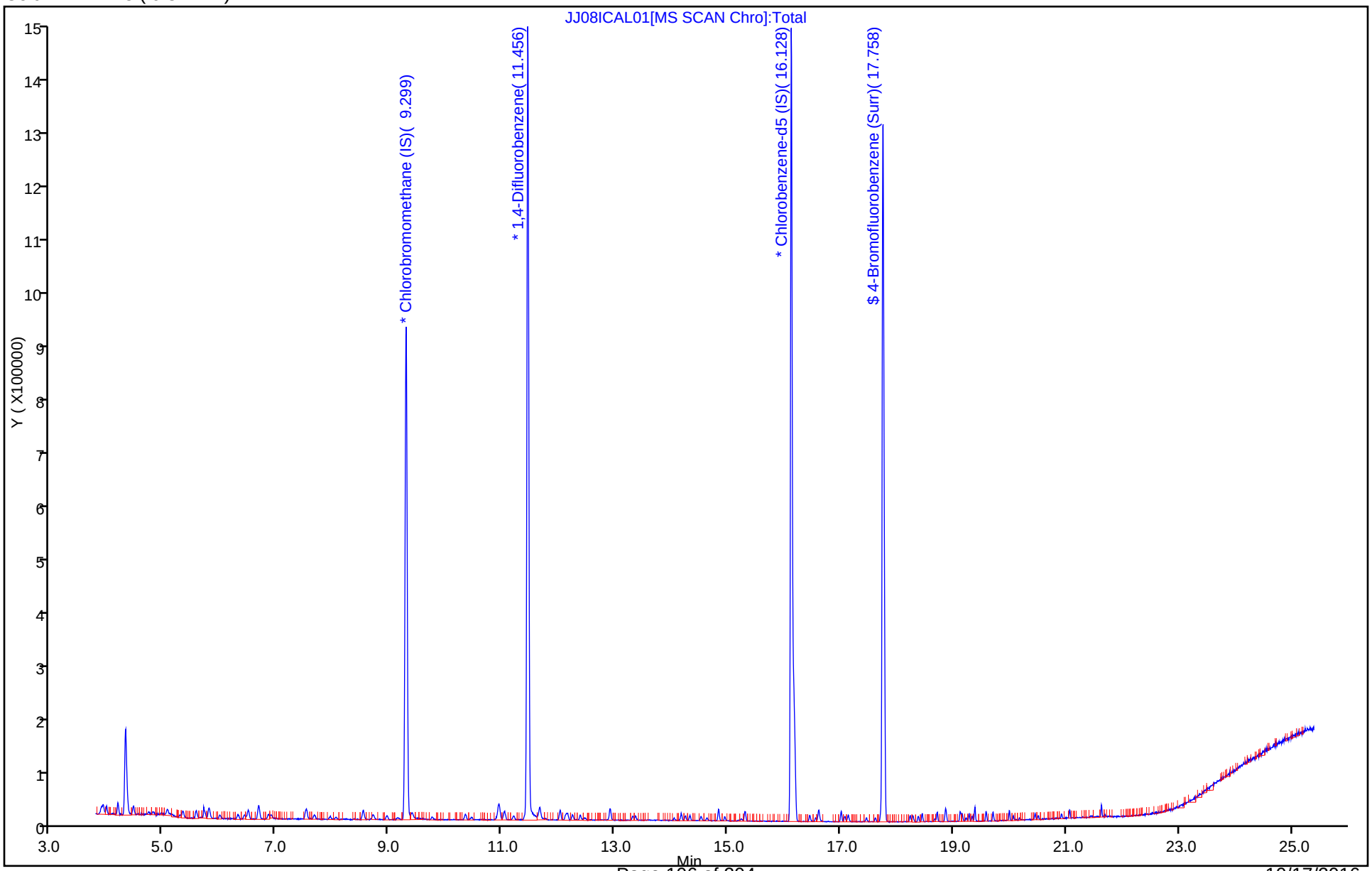
Report Date: 11-Oct-2016 11:30:30 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL01.D

Injection Date:	08-Oct-2016 19:01:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	IC L1			Worklist Smp#:	3
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

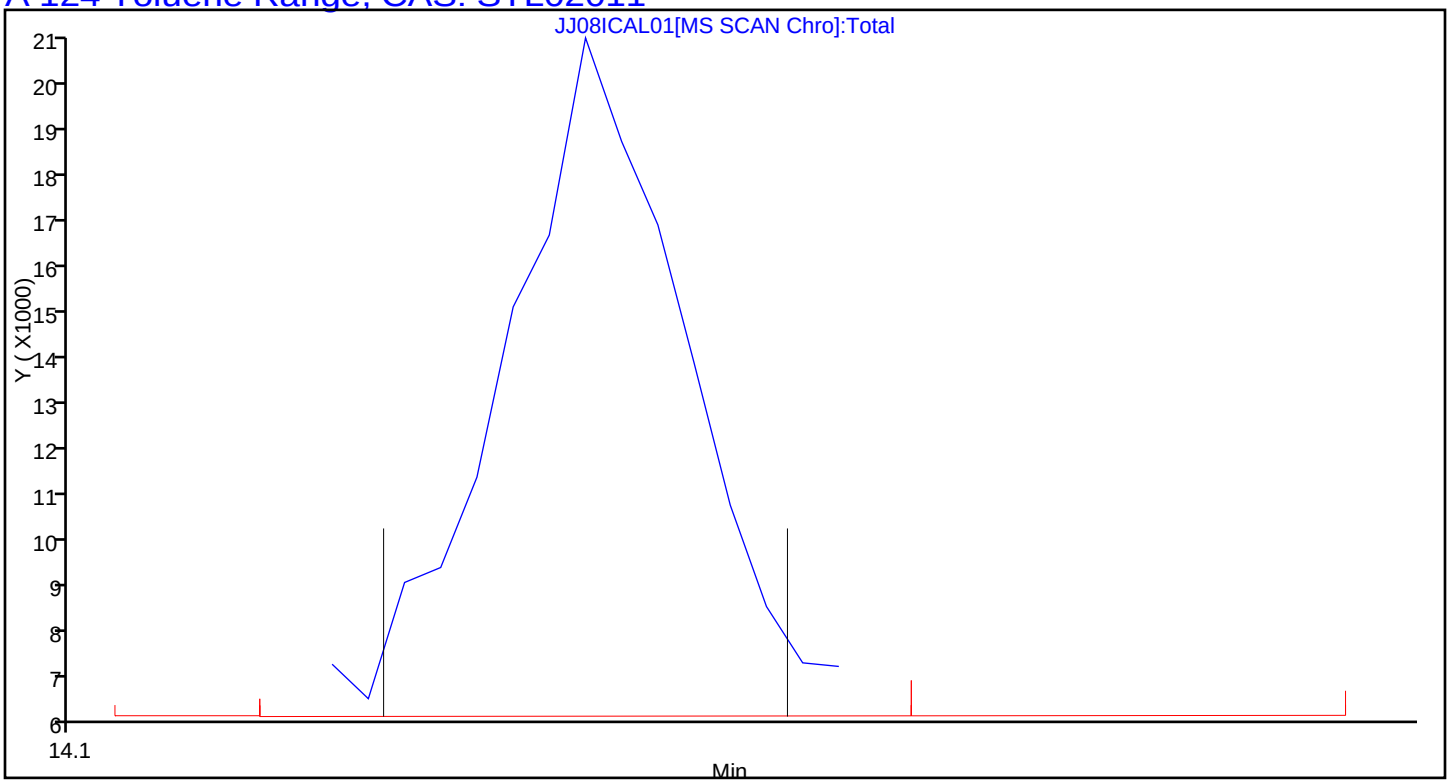


Report Date: 11-Oct-2016 11:30:30 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL01.D				
Injection Date:	08-Oct-2016 19:01:30	Instrument ID:	MJ		
Lims ID:	IC L1				
Client ID:					
Operator ID:	403648	ALS Bottle#:	1	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL02.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Oct-2016 19:54:30 ALS Bottle#: 1 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003509-004
Misc. Info.: 059244
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 11:30:35 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2016 19:44:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.302	9.302	0.000	96	323805	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.458	11.461	-0.003	95	1513431	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.131	16.131	0.000	89	1274678	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.755	17.753	0.002	90	746842	4.00	3.89	
6 Chlorodifluoromethane	67	3.913	3.918	-0.005	97	2638	0.0784	0.0800	
7 Propene	41	3.935	3.933	0.002	98	11069	0.0784	0.0977	
8 Dichlorodifluoromethane	85	3.983	3.987	-0.004	99	25411	0.0784	0.0797	
9 Chloromethane	52	4.182	4.183	-0.001	55	2966	0.0784	0.0812	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.193	4.188	0.005	93	13088	0.0784	0.0780	
11 Acetaldehyde	44	4.349	4.349	0.000	88	26535	0.3920	0.7856	
12 Vinyl chloride	62	4.371	4.369	0.002	96	8471	0.0784	0.0770	
14 Butadiene	54	4.462	4.463	-0.001	69	6717	0.0784	0.0821	
13 Butane	43	4.467	4.465	0.002	86	13757	0.0784	0.0862	
15 Bromomethane	94	4.817	4.815	0.002	98	7946	0.0784	0.0798	
16 Chloroethane	64	4.962	4.964	-0.002	95	3533	0.0784	0.0767	
17 Ethanol	31	5.064	5.063	0.001	97	20532	0.3920	0.6654	
18 Vinyl bromide	106	5.295	5.290	0.005	97	7803	0.0784	0.0755	
19 2-Methylbutane	43	5.344	5.341	0.003	91	11468	0.0784	0.0874	
20 Trichlorofluoromethane	101	5.575	5.576	-0.001	99	21408	0.0784	0.0770	
21 Acrolein	56	5.586	5.586	0.000	32	4693	0.0784	0.1650	
22 Acetonitrile	40	5.661	5.657	0.004	92	1163	0.0784	0.0332	
23 Acetone	58	5.715	5.712	0.003	98	15730	0.2352	0.4491	
24 Isopropyl alcohol	45	5.796	5.793	0.003	91	33754	0.2352	0.2787	
25 Pentane	72	5.806	5.805	0.001	94	1097	0.0784	0.0678	
26 Ethyl ether	31	5.995	5.987	0.007	90	9682	0.0784	0.0949	
27 1,1-Dichloroethene	96	6.317	6.319	-0.002	96	7893	0.0784	0.0776	
28 2-Methyl-2-propanol	59	6.430	6.419	0.011	94	12552	0.0784	0.0798	
29 Acrylonitrile	53	6.425	6.429	-0.004	67	5589	0.0784	0.0957	
30 1,1,2-Trichloro-1,2,2-trif	101	6.500	6.499	0.001	93	16582	0.0784	0.0770	
31 Methylene Chloride	84	6.677	6.682	-0.005	98	14030	0.0784	0.1364	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.699	6.698	0.001	96	8673	0.0784	0.0894	
33 Carbon disulfide	76	6.855	6.857	-0.002	100	24706	0.0784	0.0786	
34 trans-1,2-Dichloroethene	96	7.516	7.521	-0.005	98	7848	0.0784	0.0783	
35 2-Methylpentane	43	7.532	7.532	0.000	94	18226	0.0784	0.0827	
36 Methyl tert-butyl ether	73	7.667	7.653	0.014	96	19624	0.0784	0.0935	
37 1,1-Dichloroethane	63	7.957	7.955	0.002	98	15298	0.0784	0.0823	
38 Vinyl acetate	43	8.054	8.055	-0.001	100	18449	0.0784	0.0902	
39 2-Butanone (MEK)	72	8.527	8.524	0.003	84	3425	0.0784	0.0997	
40 Hexane	56	8.533	8.537	-0.004	72	6819	0.0784	0.0835	
41 Isopropyl ether	45	8.705	8.702	0.003	96	26227	0.0784	0.0928	
42 cis-1,2-Dichloroethene	96	8.952	8.961	-0.009	94	8043	0.0784	0.0814	
43 Ethyl acetate	43	9.151	9.146	0.005	97	14896	0.0784	0.0962	
44 Chloroform	83	9.307	9.310	-0.003	29	16913	0.0784	0.0831	
45 Tert-butyl ethyl ether	59	9.398	9.392	0.006	97	20831	0.0784	0.0898	
46 Tetrahydrofuran	42	9.759	9.738	0.021	94	8380	0.0784	0.0976	
47 1,1,1-Trichloroethane	97	10.350	10.352	-0.002	96	16146	0.0784	0.0772	
48 1,2-Dichloroethane	62	10.452	10.461	-0.009	95	10433	0.0784	0.0805	
49 n-Butanol	31	10.888	10.884	0.004	37	1798	0.0784	0.0504	
50 Cyclohexane	69	10.936	10.937	-0.001	69	3694	0.0784	0.0766	
51 Benzene	78	10.942	10.939	0.003	97	24939	0.0784	0.0891	
52 Carbon tetrachloride	117	10.963	10.963	0.000	95	16383	0.0784	0.0763	
53 2,3-Dimethylpentane	71	11.044	11.044	0.000	92	5141	0.0784	0.0801	
54 Thiophene	84	11.211	11.210	0.001	94	12339	0.0784	0.0790	
55 Tert-amyl methyl ether	73	11.399	11.396	0.003	95	18197	0.0784	0.0874	
56 Isooctane	57	11.668	11.670	-0.002	98	40767	0.0784	0.0902	
57 n-Heptane	71	12.028	12.033	-0.005	93	7814	0.0784	0.0800	
58 1,2-Dichloropropane	63	12.125	12.130	-0.005	89	8477	0.0784	0.0792	
59 Trichloroethene	130	12.162	12.163	-0.001	94	8979	0.0784	0.0799	
60 Dibromomethane	93	12.248	12.252	-0.004	95	8317	0.0784	0.0761	
62 Dichlorobromomethane	83	12.383	12.388	-0.005	98	15087	0.0784	0.0773	
61 1,4-Dioxane	88	12.420	12.413	0.007	78	2096	0.0784	0.0665	
63 Methyl methacrylate	41	12.474	12.470	0.004	93	7348	0.0784	0.0824	
64 Methylcyclohexane	83	12.921	12.919	0.001	95	16458	0.0784	0.0794	
65 4-Methyl-2-pentanone (MIBK	43	13.313	13.310	0.003	98	15115	0.0784	0.0871	
66 cis-1,3-Dichloropropene	75	13.367	13.369	-0.002	94	11154	0.0784	0.0791	
67 trans-1,3-Dichloropropene	75	14.044	14.051	-0.007	97	7945	0.0784	0.0709	
68 Toluene	91	14.179	14.180	-0.001	92	24101	0.0784	0.0862	
69 1,1,2-Trichloroethane	83	14.249	14.253	-0.004	90	7080	0.0784	0.0813	
70 2-Methylthiophene	97	14.329	14.332	-0.003	97	16381	0.0784	0.0727	
71 3-Methylthiophene	97	14.534	14.530	0.004	98	17436	0.0784	0.0809	
72 2-Hexanone	58	14.625	14.624	0.001	91	5121	0.0784	0.0676	
73 n-Octane	85	14.840	14.841	-0.001	95	7363	0.0784	0.0789	
74 Chlorodibromomethane	129	14.953	14.954	-0.001	96	11396	0.0784	0.0711	
75 Ethylene Dibromide	107	15.244	15.245	-0.001	99	10438	0.0784	0.0752	
76 Tetrachloroethene	129	15.313	15.312	0.001	94	8484	0.0784	0.0811	
77 2,3-Dimethylheptane	43	16.174	16.176	-0.002	94	25678	0.0784	0.0933	
78 Chlorobenzene	112	16.179	16.180	-0.001	66	16210	0.0784	0.0826	
79 Ethylbenzene	91	16.459	16.458	0.001	98	25136	0.0784	0.0814	
80 2-Ethylthiophene	97	16.561	16.563	-0.002	97	17012	0.0784	0.0772	
81 m-Xylene & p-Xylene	91	16.615	16.616	-0.001	99	38891	0.1568	0.1684	
82 n-Nonane	57	17.013	17.015	-0.002	94	14468	0.0784	0.0793	
83 Bromoform	173	17.077	17.077	0.000	78	7115	0.0784	0.0590	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.088	17.082	0.006	95	9020	0.0784	0.0618	
85 o-Xylene	91	17.136	17.142	-0.006	98	21775	0.0784	0.0860	
86 1,1,2,2-Tetrachloroethane	83	17.459	17.462	-0.003	97	13928	0.0784	0.0759	
87 1,2,3-Trichloropropane	110	17.626	17.623	0.003	96	3208	0.0784	0.0760	
88 Isopropylbenzene	105	17.717	17.719	-0.002	90	28786	0.0784	0.0895	
89 N-Propylbenzene	120	18.233	18.237	-0.004	99	5652	0.0784	0.0712	
90 2-Chlorotoluene	126	18.287	18.287	0.000	97	6062	0.0784	0.0783	
91 4-Ethyltoluene	105	18.379	18.382	-0.004	98	19960	0.0784	0.0730	
92 1,3,5-Trimethylbenzene	120	18.448	18.452	-0.004	91	11417	0.0784	0.0834	
93 Alpha Methyl Styrene	118	18.680	18.678	0.002	86	5067	0.0784	0.0513	
94 n-Decane	57	18.717	18.716	0.001	90	14185	0.0784	0.0758	
95 tert-Butylbenzene	119	18.862	18.865	-0.003	90	23590	0.0784	0.0889	
96 1,2,4-Trimethylbenzene	105	18.879	18.879	0.000	96	18385	0.0784	0.0791	
97 sec-Butylbenzene	105	19.126	19.127	-0.001	98	30727	0.0784	0.0846	
98 1,3-Dichlorobenzene	146	19.147	19.151	-0.004	95	6217	0.0784	0.0576	
99 Benzyl chloride	91	19.223	19.222	0.001	75	5373	0.0784	0.0445	
100 1,4-Dichlorobenzene	146	19.234	19.236	-0.002	90	5564	0.0784	0.0602	
101 4-Isopropyltoluene	119	19.282	19.283	-0.001	96	21296	0.0784	0.0808	
102 1,2,3-Trimethylbenzene	105	19.341	19.340	0.001	99	14647	0.0784	0.0816	
103 Butylcyclohexane	83	19.384	19.387	-0.003	91	20480	0.0784	0.0869	
104 2,3-Dihydroindene	117	19.583	19.585	-0.002	93	14146	0.0784	0.0742	
105 1,2-Dichlorobenzene	146	19.588	19.588	0.000	93	7263	0.0784	0.0651	
106 n-Butylbenzene	91	19.707	19.706	0.001	96	14360	0.0784	0.0657	
107 Indene	116	19.712	19.711	0.001	60	6325	0.0784	0.0547	
108 Undecane	57	19.997	19.997	0.000	93	11008	0.0784	0.0644	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.072	20.071	0.001	97	11922	0.0784	0.0702	
110 1,2-Dibromo-3-Chloropropan	157	20.175	20.176	-0.001	80	1615	0.0784	0.0532	
111 1,2,4,5-Tetramethylbenzene	119	20.454	20.454	0.000	97	14401	0.0784	0.0724	
112 1,2,3,5-Tetramethylbenzene	119	20.508	20.509	-0.001	94	9607	0.0784	0.0756	
113 1,2,3,4-Tetramethylbenzene	119	20.922	20.922	0.000	96	11261	0.0784	0.0709	
114 Dodecane	57	21.067	21.067	0.000	93	8328	0.0784	0.0568	
115 1,2,4-Trichlorobenzene	180	21.304	21.300	0.004	85	1324	0.0784	0.0520	
116 Naphthalene	128	21.444	21.446	-0.002	96	3986	0.0784	0.0536	
117 Benzo(b)thiophene	134	21.540	21.545	-0.005	94	1503	0.0784	0.0500	
118 Hexachlorobutadiene	225	21.632	21.631	0.001	94	8846	0.0784	0.0764	
119 1,2,3-Trichlorobenzene	180	21.696	21.697	-0.001	89	1521	0.0784	0.0507	
120 2-Methylnaphthalene	142	22.250	22.263	-0.013	92	678	0.2450	0.1771	
A 124 Toluene Range	1	14.179	(14.149-14.209)		0	52597	0.0784	0.0833	
S 126 Xylenes, Total	100				0		0.2352	0.2544	
S 127 1,2-Dichloroethene, Total	1				0		0.1568	0.1597	

Reagents:

40L12DNP_00007	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

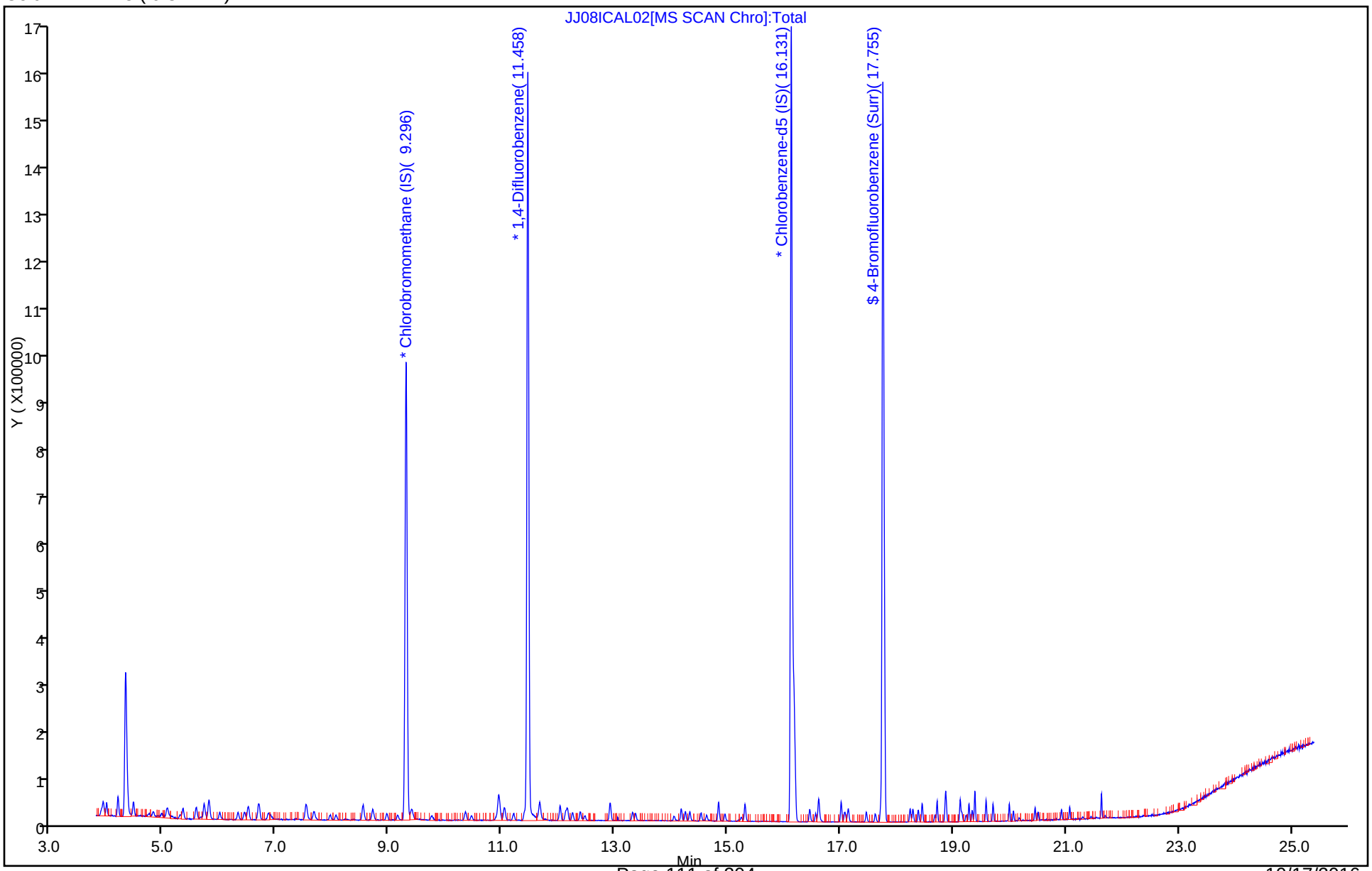
Report Date: 11-Oct-2016 11:30:36 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL02.D

Injection Date:	08-Oct-2016 19:54:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	IC L2			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

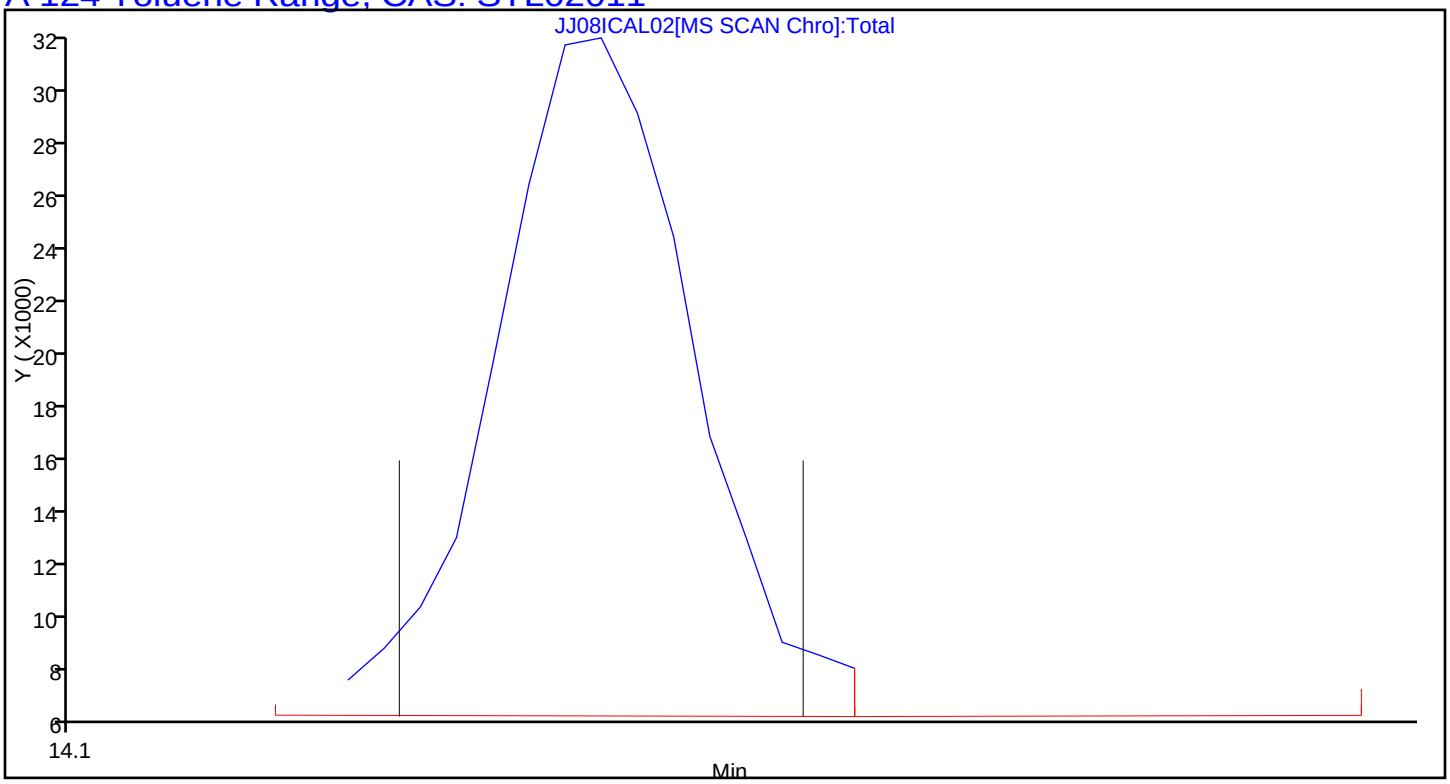


Report Date: 11-Oct-2016 11:30:37 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL02.D				
Injection Date:	08-Oct-2016 19:54:30	Instrument ID:	MJ		
Lims ID:	IC L2				
Client ID:					
Operator ID:	403648	ALS Bottle#:	1	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL03.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Oct-2016 20:47:30 ALS Bottle#: 2 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003509-005
Misc. Info.: 059243
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 11:30:44 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2016 11:09:21

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.294	9.302	-0.008	97	315859	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.456	11.461	-0.005	95	1400120	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.129	16.131	-0.002	89	1117287	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.753	17.753	0.000	88	643066	4.00	3.82	
6 Chlorodifluoromethane	67	3.922	3.918	0.004	97	5039	0.1587	0.1567	
7 Propene	41	3.933	3.933	0.000	98	19193	0.1587	0.1737	
8 Dichlorodifluoromethane	85	3.987	3.987	0.000	99	49148	0.1587	0.1581	
9 Chloromethane	52	4.186	4.183	0.003	55	7032	0.1587	0.1973	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.186	4.188	-0.002	92	27167	0.1587	0.1660	
11 Acetaldehyde	44	4.347	4.349	-0.002	95	40112	0.7933	1.22	
12 Vinyl chloride	62	4.369	4.369	0.000	98	16970	0.1587	0.1581	
14 Butadiene	54	4.460	4.463	-0.003	66	12752	0.1587	0.1598	
13 Butane	43	4.466	4.465	0.001	87	25893	0.1587	0.1664	
15 Bromomethane	94	4.815	4.815	0.000	97	15636	0.1587	0.1610	
16 Chloroethane	64	4.960	4.964	-0.004	95	7074	0.1587	0.1575	
17 Ethanol	31	5.057	5.063	-0.006	97	25681	0.7933	0.8532	
18 Vinyl bromide	106	5.283	5.290	-0.007	98	15692	0.1587	0.1556	
19 2-Methylbutane	43	5.337	5.341	-0.004	91	22126	0.1587	0.1728	
20 Trichlorofluoromethane	101	5.573	5.576	-0.003	99	43561	0.1587	0.1607	
21 Acrolein	56	5.584	5.586	-0.002	30	4832	0.1587	0.1741	
22 Acetonitrile	40	5.654	5.657	-0.003	99	4594	0.1587	0.1344	
23 Acetone	58	5.718	5.712	0.006	99	23253	0.4760	0.6806	
24 Isopropyl alcohol	45	5.788	5.793	-0.005	93	58959	0.4760	0.4990	
25 Pentane	72	5.799	5.805	-0.006	97	2436	0.1587	0.1543	
26 Ethyl ether	31	5.993	5.987	0.006	92	15116	0.1587	0.1519	
27 1,1-Dichloroethene	96	6.315	6.319	-0.004	97	15575	0.1587	0.1569	
28 2-Methyl-2-propanol	59	6.428	6.419	0.009	93	24242	0.1587	0.1580	
29 Acrylonitrile	53	6.428	6.429	-0.001	54	8395	0.1587	0.1473	
30 1,1,2-Trichloro-1,2,2-trif	101	6.493	6.499	-0.006	94	33762	0.1587	0.1607	
31 Methylene Chloride	84	6.681	6.682	-0.001	98	20737	0.1587	0.2066	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.692	6.698	-0.006	96	15985	0.1587	0.1689	
33 Carbon disulfide	76	6.853	6.857	-0.004	99	48987	0.1587	0.1599	
34 trans-1,2-Dichloroethene	96	7.520	7.521	-0.001	98	15393	0.1587	0.1573	
35 2-Methylpentane	43	7.531	7.532	-0.001	94	36100	0.1587	0.1680	
36 Methyl tert-butyl ether	73	7.654	7.653	0.001	96	30306	0.1587	0.1481	
37 1,1-Dichloroethane	63	7.950	7.955	-0.005	99	29019	0.1587	0.1600	
38 Vinyl acetate	43	8.052	8.055	-0.003	100	29006	0.1587	0.1454	
39 2-Butanone (MEK)	72	8.525	8.524	0.001	82	5518	0.1587	0.1646	
40 Hexane	56	8.536	8.537	-0.001	77	13156	0.1587	0.1651	
41 Isopropyl ether	45	8.703	8.702	0.001	98	41207	0.1587	0.1495	
42 cis-1,2-Dichloroethene	96	8.956	8.961	-0.005	96	15353	0.1587	0.1593	
43 Ethyl acetate	43	9.144	9.146	-0.002	98	23137	0.1587	0.1532	
44 Chloroform	83	9.305	9.310	-0.005	30	32155	0.1587	0.1619	
45 Tert-butyl ethyl ether	59	9.391	9.392	-0.001	97	32839	0.1587	0.1452	
46 Tetrahydrofuran	42	9.751	9.738	0.013	92	12679	0.1587	0.1513	
47 1,1,1-Trichloroethane	97	10.348	10.352	-0.004	96	33649	0.1587	0.1649	
48 1,2-Dichloroethane	62	10.456	10.461	-0.005	97	20012	0.1587	0.1668	
49 n-Butanol	31	10.891	10.884	0.007	48	5158	0.1587	0.1561	
50 Cyclohexane	69	10.934	10.937	-0.003	71	7611	0.1587	0.1706	
51 Benzene	78	10.934	10.939	-0.005	96	45872	0.1587	0.1771	
52 Carbon tetrachloride	117	10.961	10.963	-0.002	96	32675	0.1587	0.1645	
53 2,3-Dimethylpentane	71	11.037	11.044	-0.007	92	9980	0.1587	0.1681	
54 Thiophene	84	11.209	11.210	-0.001	96	23502	0.1587	0.1627	
55 Tert-amyl methyl ether	73	11.402	11.396	0.006	95	29936	0.1587	0.1641	
56 Isooctane	57	11.666	11.670	-0.004	98	73960	0.1587	0.1769	
57 n-Heptane	71	12.031	12.033	-0.002	93	14892	0.1587	0.1648	
58 1,2-Dichloropropane	63	12.128	12.130	-0.002	90	15940	0.1587	0.1609	
59 Trichloroethene	130	12.161	12.163	-0.003	92	16787	0.1587	0.1614	
60 Dibromomethane	93	12.252	12.252	0.000	92	16419	0.1587	0.1625	
62 Dichlorobromomethane	83	12.386	12.388	-0.002	97	28262	0.1587	0.1566	
61 1,4-Dioxane	88	12.419	12.413	0.006	93	4230	0.1587	0.1451	
63 Methyl methacrylate	41	12.467	12.470	-0.003	92	15280	0.1587	0.1853	
64 Methylcyclohexane	83	12.919	12.919	0.000	95	33529	0.1587	0.1749	
65 4-Methyl-2-pentanone (MIBK	43	13.311	13.310	0.001	98	26499	0.1587	0.1650	
66 cis-1,3-Dichloropropene	75	13.370	13.369	0.001	96	19690	0.1587	0.1510	
67 trans-1,3-Dichloropropene	75	14.053	14.051	0.002	97	14032	0.1587	0.1429	
68 Toluene	91	14.177	14.180	-0.003	93	40667	0.1587	0.1660	
69 1,1,2-Trichloroethane	83	14.252	14.253	-0.001	96	12026	0.1587	0.1575	
70 2-Methylthiophene	97	14.333	14.332	0.001	97	29831	0.1587	0.1510	
71 3-Methylthiophene	97	14.527	14.530	-0.003	99	30896	0.1587	0.1636	
72 2-Hexanone	58	14.623	14.624	-0.001	92	9665	0.1587	0.1456	
73 n-Octane	85	14.838	14.841	-0.003	95	14033	0.1587	0.1717	
74 Chlorodibromomethane	129	14.951	14.954	-0.003	96	22682	0.1587	0.1613	
75 Ethylene Dibromide	107	15.242	15.245	-0.003	95	19919	0.1587	0.1638	
76 Tetrachloroethene	129	15.312	15.312	0.000	93	16317	0.1587	0.1779	
77 2,3-Dimethylheptane	43	16.177	16.176	0.001	95	47652	0.1587	0.1975	
78 Chlorobenzene	112	16.177	16.180	-0.003	68	29601	0.1587	0.1722	
79 Ethylbenzene	91	16.457	16.458	-0.001	98	42924	0.1587	0.1587	
80 2-Ethylthiophene	97	16.565	16.563	0.002	97	30549	0.1587	0.1582	
81 m-Xylene & p-Xylene	91	16.613	16.616	-0.003	99	66297	0.3173	0.3275	
82 n-Nonane	57	17.016	17.015	0.001	92	26189	0.1587	0.1638	
83 Bromoform	173	17.075	17.077	-0.002	87	14356	0.1587	0.1357	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.081	17.082	-0.001	98	18072	0.1587	0.1413	
85 o-Xylene	91	17.140	17.142	-0.002	98	36573	0.1587	0.1648	
86 1,1,2,2-Tetrachloroethane	83	17.463	17.462	0.001	97	25353	0.1587	0.1576	
87 1,2,3-Trichloropropane	110	17.624	17.623	0.001	97	5836	0.1587	0.1577	
88 Isopropylbenzene	105	17.721	17.719	0.002	95	46960	0.1587	0.1666	
89 N-Propylbenzene	120	18.237	18.237	0.000	98	10213	0.1587	0.1467	
90 2-Chlorotoluene	126	18.285	18.287	-0.002	97	10469	0.1587	0.1543	
91 4-Ethyltoluene	105	18.382	18.382	0.000	98	35318	0.1587	0.1473	
92 1,3,5-Trimethylbenzene	120	18.452	18.452	0.000	92	18765	0.1587	0.1564	
93 Alpha Methyl Styrene	118	18.678	18.678	0.000	85	9408	0.1587	0.1087	
94 n-Decane	57	18.715	18.716	-0.001	91	25264	0.1587	0.1540	
95 tert-Butylbenzene	119	18.866	18.865	0.001	92	38571	0.1587	0.1659	
96 1,2,4-Trimethylbenzene	105	18.877	18.879	-0.002	95	32026	0.1587	0.1573	
97 sec-Butylbenzene	105	19.130	19.127	0.003	98	51842	0.1587	0.1627	
98 1,3-Dichlorobenzene	146	19.151	19.151	0.000	97	13786	0.1587	0.1457	
99 Benzyl chloride	91	19.226	19.222	0.004	95	12262	0.1587	0.1159	
100 1,4-Dichlorobenzene	146	19.237	19.236	0.001	91	11326	0.1587	0.1398	
101 4-Isopropyltoluene	119	19.280	19.283	-0.003	96	36212	0.1587	0.1567	
102 1,2,3-Trimethylbenzene	105	19.339	19.340	-0.001	99	25395	0.1587	0.1615	
103 Butylcyclohexane	83	19.388	19.387	0.001	92	34728	0.1587	0.1680	
104 2,3-Dihydroindene	117	19.587	19.585	0.002	92	26653	0.1587	0.1594	
105 1,2-Dichlorobenzene	146	19.592	19.588	0.004	74	14992	0.1587	0.1534	
106 n-Butylbenzene	91	19.705	19.706	-0.001	97	30226	0.1587	0.1578	
107 Indene	116	19.710	19.711	-0.001	87	12894	0.1587	0.1272	
108 Undecane	57	19.995	19.997	-0.002	97	24778	0.1587	0.1654	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.071	20.071	0.000	97	22541	0.1587	0.1515	
110 1,2-Dibromo-3-Chloropropan	157	20.178	20.176	0.002	86	3744	0.1587	0.1407	
111 1,2,4,5-Tetramethylbenzene	119	20.452	20.454	-0.002	96	27377	0.1587	0.1570	
112 1,2,3,5-Tetramethylbenzene	119	20.512	20.509	0.003	94	17088	0.1587	0.1535	
113 1,2,3,4-Tetramethylbenzene	119	20.920	20.922	-0.002	97	22862	0.1587	0.1643	
114 Dodecane	57	21.065	21.067	-0.002	94	23162	0.1587	0.1801	
115 1,2,4-Trichlorobenzene	180	21.302	21.300	0.002	87	3301	0.1587	0.1479	
116 Naphthalene	128	21.447	21.446	0.001	98	10494	0.1587	0.1610	
117 Benzo(b)thiophene	134	21.544	21.545	-0.001	97	4165	0.1587	0.1581	
118 Hexachlorobutadiene	225	21.630	21.631	-0.001	95	17985	0.1587	0.1773	
119 1,2,3-Trichlorobenzene	180	21.700	21.697	0.003	92	4611	0.1587	0.1753	
120 2-Methylnaphthalene	142	22.248	22.263	-0.015	93	1760	0.4958	0.5246	
121 1-Methylnaphthalene	142	22.372	22.359	0.013	96	2651	0.4958	0.5888	
A 124 Toluene Range	1	14.177	(14.147-14.207)		0	89052	0.1587	0.1608	
A 125 C8 Range	1	14.829	(14.811-14.847)		0	141889	0.1587	0.1914	
S 126 Xylenes, Total	100				0		0.4760	0.4922	
S 127 1,2-Dichloroethene, Total	1				0		0.3173	0.3167	

Reagents:

40L3DNP_00008	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

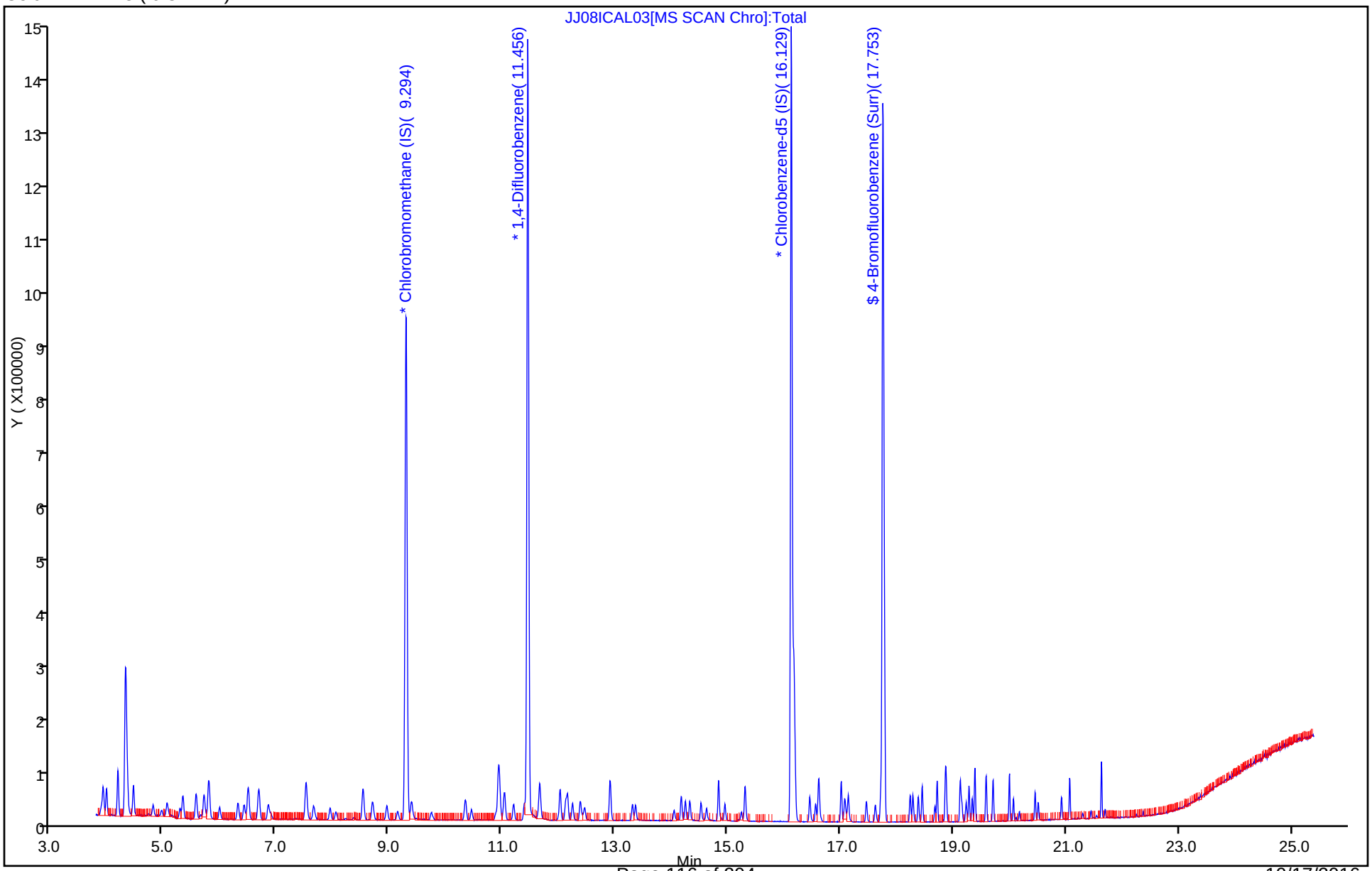
Report Date: 11-Oct-2016 11:30:45 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL03.D

Injection Date:	08-Oct-2016 20:47:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	IC L3			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

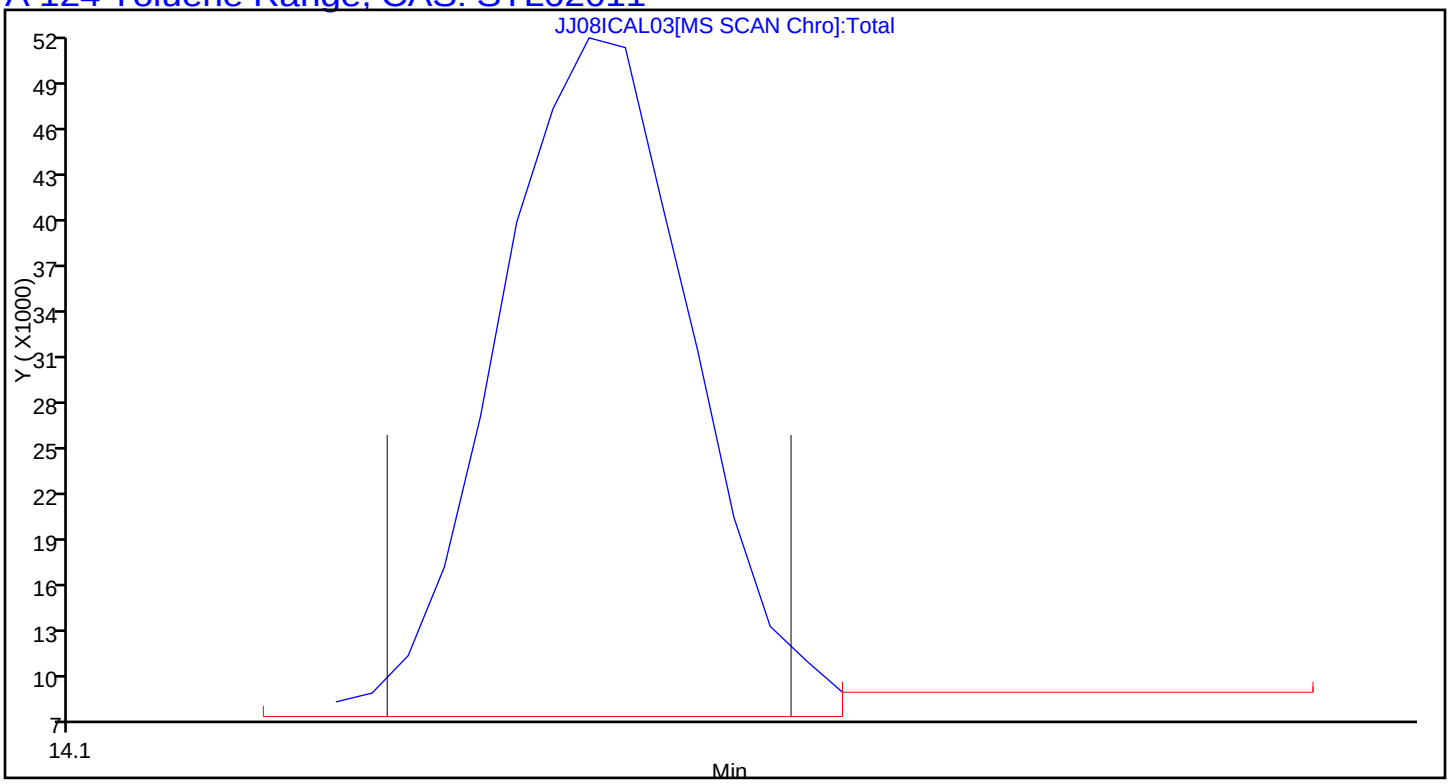


Report Date: 11-Oct-2016 11:30:45 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL03.D				
Injection Date:	08-Oct-2016 20:47:30	Instrument ID:	MJ		
Lims ID:	IC L3				
Client ID:					
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

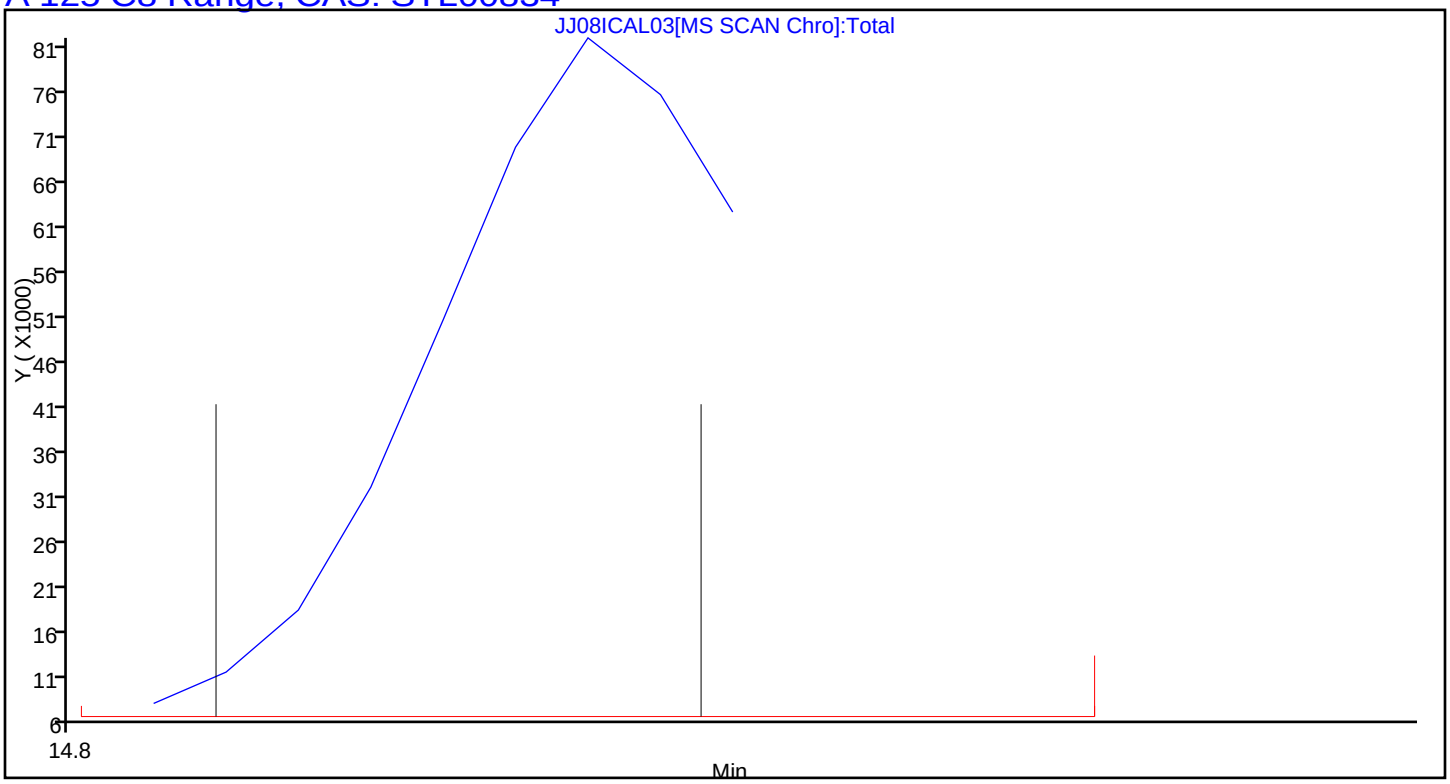
A 124 Toluene Range, CAS: STL02011



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL03.D				
Injection Date:	08-Oct-2016 20:47:30	Instrument ID:	MJ		
Lims ID:	IC L3				
Client ID:					
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL04.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 08-Oct-2016 21:41:30 ALS Bottle#: 3 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003509-006
Misc. Info.: 059242
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 11:30:51 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2016 11:09:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.301	9.302	-0.001	96	308178	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.457	11.461	-0.004	95	1452182	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.130	16.131	-0.001	89	1223912	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.754	17.753	0.001	88	745431	4.00	4.04	
6 Chlorodifluoromethane	67	3.918	3.918	0.000	97	12104	0.4000	0.3858	
7 Propene	41	3.934	3.933	0.001	99	42644	0.4000	0.3956	
8 Dichlorodifluoromethane	85	3.988	3.987	0.001	100	120201	0.4000	0.3962	
9 Chloromethane	52	4.181	4.183	-0.002	65	14884	0.4000	0.4279	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.187	4.188	-0.001	92	64587	0.4000	0.4044	
11 Acetaldehyde	44	4.348	4.349	-0.001	97	75172	2.00	2.34	
12 Vinyl chloride	62	4.370	4.369	0.001	99	42435	0.4000	0.4053	
14 Butadiene	54	4.461	4.463	-0.002	66	31358	0.4000	0.4028	
13 Butane	43	4.466	4.465	0.001	86	63876	0.4000	0.4207	
15 Bromomethane	94	4.816	4.815	0.001	98	36824	0.4000	0.3887	
16 Chloroethane	64	4.967	4.964	0.003	94	17148	0.4000	0.3913	
17 Ethanol	31	5.058	5.063	-0.005	97	64022	2.00	2.18	
18 Vinyl bromide	106	5.289	5.290	-0.001	97	38043	0.4000	0.3867	
19 2-Methylbutane	43	5.338	5.341	-0.003	92	50507	0.4000	0.4042	
20 Trichlorofluoromethane	101	5.574	5.576	-0.002	100	104867	0.4000	0.3965	
21 Acrolein	56	5.590	5.586	0.004	96	11492	0.4000	0.4245	
22 Acetonitrile	40	5.655	5.657	-0.002	97	12877	0.4000	0.3862	
23 Acetone	58	5.709	5.712	-0.003	98	50972	1.20	1.53	
24 Isopropyl alcohol	45	5.789	5.793	-0.004	94	148690	1.20	1.29	
25 Pentane	72	5.800	5.805	-0.005	96	6090	0.4000	0.3953	
26 Ethyl ether	31	5.988	5.987	0.001	92	41918	0.4000	0.4317	
27 1,1-Dichloroethene	96	6.322	6.319	0.003	97	36261	0.4000	0.3745	
28 2-Methyl-2-propanol	59	6.413	6.419	-0.006	95	59107	0.4000	0.3949	
29 Acrylonitrile	53	6.429	6.429	0.000	95	24380	0.4000	0.4385	
30 1,1,2-Trichloro-1,2,2-trif	101	6.499	6.499	0.000	94	80689	0.4000	0.3935	
31 Methylene Chloride	84	6.682	6.682	0.000	97	41089	0.4000	0.4196	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.698	6.698	0.000	93	36483	0.4000	0.3952	
33 Carbon disulfide	76	6.859	6.857	0.002	99	120970	0.4000	0.4046	
34 trans-1,2-Dichloroethene	96	7.521	7.521	0.000	98	37486	0.4000	0.3927	
35 2-Methylpentane	43	7.532	7.532	0.000	95	84772	0.4000	0.4043	
36 Methyl tert-butyl ether	73	7.655	7.653	0.002	97	87262	0.4000	0.4370	
37 1,1-Dichloroethane	63	7.951	7.955	-0.004	100	70214	0.4000	0.3968	
38 Vinyl acetate	43	8.053	8.055	-0.002	100	83094	0.4000	0.4270	
39 2-Butanone (MEK)	72	8.526	8.524	0.002	96	14095	0.4000	0.4309	
40 Hexane	56	8.532	8.537	-0.005	80	30899	0.4000	0.3974	
41 Isopropyl ether	45	8.698	8.702	-0.004	97	114673	0.4000	0.4263	
42 cis-1,2-Dichloroethene	96	8.962	8.961	0.001	97	36353	0.4000	0.3867	
43 Ethyl acetate	43	9.145	9.146	-0.001	99	62762	0.4000	0.4258	
44 Chloroform	83	9.306	9.310	-0.004	34	76886	0.4000	0.3968	
45 Tert-butyl ethyl ether	59	9.387	9.392	-0.005	96	93782	0.4000	0.4250	
46 Tetrahydrofuran	42	9.736	9.738	-0.002	93	34798	0.4000	0.4257	
47 1,1,1-Trichloroethane	97	10.355	10.352	0.003	95	79596	0.4000	0.3998	
48 1,2-Dichloroethane	62	10.457	10.461	-0.004	97	49288	0.4000	0.3962	
49 n-Butanol	31	10.887	10.884	0.003	82	11630	0.4000	0.3394	
50 Cyclohexane	69	10.930	10.937	-0.007	83	18070	0.4000	0.3906	
51 Benzene	78	10.935	10.939	-0.004	96	109572	0.4000	0.4079	
52 Carbon tetrachloride	117	10.962	10.963	-0.001	96	78074	0.4000	0.3789	
53 2,3-Dimethylpentane	71	11.043	11.044	-0.001	91	24581	0.4000	0.3993	
54 Thiophene	84	11.204	11.210	-0.006	97	57959	0.4000	0.3869	
55 Tert-amyl methyl ether	73	11.398	11.396	0.002	97	84309	0.4000	0.4219	
56 Isooctane	57	11.672	11.670	0.002	98	173210	0.4000	0.3994	
57 n-Heptane	71	12.032	12.033	-0.001	93	35102	0.4000	0.3746	
58 1,2-Dichloropropane	63	12.129	12.130	-0.001	90	39101	0.4000	0.3806	
59 Trichloroethene	130	12.161	12.163	-0.002	93	40331	0.4000	0.3740	
60 Dibromomethane	93	12.253	12.252	0.001	93	39421	0.4000	0.3761	
62 Dichlorobromomethane	83	12.387	12.388	-0.001	98	69273	0.4000	0.3700	
61 1,4-Dioxane	88	12.414	12.413	0.001	94	11296	0.4000	0.3736	
63 Methyl methacrylate	41	12.468	12.470	-0.002	92	31834	0.4000	0.3722	
64 Methylcyclohexane	83	12.914	12.919	-0.005	95	78499	0.4000	0.3947	
65 4-Methyl-2-pentanone (MIBK	43	13.312	13.310	0.002	98	66898	0.4000	0.4017	
66 cis-1,3-Dichloropropene	75	13.366	13.369	-0.003	95	50995	0.4000	0.3771	
67 trans-1,3-Dichloropropene	75	14.054	14.051	0.003	98	39823	0.4000	0.3702	
68 Toluene	91	14.178	14.180	-0.002	93	103555	0.4000	0.3859	
69 1,1,2-Trichloroethane	83	14.253	14.253	0.000	97	33101	0.4000	0.3959	
70 2-Methylthiophene	97	14.328	14.332	-0.004	97	85346	0.4000	0.3945	
71 3-Methylthiophene	97	14.527	14.530	-0.003	99	73571	0.4000	0.3557	
72 2-Hexanone	58	14.624	14.624	0.000	92	25177	0.4000	0.3462	
73 n-Octane	85	14.839	14.841	-0.002	95	34674	0.4000	0.3872	
74 Chlorodibromomethane	129	14.952	14.954	-0.002	97	56014	0.4000	0.3637	
75 Ethylene Dibromide	107	15.243	15.245	-0.002	98	51123	0.4000	0.3838	
76 Tetrachloroethene	129	15.313	15.312	0.001	95	38757	0.4000	0.3857	
77 2,3-Dimethylheptane	43	16.173	16.176	-0.003	95	111048	0.4000	0.4202	
78 Chlorobenzene	112	16.178	16.180	-0.002	72	71495	0.4000	0.3796	
79 Ethylbenzene	91	16.458	16.458	0.000	99	117415	0.4000	0.3962	
80 2-Ethylthiophene	97	16.560	16.563	-0.003	98	80706	0.4000	0.3815	
81 m-Xylene & p-Xylene	91	16.614	16.616	-0.002	100	182466	0.8000	0.8228	
82 n-Nonane	57	17.012	17.015	-0.003	94	70266	0.4000	0.4012	
83 Bromoform	173	17.076	17.077	-0.001	92	37833	0.4000	0.3265	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.082	17.082	0.000	99	51409	0.4000	0.3670	
85 o-Xylene	91	17.141	17.142	-0.001	98	99937	0.4000	0.4110	
86 1,1,2,2-Tetrachloroethane	83	17.463	17.462	0.001	99	69531	0.4000	0.3946	
87 1,2,3-Trichloropropane	110	17.619	17.623	-0.004	98	15771	0.4000	0.3892	
88 Isopropylbenzene	105	17.716	17.719	-0.003	93	130051	0.4000	0.4213	
89 N-Propylbenzene	120	18.238	18.237	0.001	98	28816	0.4000	0.3779	
90 2-Chlorotoluene	126	18.286	18.287	-0.001	97	27973	0.4000	0.3763	
91 4-Ethyltoluene	105	18.383	18.382	0.001	98	100681	0.4000	0.3833	
92 1,3,5-Trimethylbenzene	120	18.453	18.452	0.001	92	54490	0.4000	0.4146	
93 Alpha Methyl Styrene	118	18.679	18.678	0.001	85	27543	0.4000	0.2906	
94 n-Decane	57	18.716	18.716	0.000	90	73499	0.4000	0.4090	
95 tert-Butylbenzene	119	18.862	18.865	-0.003	91	109302	0.4000	0.4292	
96 1,2,4-Trimethylbenzene	105	18.878	18.879	-0.001	96	91716	0.4000	0.4112	
97 sec-Butylbenzene	105	19.125	19.127	-0.002	98	147815	0.4000	0.4236	
98 1,3-Dichlorobenzene	146	19.152	19.151	0.001	98	33997	0.4000	0.3280	
99 Benzyl chloride	91	19.222	19.222	0.000	97	28804	0.4000	0.2485	
100 1,4-Dichlorobenzene	146	19.238	19.236	0.002	91	27489	0.4000	0.3096	
101 4-Isopropyltoluene	119	19.281	19.283	-0.002	96	101281	0.4000	0.4000	
102 1,2,3-Trimethylbenzene	105	19.340	19.340	0.000	99	69930	0.4000	0.4060	
103 Butylcyclohexane	83	19.389	19.387	0.002	91	93553	0.4000	0.4132	
104 2,3-Dihydroindene	117	19.582	19.585	-0.003	93	69259	0.4000	0.3782	
105 1,2-Dichlorobenzene	146	19.588	19.588	0.000	95	38368	0.4000	0.3583	
106 n-Butylbenzene	91	19.706	19.706	0.000	98	77391	0.4000	0.3688	
107 Indene	116	19.711	19.711	0.000	90	34494	0.4000	0.3105	
108 Undecane	57	19.996	19.997	-0.001	96	57043	0.4000	0.3477	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.071	20.071	0.000	98	56986	0.4000	0.3496	
110 1,2-Dibromo-3-Chloropropan	157	20.174	20.176	-0.002	88	9138	0.4000	0.3134	
111 1,2,4,5-Tetramethylbenzene	119	20.453	20.454	-0.001	96	68600	0.4000	0.3591	
112 1,2,3,5-Tetramethylbenzene	119	20.507	20.509	-0.002	95	42619	0.4000	0.3495	
113 1,2,3,4-Tetramethylbenzene	119	20.921	20.922	-0.001	97	52196	0.4000	0.3424	
114 Dodecane	57	21.066	21.067	-0.001	95	37327	0.4000	0.2650	
115 1,2,4-Trichlorobenzene	180	21.298	21.300	-0.002	92	6853	0.4000	0.2803	
116 Naphthalene	128	21.448	21.446	0.002	99	19745	0.4000	0.2765	
117 Benzo(b)thiophene	134	21.545	21.545	0.000	99	7041	0.4000	0.2440	
118 Hexachlorobutadiene	225	21.631	21.631	0.000	95	39860	0.4000	0.3587	
119 1,2,3-Trichlorobenzene	180	21.695	21.697	-0.002	93	8210	0.4000	0.2850	
120 2-Methylnaphthalene	142	22.249	22.263	-0.014	93	2050	1.25	0.5578	
121 1-Methylnaphthalene	142	22.373	22.359	0.014	92	2215	1.25	0.4491	
A 124 Toluene Range	1	14.178	(14.148-14.208)		0	237815	0.4000	0.3921	
A 125 C8 Range	1	14.830	(14.812-14.848)		0	333608	0.4000	0.4108	
S 126 Xylenes, Total	100				0		1.20	1.23	
S 127 1,2-Dichloroethene, Total	1				0		0.8000	0.7794	

Reagents:

40L4DNP_00007	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

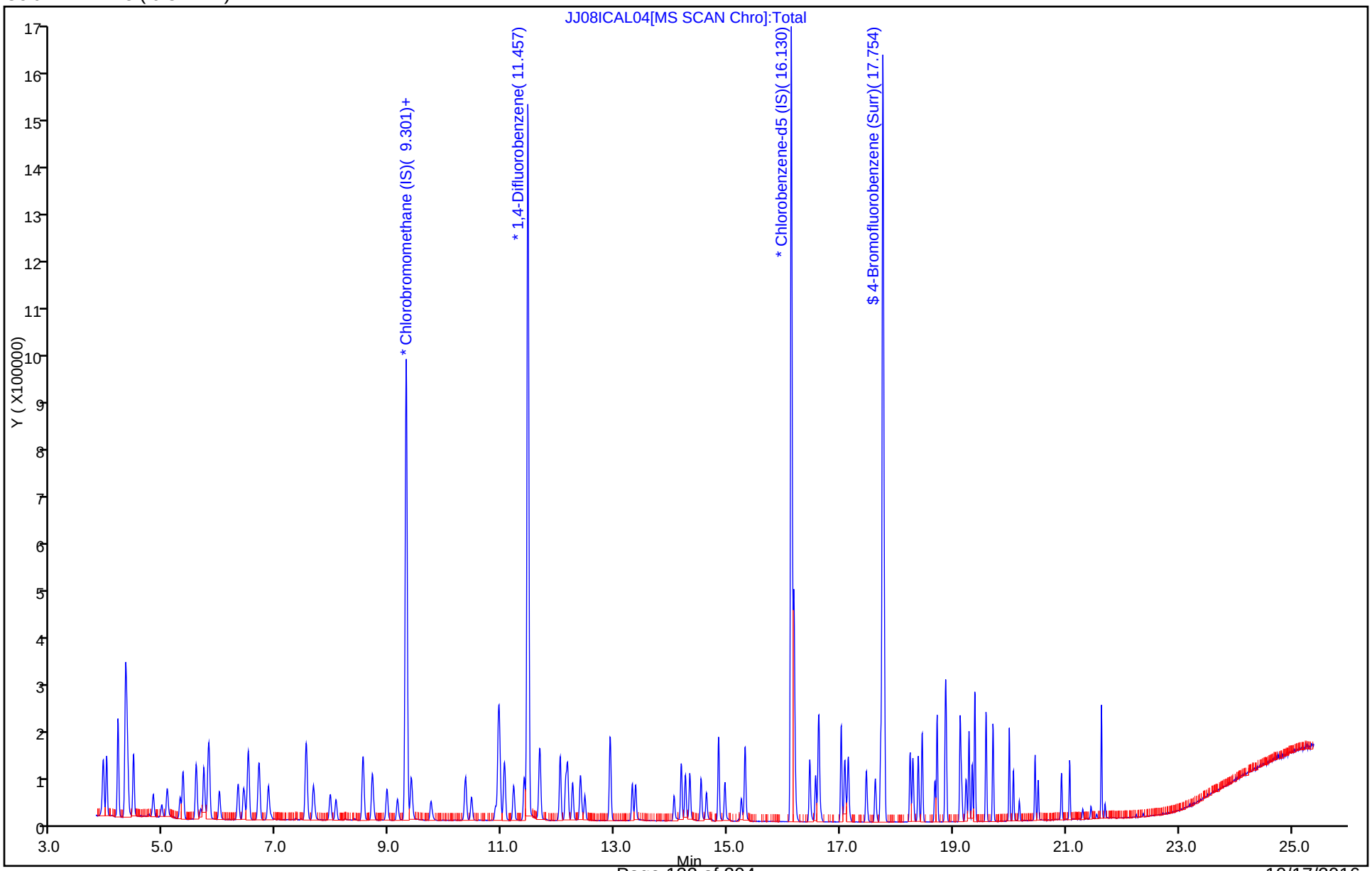
Report Date: 11-Oct-2016 11:30:53 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL04.D

Injection Date:	08-Oct-2016 21:41:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	IC L4			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

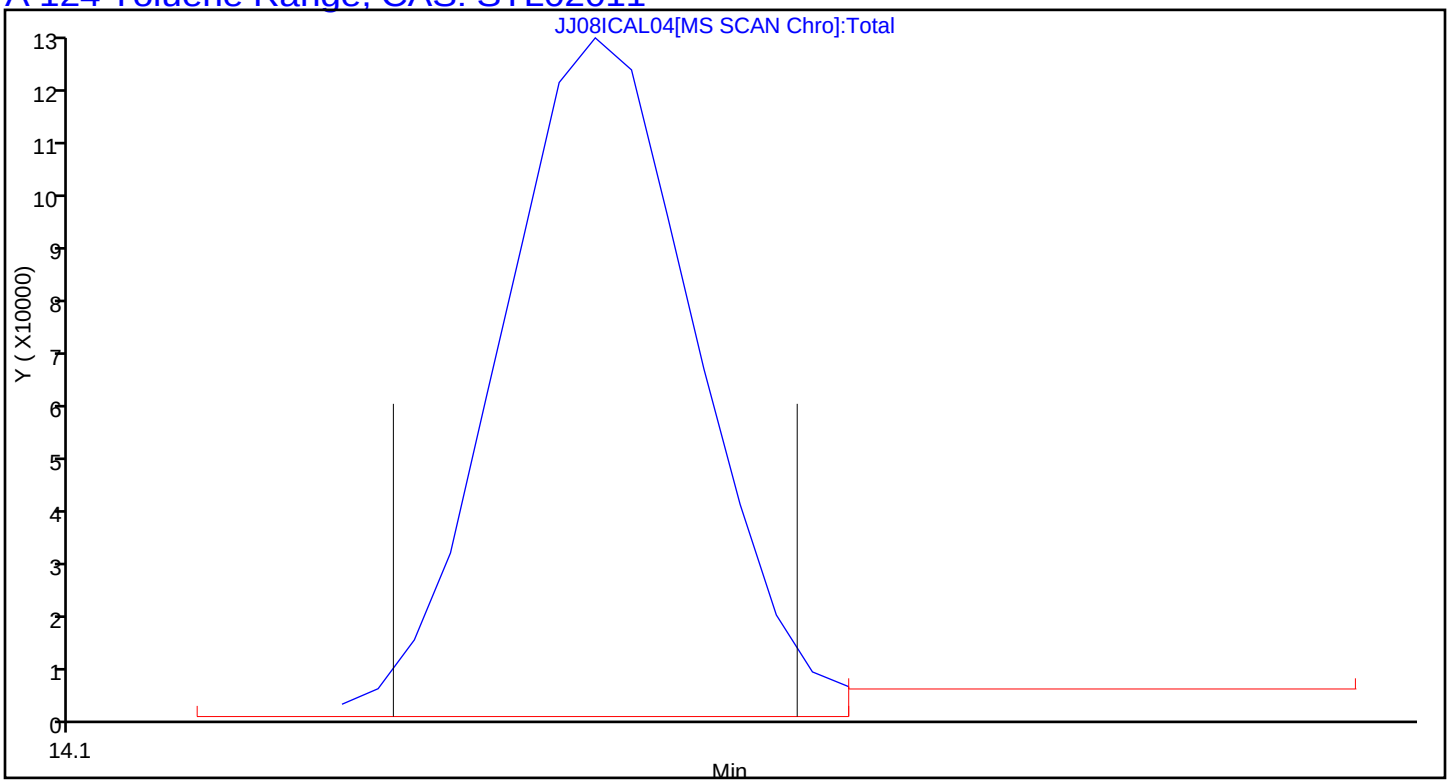


Report Date: 11-Oct-2016 11:30:53 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL04.D				
Injection Date:	08-Oct-2016 21:41:30	Instrument ID:	MJ		
Lims ID:	IC L4				
Client ID:					
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

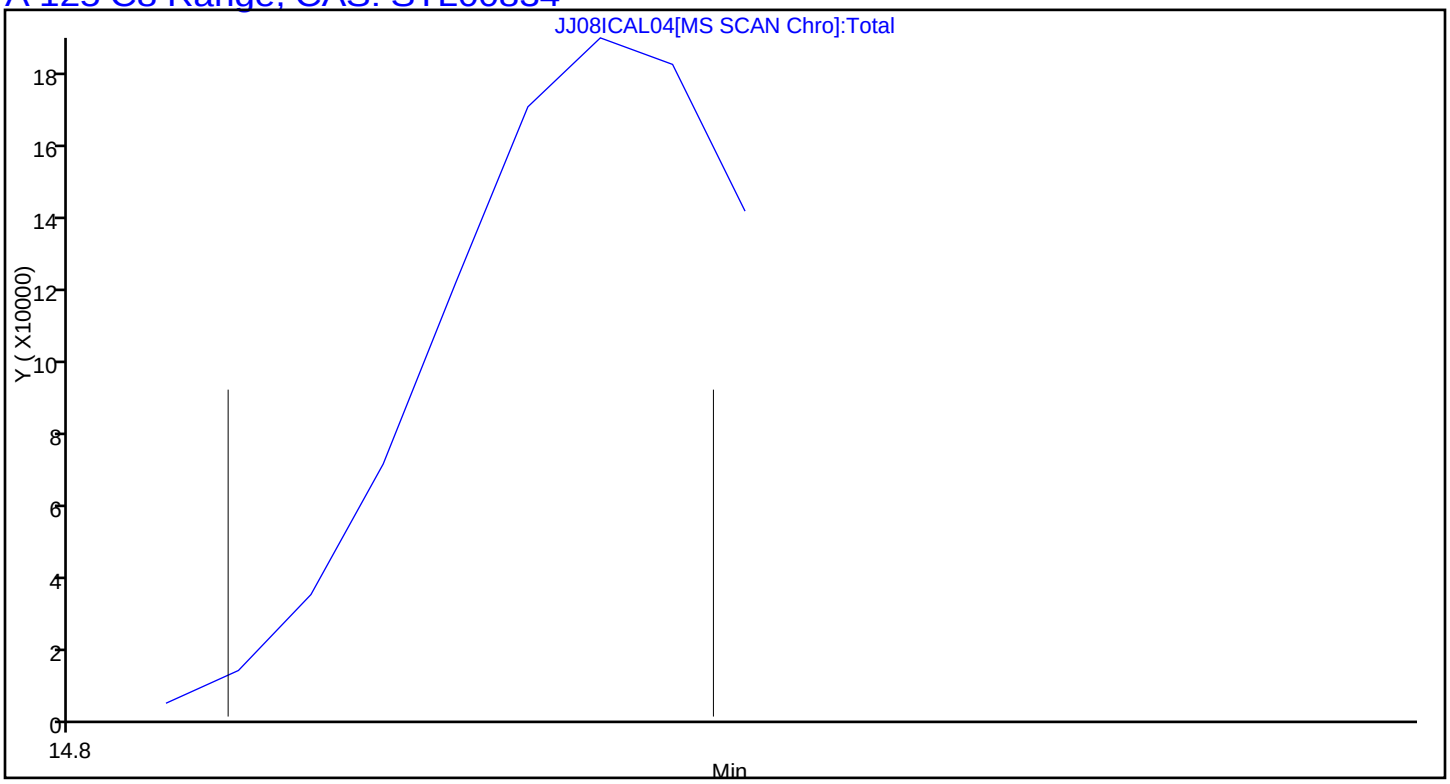


Report Date: 11-Oct-2016 11:30:53 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL04.D				
Injection Date:	08-Oct-2016 21:41:30	Instrument ID:	MJ		
Lims ID:	IC L4				
Client ID:					
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL05.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Oct-2016 22:36:30 ALS Bottle#: 4 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003509-007
Misc. Info.: 059241
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 11:30:59 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2016 11:09:05

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.303	9.302	0.001	97	299403	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.459	11.461	-0.002	95	1374704	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.132	16.131	0.001	88	1150982	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.751	17.753	-0.002	89	713913	4.00	4.11	
6 Chlorodifluoromethane	67	3.920	3.918	0.002	97	29990	1.00	0.9838	
7 Propene	41	3.931	3.933	-0.002	99	100490	1.00	0.9596	
8 Dichlorodifluoromethane	85	3.985	3.987	-0.002	100	301850	1.00	1.02	
9 Chloromethane	52	4.178	4.183	-0.005	98	35473	1.00	1.05	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.189	4.188	0.001	93	152559	1.00	0.9833	
11 Acetaldehyde	44	4.350	4.349	0.001	99	159716	5.01	5.11	
12 Vinyl chloride	62	4.366	4.369	-0.003	99	105472	1.00	1.04	
14 Butadiene	54	4.463	4.463	0.000	90	79582	1.00	1.05	
13 Butane	43	4.463	4.465	-0.002	90	154888	1.00	1.05	
15 Bromomethane	94	4.813	4.815	-0.002	98	95216	1.00	1.03	
16 Chloroethane	64	4.963	4.964	-0.001	95	44680	1.00	1.05	
17 Ethanol	31	5.060	5.063	-0.003	98	145811	5.01	5.11	
18 Vinyl bromide	106	5.291	5.290	0.001	99	98119	1.00	1.03	
19 2-Methylbutane	43	5.340	5.341	-0.001	91	124087	1.00	1.02	
20 Trichlorofluoromethane	101	5.576	5.576	0.000	99	266484	1.00	1.04	
21 Acrolein	56	5.582	5.586	-0.004	30	23762	1.00	0.9035	
22 Acetonitrile	40	5.652	5.657	-0.005	97	31521	1.00	0.9731	
23 Acetone	58	5.711	5.712	-0.001	98	93302	3.01	2.88	
24 Isopropyl alcohol	45	5.786	5.793	-0.007	94	345581	3.01	3.09	
25 Pentane	72	5.802	5.805	-0.003	96	15634	1.00	1.04	
26 Ethyl ether	31	5.980	5.987	-0.007	92	90717	1.00	0.9617	
27 1,1-Dichloroethene	96	6.318	6.319	-0.001	97	95585	1.00	1.02	
28 2-Methyl-2-propanol	59	6.410	6.419	-0.009	96	141369	1.00	0.9723	
29 Acrylonitrile	53	6.426	6.429	-0.003	94	49621	1.00	0.9187	
30 1,1,2-Trichloro-1,2,2-trif	101	6.501	6.499	0.002	94	210076	1.00	1.05	
31 Methylene Chloride	84	6.679	6.682	-0.003	97	96642	1.00	1.02	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.695	6.698	-0.003	95	89293	1.00	1.00	
33 Carbon disulfide	76	6.856	6.857	-0.001	99	294789	1.00	1.01	
34 trans-1,2-Dichloroethene	96	7.518	7.521	-0.003	97	96669	1.00	1.04	
35 2-Methylpentane	43	7.528	7.532	-0.004	95	214982	1.00	1.06	
36 Methyl tert-butyl ether	73	7.652	7.653	-0.001	97	182647	1.00	0.9415	
37 1,1-Dichloroethane	63	7.953	7.955	-0.002	100	171595	1.00	1.00	
38 Vinyl acetate	43	8.050	8.055	-0.005	100	172403	1.00	0.9120	
39 2-Butanone (MEK)	72	8.523	8.524	-0.001	96	29020	1.00	0.9132	
40 Hexane	56	8.534	8.537	-0.003	87	77947	1.00	1.03	
41 Isopropyl ether	45	8.695	8.702	-0.007	98	243807	1.00	0.9330	
42 cis-1,2-Dichloroethene	96	8.959	8.961	-0.002	95	90586	1.00	0.99	
43 Ethyl acetate	43	9.147	9.146	0.001	98	132536	1.00	0.9255	
44 Chloroform	83	9.308	9.310	-0.002	95	186688	1.00	0.99	
45 Tert-butyl ethyl ether	59	9.389	9.392	-0.003	96	198310	1.00	0.9249	
46 Tetrahydrofuran	42	9.733	9.738	-0.005	93	72211	1.00	0.9093	
47 1,1,1-Trichloroethane	97	10.351	10.352	-0.001	97	194833	1.00	1.01	
48 1,2-Dichloroethane	62	10.459	10.461	-0.002	97	116411	1.00	0.9884	
49 n-Butanol	31	10.878	10.884	-0.006	94	30007	1.00	0.9252	
50 Cyclohexane	69	10.932	10.937	-0.005	73	46974	1.00	1.07	
51 Benzene	78	10.938	10.939	-0.001	97	251778	1.00	0.99	
52 Carbon tetrachloride	117	10.959	10.963	-0.004	96	205702	1.00	1.05	
53 2,3-Dimethylpentane	71	11.040	11.044	-0.004	92	59164	1.00	1.02	
54 Thiophene	84	11.206	11.210	-0.004	97	135687	1.00	0.9567	
55 Tert-amyl methyl ether	73	11.389	11.396	-0.007	97	177159	1.00	0.9427	
56 Isooctane	57	11.669	11.670	-0.001	98	406239	1.00	0.9896	
57 n-Heptane	71	12.029	12.033	-0.004	93	83748	1.00	0.9442	
58 1,2-Dichloropropane	63	12.126	12.130	-0.004	90	92168	1.00	0.9477	
59 Trichloroethene	130	12.158	12.163	-0.005	94	98859	1.00	0.9683	
60 Dibromomethane	93	12.250	12.252	-0.002	93	95834	1.00	0.9660	
62 Dichlorobromomethane	83	12.389	12.388	0.001	99	170211	1.00	0.9603	
61 1,4-Dioxane	88	12.411	12.413	-0.002	92	29141	1.00	1.02	
63 Methyl methacrylate	41	12.465	12.470	-0.005	92	71233	1.00	0.8799	
64 Methylcyclohexane	83	12.916	12.919	-0.003	95	193416	1.00	1.03	
65 4-Methyl-2-pentanone (MIBK	43	13.304	13.310	-0.006	98	145694	1.00	0.9242	
66 cis-1,3-Dichloropropene	75	13.368	13.369	-0.001	96	118765	1.00	0.9278	
67 trans-1,3-Dichloropropene	75	14.051	14.051	0.000	99	96862	1.00	0.9576	
68 Toluene	91	14.180	14.180	0.000	94	246370	1.00	0.9764	
69 1,1,2-Trichloroethane	83	14.250	14.253	-0.003	97	76042	1.00	0.9670	
70 2-Methylthiophene	97	14.331	14.332	-0.001	98	203436	1.00	1.00	
71 3-Methylthiophene	97	14.530	14.530	0.000	99	190205	1.00	0.9779	
72 2-Hexanone	58	14.621	14.624	-0.003	92	67673	1.00	0.9895	
73 n-Octane	85	14.841	14.841	0.000	95	81751	1.00	0.9707	
74 Chlorodibromomethane	129	14.954	14.954	0.000	98	141975	1.00	0.9803	
75 Ethylene Dibromide	107	15.239	15.245	-0.006	98	122262	1.00	0.9760	
76 Tetrachloroethene	129	15.309	15.312	-0.003	95	92953	1.00	0.9837	
77 2,3-Dimethylheptane	43	16.175	16.176	-0.001	96	250479	1.00	1.01	
78 Chlorobenzene	112	16.180	16.180	0.000	94	169300	1.00	0.9559	
79 Ethylbenzene	91	16.460	16.458	0.002	99	260654	1.00	0.9352	
80 2-Ethylthiophene	97	16.562	16.563	-0.001	97	188635	1.00	0.9482	
81 m-Xylene & p-Xylene	91	16.616	16.616	0.000	100	398815	2.00	1.91	
82 n-Nonane	57	17.014	17.015	-0.001	93	168829	1.00	1.03	
83 Bromoform	173	17.078	17.077	0.001	93	104598	1.00	0.9599	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.078	17.082	-0.004	99	130563	1.00	0.99	
85 o-Xylene	91	17.138	17.142	-0.004	98	215453	1.00	0.9423	
86 1,1,2,2-Tetrachloroethane	83	17.460	17.462	-0.002	99	160274	1.00	0.9673	
87 1,2,3-Trichloropropane	110	17.622	17.623	-0.001	99	36811	1.00	0.9659	
88 Isopropylbenzene	105	17.718	17.719	-0.001	96	280044	1.00	0.9646	
89 N-Propylbenzene	120	18.235	18.237	-0.002	98	64778	1.00	0.9034	
90 2-Chlorotoluene	126	18.288	18.287	0.001	98	68698	1.00	0.9826	
91 4-Ethyltoluene	105	18.380	18.382	-0.002	97	232530	1.00	0.9414	
92 1,3,5-Trimethylbenzene	120	18.450	18.452	-0.002	94	117867	1.00	0.9537	
93 Alpha Methyl Styrene	118	18.676	18.678	-0.002	87	77630	1.00	0.8709	
94 n-Decane	57	18.713	18.716	-0.003	90	168207	1.00	1.00	
95 tert-Butylbenzene	119	18.864	18.865	-0.001	91	232863	1.00	0.9724	
96 1,2,4-Trimethylbenzene	105	18.880	18.879	0.001	96	205772	1.00	0.9811	
97 sec-Butylbenzene	105	19.127	19.127	0.000	98	323335	1.00	0.9853	
98 1,3-Dichlorobenzene	146	19.149	19.151	-0.002	98	91599	1.00	0.9396	
99 Benzyl chloride	91	19.219	19.222	-0.003	97	88177	1.00	0.8088	
100 1,4-Dichlorobenzene	146	19.235	19.236	-0.001	93	75433	1.00	0.9035	
101 4-Isopropyltoluene	119	19.283	19.283	0.000	97	238195	1.00	1.00	
102 1,2,3-Trimethylbenzene	105	19.337	19.340	-0.003	99	155360	1.00	0.9590	
103 Butylcyclohexane	83	19.385	19.387	-0.002	92	214826	1.00	1.01	
104 2,3-Dihydroindene	117	19.584	19.585	-0.001	93	166405	1.00	0.9663	
105 1,2-Dichlorobenzene	146	19.584	19.588	-0.004	98	97487	1.00	0.9681	
106 n-Butylbenzene	91	19.708	19.706	0.002	98	197055	1.00	1.00	
107 Indene	116	19.713	19.711	0.002	89	94798	1.00	0.9075	
108 Undecane	57	19.998	19.997	0.001	96	149237	1.00	0.9672	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.068	20.071	-0.003	98	148792	1.00	0.9706	
110 1,2-Dibromo-3-Chloropropan	157	20.176	20.176	0.000	90	28029	1.00	1.02	
111 1,2,4,5-Tetramethylbenzene	119	20.455	20.454	0.001	97	180026	1.00	1.00	
112 1,2,3,5-Tetramethylbenzene	119	20.509	20.509	0.000	94	114877	1.00	1.00	
113 1,2,3,4-Tetramethylbenzene	119	20.923	20.922	0.001	97	141541	1.00	0.9874	
114 Dodecane	57	21.068	21.067	0.001	95	136966	1.00	1.03	
115 1,2,4-Trichlorobenzene	180	21.300	21.300	0.000	93	25163	1.00	1.09	
116 Naphthalene	128	21.445	21.446	-0.001	99	73981	1.00	1.10	
117 Benzo(b)thiophene	134	21.547	21.545	0.002	99	27289	1.00	1.01	
118 Hexachlorobutadiene	225	21.633	21.631	0.002	95	103265	1.00	0.9883	
119 1,2,3-Trichlorobenzene	180	21.698	21.697	0.001	95	30545	1.00	1.13	
120 2-Methylnaphthalene	142	22.246	22.263	-0.017	99	11518	3.13	3.33	
121 1-Methylnaphthalene	142	22.370	22.359	0.011	100	15193	3.13	3.28	
A 124 Toluene Range	1	14.180	(14.150-14.210)		0	550707	1.00	0.9655	
A 125 C8 Range	1	14.837	(14.808-14.866)		0	794228	1.00	1.04	
S 126 Xylenes, Total	100				0		3.00	2.85	
S 127 1,2-Dichloroethene, Total	1				0		2.00	2.03	

Reagents:

40L5DNP_00007	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

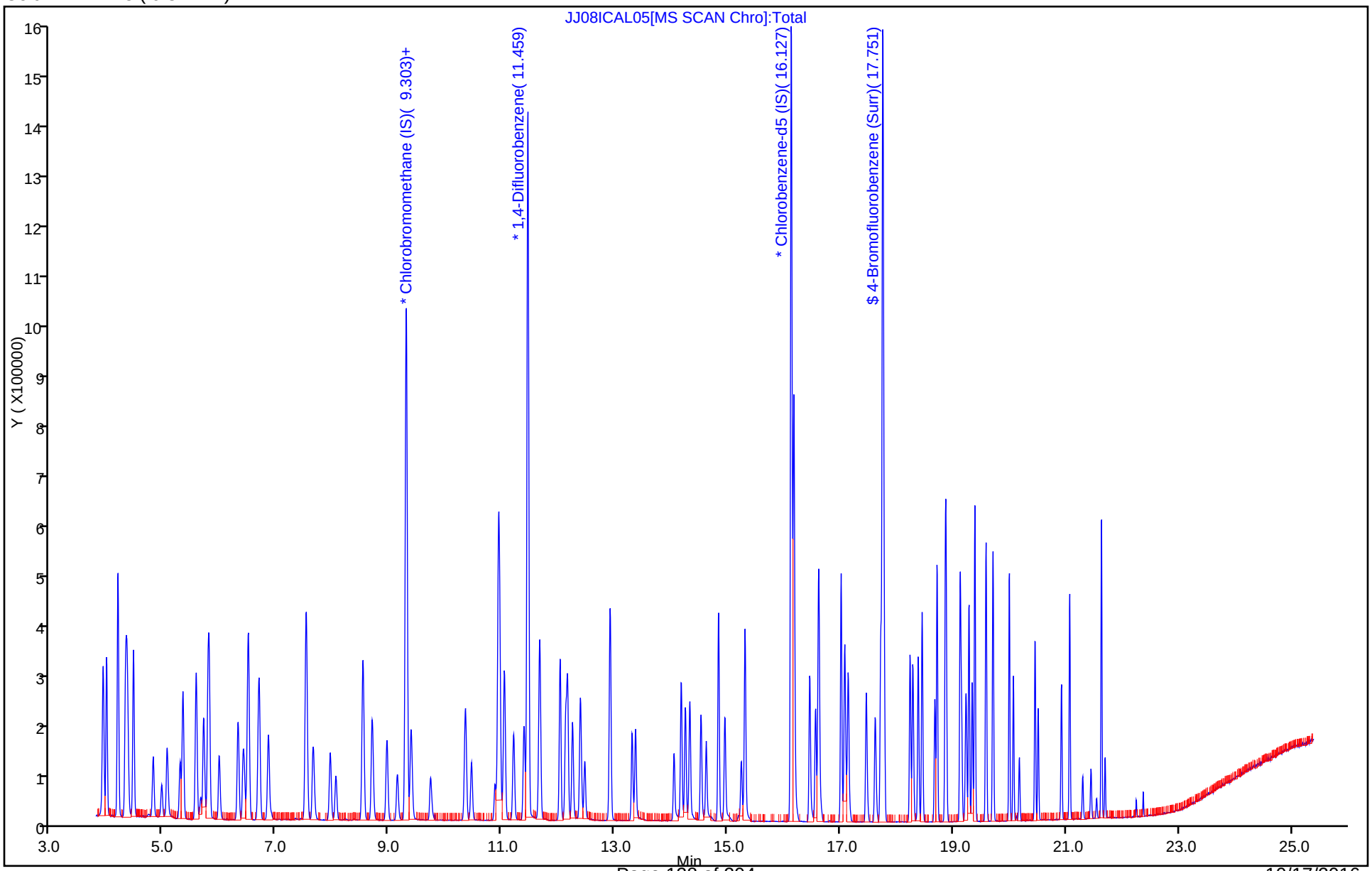
Report Date: 11-Oct-2016 11:31:00 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL05.D

Injection Date:	08-Oct-2016 22:36:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	IC L5			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

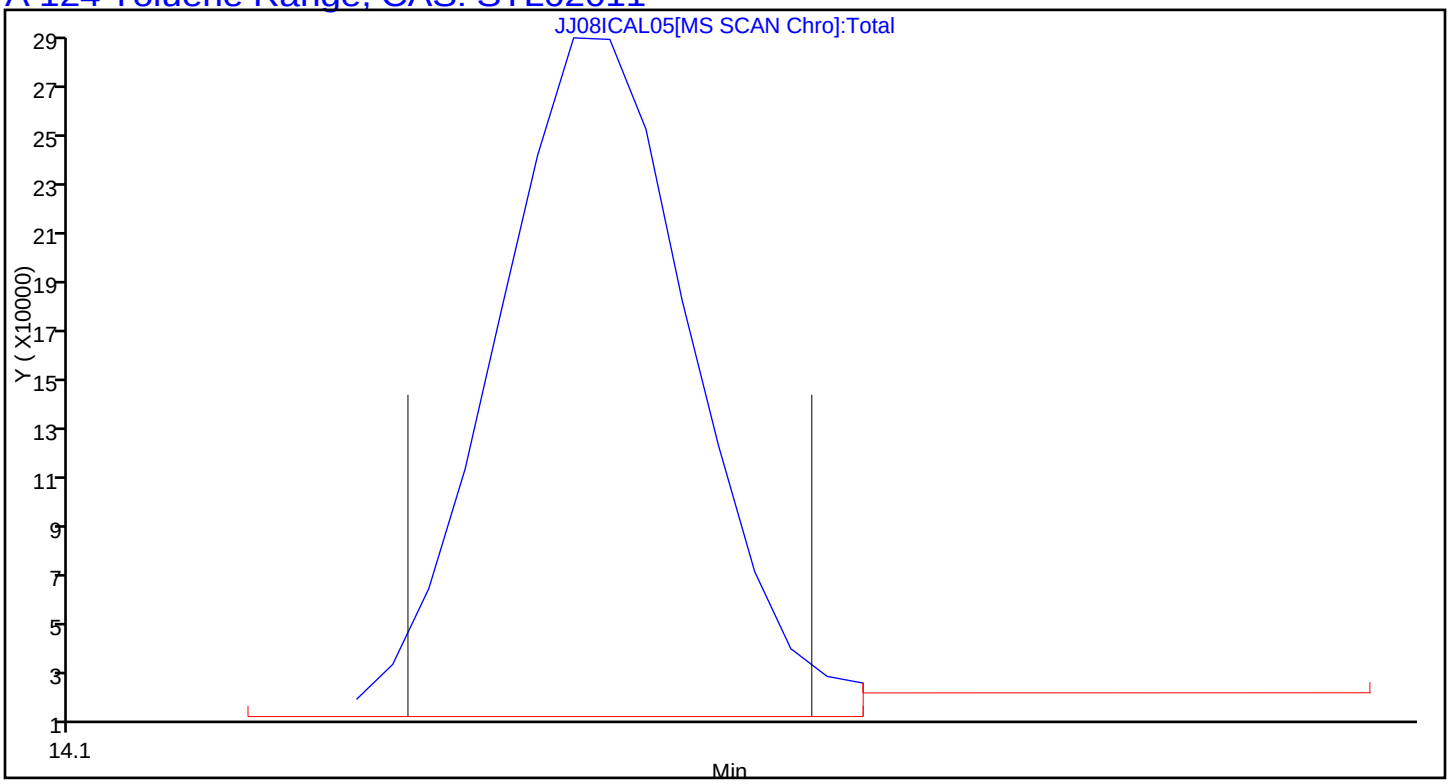


Report Date: 11-Oct-2016 11:31:00 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL05.D				
Injection Date:	08-Oct-2016 22:36:30	Instrument ID:	MJ		
Lims ID:	IC L5				
Client ID:					
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

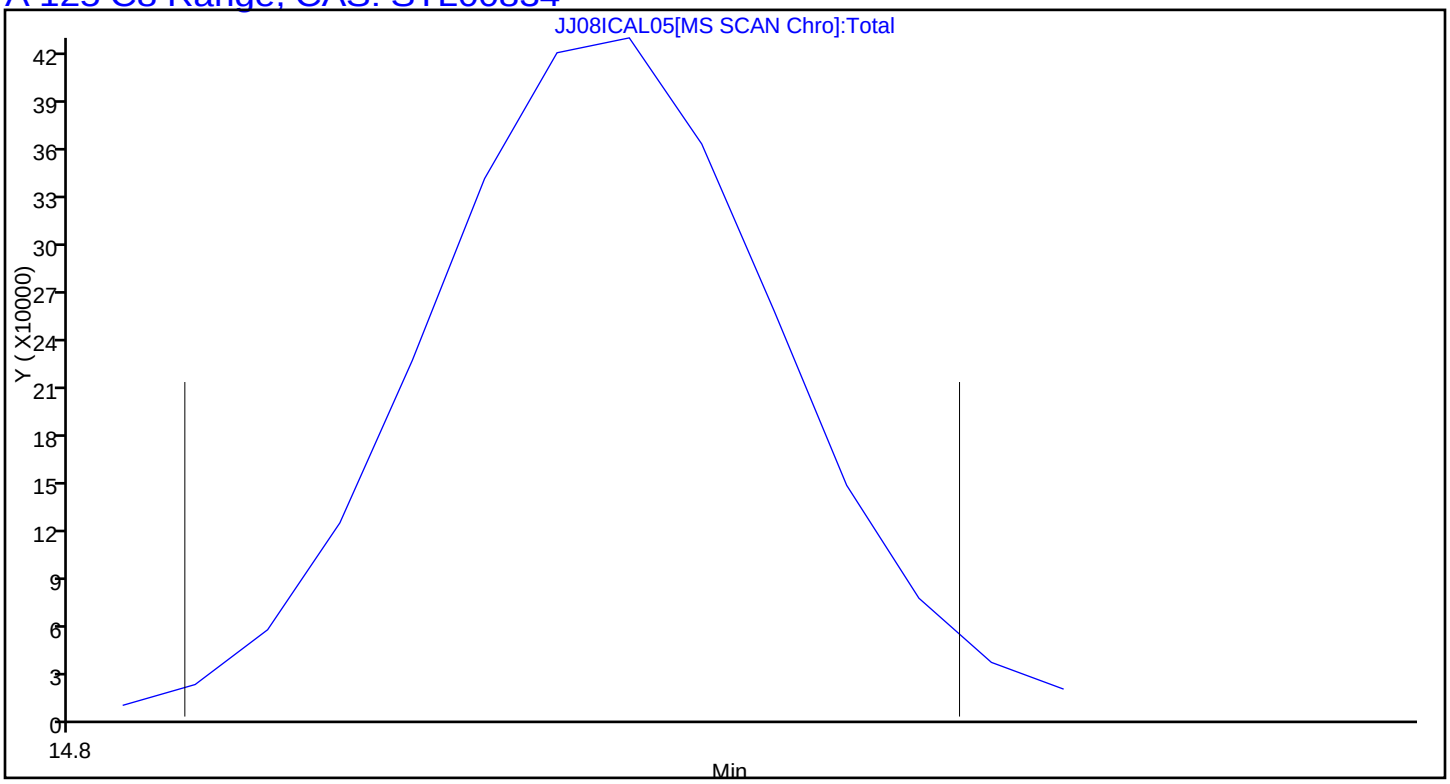


Report Date: 11-Oct-2016 11:31:00 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL05.D				
Injection Date:	08-Oct-2016 22:36:30	Instrument ID:	MJ		
Lims ID:	IC L5				
Client ID:					
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL06.D
Lims ID: ICIS L6
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 08-Oct-2016 23:29:30 ALS Bottle#: 5 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003509-008
Misc. Info.: 059240
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 11:31:09 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2016 10:47:33

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.302	9.302	0.000	97	292093	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.464	11.461	0.003	95	1340770	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.131	16.131	0.000	88	1141838	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.755	17.753	0.002	89	686528	4.00	3.99	
6 Chlorodifluoromethane	67	3.919	3.918	0.001	97	61051	2.00	2.05	
7 Propene	41	3.930	3.933	-0.003	99	196459	2.00	1.92	
8 Dichlorodifluoromethane	85	3.989	3.987	0.002	100	591503	2.00	2.06	
9 Chloromethane	52	4.183	4.183	0.000	98	65224	2.00	1.98	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.188	4.188	0.000	92	334403	2.00	2.21	
11 Acetaldehyde	44	4.350	4.349	0.001	99	328610	9.99	10.8	
12 Vinyl chloride	62	4.371	4.369	0.002	99	200832	2.00	2.02	
14 Butadiene	54	4.462	4.463	-0.001	69	151466	2.00	2.05	
13 Butane	43	4.462	4.465	-0.003	85	287380	2.00	2.00	
15 Bromomethane	94	4.812	4.815	-0.003	98	181639	2.00	2.02	
16 Chloroethane	64	4.963	4.964	-0.001	94	85607	2.00	2.06	
17 Ethanol	31	5.059	5.063	-0.004	97	301353	9.99	10.8	
18 Vinyl bromide	106	5.291	5.290	0.001	99	192126	2.00	2.06	
19 2-Methylbutane	43	5.339	5.341	-0.002	93	244836	2.00	2.07	
20 Trichlorofluoromethane	101	5.576	5.576	0.000	100	525714	2.00	2.10	
21 Acrolein	56	5.586	5.586	0.000	95	49912	2.00	1.95	
22 Acetonitrile	40	5.656	5.657	-0.001	97	75306	2.00	2.38	
23 Acetone	58	5.710	5.712	-0.002	98	207471	5.99	6.57	
24 Isopropyl alcohol	45	5.785	5.793	-0.008	96	712005	5.99	6.52	
25 Pentane	72	5.807	5.805	0.002	97	30363	2.00	2.08	
26 Ethyl ether	31	5.979	5.987	-0.008	93	201882	2.00	2.19	
27 1,1-Dichloroethene	96	6.318	6.319	-0.001	97	190825	2.00	2.08	
28 2-Methyl-2-propanol	59	6.409	6.419	-0.010	96	302486	2.00	2.13	
29 Acrylonitrile	53	6.431	6.429	0.002	94	119684	2.00	2.27	
30 1,1,2-Trichloro-1,2,2-trif	101	6.500	6.499	0.001	95	411617	2.00	2.12	
31 Methylene Chloride	84	6.683	6.682	0.001	97	182390	2.00	1.97	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.699	6.698	0.001	95	179546	2.00	2.05	
33 Carbon disulfide	76	6.855	6.857	-0.002	99	599369	2.00	2.12	
34 trans-1,2-Dichloroethene	96	7.522	7.521	0.001	98	191375	2.00	2.12	
35 2-Methylpentane	43	7.533	7.532	0.001	95	417695	2.00	2.10	
36 Methyl tert-butyl ether	73	7.646	7.653	-0.007	97	425689	2.00	2.25	
37 1,1-Dichloroethane	63	7.958	7.955	0.003	100	363477	2.00	2.17	
38 Vinyl acetate	43	8.055	8.055	0.000	100	420925	2.00	2.28	
39 2-Butanone (MEK)	72	8.517	8.524	-0.007	96	66905	2.00	2.16	
40 Hexane	56	8.538	8.537	0.001	90	154493	2.00	2.10	
41 Isopropyl ether	45	8.700	8.702	-0.002	98	554804	2.00	2.18	
42 cis-1,2-Dichloroethene	96	8.963	8.961	0.002	95	191110	2.00	2.14	
43 Ethyl acetate	43	9.141	9.146	-0.005	99	307905	2.00	2.20	
44 Chloroform	83	9.313	9.310	0.003	96	397963	2.00	2.17	
45 Tert-butyl ethyl ether	59	9.388	9.392	-0.004	96	457083	2.00	2.19	
46 Tetrahydrofuran	42	9.727	9.738	-0.011	93	171477	2.00	2.21	
47 1,1,1-Trichloroethane	97	10.351	10.352	-0.001	96	408450	2.00	2.16	
48 1,2-Dichloroethane	62	10.464	10.461	0.003	97	249655	2.00	2.17	
49 n-Butanol	31	10.867	10.884	-0.017	93	68834	2.00	2.18	
50 Cyclohexane	69	10.937	10.937	0.000	69	92091	2.00	2.16	
51 Benzene	78	10.937	10.939	-0.002	97	536994	2.00	2.17	
52 Carbon tetrachloride	117	10.964	10.963	0.001	96	413385	2.00	2.17	
53 2,3-Dimethylpentane	71	11.044	11.044	0.000	92	122807	2.00	2.16	
54 Thiophene	84	11.211	11.210	0.001	97	296880	2.00	2.15	
55 Tert-amyl methyl ether	73	11.388	11.396	-0.008	98	417595	2.00	2.24	
56 Isooctane	57	11.668	11.670	-0.002	98	873863	2.00	2.18	
57 n-Heptane	71	12.034	12.033	0.001	93	184827	2.00	2.14	
58 1,2-Dichloropropane	63	12.131	12.130	0.001	91	205421	2.00	2.17	
59 Trichloroethene	130	12.163	12.163	0.000	95	212389	2.00	2.13	
60 Dibromomethane	93	12.254	12.252	0.002	93	210316	2.00	2.17	
62 Dichlorobromomethane	83	12.389	12.388	0.001	99	384377	2.00	2.22	
61 1,4-Dioxane	88	12.405	12.413	-0.008	90	61859	2.00	2.22	
63 Methyl methacrylate	41	12.469	12.470	-0.001	92	168295	2.00	2.13	
64 Methylcyclohexane	83	12.916	12.919	-0.003	95	408489	2.00	2.22	
65 4-Methyl-2-pentanone (MIBK	43	13.303	13.310	-0.007	98	330708	2.00	2.15	
66 cis-1,3-Dichloropropene	75	13.367	13.369	-0.002	95	284607	2.00	2.28	
67 trans-1,3-Dichloropropene	75	14.050	14.051	-0.001	99	230569	2.00	2.30	
68 Toluene	91	14.179	14.180	-0.001	94	566445	2.00	2.26	
69 1,1,2-Trichloroethane	83	14.255	14.253	0.002	97	175475	2.00	2.25	
70 2-Methylthiophene	97	14.330	14.332	-0.002	97	464807	2.00	2.30	
71 3-Methylthiophene	97	14.529	14.530	-0.001	99	439094	2.00	2.28	
72 2-Hexanone	58	14.620	14.624	-0.004	92	157568	2.00	2.32	
73 n-Octane	85	14.841	14.841	0.000	95	184411	2.00	2.21	
74 Chlorodibromomethane	129	14.954	14.954	0.000	98	337791	2.00	2.35	
75 Ethylene Dibromide	107	15.244	15.245	-0.001	98	285225	2.00	2.30	
76 Tetrachloroethene	129	15.309	15.312	-0.003	95	205117	2.00	2.19	
77 2,3-Dimethylheptane	43	16.174	16.176	-0.002	96	544214	2.00	2.21	
78 Chlorobenzene	112	16.180	16.180	0.000	91	393318	2.00	2.24	
79 Ethylbenzene	91	16.459	16.458	0.001	99	636564	2.00	2.30	
80 2-Ethylthiophene	97	16.561	16.563	-0.002	98	452306	2.00	2.29	
81 m-Xylene & p-Xylene	91	16.615	16.616	-0.001	99	949395	3.99	4.59	
82 n-Nonane	57	17.013	17.015	-0.002	93	371467	2.00	2.27	
83 Bromoform	173	17.078	17.077	0.001	93	262668	2.00	2.43	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.083	17.082	0.001	99	331575	2.00	2.54	
85 o-Xylene	91	17.142	17.142	0.000	98	509651	2.00	2.25	
86 1,1,2,2-Tetrachloroethane	83	17.459	17.462	-0.003	98	379555	2.00	2.31	
87 1,2,3-Trichloropropane	110	17.621	17.623	-0.002	99	86518	2.00	2.29	
88 Isopropylbenzene	105	17.718	17.719	-0.001	97	671114	2.00	2.33	
89 N-Propylbenzene	120	18.239	18.237	0.002	99	165071	2.00	2.32	
90 2-Chlorotoluene	126	18.288	18.287	0.001	98	160028	2.00	2.31	
91 4-Ethyltoluene	105	18.379	18.382	-0.003	98	581752	2.00	2.37	
92 1,3,5-Trimethylbenzene	120	18.449	18.452	-0.003	92	284025	2.00	2.32	
93 Alpha Methyl Styrene	118	18.675	18.678	-0.003	86	211230	2.00	2.39	
94 n-Decane	57	18.718	18.716	0.002	90	400184	2.00	2.39	
95 tert-Butylbenzene	119	18.863	18.865	-0.002	91	551609	2.00	2.32	
96 1,2,4-Trimethylbenzene	105	18.879	18.879	0.000	96	495080	2.00	2.38	
97 sec-Butylbenzene	105	19.126	19.127	-0.001	98	754625	2.00	2.32	
98 1,3-Dichlorobenzene	146	19.148	19.151	-0.003	99	227357	2.00	2.35	
99 Benzyl chloride	91	19.218	19.222	-0.004	97	235854	2.00	2.18	
100 1,4-Dichlorobenzene	146	19.234	19.236	-0.002	94	191069	2.00	2.31	
101 4-Isopropyltoluene	119	19.282	19.283	-0.001	96	557746	2.00	2.36	
102 1,2,3-Trimethylbenzene	105	19.342	19.340	0.002	99	368722	2.00	2.29	
103 Butylcyclohexane	83	19.385	19.387	-0.002	92	478656	2.00	2.27	
104 2,3-Dihydroindene	117	19.584	19.585	-0.001	94	402661	2.00	2.36	
105 1,2-Dichlorobenzene	146	19.589	19.588	0.001	96	236698	2.00	2.37	
106 n-Butylbenzene	91	19.707	19.706	0.001	98	477429	2.00	2.44	
107 Indene	116	19.713	19.711	0.002	93	240660	2.00	2.32	
108 Undecane	57	19.998	19.997	0.001	96	354292	2.00	2.31	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.067	20.071	-0.004	98	356341	2.00	2.34	
110 1,2-Dibromo-3-Chloropropan	157	20.175	20.176	-0.001	92	73775	2.00	2.71	
111 1,2,4,5-Tetramethylbenzene	119	20.455	20.454	0.001	97	418851	2.00	2.35	
112 1,2,3,5-Tetramethylbenzene	119	20.508	20.509	-0.001	95	268243	2.00	2.36	
113 1,2,3,4-Tetramethylbenzene	119	20.922	20.922	0.000	97	334774	2.00	2.35	
114 Dodecane	57	21.068	21.067	0.001	95	309370	2.00	2.35	
115 1,2,4-Trichlorobenzene	180	21.299	21.300	-0.001	94	62804	2.00	2.75	
116 Naphthalene	128	21.444	21.446	-0.002	99	181491	2.00	2.72	
117 Benzo(b)thiophene	134	21.546	21.545	0.001	99	63388	2.00	2.35	
118 Hexachlorobutadiene	225	21.632	21.631	0.001	96	234515	2.00	2.26	
119 1,2,3-Trichlorobenzene	180	21.697	21.697	0.000	95	70305	2.00	2.62	
120 2-Methylnaphthalene	142	22.251	22.263	-0.012	98	21556	6.24	6.29	
121 1-Methylnaphthalene	142	22.374	22.359	0.015	98	31380	6.24	6.82	
A 124 Toluene Range	1	14.179	(14.149-14.209)		0	1265569	2.00	2.24	
A 125 C8 Range	1	14.836	(14.808-14.865)		0	1761285	2.00	2.32	
S 126 Xylenes, Total	100				0		5.99	6.84	
S 127 1,2-Dichloroethene, Total	1				0		3.99	4.26	

Reagents:

40L6DNP_00008	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

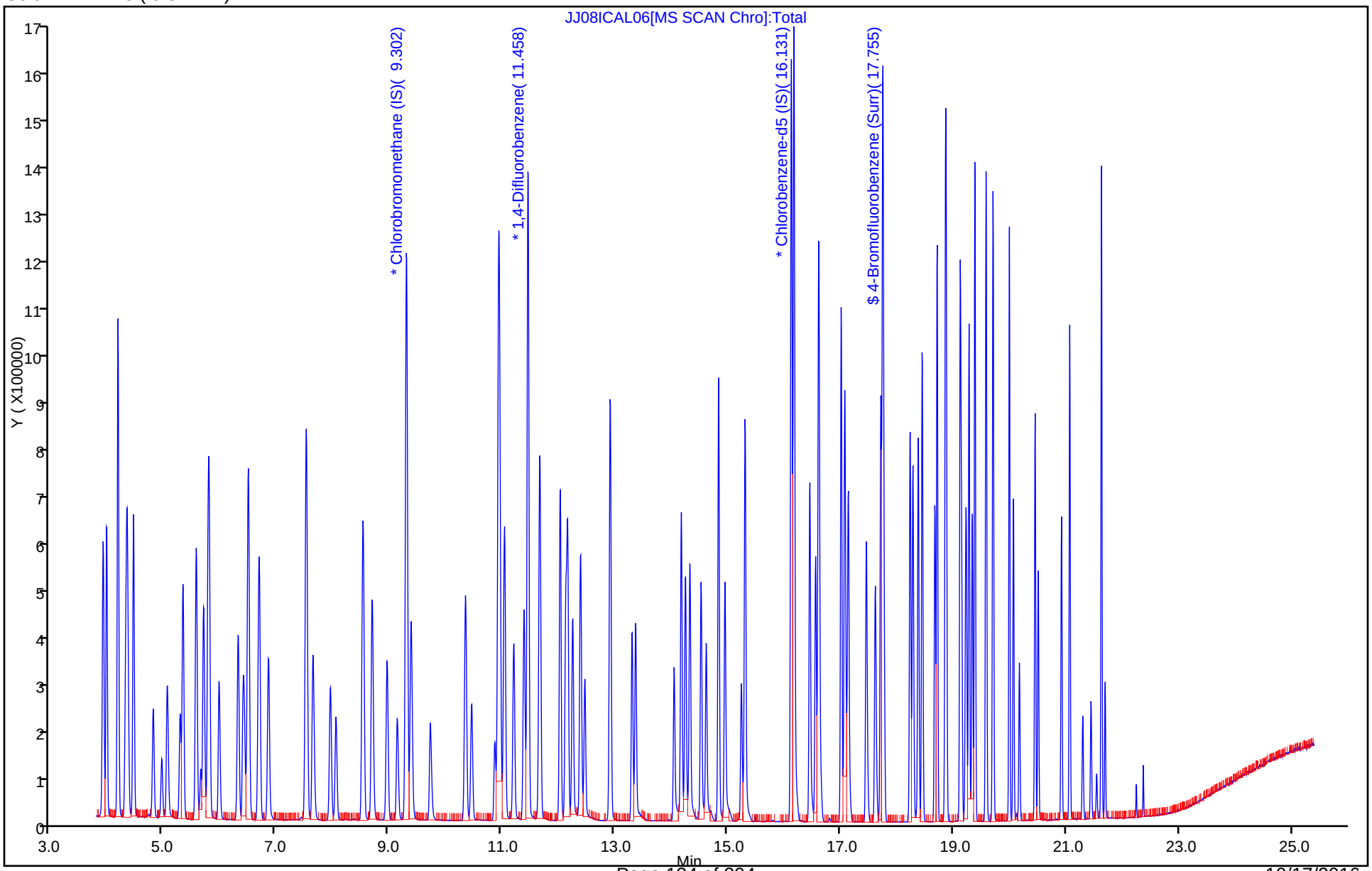
Report Date: 11-Oct-2016 11:31:10 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL06.D

Injection Date:	08-Oct-2016 23:29:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	ICIS L6			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

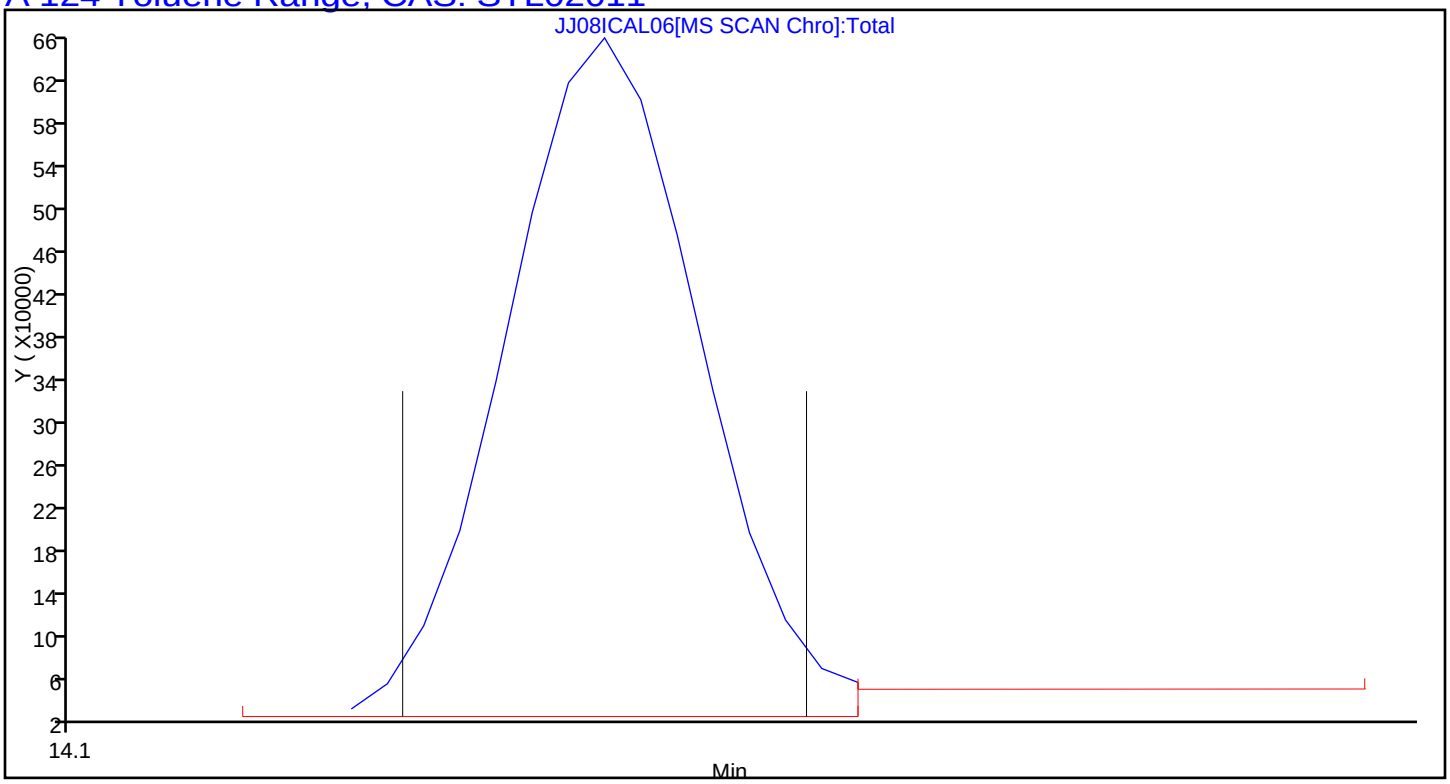


Report Date: 11-Oct-2016 11:31:10 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL06.D				
Injection Date:	08-Oct-2016 23:29:30	Instrument ID:	MJ		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

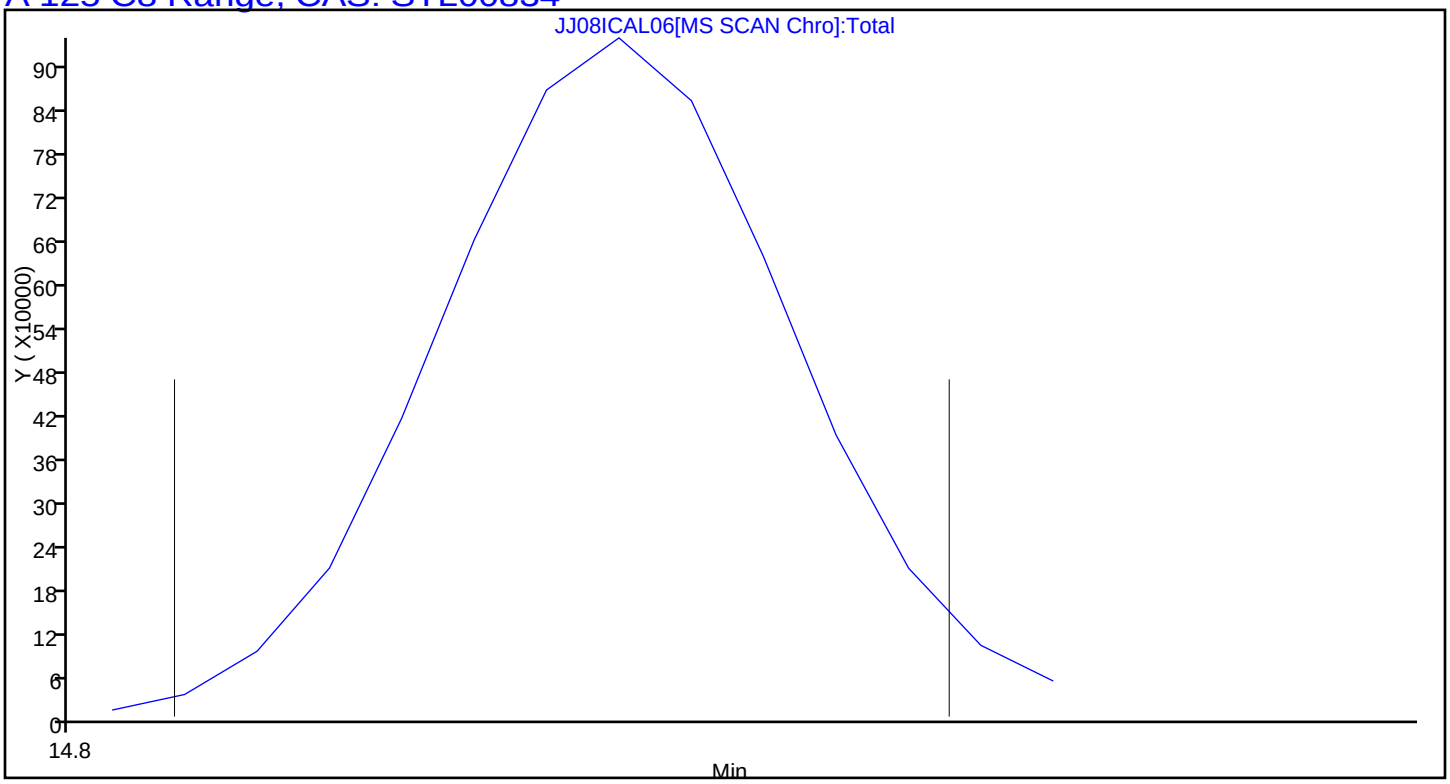


Report Date: 11-Oct-2016 11:31:10 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL06.D				
Injection Date:	08-Oct-2016 23:29:30	Instrument ID:	MJ		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL07.D
Lims ID: IC L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 09-Oct-2016 00:23:30 ALS Bottle#: 6 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003509-009
Misc. Info.: 059239
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 11:31:15 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2016 11:09:44

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.305	9.302	0.003	97	286076	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.461	11.461	0.000	95	1304213	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.134	16.131	0.003	88	1144983	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.753	17.753	0.000	89	712827	4.00	4.13	
6 Chlorodifluoromethane	67	3.917	3.918	-0.001	97	118016	4.00	4.05	
7 Propene	41	3.927	3.933	-0.006	99	384576	4.00	3.84	
8 Dichlorodifluoromethane	85	3.987	3.987	0.000	100	1131161	4.00	4.02	
9 Chloromethane	52	4.186	4.183	0.003	99	122109	4.00	3.78	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.186	4.188	-0.002	97	568337	4.00	3.83	
11 Acetaldehyde	44	4.347	4.349	-0.002	98	520734	20.0	17.5	
12 Vinyl chloride	62	4.368	4.369	-0.001	99	383339	4.00	3.94	
14 Butadiene	54	4.465	4.463	0.002	69	287374	4.00	3.98	
13 Butane	43	4.465	4.465	0.000	85	543330	4.00	3.85	
15 Bromomethane	94	4.815	4.815	0.000	99	352830	4.00	4.01	
16 Chloroethane	64	4.965	4.964	0.001	96	165501	4.00	4.07	
17 Ethanol	31	5.062	5.063	-0.001	97	507219	20.0	18.6	
18 Vinyl bromide	106	5.288	5.290	-0.002	98	373522	4.00	4.09	
19 2-Methylbutane	43	5.342	5.341	0.001	92	463108	4.00	3.99	
20 Trichlorofluoromethane	101	5.573	5.576	-0.003	100	997746	4.00	4.06	
21 Acrolein	56	5.584	5.586	-0.002	94	86518	4.00	3.44	
22 Acetonitrile	40	5.659	5.657	0.002	98	112623	4.00	3.64	
23 Acetone	58	5.707	5.712	-0.005	98	304007	12.0	9.82	
24 Isopropyl alcohol	45	5.788	5.793	-0.005	97	1238996	12.0	11.6	
25 Pentane	72	5.804	5.805	-0.001	98	57831	4.00	4.04	
26 Ethyl ether	31	5.982	5.987	-0.005	93	316288	4.00	3.51	
27 1,1-Dichloroethene	96	6.320	6.319	0.001	97	369158	4.00	4.11	
28 2-Methyl-2-propanol	59	6.406	6.419	-0.013	96	542301	4.00	3.90	
29 Acrylonitrile	53	6.428	6.429	-0.001	95	179147	4.00	3.47	
30 1,1,2-Trichloro-1,2,2-trif	101	6.498	6.499	-0.001	95	777472	4.00	4.08	
31 Methylene Chloride	84	6.681	6.682	-0.001	97	337926	4.00	3.72	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.697	6.698	-0.001	96	330186	4.00	3.85	
33 Carbon disulfide	76	6.858	6.857	0.001	99	1114641	4.00	4.02	
34 trans-1,2-Dichloroethene	96	7.520	7.521	-0.001	98	365640	4.00	4.13	
35 2-Methylpentane	43	7.530	7.532	-0.002	95	772529	4.00	3.97	
36 Methyl tert-butyl ether	73	7.643	7.653	-0.010	97	656085	4.00	3.54	
37 1,1-Dichloroethane	63	7.955	7.955	0.000	100	630813	4.00	3.84	
38 Vinyl acetate	43	8.052	8.055	-0.003	100	609691	4.00	3.38	
39 2-Butanone (MEK)	72	8.520	8.524	-0.004	97	108487	4.00	3.57	
40 Hexane	56	8.536	8.537	-0.001	91	280492	4.00	3.89	
41 Isopropyl ether	45	8.697	8.702	-0.005	97	862998	4.00	3.46	
42 cis-1,2-Dichloroethene	96	8.961	8.961	0.000	95	338207	4.00	3.88	
43 Ethyl acetate	43	9.143	9.146	-0.003	99	496876	4.00	3.63	
44 Chloroform	83	9.310	9.310	0.000	96	663152	4.00	3.69	
45 Tert-butyl ethyl ether	59	9.385	9.392	-0.007	96	722189	4.00	3.53	
46 Tetrahydrofuran	42	9.724	9.738	-0.014	93	262975	4.00	3.47	
47 1,1,1-Trichloroethane	97	10.353	10.352	0.001	96	709770	4.00	3.84	
48 1,2-Dichloroethane	62	10.461	10.461	0.000	97	422239	4.00	3.78	
49 n-Butanol	31	10.875	10.884	-0.009	92	127066	4.00	4.13	
50 Cyclohexane	69	10.940	10.937	0.003	73	164249	4.00	3.95	
51 Benzene	78	10.940	10.939	0.001	97	879174	4.00	3.64	
52 Carbon tetrachloride	117	10.961	10.963	-0.002	96	715806	4.00	3.87	
53 2,3-Dimethylpentane	71	11.047	11.044	0.003	92	211129	4.00	3.82	
54 Thiophene	84	11.208	11.210	-0.002	97	498367	4.00	3.70	
55 Tert-amyl methyl ether	73	11.391	11.396	-0.005	98	661965	4.00	3.54	
56 Isooctane	57	11.671	11.670	0.001	98	1427378	4.00	3.67	
57 n-Heptane	71	12.031	12.033	-0.002	93	310519	4.00	3.69	
58 1,2-Dichloropropane	63	12.133	12.130	0.003	91	336735	4.00	3.65	
59 Trichloroethene	130	12.166	12.163	0.003	94	353658	4.00	3.65	
60 Dibromomethane	93	12.252	12.252	0.000	94	348638	4.00	3.70	
62 Dichlorobromomethane	83	12.391	12.388	0.003	99	633628	4.00	3.77	
61 1,4-Dioxane	88	12.402	12.413	-0.011	90	113820	4.00	4.19	
63 Methyl methacrylate	41	12.467	12.470	-0.003	92	272756	4.00	3.55	
64 Methylcyclohexane	83	12.918	12.919	-0.001	96	682362	4.00	3.82	
65 4-Methyl-2-pentanone (MIBK	43	13.306	13.310	-0.004	98	590218	4.00	3.95	
66 cis-1,3-Dichloropropene	75	13.370	13.369	0.001	95	457130	4.00	3.76	
67 trans-1,3-Dichloropropene	75	14.053	14.051	0.002	98	385334	4.00	3.83	
68 Toluene	91	14.182	14.180	0.002	94	903425	4.00	3.60	
69 1,1,2-Trichloroethane	83	14.252	14.253	-0.001	97	280309	4.00	3.58	
70 2-Methylthiophene	97	14.333	14.332	0.001	97	752389	4.00	3.72	
71 3-Methylthiophene	97	14.532	14.530	0.002	99	710507	4.00	3.67	
72 2-Hexanone	58	14.623	14.624	-0.001	92	275764	4.00	4.05	
73 n-Octane	85	14.843	14.841	0.002	94	300317	4.00	3.58	
74 Chlorodibromomethane	129	14.956	14.954	0.002	98	554019	4.00	3.85	
75 Ethylene Dibromide	107	15.247	15.245	0.002	98	468707	4.00	3.76	
76 Tetrachloroethene	129	15.311	15.312	-0.001	95	325398	4.00	3.46	
77 2,3-Dimethylheptane	43	16.177	16.176	0.001	96	863711	4.00	3.49	
78 Chlorobenzene	112	16.177	16.180	-0.003	94	637698	4.00	3.62	
79 Ethylbenzene	91	16.457	16.458	-0.001	98	967485	4.00	3.49	
80 2-Ethylthiophene	97	16.564	16.563	0.001	98	712797	4.00	3.60	
81 m-Xylene & p-Xylene	91	16.618	16.616	0.002	99	1425239	8.00	6.87	
82 n-Nonane	57	17.016	17.015	0.001	92	607688	4.00	3.71	
83 Bromoform	173	17.075	17.077	-0.002	93	461674	4.00	4.26	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.080	17.082	-0.002	99	522211	4.00	3.99	
85 o-Xylene	91	17.145	17.142	0.003	98	757783	4.00	3.33	
86 1,1,2,2-Tetrachloroethane	83	17.462	17.462	0.000	99	608436	4.00	3.69	
87 1,2,3-Trichloropropane	110	17.624	17.623	0.001	99	139309	4.00	3.67	
88 Isopropylbenzene	105	17.720	17.719	0.001	97	1008946	4.00	3.49	
89 N-Propylbenzene	120	18.237	18.237	0.000	99	257802	4.00	3.61	
90 2-Chlorotoluene	126	18.285	18.287	-0.002	98	254370	4.00	3.66	
91 4-Ethyltoluene	105	18.382	18.382	0.000	98	900723	4.00	3.67	
92 1,3,5-Trimethylbenzene	120	18.452	18.452	0.000	92	432339	4.00	3.52	
93 Alpha Methyl Styrene	118	18.678	18.678	0.000	87	353509	4.00	3.99	
94 n-Decane	57	18.715	18.716	-0.001	90	627966	4.00	3.74	
95 tert-Butylbenzene	119	18.866	18.865	0.001	91	838868	4.00	3.52	
96 1,2,4-Trimethylbenzene	105	18.876	18.879	-0.003	96	766460	4.00	3.67	
97 sec-Butylbenzene	105	19.129	19.127	0.002	98	1163047	4.00	3.56	
98 1,3-Dichlorobenzene	146	19.151	19.151	0.000	99	388834	4.00	4.01	
99 Benzyl chloride	91	19.221	19.222	-0.001	98	444170	4.00	4.10	
100 1,4-Dichlorobenzene	146	19.237	19.236	0.001	95	334767	4.00	4.03	
101 4-Isopropyltoluene	119	19.285	19.283	0.002	96	880317	4.00	3.72	
102 1,2,3-Trimethylbenzene	105	19.339	19.340	-0.001	99	578208	4.00	3.59	
103 Butylcyclohexane	83	19.387	19.387	0.000	92	752044	4.00	3.55	
104 2,3-Dihydroindene	117	19.586	19.585	0.001	94	634195	4.00	3.70	
105 1,2-Dichlorobenzene	146	19.586	19.588	-0.002	95	393466	4.00	3.93	
106 n-Butylbenzene	91	19.705	19.706	-0.001	98	793620	4.00	4.04	
107 Indene	116	19.710	19.711	-0.001	90	411536	4.00	3.96	
108 Undecane	57	19.995	19.997	-0.002	96	578505	4.00	3.77	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.070	20.071	-0.001	98	602152	4.00	3.95	
110 1,2-Dibromo-3-Chloropropan	157	20.178	20.176	0.002	94	138821	4.00	5.09	
111 1,2,4,5-Tetramethylbenzene	119	20.452	20.454	-0.002	97	719532	4.00	4.03	
112 1,2,3,5-Tetramethylbenzene	119	20.511	20.509	0.002	95	444831	4.00	3.90	
113 1,2,3,4-Tetramethylbenzene	119	20.920	20.922	-0.002	97	558141	4.00	3.91	
114 Dodecane	57	21.065	21.067	-0.002	95	528290	4.00	4.01	
115 1,2,4-Trichlorobenzene	180	21.302	21.300	0.002	94	128473	4.00	5.62	
116 Naphthalene	128	21.447	21.446	0.001	99	348810	4.00	5.22	
117 Benzo(b)thiophene	134	21.544	21.545	-0.001	99	130640	4.00	4.84	
118 Hexachlorobutadiene	225	21.630	21.631	-0.001	96	373791	4.00	3.60	
119 1,2,3-Trichlorobenzene	180	21.694	21.697	-0.003	95	132264	4.00	4.91	
120 2-Methylnaphthalene	142	22.248	22.263	-0.015	98	48712	12.5	14.2	
121 1-Methylnaphthalene	142	22.372	22.359	0.013	99	64798	12.5	14.0	
A 124 Toluene Range	1	14.182	(14.152-14.212)		0	2054791	4.00	3.62	
A 125 C8 Range	1	14.834	(14.800-14.900)		0	2829479	4.00	3.72	
S 126 Xylenes, Total	100				0		12.0	10.2	
S 127 1,2-Dichloroethene, Total	1				0		8.00	8.00	

Reagents:

40L7DNP_00007	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

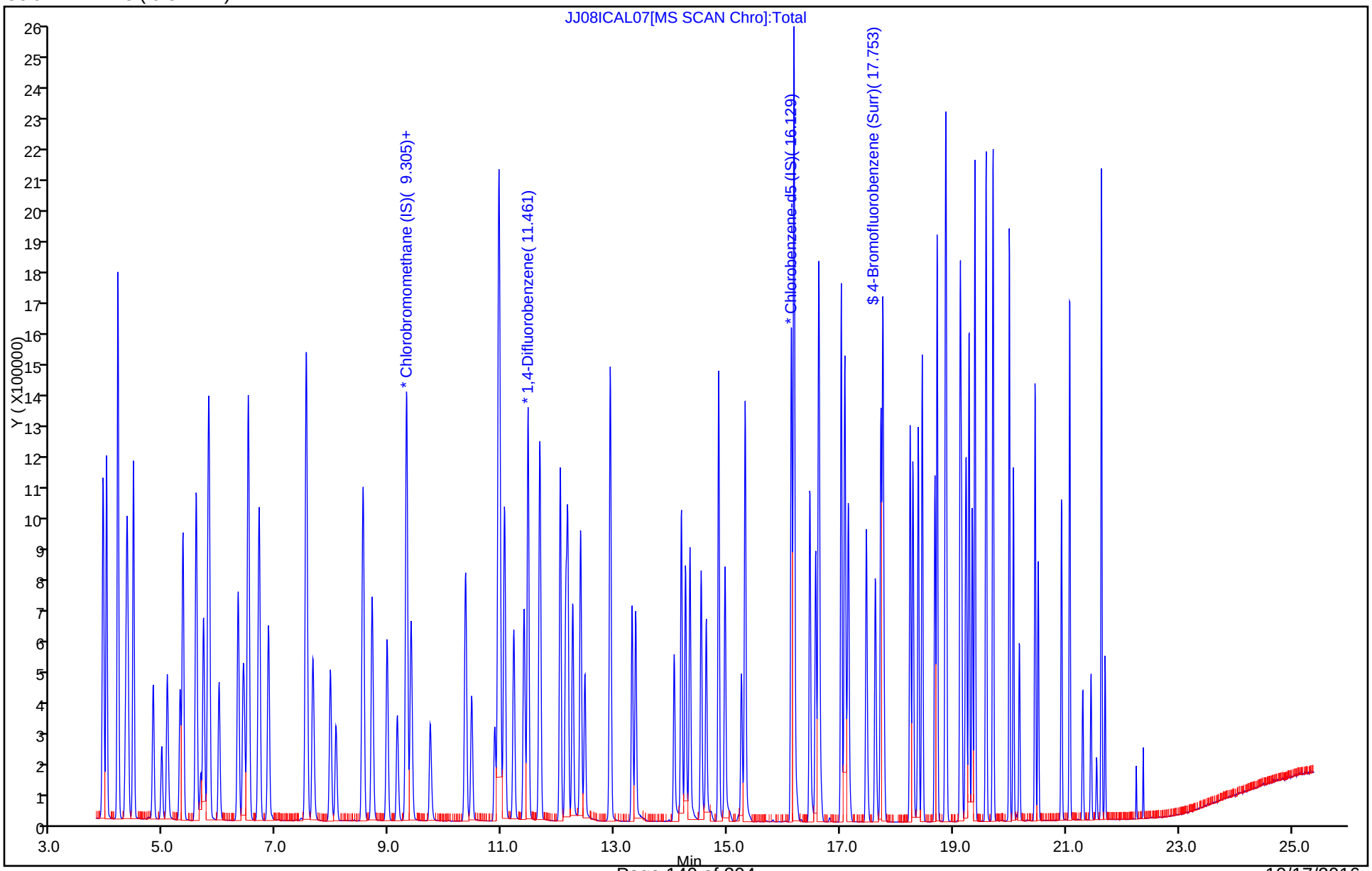
Report Date: 11-Oct-2016 11:31:17 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL07.D

Injection Date:	09-Oct-2016 00:23:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	IC L7			Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

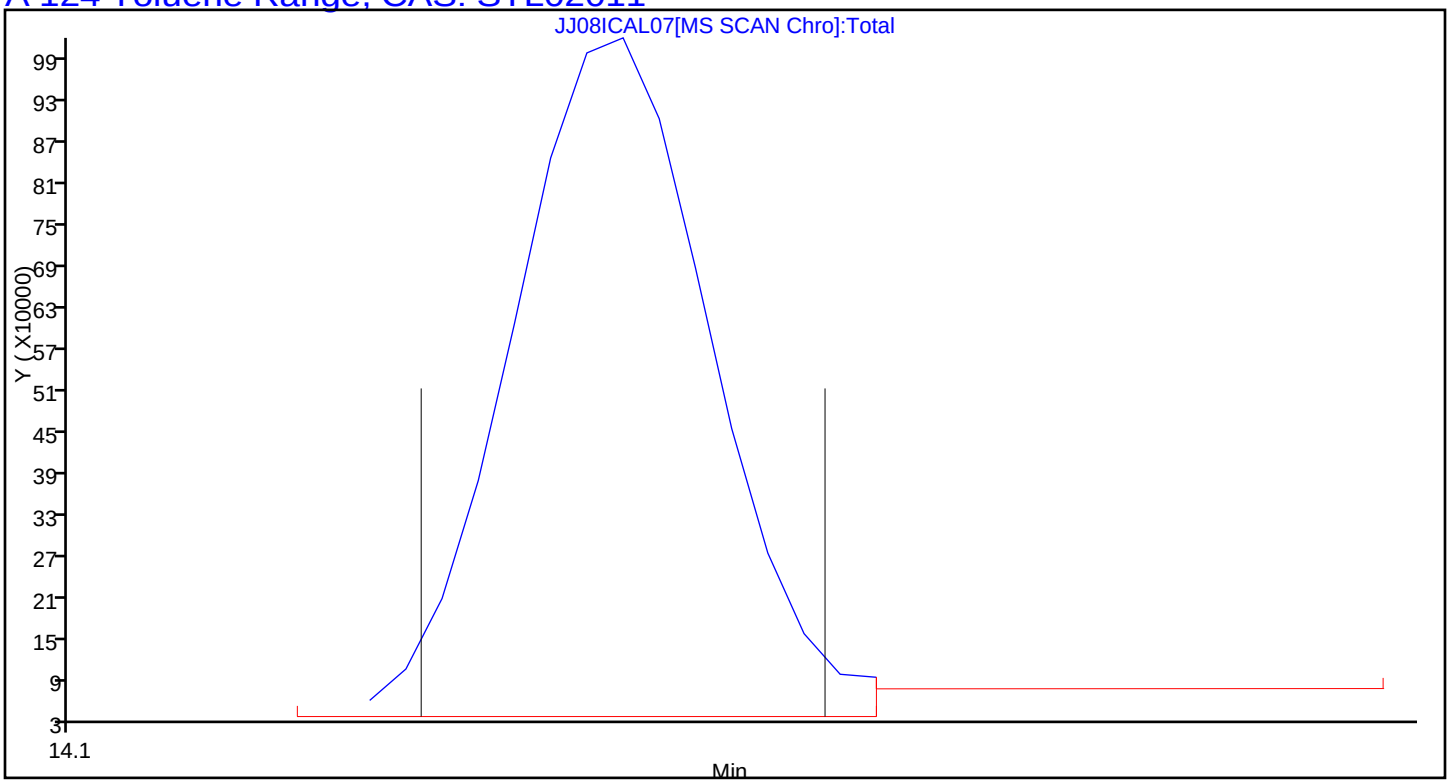


Report Date: 11-Oct-2016 11:31:17 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL07.D				
Injection Date:	09-Oct-2016 00:23:30	Instrument ID:	MJ		
Lims ID:	IC L7				
Client ID:					
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

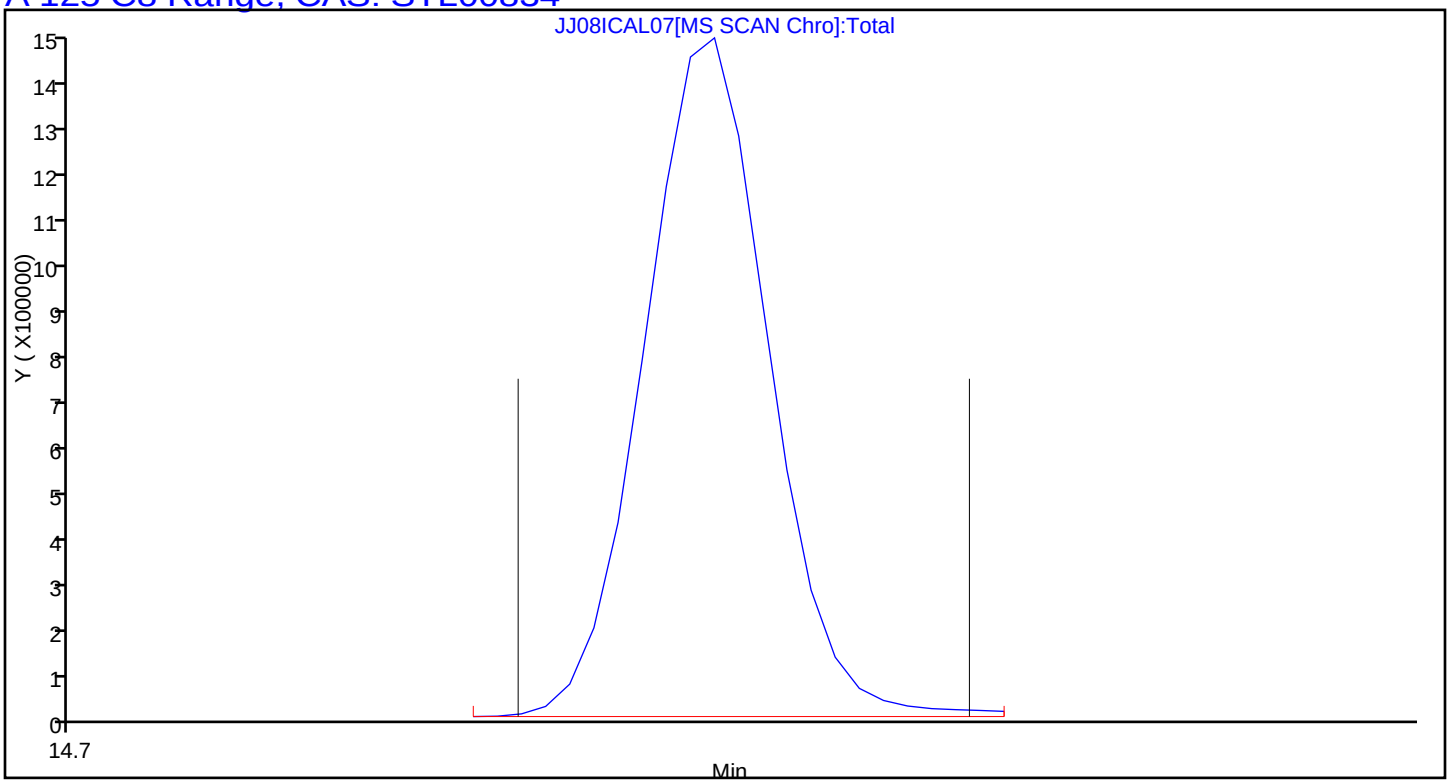


Report Date: 11-Oct-2016 11:31:17 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL07.D				
Injection Date:	09-Oct-2016 00:23:30	Instrument ID:	MJ		
Lims ID:	IC L7				
Client ID:					
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL08.D
Lims ID: IC l8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 09-Oct-2016 01:17:30 ALS Bottle#: 7 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003509-010
Misc. Info.: 059238
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 11:31:25 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2016 11:09:53

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	9.306	9.302	0.004	98	284819	4.00	4.00	
*	2 1,4-Difluorobenzene	114	11.467	11.461	0.006	95	1324409	4.00	4.00	
*	3 Chlorobenzene-d5 (IS)	117	16.135	16.131	0.004	88	1187427	4.00	4.00	
$	4 4-Bromofluorobenzene (Surr	95	17.753	17.753	0.000	90	746473	4.00	4.17	
	6 Chlorodifluoromethane	67	3.917	3.918	-0.001	97	232629	8.00	8.02	
	7 Propene	41	3.934	3.933	0.001	99	742703	8.00	7.46	
	8 Dichlorodifluoromethane	85	3.987	3.987	0.000	100	2135941	8.00	7.62	
	9 Chloromethane	52	4.186	4.183	0.003	99	229632	8.00	7.14	
	10 1,2-Dichloro-1,1,2,2-tetra	135	4.192	4.188	0.004	91	1015771	8.00	6.88	
	11 Acetaldehyde	44	4.348	4.349	-0.001	98	1109442	40.0	37.3	
	12 Vinyl chloride	62	4.369	4.369	0.000	99	724665	8.00	7.49	
	14 Butadiene	54	4.466	4.463	0.003	70	545901	8.00	7.59	
	13 Butane	43	4.466	4.465	0.001	85	1028652	8.00	7.33	
	15 Bromomethane	94	4.815	4.815	0.000	99	679891	8.00	7.76	
	16 Chloroethane	64	4.966	4.964	0.002	96	314274	8.00	7.76	
	17 Ethanol	31	5.068	5.063	0.005	97	1085964	40.0	40.0	
	18 Vinyl bromide	106	5.294	5.290	0.004	99	717438	8.00	7.89	
	19 2-Methylbutane	43	5.342	5.341	0.001	92	857434	8.00	7.42	
	20 Trichlorofluoromethane	101	5.574	5.576	-0.002	100	1874869	8.00	7.67	
	21 Acrolein	56	5.590	5.586	0.004	94	217138	8.00	8.68	
	22 Acetonitrile	40	5.660	5.657	0.003	99	274355	8.00	8.90	
	23 Acetone	58	5.708	5.712	-0.004	97	759323	24.0	24.6	
	24 Isopropyl alcohol	45	5.794	5.793	0.001	95	2482177	24.0	23.3	
	25 Pentane	72	5.810	5.805	0.005	98	110628	8.00	7.77	
	26 Ethyl ether	31	5.982	5.987	-0.005	94	759662	8.00	8.47	
	27 1,1-Dichloroethene	96	6.321	6.319	0.002	98	705786	8.00	7.89	
	28 2-Methyl-2-propanol	59	6.418	6.419	-0.001	96	1117829	8.00	8.08	
	29 Acrylonitrile	53	6.434	6.429	0.005	93	449131	8.00	8.74	
	30 1,1,2-Trichloro-1,2,2-trif	101	6.499	6.499	0.000	95	1443316	8.00	7.62	
	31 Methylene Chloride	84	6.687	6.682	0.005	96	629410	8.00	6.96	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.703	6.698	0.005	96	638806	8.00	7.49	
33 Carbon disulfide	76	6.859	6.857	0.002	99	2084710	8.00	7.54	
34 trans-1,2-Dichloroethene	96	7.526	7.521	0.005	98	686121	8.00	7.78	
35 2-Methylpentane	43	7.536	7.532	0.004	94	1419823	8.00	7.33	
36 Methyl tert-butyl ether	73	7.644	7.653	-0.009	97	1608749	8.00	8.72	
37 1,1-Dichloroethane	63	7.961	7.955	0.006	100	1282760	8.00	7.84	
38 Vinyl acetate	43	8.058	8.055	0.003	100	1643291	8.00	9.14	
39 2-Butanone (MEK)	72	8.520	8.524	-0.004	98	272011	8.00	9.00	
40 Hexane	56	8.542	8.537	0.005	90	549243	8.00	7.64	
41 Isopropyl ether	45	8.698	8.702	-0.004	97	2044544	8.00	8.22	
42 cis-1,2-Dichloroethene	96	8.967	8.961	0.006	95	698544	8.00	8.04	
43 Ethyl acetate	43	9.144	9.146	-0.002	99	1211378	8.00	8.89	
44 Chloroform	83	9.316	9.310	0.006	97	1426851	8.00	7.97	
45 Tert-butyl ethyl ether	59	9.392	9.392	0.000	96	1728031	8.00	8.47	
46 Tetrahydrofuran	42	9.725	9.738	-0.013	93	676405	8.00	8.95	
47 1,1,1-Trichloroethane	97	10.354	10.352	0.002	97	1470609	8.00	7.99	
48 1,2-Dichloroethane	62	10.467	10.461	0.006	97	914302	8.00	8.06	
49 n-Butanol	31	10.876	10.884	-0.008	91	272506	8.00	8.72	
50 Cyclohexane	69	10.940	10.937	0.003	94	308561	8.00	7.31	
51 Benzene	78	10.946	10.939	0.007	97	1869237	8.00	7.63	
52 Carbon tetrachloride	117	10.967	10.963	0.004	98	1440199	8.00	7.66	
53 2,3-Dimethylpentane	71	11.048	11.044	0.004	91	443680	8.00	7.90	
54 Thiophene	84	11.215	11.210	0.004	96	1101723	8.00	8.06	
55 Tert-amyl methyl ether	73	11.392	11.396	-0.004	98	1626808	8.00	8.39	
56 Isooctane	57	11.672	11.670	0.002	97	2963724	8.00	7.49	
57 n-Heptane	71	12.037	12.033	0.004	92	677602	8.00	7.93	
58 1,2-Dichloropropane	63	12.134	12.130	0.004	90	751794	8.00	8.02	
59 Trichloroethene	130	12.166	12.163	0.003	95	773499	8.00	7.86	
60 Dibromomethane	93	12.258	12.252	0.006	95	780137	8.00	8.16	
62 Dichlorobromomethane	83	12.392	12.388	0.004	99	1430339	8.00	8.38	
61 1,4-Dioxane	88	12.408	12.413	-0.005	90	234207	8.00	8.49	
63 Methyl methacrylate	41	12.473	12.470	0.003	91	690931	8.00	8.86	
64 Methylcyclohexane	83	12.919	12.919	0.000	95	1404210	8.00	7.74	
65 4-Methyl-2-pentanone (MIBK	43	13.312	13.310	0.002	98	1298660	8.00	8.55	
66 cis-1,3-Dichloropropene	75	13.371	13.369	0.002	95	1078107	8.00	8.74	
67 trans-1,3-Dichloropropene	75	14.054	14.051	0.003	99	970039	8.00	9.30	
68 Toluene	91	14.183	14.180	0.003	94	2108567	8.00	8.10	
69 1,1,2-Trichloroethane	83	14.258	14.253	0.005	97	665355	8.00	8.20	
70 2-Methylthiophene	97	14.333	14.332	0.001	97	1718039	8.00	8.19	
71 3-Methylthiophene	97	14.532	14.530	0.002	99	1657917	8.00	8.26	
72 2-Hexanone	58	14.624	14.624	0.000	93	624917	8.00	8.86	
73 n-Octane	85	14.844	14.841	0.003	93	684728	8.00	7.88	
74 Chlorodibromomethane	129	14.957	14.954	0.003	97	1314407	8.00	8.80	
75 Ethylene Dibromide	107	15.248	15.245	0.003	98	1141646	8.00	8.83	
76 Tetrachloroethene	129	15.312	15.312	0.000	95	737763	8.00	7.57	
77 2,3-Dimethylheptane	43	16.178	16.176	0.002	93	1776582	8.00	6.93	
78 Chlorobenzene	112	16.183	16.180	0.003	85	1484475	8.00	8.12	
79 Ethylbenzene	91	16.457	16.458	-0.001	98	2455584	8.00	8.54	
80 2-Ethylthiophene	97	16.565	16.563	0.002	97	1800351	8.00	8.77	
81 m-Xylene & p-Xylene	91	16.619	16.616	0.003	98	3477596	16.0	16.2	
82 n-Nonane	57	17.017	17.015	0.002	90	1354981	8.00	7.98	
83 Bromoform	173	17.076	17.077	-0.001	93	1179650	8.00	10.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.081	17.082	-0.001	100	1388066	8.00	10.2	
85 o-Xylene	91	17.146	17.142	0.004	100	1922232	8.00	8.15	
86 1,1,2,2-Tetrachloroethane	83	17.463	17.462	0.001	99	1531082	8.00	8.96	
87 1,2,3-Trichloropropane	110	17.624	17.623	0.001	98	368725	8.00	9.38	
88 Isopropylbenzene	105	17.721	17.719	0.002	97	2528390	8.00	8.44	
89 N-Propylbenzene	120	18.237	18.237	0.000	99	697239	8.00	9.43	
90 2-Chlorotoluene	126	18.291	18.287	0.004	97	651542	8.00	9.03	
91 4-Ethyltoluene	105	18.382	18.382	0.000	97	2330147	8.00	9.14	
92 1,3,5-Trimethylbenzene	120	18.452	18.452	0.000	92	1110666	8.00	8.71	
93 Alpha Methyl Styrene	118	18.678	18.678	0.000	87	998190	8.00	10.9	
94 n-Decane	57	18.716	18.716	0.000	92	1463837	8.00	8.40	
95 tert-Butylbenzene	119	18.866	18.865	0.001	90	2056871	8.00	8.33	
96 1,2,4-Trimethylbenzene	105	18.883	18.879	0.004	96	1892775	8.00	8.75	
97 sec-Butylbenzene	105	19.130	19.127	0.003	97	2829320	8.00	8.36	
98 1,3-Dichlorobenzene	146	19.151	19.151	0.000	98	1069569	8.00	10.6	
99 Benzyl chloride	91	19.221	19.222	-0.001	98	1286505	8.00	11.4	
100 1,4-Dichlorobenzene	146	19.237	19.236	0.001	94	970323	8.00	11.3	
101 4-Isopropyltoluene	119	19.286	19.283	0.003	95	2129135	8.00	8.67	
102 1,2,3-Trimethylbenzene	105	19.340	19.340	0.000	98	1461513	8.00	8.75	
103 Butylcyclohexane	83	19.388	19.387	0.001	93	1711828	8.00	7.79	
104 2,3-Dihydroindene	117	19.587	19.585	0.002	94	1614772	8.00	9.09	
105 1,2-Dichlorobenzene	146	19.587	19.588	-0.001	95	1039844	8.00	10.0	
106 n-Butylbenzene	91	19.705	19.706	-0.001	99	1924163	8.00	9.45	
107 Indene	116	19.711	19.711	0.000	90	1104068	8.00	10.2	
108 Undecane	57	19.996	19.997	-0.001	95	1425412	8.00	8.95	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.071	20.071	0.000	98	1459951	8.00	9.23	
110 1,2-Dibromo-3-Chloropropan	157	20.179	20.176	0.003	97	392578	8.00	13.9	
111 1,2,4,5-Tetramethylbenzene	119	20.453	20.454	-0.001	97	1709923	8.00	9.23	
112 1,2,3,5-Tetramethylbenzene	119	20.512	20.509	0.003	96	1057205	8.00	8.93	
113 1,2,3,4-Tetramethylbenzene	119	20.921	20.922	-0.001	97	1348346	8.00	9.12	
114 Dodecane	57	21.066	21.067	-0.001	95	1149872	8.00	8.41	
115 1,2,4-Trichlorobenzene	180	21.297	21.300	-0.003	94	408232	8.00	17.2	
116 Naphthalene	128	21.448	21.446	0.002	99	1018535	8.00	14.7	
117 Benzo(b)thiophene	134	21.544	21.545	-0.001	99	405817	8.00	14.5	
118 Hexachlorobutadiene	225	21.630	21.631	-0.001	96	953838	8.00	8.85	
119 1,2,3-Trichlorobenzene	180	21.695	21.697	-0.002	94	371167	8.00	13.3	
120 2-Methylnaphthalene	142	22.249	22.263	-0.014	99	114956	25.0	32.2	
121 1-Methylnaphthalene	142	22.372	22.359	0.013	99	142356	25.0	29.8	
A 124 Toluene Range	1	14.183	(14.153-14.213)		0	5193956	8.00	8.83	
A 125 C8 Range	1	14.850	(14.800-14.944)		0	6304355	8.00	8.00	
S 126 Xylenes, Total	100				0		24.0	24.3	
S 127 1,2-Dichloroethene, Total	1				0		16.0	15.8	

Reagents:

40L8DNP_00007	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

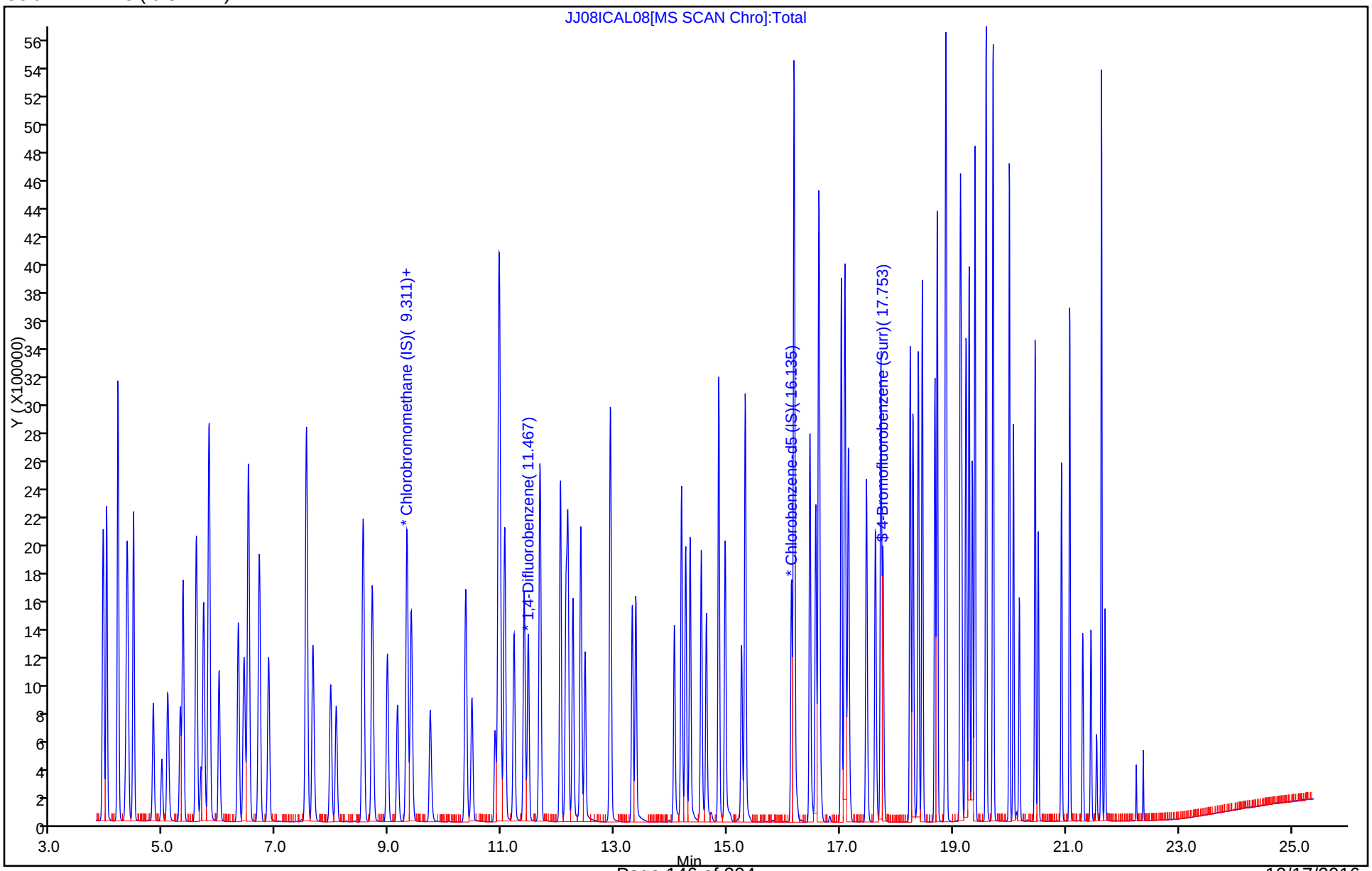
Report Date: 11-Oct-2016 11:31:27 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL08.D

Injection Date:	09-Oct-2016 01:17:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	IC l8			Worklist Smp#:	10
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

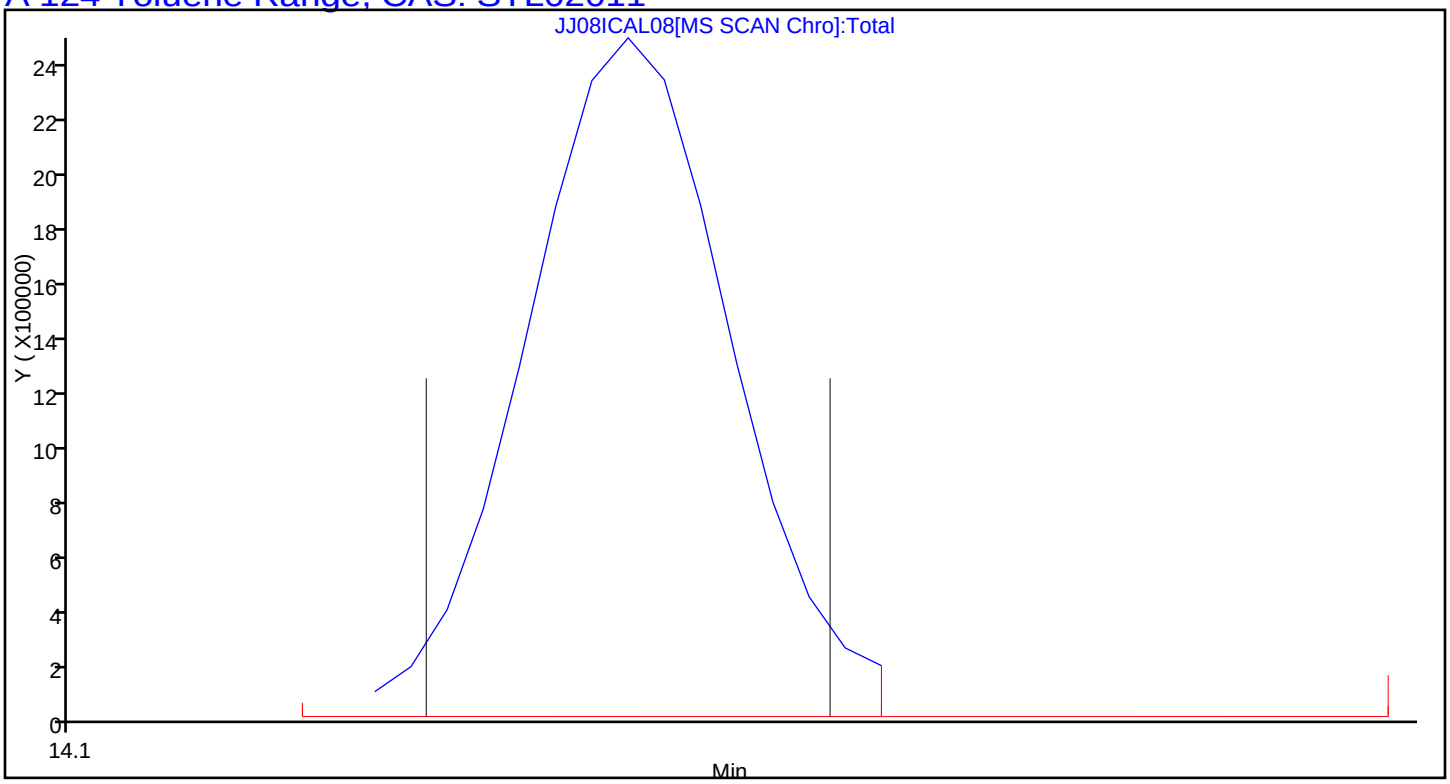


Report Date: 11-Oct-2016 11:31:27 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL08.D				
Injection Date:	09-Oct-2016 01:17:30	Instrument ID:	MJ		
Lims ID:	IC I8				
Client ID:					
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

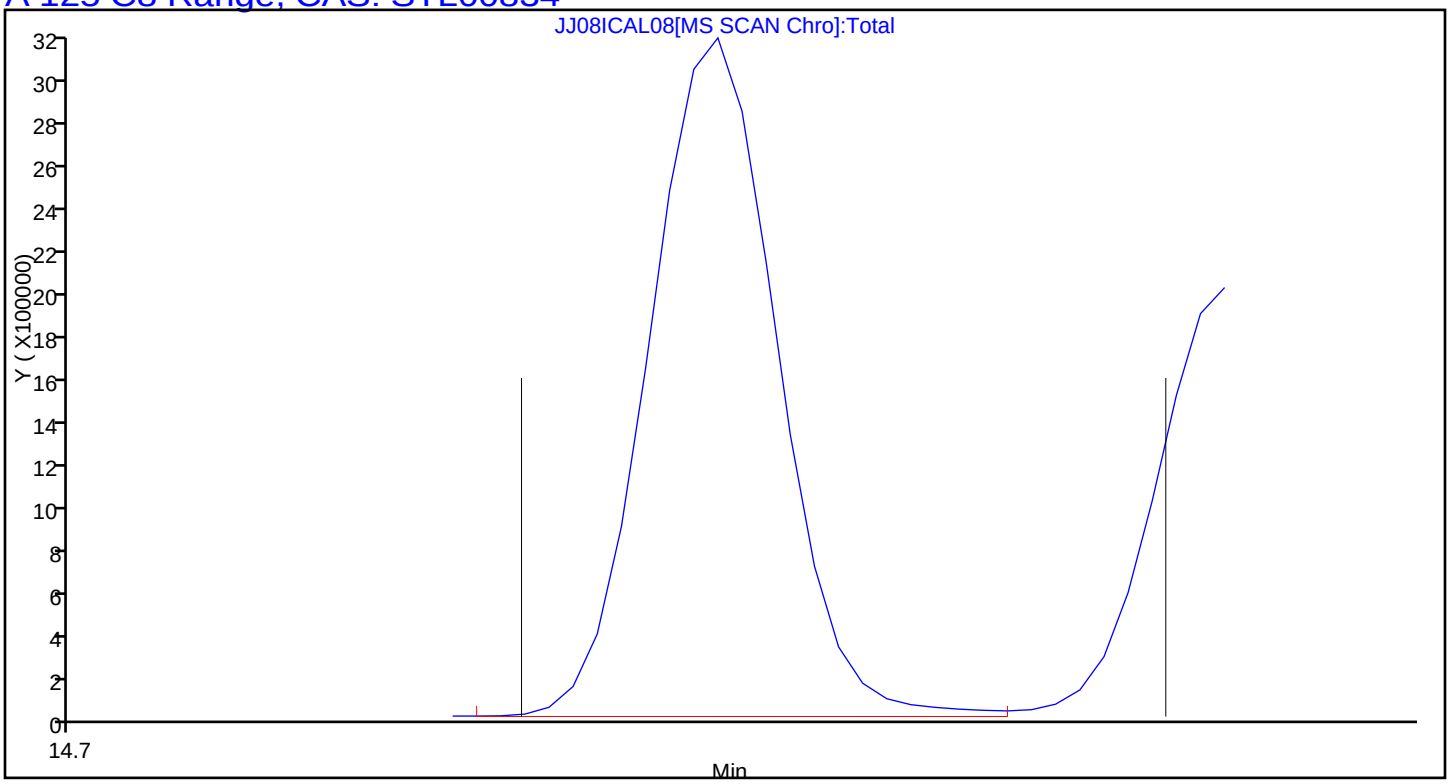


Report Date: 11-Oct-2016 11:31:27 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL08.D				
Injection Date:	09-Oct-2016 01:17:30	Instrument ID:	MJ		
Lims ID:	IC I8				
Client ID:					
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 09-Oct-2016 02:10:30 ALS Bottle#: 8 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003509-011
Misc. Info.: 059233
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 11:31:36 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2016 11:10:50

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	9.308	9.302	0.006	96	266883	4.00	4.00	
*	2 1,4-Difluorobenzene	114	11.470	11.461	0.009	95	1307339	4.00	4.00	
*	3 Chlorobenzene-d5 (IS)	117	16.132	16.131	0.001	88	1216984	4.00	4.00	
$	4 4-Bromofluorobenzene (Surr	95	17.756	17.753	0.003	90	759449	4.00	4.14	
	6 Chlorodifluoromethane	67	3.920	3.918	0.002	97	435440	16.0	16.0	
	7 Propene	41	3.936	3.933	0.003	99	1278552	16.0	13.7	
	8 Dichlorodifluoromethane	85	3.990	3.987	0.003	99	3672524	16.0	14.0	
	9 Chloromethane	52	4.183	4.183	0.000	98	390327	16.0	13.0	
	10 1,2-Dichloro-1,1,2,2-tetra	135	4.189	4.188	0.001	93	2125671	16.0	15.4	
	11 Acetaldehyde	44	4.350	4.349	0.001	98	2056351	80.0	73.9	
	12 Vinyl chloride	62	4.372	4.369	0.003	99	1305672	16.0	14.4	
	14 Butadiene	54	4.463	4.463	0.000	71	989900	16.0	14.7	
	13 Butane	43	4.463	4.465	-0.002	84	1833996	16.0	13.9	
	15 Bromomethane	94	4.818	4.815	0.003	99	1281974	16.0	15.6	
	16 Chloroethane	64	4.968	4.964	0.004	97	596998	16.0	15.7	
	17 Ethanol	31	5.076	5.063	0.013	97	1625717	80.0	63.9	
	18 Vinyl bromide	106	5.296	5.290	0.006	99	1395283	16.0	16.4	
	19 2-Methylbutane	43	5.345	5.341	0.004	91	1590512	16.0	14.7	
	20 Trichlorofluoromethane	101	5.581	5.576	0.005	100	3495723	16.0	15.3	
	21 Acrolein	56	5.592	5.586	0.006	95	382502	16.0	16.3	
	22 Acetonitrile	40	5.667	5.657	0.010	99	461794	16.0	16.0	
	23 Acetone	58	5.711	5.712	-0.002	97	1144445	48.0	39.6	
	24 Isopropyl alcohol	45	5.807	5.793	0.014	93	3961946	48.0	39.7	
	25 Pentane	72	5.813	5.805	0.008	98	207814	16.0	15.6	
	26 Ethyl ether	31	5.985	5.987	-0.002	94	1304099	16.0	15.5	
	27 1,1-Dichloroethene	96	6.324	6.319	0.005	99	1363879	16.0	16.3	
	28 2-Methyl-2-propanol	59	6.426	6.419	0.007	96	2020125	16.0	15.6	
	29 Acrylonitrile	53	6.436	6.429	0.007	94	739993	16.0	15.4	
	30 1,1,2-Trichloro-1,2,2-trif	101	6.501	6.499	0.002	96	2657038	16.0	15.0	
	31 Methylene Chloride	84	6.689	6.682	0.007	98	1155194	16.0	13.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.705	6.698	0.007	98	1134376	16.0	14.2	
33 Carbon disulfide	76	6.861	6.857	0.004	99	3969758	16.0	15.3	
34 trans-1,2-Dichloroethene	96	7.528	7.521	0.007	99	1222745	16.0	14.8	
35 2-Methylpentane	43	7.539	7.532	0.007	93	2499321	16.0	13.8	
36 Methyl tert-butyl ether	73	7.646	7.653	-0.007	97	2582783	16.0	14.9	
37 1,1-Dichloroethane	63	7.964	7.955	0.009	100	2275244	16.0	14.8	
38 Vinyl acetate	43	8.060	8.055	0.005	100	2633160	16.0	15.6	
39 2-Butanone (MEK)	72	8.523	8.524	-0.001	97	396756	16.0	14.0	
40 Hexane	56	8.544	8.537	0.007	90	963328	16.0	14.3	
41 Isopropyl ether	45	8.700	8.702	-0.002	96	3156431	16.0	13.6	
42 cis-1,2-Dichloroethene	96	8.969	8.961	0.008	94	1240681	16.0	15.2	
43 Ethyl acetate	43	9.147	9.146	0.001	99	1885712	16.0	14.8	
44 Chloroform	83	9.319	9.310	0.009	97	2510211	16.0	15.0	
45 Tert-butyl ethyl ether	59	9.394	9.392	0.002	96	2695405	16.0	14.1	
46 Tetrahydrofuran	42	9.727	9.738	-0.011	92	1110580	16.0	15.7	
47 1,1,1-Trichloroethane	97	10.357	10.352	0.005	97	2557765	16.0	14.8	
48 1,2-Dichloroethane	62	10.469	10.461	0.008	97	1621122	16.0	14.5	
49 n-Butanol	31	10.883	10.884	-0.001	92	509145	16.0	16.5	
50 Cyclohexane	69	10.943	10.937	0.006	88	516001	16.0	12.4	
51 Benzene	78	10.943	10.939	0.004	97	3056544	16.0	12.6	
52 Carbon tetrachloride	117	10.964	10.963	0.001	98	2444049	16.0	13.2	
53 2,3-Dimethylpentane	71	11.050	11.044	0.006	91	782517	16.0	14.1	
54 Thiophene	84	11.217	11.210	0.007	97	1921978	16.0	14.3	
55 Tert-amyl methyl ether	73	11.394	11.396	-0.002	98	2536568	16.0	12.8	
56 Isooctane	57	11.674	11.670	0.004	96	5010864	16.0	12.8	
57 n-Heptane	71	12.040	12.033	0.007	91	1209602	16.0	14.3	
58 1,2-Dichloropropane	63	12.136	12.130	0.006	90	1297014	16.0	14.0	
59 Trichloroethene	130	12.169	12.163	0.006	96	1362381	16.0	14.0	
60 Dibromomethane	93	12.260	12.252	0.008	96	1372684	16.0	14.5	
62 Dichlorobromomethane	83	12.395	12.388	0.007	99	2542594	16.0	15.1	
61 1,4-Dioxane	88	12.411	12.413	-0.002	88	399104	16.0	14.7	
63 Methyl methacrylate	41	12.475	12.470	0.005	91	1102637	16.0	14.3	
64 Methylcyclohexane	83	12.922	12.919	0.003	96	2393729	16.0	13.4	
65 4-Methyl-2-pentanone (MIBK	43	13.314	13.310	0.004	97	2160191	16.0	14.4	
66 cis-1,3-Dichloropropene	75	13.373	13.369	0.004	95	1936451	16.0	15.9	
67 trans-1,3-Dichloropropene	75	14.056	14.051	0.005	99	1785545	16.0	16.7	
68 Toluene	91	14.185	14.180	0.005	94	3708453	16.0	13.9	
69 1,1,2-Trichloroethane	83	14.260	14.253	0.007	97	1190782	16.0	14.3	
70 2-Methylthiophene	97	14.336	14.332	0.004	97	3024608	16.0	14.1	
71 3-Methylthiophene	97	14.535	14.530	0.005	98	2968551	16.0	14.4	
72 2-Hexanone	58	14.626	14.624	0.002	94	1094375	16.0	15.1	
73 n-Octane	85	14.847	14.841	0.006	91	1203931	16.0	13.5	
74 Chlorodibromomethane	129	14.960	14.954	0.006	96	2356036	16.0	15.4	
75 Ethylene Dibromide	107	15.250	15.245	0.005	98	2076091	16.0	15.7	
76 Tetrachloroethene	129	15.314	15.312	0.002	95	1298341	16.0	13.0	
77 2,3-Dimethylheptane	43	16.180	16.176	0.004	91	2791997	16.0	10.6	
78 Chlorobenzene	112	16.186	16.180	0.006	94	2558548	16.0	13.7	
79 Ethylbenzene	91	16.460	16.458	0.002	98	4122632	16.0	14.0	
80 2-Ethylthiophene	97	16.567	16.563	0.004	97	3126145	16.0	14.9	
81 m-Xylene & p-Xylene	91	16.621	16.616	0.005	97	5598414	32.0	25.4	
82 n-Nonane	57	17.019	17.015	0.004	88	2301308	16.0	13.2	
83 Bromoform	173	17.078	17.077	0.001	95	2195036	16.0	19.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.084	17.082	0.002	99	2341796	16.0	16.8	
85 o-Xylene	91	17.148	17.142	0.006	100	3180197	16.0	13.2	
86 1,1,2,2-Tetrachloroethane	83	17.465	17.462	0.003	99	2592834	16.0	14.8	
87 1,2,3-Trichloropropane	110	17.627	17.623	0.004	98	646183	16.0	16.0	
88 Isopropylbenzene	105	17.723	17.719	0.004	98	4117496	16.0	13.4	
89 N-Propylbenzene	120	18.240	18.237	0.003	98	1195062	16.0	15.8	
90 2-Chlorotoluene	126	18.288	18.287	0.001	96	1160412	16.0	15.7	
91 4-Ethyltoluene	105	18.385	18.382	0.003	96	3866352	16.0	14.8	
92 1,3,5-Trimethylbenzene	120	18.455	18.452	0.003	93	1880990	16.0	14.4	
93 Alpha Methyl Styrene	118	18.681	18.678	0.003	86	1763503	16.0	18.7	
94 n-Decane	57	18.718	18.716	0.002	94	2385192	16.0	13.3	
95 tert-Butylbenzene	119	18.869	18.865	0.004	91	3350611	16.0	13.2	
96 1,2,4-Trimethylbenzene	105	18.885	18.879	0.006	95	3075224	16.0	13.9	
97 sec-Butylbenzene	105	19.127	19.127	0.000	96	4490227	16.0	12.9	
98 1,3-Dichlorobenzene	146	19.154	19.151	0.003	98	1950364	16.0	18.9	
99 Benzyl chloride	91	19.224	19.222	0.002	98	2389971	16.0	20.7	
100 1,4-Dichlorobenzene	146	19.240	19.236	0.004	92	1819109	16.0	20.6	
101 4-Isopropyltoluene	119	19.288	19.283	0.005	95	3504694	16.0	13.9	
102 1,2,3-Trimethylbenzene	105	19.342	19.340	0.002	98	2457067	16.0	14.3	
103 Butylcyclohexane	83	19.390	19.387	0.003	93	2867784	16.0	12.7	
104 2,3-Dihydroindene	117	19.584	19.585	-0.001	94	2671703	16.0	14.7	
105 1,2-Dichlorobenzene	146	19.589	19.588	0.001	93	1828104	16.0	17.2	
106 n-Butylbenzene	91	19.708	19.706	0.002	99	3209166	16.0	15.4	
107 Indene	116	19.713	19.711	0.002	89	1914125	16.0	17.3	
108 Undecane	57	19.998	19.997	0.001	93	2355117	16.0	14.4	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.073	20.071	0.002	97	2574855	16.0	15.9	
110 1,2-Dibromo-3-Chloropropan	157	20.176	20.176	0.000	96	796269	16.0	27.5	
111 1,2,4,5-Tetramethylbenzene	119	20.455	20.454	0.001	98	3014619	16.0	15.9	
112 1,2,3,5-Tetramethylbenzene	119	20.509	20.509	0.000	96	1900079	16.0	15.7	
113 1,2,3,4-Tetramethylbenzene	119	20.923	20.922	0.001	98	2447419	16.0	16.1	
114 Dodecane	57	21.068	21.067	0.001	94	2101742	16.0	15.0	
115 1,2,4-Trichlorobenzene	180	21.299	21.300	-0.001	94	937716	16.0	38.6	
116 Naphthalene	128	21.445	21.446	-0.001	98	2037663	16.0	28.7	
117 Benzo(b)thiophene	134	21.547	21.545	0.002	99	902790	16.0	31.5	
118 Hexachlorobutadiene	225	21.633	21.631	0.002	95	1735997	16.0	15.7	
119 1,2,3-Trichlorobenzene	180	21.697	21.697	0.000	95	786968	16.0	27.5	
120 2-Methylnaphthalene	142	22.251	22.263	-0.012	99	307877	50.0	84.3	
121 1-Methylnaphthalene	142	22.375	22.359	0.016	99	369497	50.0	75.3	
A 124 Toluene Range	1	14.185	(14.155-14.215)		0	8816266	16.0	14.6	
A 125 C8 Range	1	14.855	(14.808-14.952)		0	10853398	16.0	13.4	
S 126 Xylenes, Total	100				0		48.0	38.5	
S 127 1,2-Dichloroethene, Total	1				0		32.0	30.0	

Reagents:

40L9DNP_00009	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

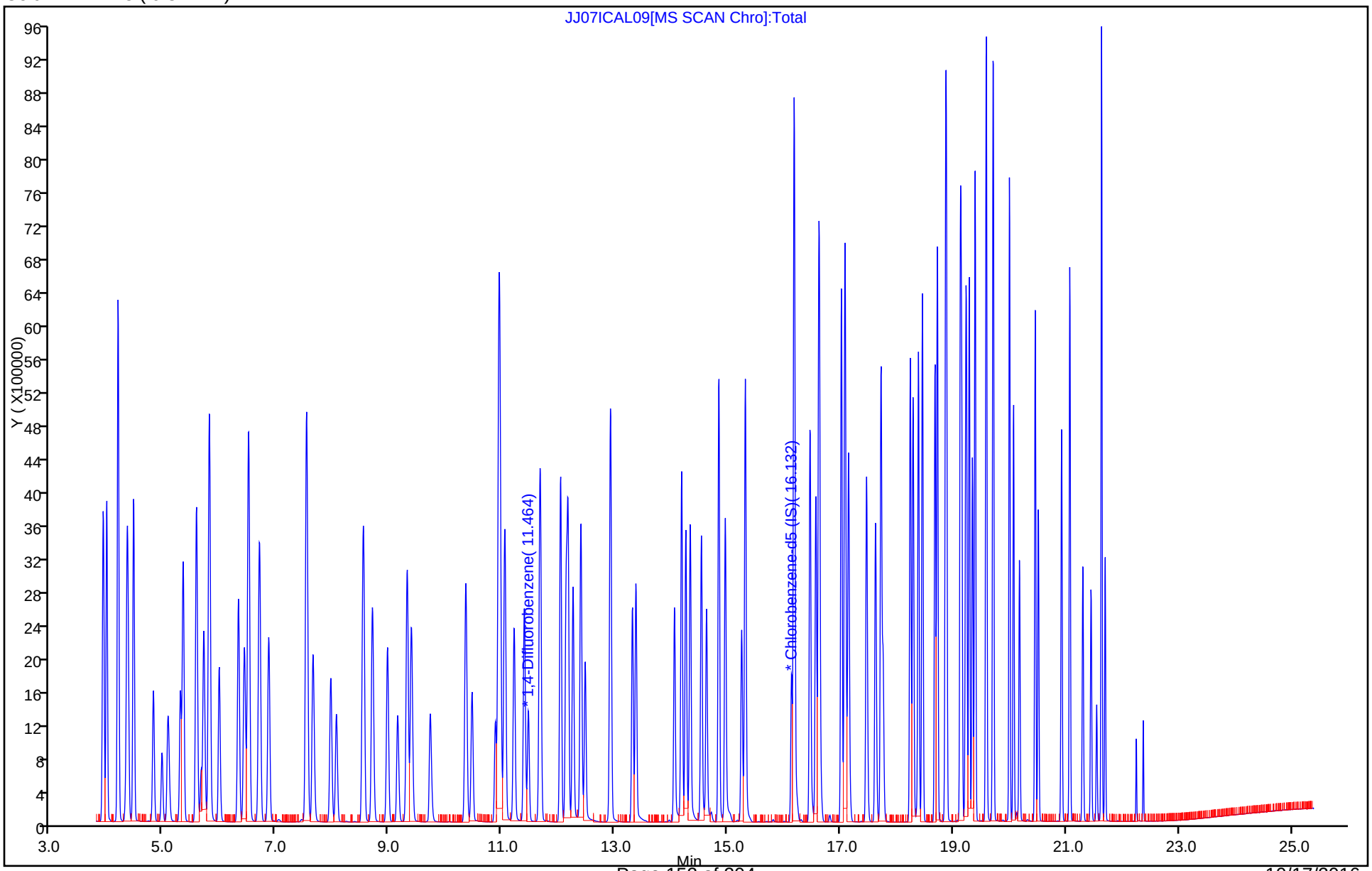
Report Date: 11-Oct-2016 11:31:37 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Injection Date:	09-Oct-2016 02:10:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	IC L9			Worklist Smp#:	11
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

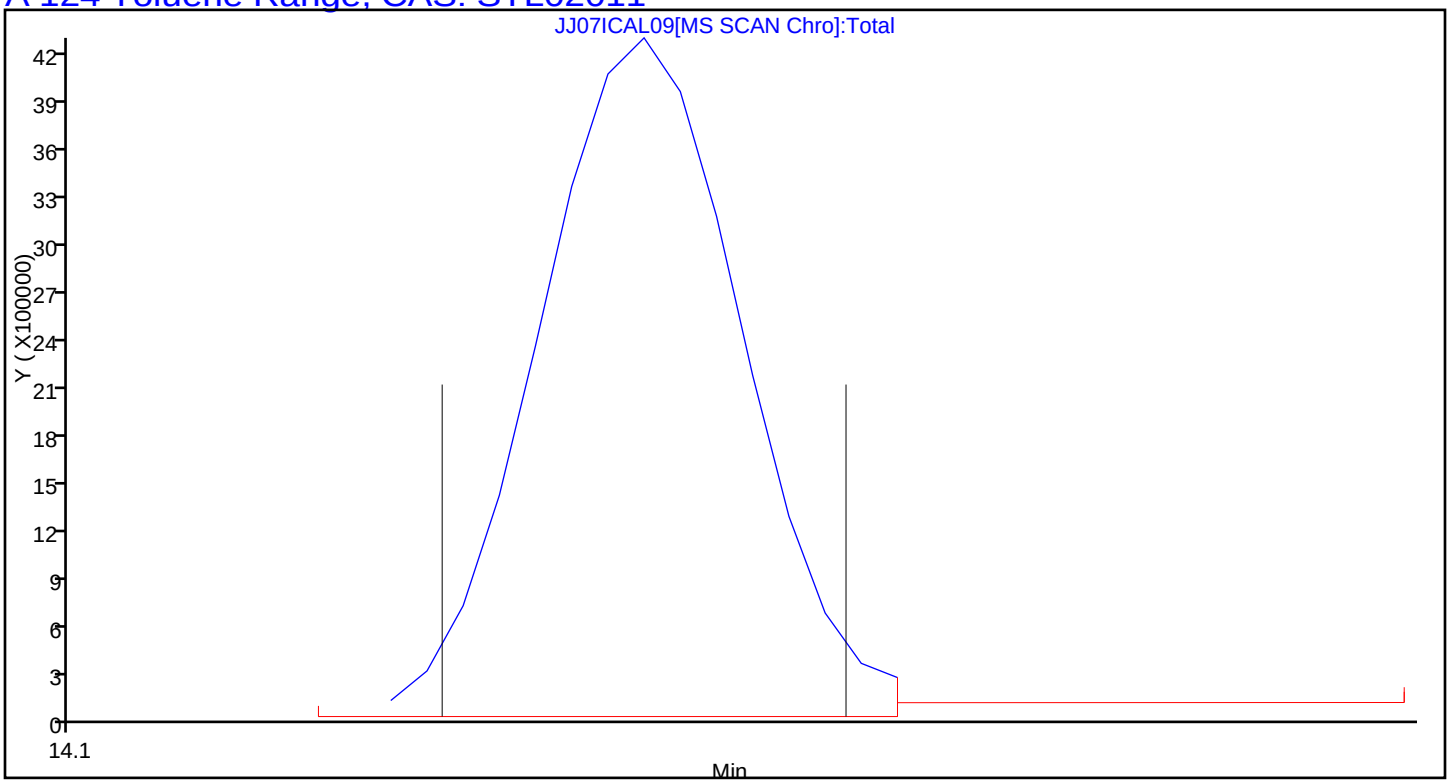


Report Date: 11-Oct-2016 11:31:37 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Injection Date:	09-Oct-2016 02:10:30	Instrument ID:	MJ		
Lims ID:	IC L9				
Client ID:					
Operator ID:	403648	ALS Bottle#:	8	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

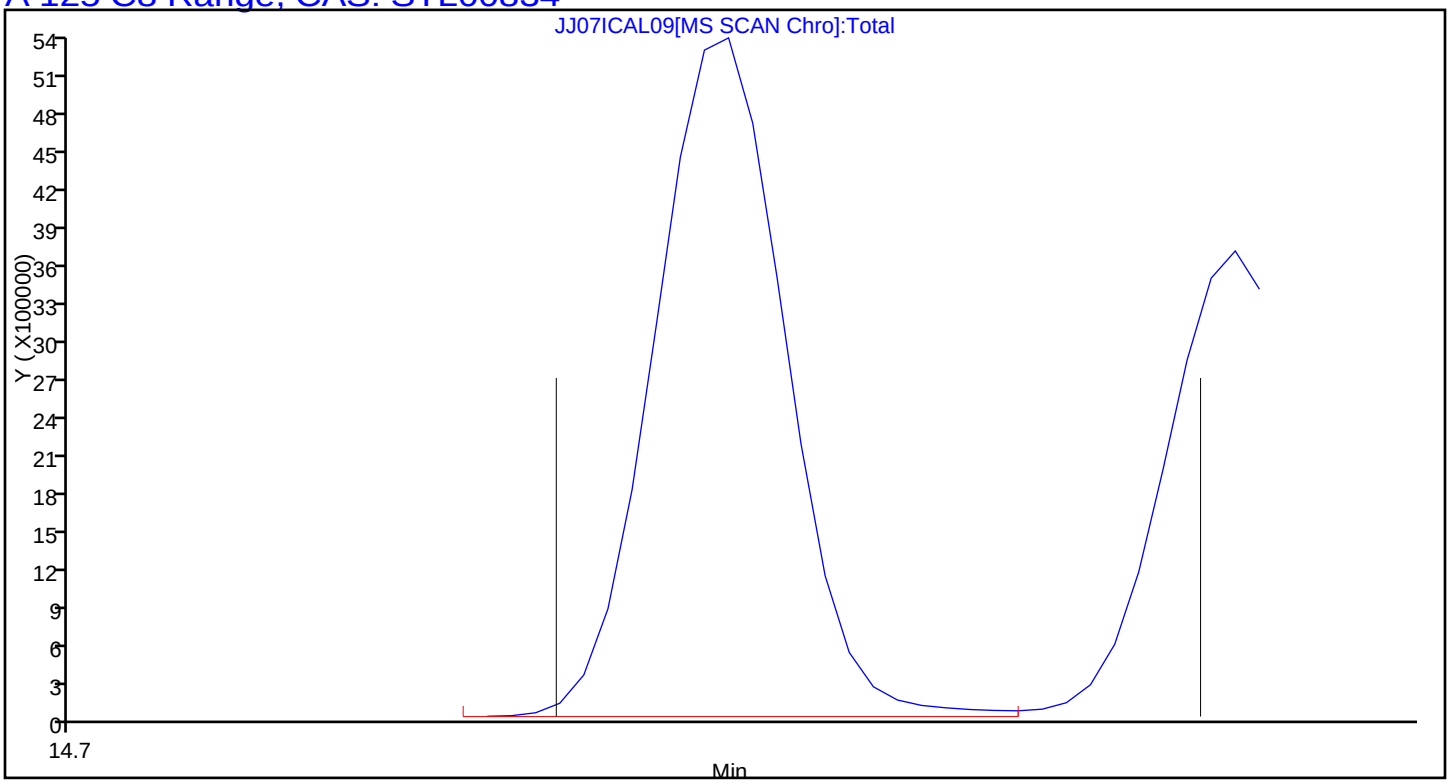


Report Date: 11-Oct-2016 11:31:37 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Injection Date:	09-Oct-2016 02:10:30	Instrument ID:	MJ		
Lims ID:	IC L9				
Client ID:					
Operator ID:	403648	ALS Bottle#:	8	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1

SDG No.:

Lab Sample ID: ICV 140-6845/17 Calibration Date: 10/09/2016 07:04

Instrument ID: MJ Calib Start Date: 10/08/2016 19:01

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/09/2016 02:10

Lab File ID: JJ08LCS.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4073	0.4360		2.14	2.00	7.1	35.0
Propene	Ave	1.399	1.498		2.14	2.00	7.1	35.0
Dichlorodifluoromethane	Ave	3.938	4.219		2.14	2.00	7.1	35.0
Chloromethane	Ave	0.4515	0.4605		2.04	2.00	2.0	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.073	2.123		2.05	2.00	2.4	35.0
Acetaldehyde	Ave	0.4172	0.3708		8.89	10.0	-11.1	35.0
Vinyl chloride	Ave	1.359	1.477		2.18	2.00	8.7	35.0
1,3-Butadiene	Ave	1.010	1.081		2.14	2.00	7.0	35.0
Butane	Ave	1.971	2.080		2.11	2.00	5.5	35.0
Bromomethane	Ave	1.230	1.299		2.11	2.00	5.6	35.0
Chloroethane	Ave	0.5688	0.6180		2.17	2.00	8.7	35.0
Ethanol	Ave	0.3812	0.3603		9.46	10.0	-5.5	35.0
Vinyl bromide	Ave	1.277	1.456		2.28	2.00	14.0	35.0
2-Methylbutane	Ave	1.622	1.794		2.21	2.00	10.6	35.0
Trichlorofluoromethane	Ave	3.433	3.741		2.18	2.00	9.0	35.0
Acrolein	Ave	0.3514	0.3286		1.87	2.00	-6.5	35.0
Acetonitrile	Ave	0.4327	0.4317		2.00	2.00	-0.2	35.0
Acetone	Ave	0.4327	0.4021		5.58	6.00	-7.1	35.0
Isopropyl alcohol	Ave	1.496	1.528		6.13	6.00	2.1	35.0
Pentane	Ave	0.2000	0.2291		2.29	2.00	14.6	35.0
Ethyl ether	Ave	1.260	1.162		1.84	2.00	-7.8	35.0
1,1-Dichloroethene	Ave	1.257	1.371		2.18	2.00	9.1	35.0
tert-Butyl alcohol	Ave	1.943	1.906		1.96	2.00	-1.9	35.0
Acrylonitrile	Ave	0.7216	0.6765		1.88	2.00	-6.3	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.661	2.992		2.25	2.00	12.4	35.0
Methylene Chloride	Ave	1.271	1.315		2.07	2.00	3.5	35.0
3-Chloropropene	Ave	1.198	1.267		2.12	2.00	5.8	35.0
Carbon disulfide	Ave	3.881	4.087		2.11	2.00	5.3	35.0
trans-1,2-Dichloroethene	Ave	1.239	1.372		2.22	2.00	10.8	35.0
2-Methylpentane	Ave	2.721	3.325		2.44	2.00	22.2	35.0
Methyl tert-butyl ether	Ave	2.592	2.382		1.84	2.00	-8.1	35.0
1,1-Dichloroethane	Ave	2.297	2.533		2.21	2.00	10.3	35.0
Vinyl acetate	Ave	2.526	2.213		1.75	2.00	-12.4	35.0
2-Butanone (MEK)	Ave	0.4246	0.3850		1.81	2.00	-9.3	35.0
Hexane	Ave	1.009	1.097		2.17	2.00	8.7	35.0
Isopropyl ether	Ave	3.491	2.967		1.70	2.00	-15.0	35.0
cis-1,2-Dichloroethene	Ave	1.220	1.353		2.22	2.00	10.9	35.0
Ethyl acetate	Ave	1.913	1.712		1.79	2.00	-10.5	35.0
Chloroform	Ave	2.515	2.586		2.06	2.00	2.8	35.0
Tert-butyl ethyl ether	Ave	2.864	2.813		1.97	2.00	-1.8	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1

SDG No.:

Lab Sample ID: ICV 140-6845/17 Calibration Date: 10/09/2016 07:04

Instrument ID: MJ Calib Start Date: 10/08/2016 19:01

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/09/2016 02:10

Lab File ID: JJ08LCS.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.061	0.9762		1.84	2.00	-8.0	35.0
1,1,1-Trichloroethane	Ave	2.584	2.783		2.16	2.00	7.7	35.0
1,2-Dichloroethane	Ave	0.3427	0.3958		2.31	2.00	15.5	35.0
1-Butanol	Ave	0.0944	0.1025		2.17	2.00	8.7	35.0
Benzene	Ave	0.7399	0.8480		2.29	2.00	14.6	35.0
Cyclohexane	Ave	0.1274	0.1553		2.44	2.00	21.9	35.0
Carbon tetrachloride	Ave	0.5676	0.6786		2.39	2.00	19.6	35.0
2,3-Dimethylpentane	Ave	0.1696	0.1865		2.20	2.00	10.0	35.0
Thiophene	Ave	0.4127	0.4847		2.35	2.00	17.5	35.0
Tert-amyl methyl ether	Ave	0.6531	0.6553		2.01	2.00	0.3	35.0
2,2,4-Trimethylpentane	Ave	1.194	1.356		2.27	2.00	13.5	35.0
Heptane	Ave	0.2581	0.2849		2.21	2.00	10.4	35.0
1,2-Dichloropropane	Ave	0.2830	0.3049		2.16	2.00	7.7	35.0
Trichloroethene	Ave	0.2971	0.3390		2.28	2.00	14.1	35.0
Dibromomethane	Ave	0.2887	0.3263		2.26	2.00	13.0	35.0
Bromodichloromethane	Ave	0.5158	0.5761		2.24	2.00	11.7	35.0
1,4-Dioxane	Ave	0.0833	0.0886		2.13	2.00	6.3	35.0
Methyl methacrylate	Ave	0.2356	0.2237		1.90	2.00	-5.0	35.0
Methylcyclohexane	Ave	0.5478	0.5258		1.92	2.00	-4.0	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4587	0.4841		2.11	2.00	5.5	35.0
cis-1,3-Dichloropropene	Ave	0.3725	0.4136		2.22	2.00	11.0	35.0
trans-1,3-Dichloropropene	Ave	0.3515	0.3792		2.16	2.00	7.9	35.0
Toluene	Ave	0.8769	0.9365		2.14	2.00	6.8	35.0
1,1,2-Trichloroethane	Ave	0.2733	0.2849		2.09	2.00	4.3	35.0
2-Methylthiophene	Ave	0.7071	0.8099		2.29	2.00	14.5	35.0
3-Methylthiophene	Ave	0.6759	0.7922		2.35	2.00	17.2	35.0
2-Hexanone	Ave	0.2377	0.2522		2.12	2.00	6.1	35.0
Octane	Ave	0.2927	0.3177		2.17	2.00	8.5	35.0
Dibromochloromethane	Ave	0.5033	0.5559		2.21	2.00	10.5	35.0
1,2-Dibromoethane (EDB)	Ave	0.4354	0.4760		2.19	2.00	9.3	35.0
Tetrachloroethene	Ave	0.3284	0.3556		2.17	2.00	8.3	35.0
2,3-Dimethylheptane	Ave	0.8637	0.9400		2.18	2.00	8.8	35.0
Chlorobenzene	Ave	0.6155	0.6685		2.17	2.00	8.6	35.0
Ethylbenzene	Ave	0.9686	0.9699		2.00	2.00	0.1	35.0
2-Ethylthiophene	Ave	0.6914	0.7018		2.03	2.00	1.5	35.0
m-Xylene & p-Xylene	Ave	0.7248	0.7307		4.03	4.00	0.8	35.0
Nonane	Ave	0.5723	0.6149		2.15	2.00	7.4	35.0
Bromoform	Ave	0.3787	0.4257		2.25	2.00	12.4	35.0
Styrene	Ave	0.4578	0.5106		2.23	2.00	11.5	35.0
o-Xylene	Ave	0.7946	0.7726		1.95	2.00	-2.8	35.0
1,1,2,2-Tetrachloroethane	Ave	0.5758	0.5832		2.03	2.00	1.3	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1

SDG No.:

Lab Sample ID: ICV 140-6845/17 Calibration Date: 10/09/2016 07:04

Instrument ID: MJ Calib Start Date: 10/08/2016 19:01

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/09/2016 02:10

Lab File ID: JJ08LCS.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1324	0.1339		2.02	2.00	1.1	35.0
Isopropylbenzene	Ave	1.009	1.036		2.05	2.00	2.6	35.0
Propylbenzene	Ave	0.2492	0.2586		2.08	2.00	3.8	35.0
2-Chlorotoluene	Ave	0.2430	0.2558		2.11	2.00	5.3	35.0
4-Ethyltoluene	Ave	0.8584	0.8422		1.96	2.00	-1.9	35.0
1,3,5-Trimethylbenzene	Ave	0.4295	0.4357		2.03	2.00	1.5	35.0
Alpha Methyl Styrene	Ave	0.3098	0.3159		2.04	2.00	2.0	35.0
Decane	Ave	0.5873	0.6059		2.06	2.00	3.2	35.0
tert-Butylbenzene	Ave	0.8323	0.8488		2.04	2.00	2.0	35.0
1,2,4-Trimethylbenzene	Ave	0.7289	0.7687		2.11	2.00	5.5	35.0
sec-Butylbenzene	Ave	1.140	1.162		2.04	2.00	1.9	35.0
1,3-Dichlorobenzene	Ave	0.3388	0.3542		2.09	2.00	4.6	35.0
Benzyl chloride	Ave	0.3789	0.3714		1.96	2.00	-2.0	35.0
1,4-Dichlorobenzene	Ave	0.2901	0.2939		2.03	2.00	1.3	35.0
4-Isopropyltoluene	Ave	0.8275	0.8626		2.09	2.00	4.3	35.0
1,2,3-Trimethylbenzene	Ave	0.5630	0.6328		2.25	2.00	12.4	35.0
Butylcyclohexane	Ave	0.7399	0.7529		2.04	2.00	1.8	35.0
Indane	Ave	0.5985	0.5941		1.99	2.00	-0.7	35.0
1,2-Dichlorobenzene	Ave	0.3500	0.3648		2.09	2.00	4.3	35.0
Butylbenzene	Ave	0.6858	0.7376		2.15	2.00	7.6	35.0
Indene	Ave	0.3630	0.4709		2.60	2.00	29.7	35.0
Undecane	Ave	0.5362	0.5224		1.95	2.00	-2.6	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.5328	0.6957		2.61	2.00	30.6	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.0953	0.0888		1.86	2.00	-6.8	35.0
1,2,4,5-Tetramethylbenzene	Ave	0.6244	0.7067		2.26	2.00	13.2	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.3986	0.4571		2.29	2.00	14.7	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.4982	0.5408		2.17	2.00	8.6	35.0
Dodecane	Ave	0.4604	0.4600		2.00	2.00	-0.0	35.0
1,2,4-Trichlorobenzene	Ave	0.0799	0.0917		2.30	2.00	14.7	35.0
Naphthalene	Ave	0.2334	0.2634		2.26	2.00	12.8	35.0
Benzo(b)thiophene	Ave	0.0943	0.1047		2.22	2.00	11.0	35.0
Hexachlorobutadiene	Ave	0.3631	0.3101		1.71	2.00	-14.6	35.0
1,2,3-Trichlorobenzene	Ave	0.0941	0.0989		2.10	2.00	5.0	35.0
2-Methylnaphthalene	Ave	0.0120	0.0115		6.00	6.25	-4.0	50.0
1-Methylnaphthalene	Ave	0.0161	0.0136		5.28	6.25	-15.5	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6030	0.6447		4.28	4.00	6.9	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08LCS.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 09-Oct-2016 07:04:30 ALS Bottle#: 10 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003509-017
Misc. Info.: 059230
Operator ID: 403648 Instrument ID: MJ
Sublist:

Method: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 12:05:23 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 11-Oct-2016 12:05:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.299	9.302	-0.003	97	290428	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.461	11.461	0.000	95	1211046	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.128	16.131	-0.003	88	1042574	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.752	17.750	-0.001	88	672133	4.00	4.28	
6 Chlorodifluoromethane	67	3.916	3.917	-0.002	97	63342	2.00	2.14	
7 Propene	41	3.927	3.931	-0.006	99	217637	2.00	2.14	
8 Dichlorodifluoromethane	85	3.986	3.986	-0.001	100	612992	2.00	2.14	
9 Chloromethane	52	4.180	4.182	-0.003	99	66902	2.00	2.04	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.185	4.187	-0.003	92	308406	2.00	2.05	
11 Acetaldehyde	44	4.347	4.348	-0.002	100	269335	10.0	8.89	
12 Vinyl chloride	62	4.368	4.368	-0.001	99	214639	2.00	2.18	
14 Butadiene	54	4.459	4.462	-0.004	68	157055	2.00	2.14	
13 Butane	43	4.459	4.463	-0.006	86	302205	2.00	2.11	
15 Bromomethane	94	4.809	4.813	-0.006	99	188724	2.00	2.11	
16 Chloroethane	64	4.960	4.963	-0.004	97	89791	2.00	2.17	
17 Ethanol	31	5.056	5.061	-0.007	98	261752	10.0	9.46	
18 Vinyl bromide	106	5.288	5.288	-0.002	99	211537	2.00	2.28	
19 2-Methylbutane	43	5.336	5.339	-0.005	92	260686	2.00	2.21	
20 Trichlorofluoromethane	101	5.573	5.574	-0.003	100	543594	2.00	2.18	
21 Acrolein	56	5.583	5.585	-0.003	95	47736	2.00	1.87	
22 Acetonitrile	40	5.653	5.656	-0.004	99	62723	2.00	2.00	
23 Acetone	58	5.702	5.710	-0.010	98	175266	6.00	5.58	
24 Isopropyl alcohol	45	5.782	5.791	-0.011	97	666200	6.00	6.13	
25 Pentane	72	5.804	5.803	-0.001	97	33292	2.00	2.29	
26 Ethyl ether	31	5.981	5.985	-0.006	93	168771	2.00	1.84	
27 1,1-Dichloroethene	96	6.315	6.317	-0.004	97	199162	2.00	2.18	
28 2-Methyl-2-propanol	59	6.406	6.417	-0.013	95	276883	2.00	1.96	
29 Acrylonitrile	53	6.428	6.427	-0.001	94	98293	2.00	1.88	
30 1,1,2-Trichloro-1,2,2-trif	101	6.497	6.497	-0.002	95	434702	2.00	2.25	
31 Methylene Chloride	84	6.680	6.680	-0.002	97	191023	2.00	2.07	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.696	6.696	-0.002	96	184128	2.00	2.12	
33 Carbon disulfide	76	6.858	6.855	0.001	99	593873	2.00	2.11	
34 trans-1,2-Dichloroethene	96	7.519	7.519	-0.002	98	199394	2.00	2.22	
35 2-Methylpentane	43	7.530	7.530	-0.002	95	483025	2.00	2.44	
36 Methyl tert-butyl ether	73	7.643	7.651	-0.010	97	346127	2.00	1.84	
37 1,1-Dichloroethane	63	7.949	7.953	-0.006	100	367991	2.00	2.21	
38 Vinyl acetate	43	8.052	8.052	-0.003	100	321595	2.00	1.75	
39 2-Butanone (MEK)	72	8.519	8.521	-0.005	96	55943	2.00	1.81	
40 Hexane	56	8.536	8.534	-0.001	90	159317	2.00	2.17	
41 Isopropyl ether	45	8.691	8.699	-0.011	98	431058	2.00	1.70	
42 cis-1,2-Dichloroethene	96	8.955	8.958	-0.006	95	196616	2.00	2.22	
43 Ethyl acetate	43	9.143	9.143	-0.003	99	248704	2.00	1.79	
44 Chloroform	83	9.310	9.307	0.000	97	375741	2.00	2.06	
45 Tert-butyl ethyl ether	59	9.385	9.389	-0.007	96	408722	2.00	1.97	
46 Tetrahydrofuran	42	9.729	9.734	-0.009	93	141837	2.00	1.84	
47 1,1,1-Trichloroethane	97	10.348	10.349	-0.004	96	404365	2.00	2.16	
48 1,2-Dichloroethane	62	10.461	10.456	0.000	98	239762	2.00	2.31	
49 n-Butanol	31	10.869	10.878	-0.015	91	62123	2.00	2.17	
50 Cyclohexane	69	10.939	10.932	0.002	72	94106	2.00	2.44	
51 Benzene	78	10.939	10.933	0.000	97	513774	2.00	2.29	
52 Carbon tetrachloride	117	10.961	10.957	-0.002	97	411138	2.00	2.39	
53 2,3-Dimethylpentane	71	11.041	11.039	-0.003	92	113015	2.00	2.20	
54 Thiophene	84	11.208	11.205	-0.002	97	293664	2.00	2.35	
55 Tert-amyl methyl ether	73	11.391	11.394	-0.005	98	341818	2.00	2.01	
56 Isooctane	57	11.665	11.664	-0.005	98	821283	2.00	2.27	
57 n-Heptane	71	12.031	12.027	-0.002	93	172588	2.00	2.21	
58 1,2-Dichloropropane	63	12.128	12.124	-0.002	91	184700	2.00	2.16	
59 Trichloroethene	130	12.160	12.158	-0.003	95	205397	2.00	2.28	
60 Dibromomethane	93	12.251	12.247	-0.001	93	197677	2.00	2.26	
62 Dichlorobromomethane	83	12.386	12.382	-0.002	99	349032	2.00	2.24	
61 1,4-Dioxane	88	12.402	12.407	-0.011	93	53657	2.00	2.13	
63 Methyl methacrylate	41	12.466	12.464	-0.004	91	135535	2.00	1.90	
64 Methylcyclohexane	83	12.918	12.913	-0.001	95	318536	2.00	1.92	
65 4-Methyl-2-pentanone (MIBK	43	13.305	13.304	-0.005	98	293313	2.00	2.11	
66 cis-1,3-Dichloropropene	75	13.370	13.362	0.001	95	250575	2.00	2.22	
67 trans-1,3-Dichloropropene	75	14.053	14.049	0.002	98	197773	2.00	2.16	
68 Toluene	91	14.176	14.177	-0.004	94	488441	2.00	2.14	
69 1,1,2-Trichloroethane	83	14.252	14.248	-0.001	97	148611	2.00	2.09	
70 2-Methylthiophene	97	14.332	14.329	0.000	97	422434	2.00	2.29	
71 3-Methylthiophene	97	14.531	14.527	0.001	99	413182	2.00	2.35	
72 2-Hexanone	58	14.623	14.622	-0.001	92	131514	2.00	2.12	
73 n-Octane	85	14.843	14.839	0.002	95	165697	2.00	2.17	
74 Chlorodibromomethane	129	14.951	14.951	-0.003	98	289960	2.00	2.21	
75 Ethylene Dibromide	107	15.241	15.242	-0.004	98	248278	2.00	2.19	
76 Tetrachloroethene	129	15.311	15.309	-0.001	95	185443	2.00	2.17	
77 2,3-Dimethylheptane	43	16.177	16.173	0.001	96	490258	2.00	2.18	
78 Chlorobenzene	112	16.177	16.177	-0.003	75	348675	2.00	2.17	
79 Ethylbenzene	91	16.456	16.455	-0.002	99	505889	2.00	2.00	
80 2-Ethylthiophene	97	16.558	16.560	-0.005	98	366040	2.00	2.03	
81 m-Xylene & p-Xylene	91	16.618	16.613	0.002	99	762243	4.00	4.03	
82 n-Nonane	57	17.016	17.012	0.001	93	320711	2.00	2.15	
83 Bromoform	173	17.075	17.074	-0.002	92	222043	2.00	2.25	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.080	17.079	-0.002	99	266334	2.00	2.23	
85 o-Xylene	91	17.139	17.139	-0.003	99	402947	2.00	1.95	
86 1,1,2,2-Tetrachloroethane	83	17.456	17.459	-0.006	99	304189	2.00	2.03	
87 1,2,3-Trichloropropane	110	17.618	17.619	-0.005	99	69823	2.00	2.02	
88 Isopropylbenzene	105	17.715	17.715	-0.004	97	540094	2.00	2.05	
89 N-Propylbenzene	120	18.236	18.234	-0.001	99	134863	2.00	2.08	
90 2-Chlorotoluene	126	18.285	18.284	-0.002	98	133435	2.00	2.11	
91 4-Ethyltoluene	105	18.381	18.379	-0.001	98	439253	2.00	1.96	
92 1,3,5-Trimethylbenzene	120	18.451	18.448	-0.001	92	227267	2.00	2.03	
93 Alpha Methyl Styrene	118	18.677	18.674	-0.001	87	164775	2.00	2.04	
94 n-Decane	57	18.715	18.712	-0.001	90	315988	2.00	2.06	
95 tert-Butylbenzene	119	18.865	18.861	0.000	90	442717	2.00	2.04	
96 1,2,4-Trimethylbenzene	105	18.876	18.876	-0.003	96	400946	2.00	2.11	
97 sec-Butylbenzene	105	19.123	19.123	-0.004	98	606177	2.00	2.04	
98 1,3-Dichlorobenzene	146	19.145	19.147	-0.006	98	184753	2.00	2.09	
99 Benzyl chloride	91	19.220	19.218	-0.002	98	193714	2.00	1.96	
100 1,4-Dichlorobenzene	146	19.231	19.233	-0.005	95	153293	2.00	2.03	
101 4-Isopropyltoluene	119	19.279	19.279	-0.004	96	449920	2.00	2.09	
102 1,2,3-Trimethylbenzene	105	19.339	19.336	-0.001	98	330018	2.00	2.25	
103 Butylcyclohexane	83	19.387	19.383	0.000	92	392685	2.00	2.04	
104 2,3-Dihydroindene	117	19.581	19.581	-0.004	94	309857	2.00	1.99	
105 1,2-Dichlorobenzene	146	19.586	19.585	-0.002	96	190286	2.00	2.09	
106 n-Butylbenzene	91	19.704	19.702	-0.002	98	384717	2.00	2.15	
107 Indene	116	19.710	19.708	-0.001	90	245592	2.00	2.60	
108 Undecane	57	19.995	19.993	-0.002	96	272459	2.00	1.95	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.070	20.067	-0.001	98	362852	2.00	2.61	
110 1,2-Dibromo-3-Chloropropan	157	20.177	20.172	0.001	91	46307	2.00	1.86	
111 1,2,4,5-Tetramethylbenzene	119	20.452	20.450	-0.002	97	368574	2.00	2.26	
112 1,2,3,5-Tetramethylbenzene	119	20.505	20.505	-0.004	95	238392	2.00	2.29	
113 1,2,3,4-Tetramethylbenzene	119	20.920	20.918	-0.002	97	282060	2.00	2.17	
114 Dodecane	57	21.065	21.063	-0.002	95	239909	2.00	2.00	
115 1,2,4-Trichlorobenzene	180	21.301	21.296	0.001	94	47814	2.00	2.30	
116 Naphthalene	128	21.446	21.442	0.000	99	137359	2.00	2.26	
117 Benzo(b)thiophene	134	21.543	21.541	-0.002	99	54595	2.00	2.22	
118 Hexachlorobutadiene	225	21.629	21.627	-0.002	96	161730	2.00	1.71	
119 1,2,3-Trichlorobenzene	180	21.694	21.693	-0.003	95	51585	2.00	2.10	
120 2-Methylnaphthalene	142	22.248	22.259	-0.015	99	18796	6.25	6.00	
121 1-Methylnaphthalene	142	22.371	22.355	0.012	98	22203	6.25	5.28	
A 124 Toluene Range	1	14.180	(14.155-14.204)		0	1189423	2.00	2.30	
A 125 C8 Range	1	14.880	(14.808-14.952)		0	1558269	2.00	2.25	
S 126 Xylenes, Total	100				0		6.00	5.98	
S 127 1,2-Dichloroethene, Total	1				0		4.00	4.44	

Reagents:

40CV101S_00019	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

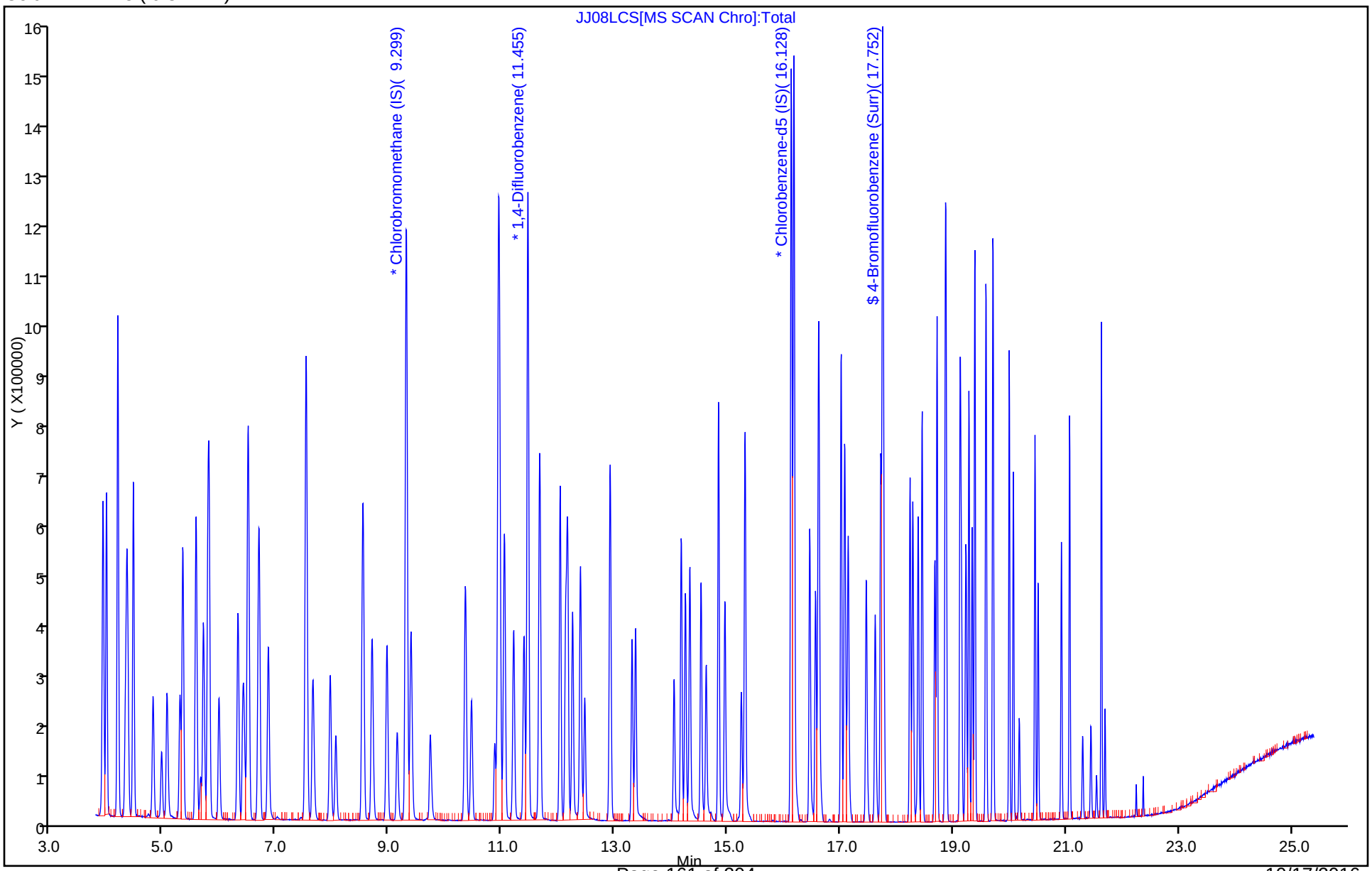
Report Date: 11-Oct-2016 12:05:25 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08LCS.D

Injection Date:	09-Oct-2016 07:04:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	ICV			Worklist Smp#:	17
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1

SDG No.:

Lab Sample ID: CCVIS 140-6849/2 Calibration Date: 10/09/2016 12:50

Instrument ID: MJ Calib Start Date: 10/08/2016 19:01

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/09/2016 02:10

Lab File ID: JCCVJ09.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4073	0.4373		2.15	2.00	7.4	30.0
Propene	Ave	1.399	1.400		2.00	2.00	0.0	30.0
Dichlorodifluoromethane	Ave	3.938	4.228		2.15	2.00	7.4	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.073	2.649		2.56	2.00	27.8	30.0
Chloromethane	Ave	0.4515	0.4539		2.01	2.00	0.6	30.0
Acetaldehyde	Ave	0.4172	0.3548		8.51	10.0	-15.0	30.0
Vinyl chloride	Ave	1.359	1.497		2.20	2.00	10.1	30.0
1,3-Butadiene	Ave	1.010	1.114		2.21	2.00	10.3	30.0
Butane	Ave	1.971	2.148		2.18	2.00	9.0	30.0
Bromomethane	Ave	1.230	1.338		2.18	2.00	8.8	30.0
Chloroethane	Ave	0.5688	0.6358		2.24	2.00	11.8	30.0
Ethanol	Ave	0.3812	0.3784		9.93	10.0	-0.7	30.0
Vinyl bromide	Ave	1.277	1.461		2.29	2.00	14.4	30.0
2-Methylbutane	Ave	1.622	1.753		2.16	2.00	8.1	30.0
Trichlorofluoromethane	Ave	3.433	3.791		2.21	2.00	10.4	30.0
Acrolein	Ave	0.3514	0.3406		1.94	2.00	-3.1	30.0
Acetonitrile	Ave	0.4327	0.4313		1.99	2.00	-0.3	30.0
Acetone	Ave	0.4327	0.4254		5.90	6.00	-1.7	30.0
Isopropyl alcohol	Ave	1.496	1.474		5.91	6.00	-1.5	30.0
Pentane	Ave	0.2000	0.2235		2.24	2.00	11.8	30.0
Ethyl ether	Ave	1.260	1.187		1.89	2.00	-5.8	30.0
1,1-Dichloroethene	Ave	1.257	1.395		2.22	2.00	11.0	30.0
tert-Butyl alcohol	Ave	1.943	1.855		1.91	2.00	-4.5	30.0
Acrylonitrile	Ave	0.7216	0.7104		1.97	2.00	-1.6	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.661	2.973		2.24	2.00	11.7	30.0
Methylene Chloride	Ave	1.271	1.282		2.02	2.00	0.8	30.0
3-Chloropropene	Ave	1.198	1.161		1.94	2.00	-3.1	30.0
Carbon disulfide	Ave	3.881	4.174		2.15	2.00	7.6	30.0
trans-1,2-Dichloroethene	Ave	1.239	1.355		2.19	2.00	9.4	30.0
2-Methylpentane	Ave	2.721	3.131		2.30	2.00	15.1	30.0
Methyl tert-butyl ether	Ave	2.592	2.501		1.93	2.00	-3.5	30.0
1,1-Dichloroethane	Ave	2.297	2.406		2.10	2.00	4.7	30.0
Vinyl acetate	Ave	2.526	2.315		1.83	2.00	-8.4	30.0
2-Butanone (MEK)	Ave	0.4246	0.4081		1.92	2.00	-3.9	30.0
Hexane	Ave	1.009	1.048		2.08	2.00	3.8	30.0
Isopropyl ether	Ave	3.491	3.046		1.75	2.00	-12.7	30.0
cis-1,2-Dichloroethene	Ave	1.220	1.311		2.15	2.00	7.5	30.0
Ethyl acetate	Ave	1.913	1.799		1.88	2.00	-6.0	30.0
Chloroform	Ave	2.515	2.568		2.04	2.00	2.1	30.0
Tert-butyl ethyl ether	Ave	2.864	2.898		2.02	2.00	1.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1

SDG No.:

Lab Sample ID: CCVIS 140-6849/2 Calibration Date: 10/09/2016 12:50

Instrument ID: MJ Calib Start Date: 10/08/2016 19:01

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/09/2016 02:10

Lab File ID: JCCVJ09.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.061	1.000		1.89	2.00	-5.8	30.0
1,1,1-Trichloroethane	Ave	2.584	2.686		2.08	2.00	4.0	30.0
1,2-Dichloroethane	Ave	0.3427	0.3741		2.18	2.00	9.2	30.0
1-Butanol	Ave	0.0944	0.0978		2.07	2.00	3.6	30.0
Benzene	Ave	0.7399	0.8127		2.20	2.00	9.8	30.0
Cyclohexane	Ave	0.1274	0.1487		2.34	2.00	16.7	30.0
Carbon tetrachloride	Ave	0.5676	0.6403		2.26	2.00	12.8	30.0
2,3-Dimethylpentane	Ave	0.1696	0.1765		2.08	2.00	4.1	30.0
Thiophene	Ave	0.4127	0.4631		2.25	2.00	12.2	30.0
Tert-amyl methyl ether	Ave	0.6531	0.7048		2.16	2.00	7.9	30.0
2,2,4-Trimethylpentane	Ave	1.194	1.326		2.22	2.00	11.0	30.0
Heptane	Ave	0.2581	0.2747		2.13	2.00	6.4	30.0
1,2-Dichloropropane	Ave	0.2830	0.3029		2.14	2.00	7.0	30.0
Trichloroethene	Ave	0.2971	0.3201		2.16	2.00	7.8	30.0
Dibromomethane	Ave	0.2887	0.3226		2.24	2.00	11.7	30.0
Bromodichloromethane	Ave	0.5158	0.5764		2.24	2.00	11.8	30.0
1,4-Dioxane	Ave	0.0833	0.0890		2.14	2.00	6.8	30.0
Methyl methacrylate	Ave	0.2356	0.2427		2.06	2.00	3.0	30.0
Methylcyclohexane	Ave	0.5478	0.5047		1.84	2.00	-7.9	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4587	0.5008		2.18	2.00	9.2	30.0
cis-1,3-Dichloropropene	Ave	0.3725	0.4062		2.18	2.00	9.1	30.0
trans-1,3-Dichloropropene	Ave	0.3515	0.3850		2.19	2.00	9.5	30.0
Toluene	Ave	0.8769	0.9560		2.18	2.00	9.0	30.0
1,1,2-Trichloroethane	Ave	0.2733	0.2953		2.16	2.00	8.0	30.0
2-Methylthiophene	Ave	0.7071	0.8264		2.34	2.00	16.9	30.0
3-Methylthiophene	Ave	0.6759	0.8166		2.42	2.00	20.8	30.0
2-Hexanone	Ave	0.2377	0.2707		2.28	2.00	13.9	30.0
Octane	Ave	0.2927	0.3366		2.30	2.00	15.0	30.0
Dibromochloromethane	Ave	0.5033	0.5937		2.36	2.00	18.0	30.0
1,2-Dibromoethane (EDB)	Ave	0.4354	0.4802		2.21	2.00	10.3	30.0
Tetrachloroethene	Ave	0.3284	0.3671		2.24	2.00	11.8	30.0
2,3-Dimethylheptane	Ave	0.8637	1.016		2.35	2.00	17.7	30.0
Chlorobenzene	Ave	0.6155	0.6871		2.23	2.00	11.6	30.0
Ethylbenzene	Ave	0.9686	1.027		2.12	2.00	6.0	30.0
2-Ethylthiophene	Ave	0.6914	0.7402		2.14	2.00	7.1	30.0
m-Xylene & p-Xylene	Ave	0.7248	0.7844		4.33	4.00	8.2	30.0
Nonane	Ave	0.5723	0.6427		2.25	2.00	12.3	30.0
Bromoform	Ave	0.3787	0.4447		2.35	2.00	17.4	30.0
Styrene	Ave	0.4578	0.5490		2.40	2.00	19.9	30.0
o-Xylene	Ave	0.7946	0.8232		2.07	2.00	3.6	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5758	0.6247		2.17	2.00	8.5	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1

SDG No.:

Lab Sample ID: CCVIS 140-6849/2 Calibration Date: 10/09/2016 12:50

Instrument ID: MJ Calib Start Date: 10/08/2016 19:01

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/09/2016 02:10

Lab File ID: JCCVJ09.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1324	0.1456		2.20	2.00	9.9	30.0
Isopropylbenzene	Ave	1.009	1.099		2.18	2.00	8.9	30.0
Propylbenzene	Ave	0.2492	0.2740		2.20	2.00	10.0	30.0
2-Chlorotoluene	Ave	0.2430	0.2708		2.23	2.00	11.4	30.0
4-Ethyltoluene	Ave	0.8584	0.9161		2.14	2.00	6.7	30.0
1,3,5-Trimethylbenzene	Ave	0.4295	0.4758		2.22	2.00	10.8	30.0
Alpha Methyl Styrene	Ave	0.3098	0.3482		2.25	2.00	12.4	30.0
Decane	Ave	0.5873	0.6340		2.16	2.00	8.0	30.0
tert-Butylbenzene	Ave	0.8323	0.9174		2.21	2.00	10.2	30.0
1,2,4-Trimethylbenzene	Ave	0.7289	0.8310		2.28	2.00	14.0	30.0
sec-Butylbenzene	Ave	1.140	1.254		2.20	2.00	10.0	30.0
1,3-Dichlorobenzene	Ave	0.3388	0.3920		2.32	2.00	15.7	30.0
Benzyl chloride	Ave	0.3789	0.4288		2.26	2.00	13.2	30.0
1,4-Dichlorobenzene	Ave	0.2901	0.3310		2.28	2.00	14.1	30.0
4-Isopropyltoluene	Ave	0.8275	0.9263		2.24	2.00	11.9	30.0
1,2,3-Trimethylbenzene	Ave	0.5630	0.6746		2.40	2.00	19.8	30.0
Butylcyclohexane	Ave	0.7399	0.7700		2.08	2.00	4.1	30.0
Indane	Ave	0.5985	0.6406		2.14	2.00	7.0	30.0
1,2-Dichlorobenzene	Ave	0.3500	0.3970		2.27	2.00	13.5	30.0
Butylbenzene	Ave	0.6858	0.8129		2.37	2.00	18.5	30.0
Indene	Ave	0.3630	0.5283		2.91	2.00	45.5*	30.0
Undecane	Ave	0.5362	0.5676		2.12	2.00	5.8	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.5328	0.7555		2.84	2.00	41.8*	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.0953	0.1027		2.16	2.00	7.8	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.6244	0.7703		2.47	2.00	23.4	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.3986	0.4924		2.47	2.00	23.5	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.4982	0.5798		2.33	2.00	16.4	30.0
Dodecane	Ave	0.4604	0.4858		2.11	2.00	5.5	30.0
1,2,4-Trichlorobenzene	Ave	0.0799	0.1072		2.68	2.00	34.1*	30.0
Naphthalene	Ave	0.2334	0.3031		2.60	2.00	29.9	30.0
Benzo(b)thiophene	Ave	0.0943	0.1310		2.78	2.00	39.0*	30.0
Hexachlorobutadiene	Ave	0.3631	0.3250		1.79	2.00	-10.5	30.0
1,2,3-Trichlorobenzene	Ave	0.0941	0.1109		2.36	2.00	17.8	30.0
2-Methylnaphthalene	Ave	0.0120	0.0136		7.08	6.25	13.3	50.0
1-Methylnaphthalene	Ave	0.0161	0.0146		5.67	6.25	-9.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6030	0.6383		4.23	4.00	5.8	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JCCVJ09.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 09-Oct-2016 12:50:30 ALS Bottle#: 10 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003509-013
Misc. Info.: S19
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 12:33:15 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 11-Oct-2016 12:33:15

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.302	9.302	0.000	98	279785	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.463	11.463	0.000	95	1199916	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.131	16.131	0.000	88	984160	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.755	17.755	0.000	89	628201	4.00	4.23	
6 Chlorodifluoromethane	67	3.919	3.919	0.000	97	61207	2.00	2.15	
7 Propene	41	3.930	3.930	0.000	99	195969	2.00	2.00	
8 Dichlorodifluoromethane	85	3.989	3.989	0.000	100	591841	2.00	2.15	
9 Chloromethane	52	4.188	4.188	0.000	98	63537	2.00	2.01	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.188	4.188	0.000	97	370808	2.00	2.56	
11 Acetaldehyde	44	4.349	4.349	0.000	99	248291	10.0	8.51	
12 Vinyl chloride	62	4.371	4.371	0.000	99	209524	2.00	2.20	
14 Butadiene	54	4.462	4.462	0.000	68	155951	2.00	2.21	
13 Butane	43	4.468	4.468	0.000	86	300664	2.00	2.18	
15 Bromomethane	94	4.817	4.817	0.000	98	187320	2.00	2.18	
16 Chloroethane	64	4.968	4.968	0.000	96	88991	2.00	2.24	
17 Ethanol	31	5.059	5.059	0.000	98	264786	10.0	9.93	
18 Vinyl bromide	106	5.290	5.290	0.000	98	204501	2.00	2.29	
19 2-Methylbutane	43	5.344	5.344	0.000	92	245350	2.00	2.16	
20 Trichlorofluoromethane	101	5.575	5.575	0.000	99	530568	2.00	2.21	
21 Acrolein	56	5.586	5.586	0.000	95	47673	2.00	1.94	
22 Acetonitrile	40	5.656	5.656	0.000	99	60366	2.00	1.99	
23 Acetone	58	5.710	5.710	0.000	97	178624	6.00	5.90	
24 Isopropyl alcohol	45	5.785	5.785	0.000	96	618802	6.00	5.91	
25 Pentane	72	5.812	5.812	0.000	97	31287	2.00	2.24	
26 Ethyl ether	31	5.984	5.984	0.000	93	166209	2.00	1.89	
27 1,1-Dichloroethene	96	6.323	6.323	0.000	97	195299	2.00	2.22	
28 2-Methyl-2-propanol	59	6.409	6.409	0.000	96	259613	2.00	1.91	
29 Acrylonitrile	53	6.430	6.430	0.000	95	99430	2.00	1.97	
30 1,1,2-Trichloro-1,2,2-trif	101	6.500	6.500	0.000	94	416087	2.00	2.24	
31 Methylene Chloride	84	6.683	6.683	0.000	96	179374	2.00	2.02	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.699	6.699	0.000	96	162456	2.00	1.94	
33 Carbon disulfide	76	6.855	6.855	0.000	99	584274	2.00	2.15	
34 trans-1,2-Dichloroethene	96	7.522	7.522	0.000	98	189701	2.00	2.19	
35 2-Methylpentane	43	7.533	7.533	0.000	95	438248	2.00	2.30	
36 Methyl tert-butyl ether	73	7.651	7.651	0.000	97	350025	2.00	1.93	
37 1,1-Dichloroethane	63	7.957	7.957	0.000	100	336718	2.00	2.10	
38 Vinyl acetate	43	8.054	8.054	0.000	100	323976	2.00	1.83	
39 2-Butanone (MEK)	72	8.522	8.522	0.000	97	57116	2.00	1.92	
40 Hexane	56	8.538	8.538	0.000	90	146634	2.00	2.08	
41 Isopropyl ether	45	8.700	8.700	0.000	98	426394	2.00	1.75	
42 cis-1,2-Dichloroethene	96	8.963	8.963	0.000	95	183515	2.00	2.15	
43 Ethyl acetate	43	9.140	9.140	0.000	99	251819	2.00	1.88	
44 Chloroform	83	9.313	9.313	0.000	97	359437	2.00	2.04	
45 Tert-butyl ethyl ether	59	9.388	9.388	0.000	96	405631	2.00	2.02	
46 Tetrahydrofuran	42	9.727	9.727	0.000	93	139951	2.00	1.89	
47 1,1,1-Trichloroethane	97	10.350	10.350	0.000	96	376010	2.00	2.08	
48 1,2-Dichloroethane	62	10.463	10.463	0.000	98	224558	2.00	2.18	
49 n-Butanol	31	10.872	10.872	0.000	91	58715	2.00	2.07	
51 Benzene	78	10.936	10.936	0.000	96	487843	2.00	2.20	
50 Cyclohexane	69	10.942	10.942	0.000	75	89284	2.00	2.34	
52 Carbon tetrachloride	117	10.963	10.963	0.000	97	384363	2.00	2.26	
53 2,3-Dimethylpentane	71	11.044	11.044	0.000	92	105918	2.00	2.08	
54 Thiophene	84	11.211	11.211	0.000	96	277970	2.00	2.25	
55 Tert-amyl methyl ether	73	11.388	11.388	0.000	98	347040	2.00	2.16	
56 Isooctane	57	11.668	11.668	0.000	98	796008	2.00	2.22	
57 n-Heptane	71	12.033	12.033	0.000	93	164904	2.00	2.13	
58 1,2-Dichloropropane	63	12.130	12.130	0.000	91	181848	2.00	2.14	
59 Trichloroethene	130	12.163	12.163	0.000	95	192153	2.00	2.16	
60 Dibromomethane	93	12.254	12.254	0.000	92	193620	2.00	2.24	
62 Dichlorobromomethane	83	12.388	12.388	0.000	99	346006	2.00	2.24	
61 1,4-Dioxane	88	12.404	12.404	0.000	92	53397	2.00	2.14	
63 Methyl methacrylate	41	12.469	12.469	0.000	93	145691	2.00	2.06	
64 Methylcyclohexane	83	12.921	12.921	0.000	96	302976	2.00	1.84	
65 4-Methyl-2-pentanone (MIBK	43	13.308	13.308	0.000	98	300602	2.00	2.18	
66 cis-1,3-Dichloropropene	75	13.372	13.372	0.000	95	243817	2.00	2.18	
67 trans-1,3-Dichloropropene	75	14.055	14.055	0.000	99	189548	2.00	2.19	
68 Toluene	91	14.179	14.179	0.000	93	470662	2.00	2.18	
69 1,1,2-Trichloroethane	83	14.254	14.254	0.000	97	145370	2.00	2.16	
70 2-Methylthiophene	97	14.330	14.330	0.000	97	406867	2.00	2.34	
71 3-Methylthiophene	97	14.529	14.529	0.000	99	402042	2.00	2.42	
72 2-Hexanone	58	14.620	14.620	0.000	92	133276	2.00	2.28	
73 n-Octane	85	14.840	14.840	0.000	95	165723	2.00	2.30	
74 Chlorodibromomethane	129	14.953	14.953	0.000	98	292289	2.00	2.36	
75 Ethylene Dibromide	107	15.244	15.244	0.000	98	236413	2.00	2.21	
76 Tetrachloroethene	129	15.314	15.314	0.000	96	180718	2.00	2.24	
77 2,3-Dimethylheptane	43	16.174	16.174	0.000	96	500337	2.00	2.35	
78 Chlorobenzene	112	16.179	16.179	0.000	75	338274	2.00	2.23	
79 Ethylbenzene	91	16.459	16.459	0.000	98	505543	2.00	2.12	
80 2-Ethylthiophene	97	16.561	16.561	0.000	98	364432	2.00	2.14	
81 m-Xylene & p-Xylene	91	16.615	16.615	0.000	100	772351	4.00	4.33	
82 n-Nonane	57	17.013	17.013	0.000	93	316418	2.00	2.25	
83 Bromoform	173	17.077	17.077	0.000	92	218946	2.00	2.35	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.083	17.083	0.000	99	270281	2.00	2.40	
85 o-Xylene	91	17.142	17.142	0.000	99	405295	2.00	2.07	
86 1,1,2,2-Tetrachloroethane	83	17.459	17.459	0.000	98	307549	2.00	2.17	
87 1,2,3-Trichloropropane	110	17.621	17.621	0.000	99	71665	2.00	2.20	
88 Isopropylbenzene	105	17.717	17.717	0.000	97	541000	2.00	2.18	
89 N-Propylbenzene	120	18.239	18.239	0.000	99	134922	2.00	2.20	
90 2-Chlorotoluene	126	18.287	18.287	0.000	98	133305	2.00	2.23	
91 4-Ethyltoluene	105	18.384	18.384	0.000	98	451050	2.00	2.14	
92 1,3,5-Trimethylbenzene	120	18.454	18.454	0.000	92	234278	2.00	2.22	
93 Alpha Methyl Styrene	118	18.674	18.674	0.000	87	171415	2.00	2.25	
94 n-Decane	57	18.717	18.717	0.000	90	312165	2.00	2.16	
95 tert-Butylbenzene	119	18.863	18.863	0.000	91	451675	2.00	2.21	
96 1,2,4-Trimethylbenzene	105	18.879	18.879	0.000	96	409144	2.00	2.28	
97 sec-Butylbenzene	105	19.126	19.126	0.000	98	617478	2.00	2.20	
98 1,3-Dichlorobenzene	146	19.148	19.148	0.000	99	192991	2.00	2.32	
99 Benzyl chloride	91	19.218	19.218	0.000	97	211091	2.00	2.26	
100 1,4-Dichlorobenzene	146	19.234	19.234	0.000	92	162977	2.00	2.28	
101 4-Isopropyltoluene	119	19.282	19.282	0.000	96	456058	2.00	2.24	
102 1,2,3-Trimethylbenzene	105	19.341	19.341	0.000	98	332137	2.00	2.40	
103 Butylcyclohexane	83	19.384	19.384	0.000	92	379110	2.00	2.08	
104 2,3-Dihydroindene	117	19.583	19.583	0.000	93	315410	2.00	2.14	
105 1,2-Dichlorobenzene	146	19.589	19.589	0.000	98	195474	2.00	2.27	
106 n-Butylbenzene	91	19.707	19.707	0.000	98	400221	2.00	2.37	
107 Indene	116	19.712	19.712	0.000	94	260122	2.00	2.91	
108 Undecane	57	19.997	19.997	0.000	96	279443	2.00	2.12	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.067	20.067	0.000	98	371979	2.00	2.84	
110 1,2-Dibromo-3-Chloropropan	157	20.175	20.175	0.000	92	50580	2.00	2.16	
111 1,2,4,5-Tetramethylbenzene	119	20.454	20.454	0.000	97	379259	2.00	2.47	
112 1,2,3,5-Tetramethylbenzene	119	20.508	20.508	0.000	95	242413	2.00	2.47	
113 1,2,3,4-Tetramethylbenzene	119	20.922	20.922	0.000	97	285444	2.00	2.33	
114 Dodecane	57	21.067	21.067	0.000	95	239202	2.00	2.11	
115 1,2,4-Trichlorobenzene	180	21.299	21.299	0.000	95	52754	2.00	2.68	
116 Naphthalene	128	21.444	21.444	0.000	99	149231	2.00	2.60	
117 Benzo(b)thiophene	134	21.546	21.546	0.000	99	64519	2.00	2.78	
118 Hexachlorobutadiene	225	21.632	21.632	0.000	96	159997	2.00	1.79	
119 1,2,3-Trichlorobenzene	180	21.697	21.697	0.000	95	54604	2.00	2.36	
120 2-Methylnaphthalene	142	22.250	22.250	0.000	99	20932	6.25	7.08	
121 1-Methylnaphthalene	142	22.374	22.374	0.000	99	22491	6.25	5.67	
A 124 Toluene Range	1	14.179	(14.149-14.209)		0	1144546	2.00	2.35	
A 125 C8 Range	1	14.836	(14.802-14.870)		0	1598645	2.00	2.45	
S 126 Xylenes, Total	100				0		6.00	6.40	
S 127 1,2-Dichloroethene, Total	1				0		4.00	4.34	

Reagents:

40CV101S_00019	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

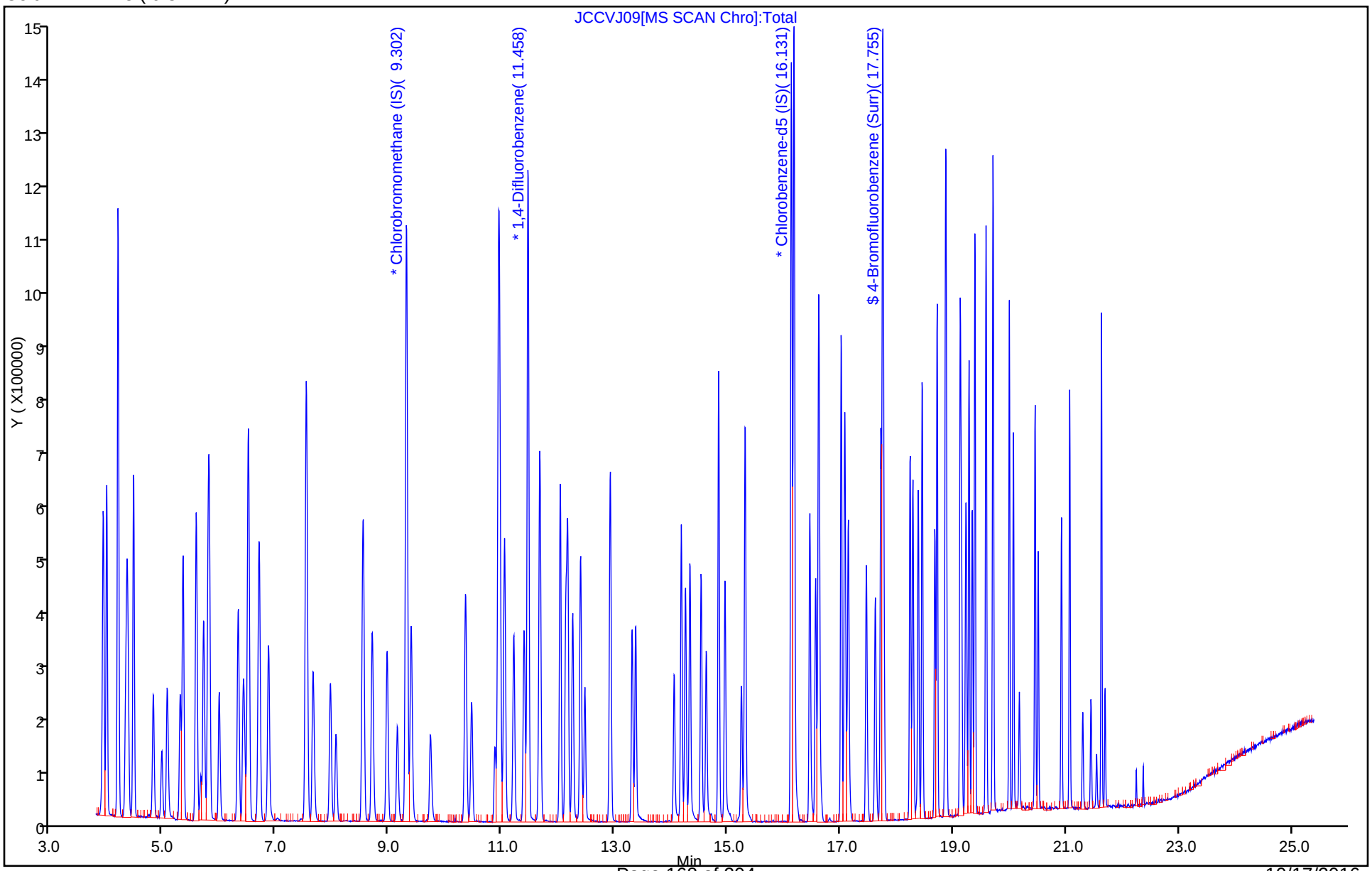
Report Date: 11-Oct-2016 12:33:17 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JCCVJ09.D

Injection Date:	09-Oct-2016 12:50:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JBFBJ08.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	08-Oct-2016 17:39:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003509-001				
Misc. Info.:	BFB				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	11-Oct-2016 11:30:12	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				
First Level Reviewer: barlozhetskayaa		Date:	08-Oct-2016 18:15:31		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.039	4.039	0.000	0	254915	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

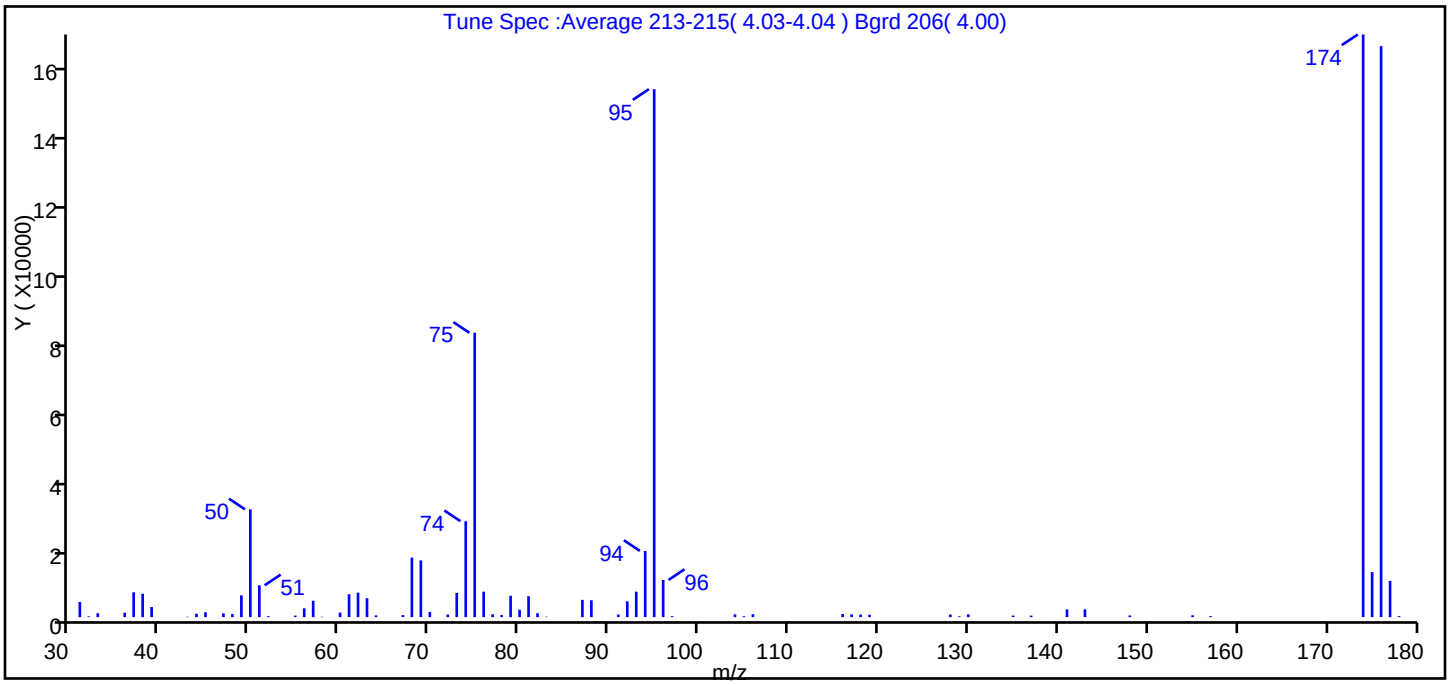
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JBFBJ08.D
Injection Date: 08-Oct-2016 17:39:30 Instrument ID: MJ
Lims ID: BFB
Client ID:
Operator ID: 403648 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	20.4
75	30 to 60% of m/z 95	53.9
96	5 to 9% of m/z 95	7.0
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	110.4
175	5 to 9% of m/z 174	8.5 (7.7)
176	Greater than 95% but less than 101% of m/z 174	108.2 (98.0)
177	5 to 9% of m/z 176	6.9 (6.4)

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JBFBJ08.D\MJ_TO15.rslt\spectra.d
Injection Date: 08-Oct-2016 17:39:30
Spectrum: Tune Spec :Average 213-215(4.03-4.04) Bgrd 206(4.00)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 72

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	4194	57.00	4502	79.00	5865	117.00	759
32.00	200	58.00	100	80.00	2039	118.00	708
33.00	1072	60.00	1271	81.00	5753	119.00	655
36.00	1226	61.00	6290	82.00	1080	128.00	708
37.00	6834	62.00	6736	83.00	120	129.00	228
38.00	6441	63.00	5213	87.00	4750	130.00	774
39.00	2781	64.00	489	88.00	4639	135.00	434
43.00	101	67.00	549	91.00	724	137.00	423
44.00	931	68.00	16354	92.00	4329	141.00	2125
45.00	1349	69.00	15602	93.00	7009	143.00	2162
47.00	1046	70.00	1443	94.00	18208	148.00	476
48.00	853	72.00	711	95.00	145152	155.00	512
49.00	5990	73.00	6661	96.00	10220	157.00	274
50.00	29632	74.00	26384	97.00	262	174.00	160192
51.00	8759	75.00	78184	104.00	766	175.00	12385
52.00	256	76.00	7010	105.00	239	176.00	156992
55.00	431	77.00	792	106.00	795	177.00	9970
56.00	2436	78.00	573	116.00	850	178.00	275

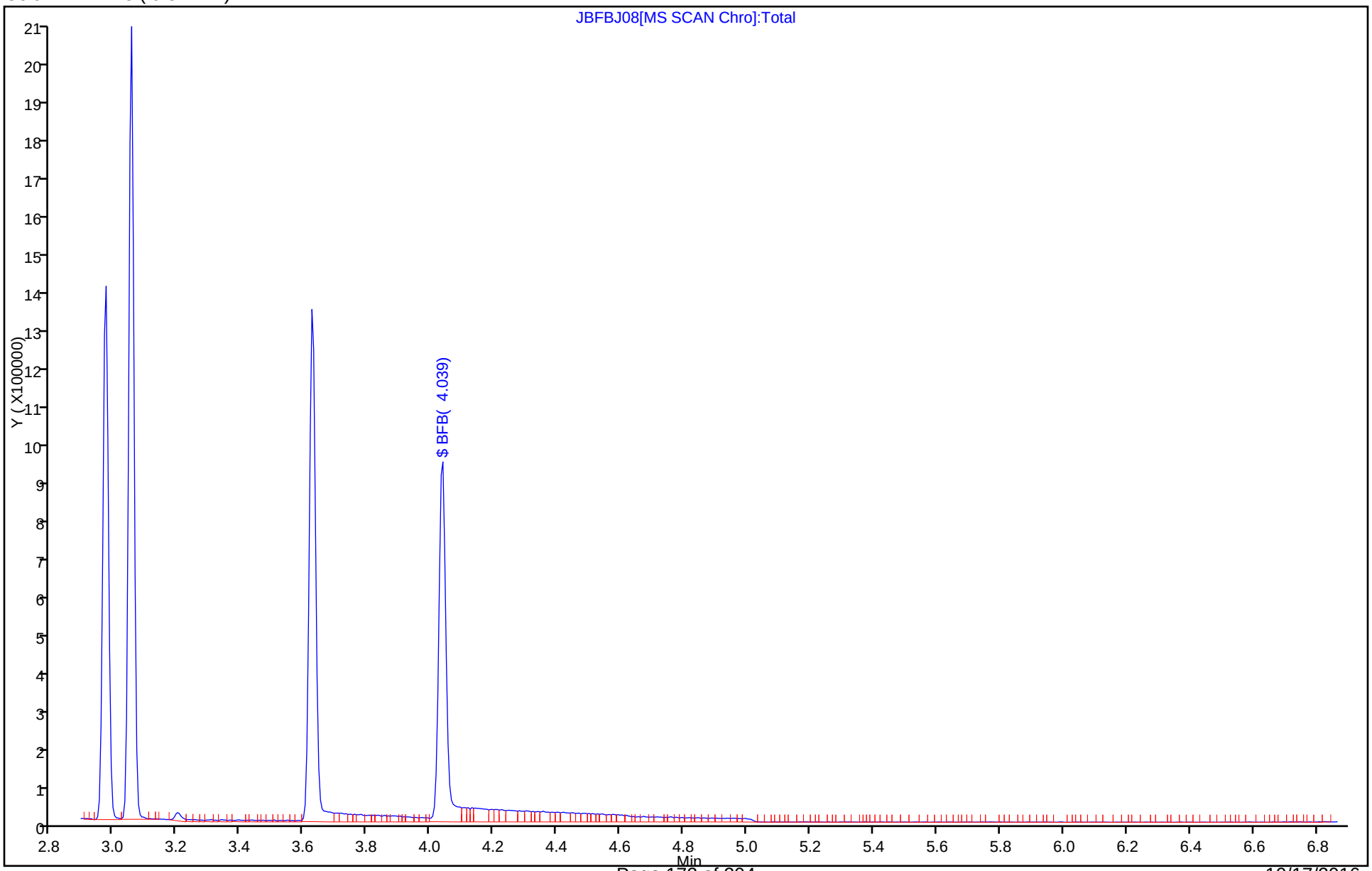
Report Date: 11-Oct-2016 11:30:14 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JBFBJ08.D

Injection Date:	08-Oct-2016 17:39:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JBFBJ09.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	09-Oct-2016 12:23:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003510-001				
Misc. Info.:	BFB				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	11-Oct-2016 12:18:10	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				
First Level Reviewer: barlozhetskayaa		Date:	11-Oct-2016 12:18:10		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.034	4.034	0.000	0	231901	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

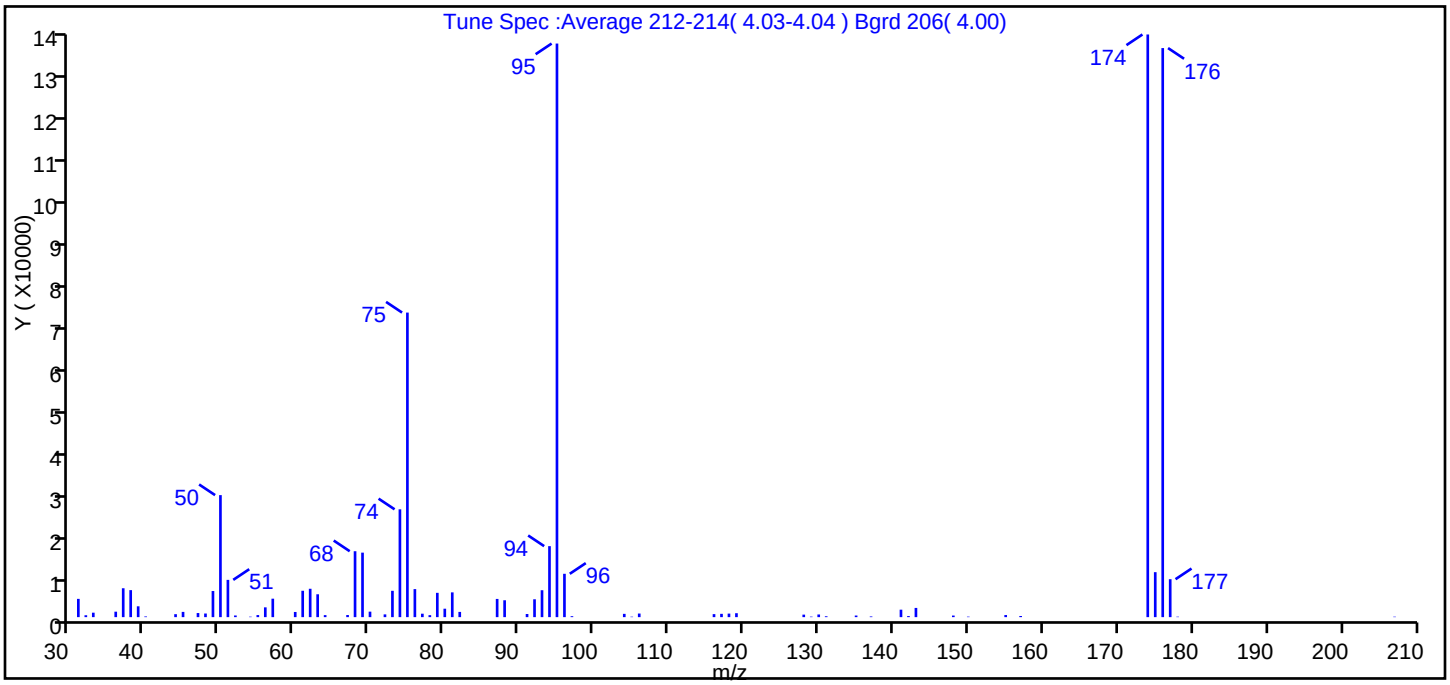
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JBFBJ09.D
Injection Date: 09-Oct-2016 12:23:30 Instrument ID: MJ
Lims ID: BFB
Client ID:
Operator ID: 403648 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.3
75	30 to 60% of m/z 95	53.1
96	5 to 9% of m/z 95	7.6
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	101.6
175	5 to 9% of m/z 174	7.8 (7.7)
176	Greater than 95% but less than 101% of m/z 174	99.2 (97.7)
177	5 to 9% of m/z 176	6.6 (6.7)

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JBFBJ09.D\MJ_TO15.rslt\spectra.d
Injection Date: 09-Oct-2016 12:23:30
Spectrum: Tune Spec :Average 212-214(4.03-4.04) Bgrd 206(4.00)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 75

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	4383	57.00	4427	81.00	5941	129.00	121
32.00	454	60.00	1241	82.00	1256	130.00	637
33.00	1070	61.00	6327	87.00	4369	131.00	210
36.00	1311	62.00	6806	88.00	4049	135.00	387
37.00	6930	63.00	5486	91.00	754	137.00	165
38.00	6479	64.00	484	92.00	4286	141.00	1791
39.00	2601	67.00	509	93.00	6457	142.00	254
40.00	165	68.00	15814	94.00	17032	143.00	2212
44.00	712	69.00	15475	95.00	137600	148.00	382
45.00	1259	70.00	1319	96.00	10400	150.00	120
47.00	985	72.00	663	97.00	224	155.00	502
48.00	870	73.00	6317	104.00	789	157.00	274
49.00	6266	74.00	25864	105.00	108	174.00	139776
50.00	29272	75.00	73064	106.00	866	175.00	10789
51.00	8942	76.00	6725	116.00	725	176.00	136512
52.00	399	77.00	827	117.00	794	177.00	9101
54.00	109	78.00	475	118.00	849	178.00	111
55.00	498	79.00	5830	119.00	946	207.00	107
56.00	2349	80.00	2025	128.00	604		

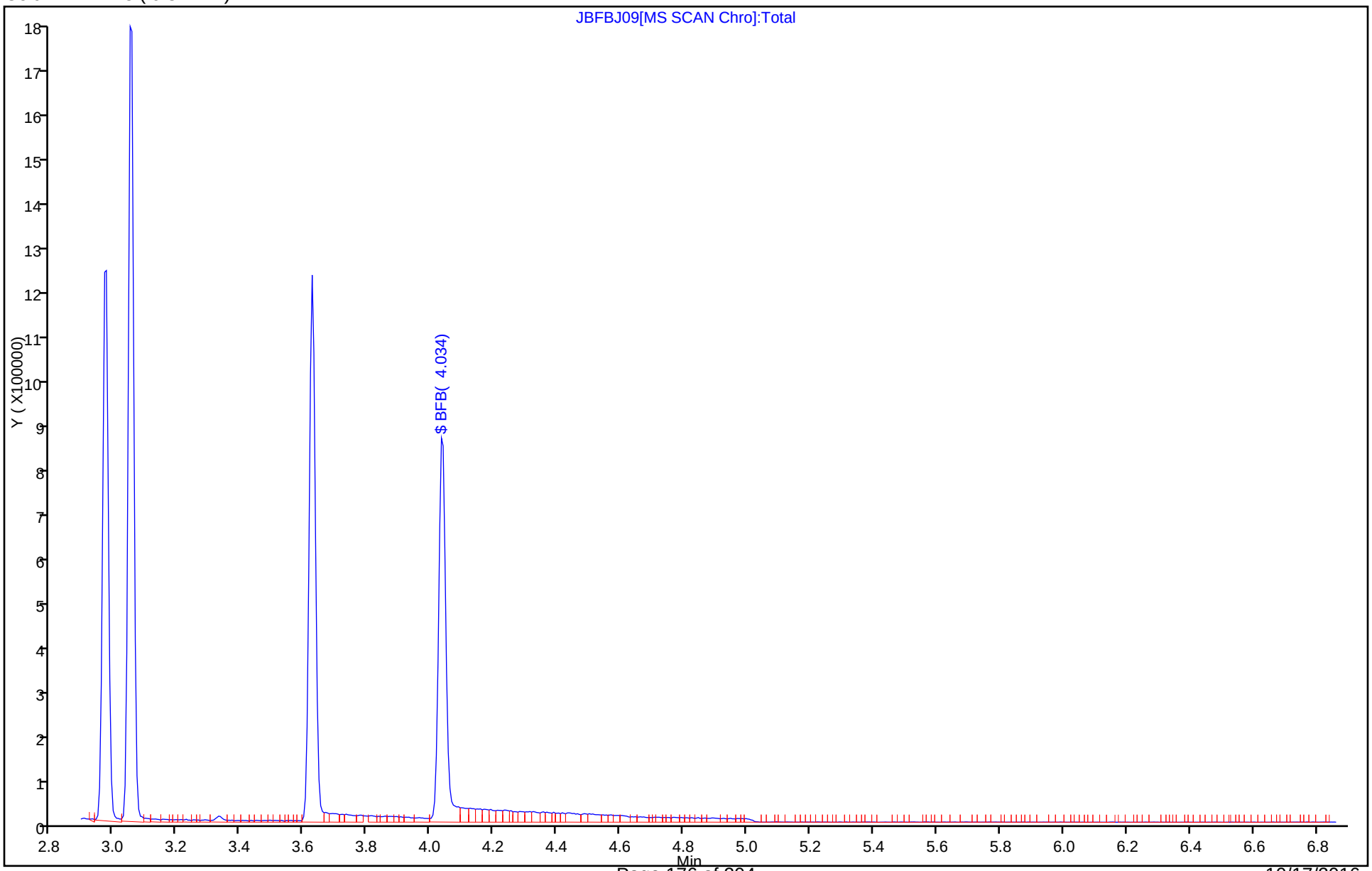
Report Date: 11-Oct-2016 12:18:11 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JBFBJ09.D

Injection Date:	09-Oct-2016 12:23:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-6849/4

Matrix: Air Lab File ID: JMB500J09.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 10/09/2016 15:24

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6849 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6042-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-6849/4

Matrix: Air | Lab File ID: JMB500J09.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 10/09/2016 15:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6849 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JMB500J09.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 09-Oct-2016 15:24:30 ALS Bottle#: 16 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003510-004
Misc. Info.: MB500mL
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 12:33:56 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 11-Oct-2016 12:33:55

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.305	9.302	0.003	95	289203	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.462	11.463	-0.001	95	1341366	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.129	16.131	-0.002	93	1102997	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.753	17.755	-0.002	89	663118	4.00	3.99	
31 Methylene Chloride	84	6.697	6.683	0.014	93	5792		0.0630	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

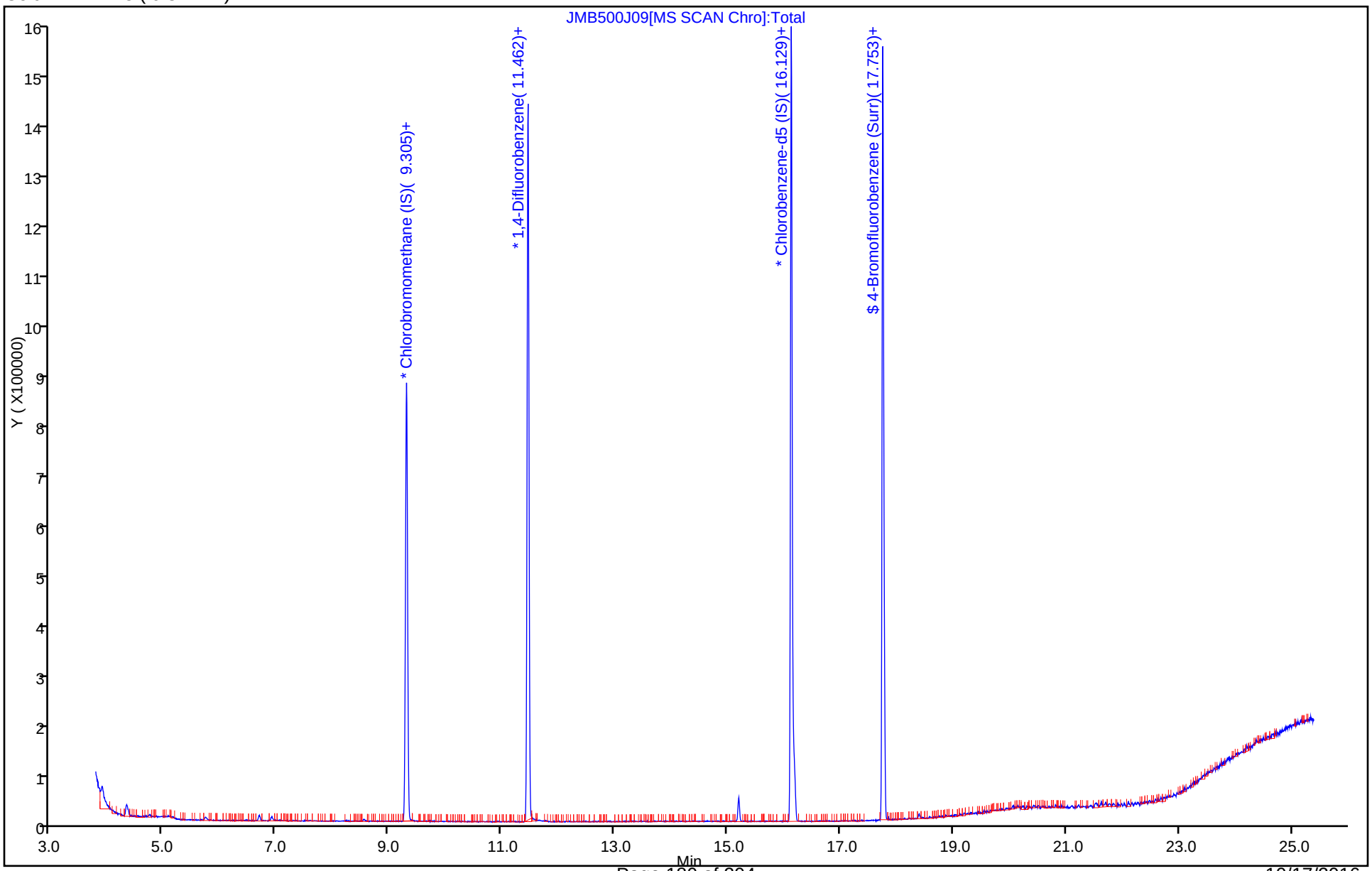
Report Date: 11-Oct-2016 12:33:58 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JMB500J09.D

Injection Date:	09-Oct-2016 15:24:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	MB			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JMB500J09.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	09-Oct-2016 15:24:30	ALS Bottle#:	16	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003510-004				
Misc. Info.:	MB500mL				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	11-Oct-2016 12:33:56	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				

First Level Reviewer: barlozhetskayaa Date: 11-Oct-2016 12:33:55

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.99	99.69

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 140-6849/1002

Matrix: Air Lab File ID: JCCVJ09-LCS.d

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 10/09/2016 12:50

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6849 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.20		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.26		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.15		0.080	0.015
67-66-3	Chloroform	119.38	2.04		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.15		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.15		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.10		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.18		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.22		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.12		0.080	0.027
75-09-2	Methylene Chloride	84.93	2.02		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.93		0.40	0.068
91-20-3	Naphthalene	128.17	2.60		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.24		0.080	0.016
108-88-3	Toluene	92.14	2.18		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.19		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	2.68		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.08		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.16		0.080	0.021
79-01-6	Trichloroethene	131.39	2.16		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.40		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.28		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	2.22		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.20		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.40		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JCCVJ09-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 09-Oct-2016 12:50:30 ALS Bottle#: 10 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003509-013
Misc. Info.: S19
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 12:33:15 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 11-Oct-2016 12:33:15

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.302	9.302	0.000	98	279785	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.463	11.463	0.000	95	1199916	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.131	16.131	0.000	88	984160	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.755	17.755	0.000	89	628201	4.00	4.23	
6 Chlorodifluoromethane	67	3.919	3.919	0.000	97	61207	2.00	2.15	
7 Propene	41	3.930	3.930	0.000	99	195969	2.00	2.00	
8 Dichlorodifluoromethane	85	3.989	3.989	0.000	100	591841	2.00	2.15	
9 Chloromethane	52	4.188	4.188	0.000	98	63537	2.00	2.01	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.188	4.188	0.000	97	370808	2.00	2.56	
11 Acetaldehyde	44	4.349	4.349	0.000	99	248291	10.0	8.51	
12 Vinyl chloride	62	4.371	4.371	0.000	99	209524	2.00	2.20	
14 Butadiene	54	4.462	4.462	0.000	68	155951	2.00	2.21	
13 Butane	43	4.468	4.468	0.000	86	300664	2.00	2.18	
15 Bromomethane	94	4.817	4.817	0.000	98	187320	2.00	2.18	
16 Chloroethane	64	4.968	4.968	0.000	96	88991	2.00	2.24	
17 Ethanol	31	5.059	5.059	0.000	98	264786	10.0	9.93	
18 Vinyl bromide	106	5.290	5.290	0.000	98	204501	2.00	2.29	
19 2-Methylbutane	43	5.344	5.344	0.000	92	245350	2.00	2.16	
20 Trichlorofluoromethane	101	5.575	5.575	0.000	99	530568	2.00	2.21	
21 Acrolein	56	5.586	5.586	0.000	95	47673	2.00	1.94	
22 Acetonitrile	40	5.656	5.656	0.000	99	60366	2.00	1.99	
23 Acetone	58	5.710	5.710	0.000	97	178624	6.00	5.90	
24 Isopropyl alcohol	45	5.785	5.785	0.000	96	618802	6.00	5.91	
25 Pentane	72	5.812	5.812	0.000	97	31287	2.00	2.24	
26 Ethyl ether	31	5.984	5.984	0.000	93	166209	2.00	1.89	
27 1,1-Dichloroethene	96	6.323	6.323	0.000	97	195299	2.00	2.22	
28 2-Methyl-2-propanol	59	6.409	6.409	0.000	96	259613	2.00	1.91	
29 Acrylonitrile	53	6.430	6.430	0.000	95	99430	2.00	1.97	
30 1,1,2-Trichloro-1,2,2-trif	101	6.500	6.500	0.000	94	416087	2.00	2.24	
31 Methylene Chloride	84	6.683	6.683	0.000	96	179374	2.00	2.02	
32 3-Chloro-1-propene	39	6.699	6.699	0.000	96	162456	2.00	1.94	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.855	6.855	0.000	99	584274	2.00	2.15	
34 trans-1,2-Dichloroethene	96	7.522	7.522	0.000	98	189701	2.00	2.19	
35 2-Methylpentane	43	7.533	7.533	0.000	95	438248	2.00	2.30	
36 Methyl tert-butyl ether	73	7.651	7.651	0.000	97	350025	2.00	1.93	
37 1,1-Dichloroethane	63	7.957	7.957	0.000	100	336718	2.00	2.10	
38 Vinyl acetate	43	8.054	8.054	0.000	100	323976	2.00	1.83	
39 2-Butanone (MEK)	72	8.522	8.522	0.000	97	57116	2.00	1.92	
40 Hexane	56	8.538	8.538	0.000	90	146634	2.00	2.08	
41 Isopropyl ether	45	8.700	8.700	0.000	98	426394	2.00	1.75	
42 cis-1,2-Dichloroethene	96	8.963	8.963	0.000	95	183515	2.00	2.15	
43 Ethyl acetate	43	9.140	9.140	0.000	99	251819	2.00	1.88	
44 Chloroform	83	9.313	9.313	0.000	97	359437	2.00	2.04	
45 Tert-butyl ethyl ether	59	9.388	9.388	0.000	96	405631	2.00	2.02	
46 Tetrahydrofuran	42	9.727	9.727	0.000	93	139951	2.00	1.89	
47 1,1,1-Trichloroethane	97	10.350	10.350	0.000	96	376010	2.00	2.08	
48 1,2-Dichloroethane	62	10.463	10.463	0.000	98	224558	2.00	2.18	
49 n-Butanol	31	10.872	10.872	0.000	91	58715	2.00	2.07	
51 Benzene	78	10.936	10.936	0.000	96	487843	2.00	2.20	
50 Cyclohexane	69	10.942	10.942	0.000	75	89284	2.00	2.34	
52 Carbon tetrachloride	117	10.963	10.963	0.000	97	384363	2.00	2.26	
53 2,3-Dimethylpentane	71	11.044	11.044	0.000	92	105918	2.00	2.08	
54 Thiophene	84	11.211	11.211	0.000	96	277970	2.00	2.25	
55 Tert-amyl methyl ether	73	11.388	11.388	0.000	98	347040	2.00	2.16	
56 Isooctane	57	11.668	11.668	0.000	98	796008	2.00	2.22	
57 n-Heptane	71	12.033	12.033	0.000	93	164904	2.00	2.13	
58 1,2-Dichloropropane	63	12.130	12.130	0.000	91	181848	2.00	2.14	
59 Trichloroethene	130	12.163	12.163	0.000	95	192153	2.00	2.16	
60 Dibromomethane	93	12.254	12.254	0.000	92	193620	2.00	2.24	
62 Dichlorobromomethane	83	12.388	12.388	0.000	99	346006	2.00	2.24	
61 1,4-Dioxane	88	12.404	12.404	0.000	92	53397	2.00	2.14	
63 Methyl methacrylate	41	12.469	12.469	0.000	93	145691	2.00	2.06	
64 Methylcyclohexane	83	12.921	12.921	0.000	96	302976	2.00	1.84	
65 4-Methyl-2-pentanone (MIBK	43	13.308	13.308	0.000	98	300602	2.00	2.18	
66 cis-1,3-Dichloropropene	75	13.372	13.372	0.000	95	243817	2.00	2.18	
67 trans-1,3-Dichloropropene	75	14.055	14.055	0.000	99	189548	2.00	2.19	
68 Toluene	91	14.179	14.179	0.000	93	470662	2.00	2.18	
69 1,1,2-Trichloroethane	83	14.254	14.254	0.000	97	145370	2.00	2.16	
70 2-Methylthiophene	97	14.330	14.330	0.000	97	406867	2.00	2.34	
71 3-Methylthiophene	97	14.529	14.529	0.000	99	402042	2.00	2.42	
72 2-Hexanone	58	14.620	14.620	0.000	92	133276	2.00	2.28	
73 n-Octane	85	14.840	14.840	0.000	95	165723	2.00	2.30	
74 Chlorodibromomethane	129	14.953	14.953	0.000	98	292289	2.00	2.36	
75 Ethylene Dibromide	107	15.244	15.244	0.000	98	236413	2.00	2.21	
76 Tetrachloroethene	129	15.314	15.314	0.000	96	180718	2.00	2.24	
77 2,3-Dimethylheptane	43	16.174	16.174	0.000	96	500337	2.00	2.35	
78 Chlorobenzene	112	16.179	16.179	0.000	75	338274	2.00	2.23	
79 Ethylbenzene	91	16.459	16.459	0.000	98	505543	2.00	2.12	
80 2-Ethylthiophene	97	16.561	16.561	0.000	98	364432	2.00	2.14	
81 m-Xylene & p-Xylene	91	16.615	16.615	0.000	100	772351	4.00	4.33	
82 n-Nonane	57	17.013	17.013	0.000	93	316418	2.00	2.25	
83 Bromoform	173	17.077	17.077	0.000	92	218946	2.00	2.35	
84 Styrene	104	17.083	17.083	0.000	99	270281	2.00	2.40	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	17.142	17.142	0.000	99	405295	2.00	2.07	
86 1,1,2,2-Tetrachloroethane	83	17.459	17.459	0.000	98	307549	2.00	2.17	
87 1,2,3-Trichloropropane	110	17.621	17.621	0.000	99	71665	2.00	2.20	
88 Isopropylbenzene	105	17.717	17.717	0.000	97	541000	2.00	2.18	
89 N-Propylbenzene	120	18.239	18.239	0.000	99	134922	2.00	2.20	
90 2-Chlorotoluene	126	18.287	18.287	0.000	98	133305	2.00	2.23	
91 4-Ethyltoluene	105	18.384	18.384	0.000	98	451050	2.00	2.14	
92 1,3,5-Trimethylbenzene	120	18.454	18.454	0.000	92	234278	2.00	2.22	
93 Alpha Methyl Styrene	118	18.674	18.674	0.000	87	171415	2.00	2.25	
94 n-Decane	57	18.717	18.717	0.000	90	312165	2.00	2.16	
95 tert-Butylbenzene	119	18.863	18.863	0.000	91	451675	2.00	2.21	
96 1,2,4-Trimethylbenzene	105	18.879	18.879	0.000	96	409144	2.00	2.28	
97 sec-Butylbenzene	105	19.126	19.126	0.000	98	617478	2.00	2.20	
98 1,3-Dichlorobenzene	146	19.148	19.148	0.000	99	192991	2.00	2.32	
99 Benzyl chloride	91	19.218	19.218	0.000	97	211091	2.00	2.26	
100 1,4-Dichlorobenzene	146	19.234	19.234	0.000	92	162977	2.00	2.28	
101 4-Isopropyltoluene	119	19.282	19.282	0.000	96	456058	2.00	2.24	
102 1,2,3-Trimethylbenzene	105	19.341	19.341	0.000	98	332137	2.00	2.40	
103 Butylcyclohexane	83	19.384	19.384	0.000	92	379110	2.00	2.08	
104 2,3-Dihydroindene	117	19.583	19.583	0.000	93	315410	2.00	2.14	
105 1,2-Dichlorobenzene	146	19.589	19.589	0.000	98	195474	2.00	2.27	
106 n-Butylbenzene	91	19.707	19.707	0.000	98	400221	2.00	2.37	
107 Indene	116	19.712	19.712	0.000	94	260122	2.00	2.91	
108 Undecane	57	19.997	19.997	0.000	96	279443	2.00	2.12	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.067	20.067	0.000	98	371979	2.00	2.84	
110 1,2-Dibromo-3-Chloropropan	157	20.175	20.175	0.000	92	50580	2.00	2.16	
111 1,2,4,5-Tetramethylbenzene	119	20.454	20.454	0.000	97	379259	2.00	2.47	
112 1,2,3,5-Tetramethylbenzene	119	20.508	20.508	0.000	95	242413	2.00	2.47	
113 1,2,3,4-Tetramethylbenzene	119	20.922	20.922	0.000	97	285444	2.00	2.33	
114 Dodecane	57	21.067	21.067	0.000	95	239202	2.00	2.11	
115 1,2,4-Trichlorobenzene	180	21.299	21.299	0.000	95	52754	2.00	2.68	
116 Naphthalene	128	21.444	21.444	0.000	99	149231	2.00	2.60	
117 Benzo(b)thiophene	134	21.546	21.546	0.000	99	64519	2.00	2.78	
118 Hexachlorobutadiene	225	21.632	21.632	0.000	96	159997	2.00	1.79	
119 1,2,3-Trichlorobenzene	180	21.697	21.697	0.000	95	54604	2.00	2.36	
120 2-Methylnaphthalene	142	22.250	22.250	0.000	99	20932	6.25	7.08	
121 1-Methylnaphthalene	142	22.374	22.374	0.000	99	22491	6.25	5.67	
A 124 Toluene Range	1	14.179	(14.149-14.209)		0	1144546	2.00	2.35	
A 125 C8 Range	1	14.836	(14.802-14.870)		0	1598645	2.00	2.45	
S 126 Xylenes, Total	100				0		6.00	6.40	
S 127 1,2-Dichloroethene, Total	1				0		4.00	4.34	

Reagents:

40CV101S_00019	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

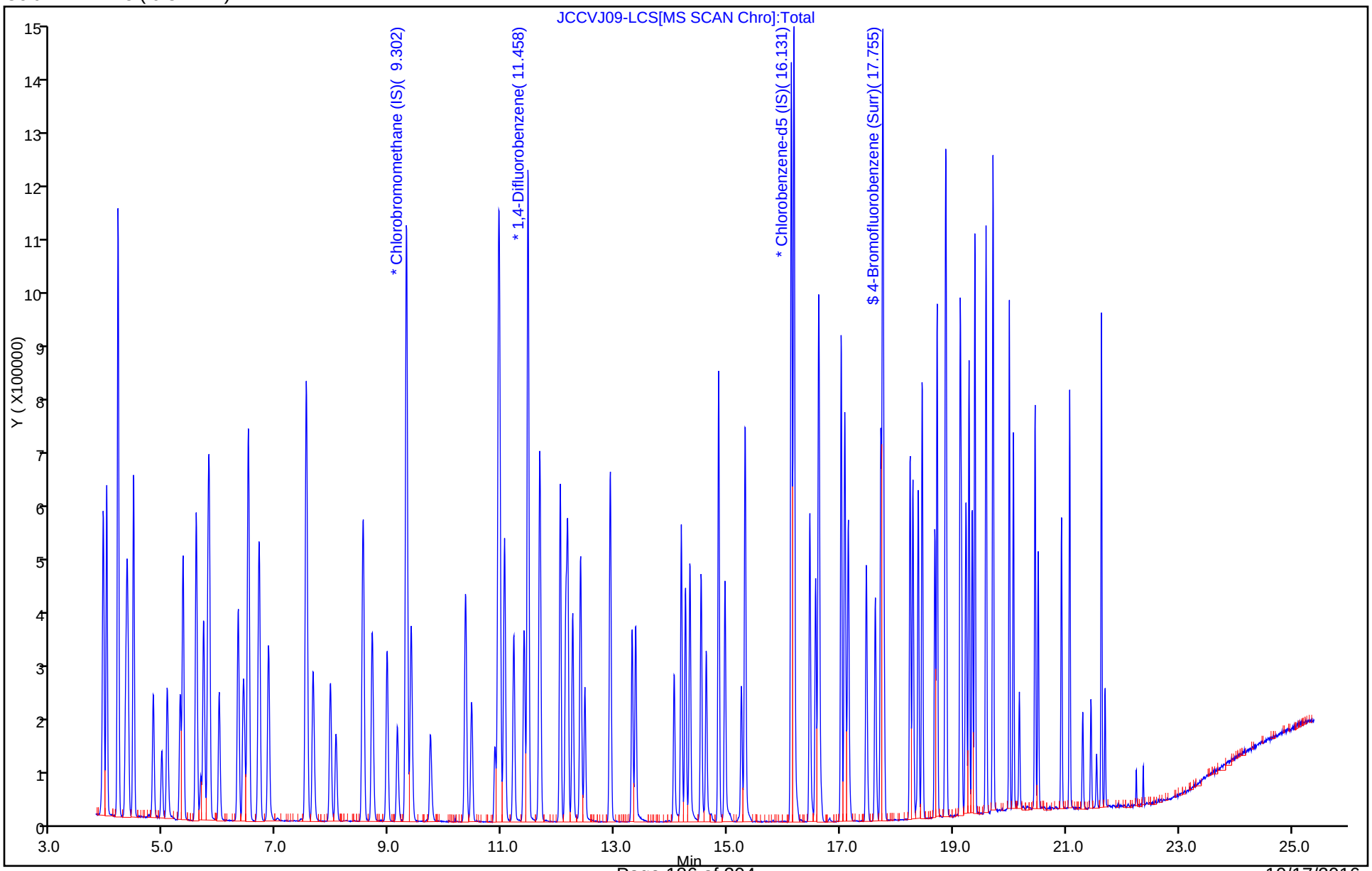
Report Date: 11-Oct-2016 12:33:23 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JCCVJ09-LCS.d

Injection Date:	09-Oct-2016 12:50:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	LCS			Worklist Smp#:	1002
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\JCCVJ09-LCS.d				
Lims ID:	LCS				
Client ID:					
Sample Type:	LCS				
Inject. Date:	09-Oct-2016 12:50:30	ALS Bottle#:	10	Worklist Smp#:	1002
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003509-013				
Misc. Info.:	S19				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161009-3510.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	11-Oct-2016 12:33:15	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				

First Level Reviewer: barlozhetskayaa Date: 11-Oct-2016 12:33:15

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.23	105.85

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1

SDG No.:

Instrument ID: MJ Start Date: 10/08/2016 17:39

Analysis Batch Number: 6845 End Date: 10/09/2016 07:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-6845/1		10/08/2016 17:39	1	JBFBJ08.D	RTX-5 0.32(mm)
IC 140-6845/3		10/08/2016 19:01	1	JJ08ICAL01.D	RTX-5 0.32(mm)
IC 140-6845/4		10/08/2016 19:54	1	JJ08ICAL02.D	RTX-5 0.32(mm)
IC 140-6845/5		10/08/2016 20:47	1	JJ08ICAL03.D	RTX-5 0.32(mm)
IC 140-6845/6		10/08/2016 21:41	1	JJ08ICAL04.D	RTX-5 0.32(mm)
IC 140-6845/7		10/08/2016 22:36	1	JJ08ICAL05.D	RTX-5 0.32(mm)
ICIS 140-6845/8		10/08/2016 23:29	1	JJ08ICAL06.D	RTX-5 0.32(mm)
IC 140-6845/9		10/09/2016 00:23	1	JJ08ICAL07.D	RTX-5 0.32(mm)
IC 140-6845/10		10/09/2016 01:17	1	JJ08ICAL08.D	RTX-5 0.32(mm)
IC 140-6845/11		10/09/2016 02:10	1	JJ07ICAL09.D	RTX-5 0.32(mm)
ICV 140-6845/17		10/09/2016 07:04	1	JJ08LCS.D	RTX-5 0.32(mm)

161008

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 101 mL	39.3	10/8/2016	5:39:43 PM
CLEAN	16 - 201 mL	23.5	10/8/2016	6:07:34 PM
ICAL01	1 - 100 mL	35.1	10/8/2016	7:01:14 PM
ICAL02	1 - 200 mL	34.3	10/8/2016	7:54:20 PM
ICAL03	2 - 202 mL	33.2	10/8/2016	8:47:56 PM
ICAL04	3 - 200 mL	34	10/8/2016	9:41:56 PM
ICAL05	4 - 200 mL	33.3	10/8/2016	10:36:28 PM
ICAL06	5 - 202 mL	33.5	10/8/2016	11:29:40 PM
ICAL07	6 - 201 mL	31.7	10/9/2016	12:23:14 AM
ICAL08	7 - 201 mL	30.4	10/9/2016	1:17:09 AM
ICAL09	8 - 200 mL	33.5	10/9/2016	2:10:38 AM
PRIME	9 - 50 mL	34.1	10/9/2016	3:04:49 AM
ICV-DNU	9 - 101 mL	32.6	10/9/2016	3:58:42 AM
DNU	16 - 101 mL	23.5	10/9/2016	4:46:56 AM
blk	16 - 501 mL	22.7	10/9/2016	5:16:16 AM
MDL	1 - 50 mL	33.8	10/9/2016	6:10:29 AM
LCS - ICV	10 - 101 mL	29.5	10/9/2016	7:04:41 AM
CAN10818	11 - 500 mL	16.8	10/9/2016	7:59:03 AM
CAN11009	12 - 501 mL	20.3	10/9/2016	8:53:04 AM
CAN10886	13 - 501 mL	19.2	10/9/2016	9:47:15 AM
CAN11000	14 - 500 mL	19	10/9/2016	10:41:47 AM
CAN11296	15 - 501 mL	22.3	10/9/2016	11:35:09 AM

MJ ICAL WL 3509

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Analysis Date:	10/8/16	Instrument:	MJ	Chrom WL #:	3509	TALS Batch & Event #	TO14/15: 68451 771	AFCEE: 68481 774
							DOD: 68471 773	OHIO: 68461 772

Chrom/Worklist Review	1st	Comments	2nd
1. Re-read each Limit Group [method editor-limit groups]	✓		
2. Verify LODV in Chrom [method editor -> edit -> MDL]	✓		
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]	✓		✓
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]	✓		✓
5. Did BFB meet tune criteria? [F8]	✓		✓
6. Were all standards injected within 24 hr of BFB? [F7]	✓		✓
7. High point checked for saturation and point removed if so? [Chrom]	✓		✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]	NA		NA
9. RT for each IS ±20 sec avg. RT? [F6 IstdRec]	✓		✓
10. Area for each IS ± 40% avg. area? [F6 IstdRec]	✓		✓
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]	✓		✓
12. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3;5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4- and 1,2,3-trichlorobenzenes	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓	DM TPH as C6	✓

MLG Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50% [F6 Σ]	✓	✓	✓	✓	124tclbz	✓	✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]	✓	✓	✓	✓		✓	✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]	✓	✓	✓	✓		✓	✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? Note: Ohio does not allow quad [F6]	NA	→	→	→		NA	→	→	→
18. If curves were used, is correlation coefficient ≥0.990? [F6]	NA	→	→	→		NA	→	→	→
19. Is the intercept less than the RL for each curve? [F6]	NA	→	→	→		NA	→	→	→
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]	NA	→	→			NA	→	→	
21. Is the second source analysis within limits? [F8 ccv]	✓	✓	✓	✓		✓	✓	✓	✓
22. **Analyst/Date:** HRS 10/10/16	**2nd Level Reviewer/Date:** DMW 10/11/16								
Comments:									

TALS Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
23. Upload ICAL		✓							
24. Graphics uploaded? [Sample List Tab]	✓	✓	✓	✓		✓	✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events –'Fix ICAL linkage' if needed]	✓	✓	✓	✓		✓	✓	✓	✓
26. Runs linked to BFB? [QC Links]	✓	✓	✓	✓		✓	✓	✓	✓
27. If criteria not met, was a NCM generated?	NA	→	→	→		NA	NA	NA	NA
28. After review in TALS, approve the method in TALS.						✓	✓	✓	✓
29. After verifying TALS is correct, lock method in Chrom <resolve any error issues>								✓	
30. Checklist & Entech report scanned, attached & assigned properly?						✓	✓	✓	✓
Analyst: HRS **Date:** 10/11/16	**2nd Level Reviewer :** DMW **Date:** 10/11/16								
Comments:	**Comments:**								
UR ⇒4: 124tclbz, naphth, benzo(b), # 123tclbz	# 1,2-DB-3-CLP								
UR ⇒25: 1 & 2 methyl naphth.									

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-6042-1

SDG No.:

Instrument ID: MJ Start Date: 10/09/2016 12:23

Analysis Batch Number: 6849 End Date: 10/10/2016 11:12

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-6849/1		10/09/2016 12:23	1	JBFBJ09.D	RTX-5 0.32(mm)
CCVIS 140-6849/2		10/09/2016 12:50	1	JCCVJ09.D	RTX-5 0.32(mm)
LCS 140-6849/1002		10/09/2016 12:50	1	JCCVJ09-LCS.d	RTX-5 0.32(mm)
MB 140-6849/4		10/09/2016 15:24	1	JMB500J09.D	RTX-5 0.32(mm)
ZZZZZ		10/09/2016 18:04	144.54		RTX-5 0.32(mm)
ZZZZZ		10/09/2016 18:58	46.42		RTX-5 0.32(mm)
ZZZZZ		10/09/2016 19:51	1		RTX-5 0.32(mm)
ZZZZZ		10/09/2016 20:45	1		RTX-5 0.32(mm)
ZZZZZ		10/09/2016 21:39	1		RTX-5 0.32(mm)
ZZZZZ		10/09/2016 22:32	1		RTX-5 0.32(mm)
ZZZZZ		10/09/2016 23:26	1		RTX-5 0.32(mm)
140-6042-1		10/10/2016 00:20	1	JJ09P109.D	RTX-5 0.32(mm)
140-6042-2		10/10/2016 01:13	1	JJ09P110.D	RTX-5 0.32(mm)
140-6042-3		10/10/2016 02:07	1	JJ09P111.D	RTX-5 0.32(mm)
ZZZZZ		10/10/2016 03:00	1		RTX-5 0.32(mm)
ZZZZZ		10/10/2016 03:54	1		RTX-5 0.32(mm)
ZZZZZ		10/10/2016 04:48	1		RTX-5 0.32(mm)
ZZZZZ		10/10/2016 05:41	1		RTX-5 0.32(mm)
ZZZZZ		10/10/2016 06:35	1		RTX-5 0.32(mm)
140-6042-2 DL		10/10/2016 10:17	1	JJ09P110DL.D	RTX-5 0.32(mm)
140-6042-3 DL		10/10/2016 11:12	1	JJ09P111DL.D	RTX-5 0.32(mm)

161009

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 101 mL	23	10/9/2016	12:23:07 PM
CCV	10 - 101 mL	29	10/9/2016	12:50:10 PM
dnuflush	16 - 101 mL	22.9	10/9/2016	2:55:08 PM
mb500	16 - 501 mL	21.9	10/9/2016	3:24:28 PM
6053-01	1 - 31 mL	14.2	10/9/2016	4:17:46 PM
6053-02	2 - 16 mL - RR 60 ml	14.6	10/9/2016	5:11:01 PM
6041-01	3 - 41 mL	14.1	10/9/2016	6:04:55 PM
6041-02	4 - 26 mL	14.2	10/9/2016	6:58:13 PM
5997-03	5 - 500 mL	2.2	10/9/2016	7:51:45 PM
5997-08	6 - 200 mL	6.8	10/9/2016	8:45:34 PM
6059-01	7 - 50 mL	8.7	10/9/2016	9:39:03 PM
6059-02	8 - 50 mL	8.2	10/9/2016	10:32:30 PM
6059-02du	8 - 51 mL	5.8	10/9/2016	11:26:26 PM
6042-01	9 - 20 mL	9.9	10/10/2016	12:20:24 AM
6042-02	10 - 100 mL	8.3	10/10/2016	1:13:35 AM
6042-03	11 - 100 mL	7.5	10/10/2016	2:07:00 AM
6057-01	12 - 52 mL	6.2	10/10/2016	3:00:38 AM
6057-02	13 - 51 mL	5.6	10/10/2016	3:54:35 AM
6058-01	14 - 501 mL	9.1	10/10/2016	4:48:08 AM
5999-02du	15 - 500 mL	5.7	10/10/2016	5:41:47 AM
5999-02	15 - 500 mL	2.7	10/10/2016	6:35:03 AM
DNU70526-01	1 - 91 mL - 140-6048-A-1-A	14.2	10/10/2016	7:28:23 AM
6053-02R	2 - 61 mL	11.1	10/10/2016	8:22:00 AM
CAN10818	3 - 502 mL	14.8	10/10/2016	9:15:49 AM
6042-02DL	10 - 30 mL	6.8	10/10/2016	10:17:46 AM
6042-03DL	11 - 42 mL	5.1	10/10/2016	11:12:20 AM

MJ WL 3510

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

AB 10/10/16

Instrument/Date	MJ ~~35~~ 10/9/16		Routine	AFCEE	DOD	OHIO
CCAL Chrom WL #	3510	CCAL Batch #	6849	NA	NA	6856
ICAL Chrom WL #	3509	ICAL Batch # / Event #	6845 / 771			6846 / 772

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		✓
2. Did BFB meet tune criteria? [F8]	✓	□ [Failed TO-14A, but passes TO-15] (NCM#_____)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
4. Is the %D ≤ 30% for all target analytes? [≤ 40% for AFCEE non-table analytes] [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab] 124 tclbz others (NT)	✓	☑ CCV - %D - LCS criteria met (NCM# 5257) □ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#_____)	✓
5. Elution order checked on isomeric pairs? [Chrom]			✓
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	NA		NA
7. Has the RT been updated to the method?	✓		✓
Analyst: AB Date: 10/11/16		2nd Level Reviewer: DW Date: 10/12/16	
Comments:		Comments:	
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓		✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#_____) □ Method Blank – Report, 10X (NCM#_____)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample ____ Reason ____ Sample ____ Reason ____	✓	□ (1) Surrogate – Matrix (NCM#_____) □ (2) Surrogate – High, ND (NCM#_____) □ (3) ISTD – RA/RA Concurs (NCM#_____) □ (4) Surrogate –RX concur, Report both (NCM#_____) □ (5) ISTD – Matrix, DL required (NCM#_____)	✓
15. Samples outside calibration range scheduled for dilution? *Samples:*	✓	□ ICAL – Range Exceeded; Minimum Dilution	✓

Chrom Review	1st	If No, why is data reportable?	2nd
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample ____ Reason ____ Sample ____ Reason ____	✓	□ (1) Reporting Limit – Dilution, Matrix (NCM#_____) □ (2) Reporting Limit – Dilution, Non-Target (NCM#_____) □ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	NA		NA
18. Obvious non-TPH peaks excluded?	NA		NA

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

19. Individual TPH peak area < octane high point area?	NA		NA
TALS Review	**1st**	**If No, why is data reportable?**	**2nd**
20. Graphics uploaded? [Sample List Tab]	✓		✓
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	✓		
22. Sample special instructions verified?	✓		✓
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP. Number of target analytes in LCS / # marginal exceedances of LCS control limits allowed: >90 / 5 71 - 90 / 4 51 - 70 / 3 31 - 50 / 2 11 - 30 / 1 < 11 / 0	✓	☐ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) ☐ LCS/LCSD - %R High (NCM#_____)	✓
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]	✓		✓
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	✓		✓
26. Analytes over calibration range set to secondary [Conditions Review Tab]	✓		✓
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	✓		✓
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*	✓		✓
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	✓	**500 mL blank ID:** 4 **200 mL blank ID:** NA	✓
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	✓		✓
31. Correct ICV linked to each MB? [QC Links]	✓		✓
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	✓		✓
33. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
34. QC checker run and items addressed?			✓
35. Checklist & Entech report scanned, attached & assigned properly?			✓

Analyst: AB	**Date:** 10/11/16	**2nd Level Reviewer :** DW	**Date:** 10/12/16
Comments:		**Comments:**	
"CN" propene J5999 NCM# 5244			
Example Calculation:			
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF			
6041#1 tce @ 7.11 → 12845.99			
Rep 13K ✓			

MS017r41, 5/25/2016

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5790-1

SDG No.:

Client Sample ID: 10746 | Lab Sample ID: 140-5790-2

Matrix: Air | Lab File ID: LOT5790.D

Analysis Method: TO-15 | Date Collected: 09/09/2016 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 09/12/2016 13:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6563 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5790-1

SDG No.:

Client Sample ID: 10746 | Lab Sample ID: 140-5790-2

Matrix: Air | Lab File ID: LOT5790.D

Analysis Method: TO-15 | Date Collected: 09/09/2016 11:55

Sample wt/vol: 200(mL) | Date Analyzed: 09/12/2016 13:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6563 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5790-1

SDG No.:

Client Sample ID: 10746 Lab Sample ID: 140-5790-2

Matrix: Air Lab File ID: LOT5790.D

Analysis Method: TO-15 Date Collected: 09/09/2016 11:55

Sample wt/vol: 200(mL) Date Analyzed: 09/12/2016 13:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6563 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5790-1

SDG No.:

Client Sample ID: 10746 Lab Sample ID: 140-5790-2

Matrix: Air Lab File ID: LOT5790.D

Analysis Method: TO-15 Date Collected: 09/09/2016 11:55

Sample wt/vol: 200(mL) Date Analyzed: 09/12/2016 13:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6563 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160910-3413.b\LOT5790.D				
Lims ID:	140-5790-A-2				
Client ID:	10746				
Sample Type:	Client				
Inject. Date:	12-Sep-2016 13:46:30	ALS Bottle#:	1	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003413-008				
Misc. Info.:	10746				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20160910-3413.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Sep-2016 13:35:37	Calib Date:	20-Jul-2016 20:22:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20160719-3204.b\GG20ICL9.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK019				
First Level Reviewer: tajh		Date:	12-Sep-2016 14:36:51		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.460	8.471	-0.011	91	305377	4.00	
* 2 1,4-Difluorobenzene	114	10.622	10.633	-0.011	96	1308803	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.400	15.405	-0.005	91	1166337	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.055	17.061	-0.006	90	811821	3.99	
6 Chlorodifluoromethane	67	3.714	3.715	0.000	40	613	0.0242	
31 Methylene Chloride	84	6.065	6.076	-0.011	93	6943	0.0934	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

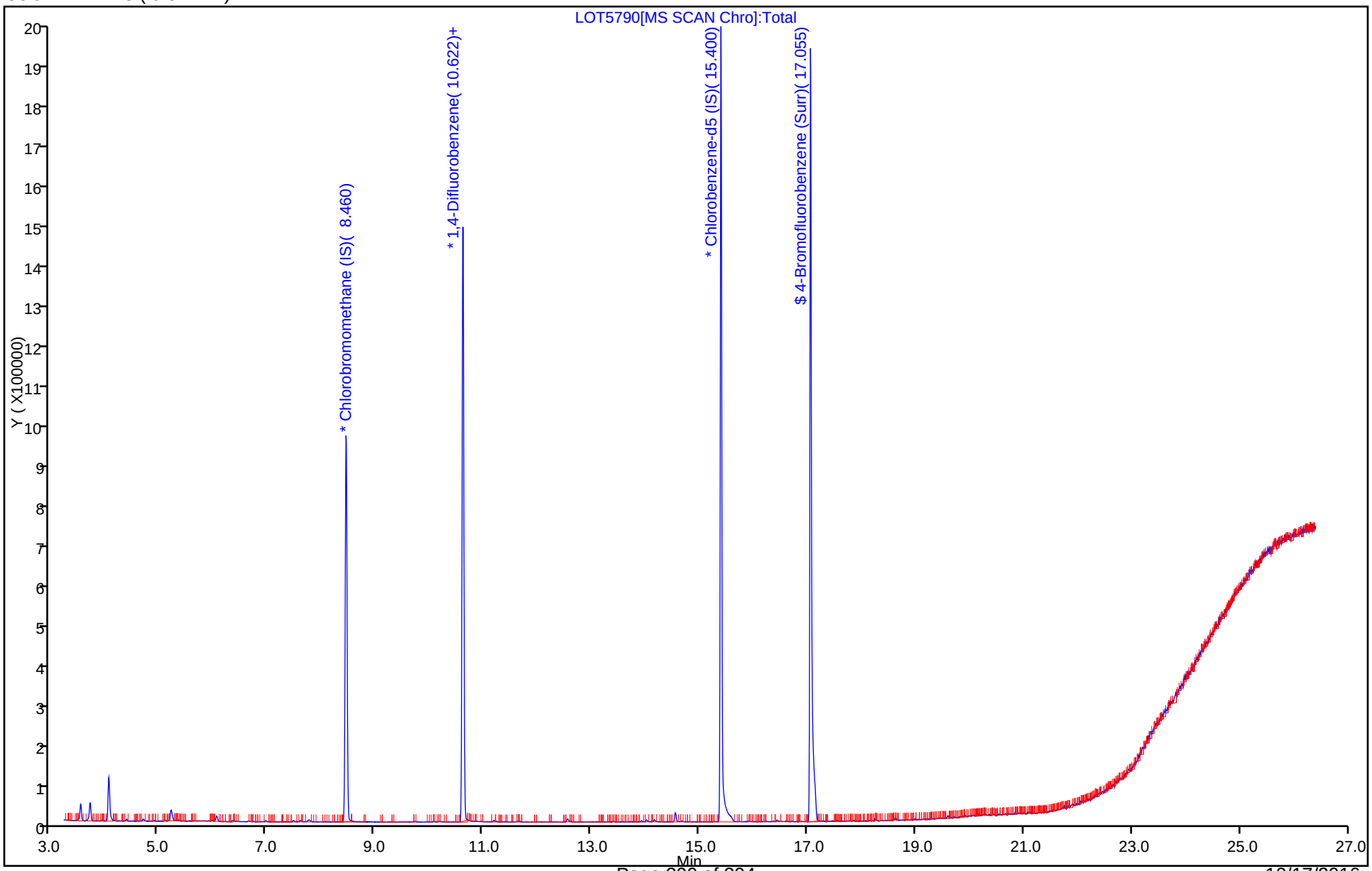
Report Date: 13-Sep-2016 13:35:42 Chrom Revision: 2.2 02-Sep-2016 12:39:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160910-3413.b\LOT5790.D

Injection Date:	12-Sep-2016 13:46:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-5790-A-2	Lab Sample ID:	140-5790-2	Worklist Smp#:	8
Client ID:	10746				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



Shipping and Receiving Documents

180325

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: Tetra Tech
Address: 51 Franklin St
City/State/Zip Annapolis / MD / 21401
Phone: 410-990-4607
FAX:
Project Name: Lockheed Martin MRC
Site/location: Building A / Middle River
PO # 117-0512124

Project Manager: Peter Rich
Phone: 410-990-4607
Site Contact:
TAL Contact:

Analysis Turnaround Time
Standard (Specify)
Rush (Specify)

Sampled By: JMW

1 of 1 COCs

140-6042 Chain of Custody

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
BLDG-A Influent	10/5/16	1427	1429	29.5	0	09569	10758	✓											
BLDG-A Mid	10/5/16	1431	1433	29	0	10104	09801	✓											
BLDG-A Effluent	10/5/16	1439	1441	30	0	10911	09794	✓											

Sampled by :

Temperature (Fahrenheit)

	Interior	Ambient	
Start			
Stop			

Received @ ambient (20°C)
1 cooler, Fedex SG

Pressure (inches of Hg)

	Interior	Ambient	
Start			
Stop			

trK # 7774 0130 4620
Custody seal intact
KW 10/6/16

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by: J. M. Wilks	Date/Time: 10/5/16 1600	Received by: [signature]
Relinquished by: [signature]	Date/Time: 10/5/16 / 1610	Received by: [signature] 10/6/16 1030

3 cans
KW 10/6/16
~~6 KR~~
3 KR

10/17/2016

Loc: 140
6042

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	/			☐ **Containers, Broken**
2. Were ambient air containers received intact?			/	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?	/			☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			/	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	/			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	/			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	/			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	/			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	/			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	/			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	/			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	/			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	/			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	/			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	/			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			/	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			/	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			/	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			/	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			/	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: 1400 2921 PM Instructions: _____

Sample Receiving Associate: _____ Date: 10/6/16

QA026R30.doc, 080916

140-6042

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 10/7/2016

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
AFB	140-6042-a-1	10758	5790	B	1	0	1610	
AFB	140-6042-a-2	09801	5790	B	1	+0.6	1611	
AFB	140-6042-a-3	09794	5790	B	1	0	1612	

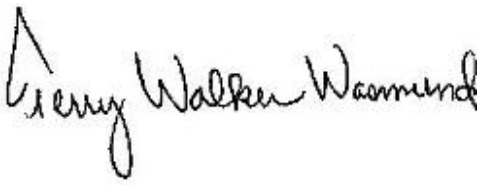
ANALYTICAL REPORT

Job Number: 140-6285-1

Job Description: SSD OEM LMC MRC/Middle River

For:
Tetra Tech GEO
51 Franklin Street
Suite 400
Annapolis, MD 21401

Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
11/16/2016 9:44 AM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
11/16/2016

cc: Belssi Chang
Ms. Dawn Monico
Amy Thomson
Michael Wilks

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Table of Contents

Cover Title Page 1

Data Summaries 4

Definitions 4

Case Narrative 5

Detection Summary 6

Client Sample Results 10

Default Detection Limits 22

Surrogate Summary 23

QC Sample Results 24

QC Association 30

Chronicle 31

Method Summary 33

Sample Summary 34

Organic Sample Data 35

Air - GC/MS VOA 35

Method TO15 Low Level 35

Method TO15 Low Level QC Summary 36

Method TO15 Low Level Sample Data 49

Standards Data 177

Method TO15 Low Level ICAL Data 177

Method TO15 Low Level CCAL Data 304

Raw QC Data 332

Method TO15 Low Level Tune Data 332

Method TO15 Low Level Blank Data 350

Method TO15 Low Level LCS/LCSD Data 360

Method TO15 Low Level Run Logs 372

Table of Contents

Air Canister Dilution 384
Clean Canister Certification 385
Clean Canister Data 385
Shipping and Receiving Documents 403
Client Chain of Custody 404
Sample Receipt Checklist 406

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-6285-1

Receipt
The samples were received on 11/4/2016 at 10:15 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA
Method(s) D1946, TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

Method(s) TO 15 LL, TO-15: Can Certification Comments:
Due to the large number of analytes in the CCV, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for several analytes to recover outside criteria for this method when analyzing for a full list. The CCV associated with the can cleaning batches had analytes outside control limits. These results have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments
No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: SSD OEM LMC MRC/Middle River

TestAmerica Job ID: 140-6285-1

Client Sample ID: C-EFFLUENT — Lab Sample ID: 140-6285-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.5		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	4.7		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.66		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.35	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.32	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	6.5		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	4.0		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.26	J	0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.1		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.37	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.3		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	8.1		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	17		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	3.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1.4	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	1.3	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	1.2	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	23		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	15		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	1.3	J	2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	5.2		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.8	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	5.5		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: C-MID-GAC — Lab Sample ID: 140-6285-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	3.4		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.093	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	5.6		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.40		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.79		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.66		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1.5		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.48		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.18	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	3.6		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	2.4		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	3.0		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.13	J	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.23	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.92		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	11		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.58	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	20		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.9		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	3.1		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: C-MID-GAC (Continued) — Lab Sample ID: 140-6285-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dichlorodifluoromethane	3.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	6.2		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	1.9		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.80	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	13		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	9.1		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	17		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.68	J	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.1	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	4.0		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: C-INFLUENT — Lab Sample ID: 140-6285-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	3.1		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.13	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	6.1		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.55		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.72		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.61		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.43		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.19	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.43		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	3.8		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.23	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	3.7		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	2.4		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	8.7		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.24	J	0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.88		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.28	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	2.1		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	9.8		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.80	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	22		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	2.7		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	2.8		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	3.0		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1.7		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.76	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	1.9		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	13		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	1.6	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	14		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	13		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	47		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	1.2	J	2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	4.3		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.4	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: C-INFLUENT (Continued) — Lab Sample ID: 140-6285-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	9.1		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: A-EFFLUENT — Lab Sample ID: 140-6285-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.19	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.94		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.93		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	13		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.63		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	17		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	31		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	3.1		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	340	E	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Vinyl chloride	0.53		0.20	0.15	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane - DL	290		4.0	0.60	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	1.2	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.3		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	4.5		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	51		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	3.1		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	68		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	120		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	11		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	1800	E	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Vinyl chloride	1.3		0.51	0.37	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane - DL	1600		22	3.3	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: A-MID-GAC — Lab Sample ID: 140-6285-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	13		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.49		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.99		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	2.5		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	130	E	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.58		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	30		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,2-Dichloroethane	1.6		0.40	0.095	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	89	E	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.17	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	3.7		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.5		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	2.0		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	530	E	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	16		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.17	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Vinyl chloride	0.49		0.20	0.15	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.84		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: A-MID-GAC (Continued) — Lab Sample ID: 140-6285-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene - DL	130		4.0	1.2	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene - DL	97		4.0	0.70	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane - DL	790		4.0	0.60	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	42		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	3.1		2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.5		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	12		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	500	E	1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.9		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	120		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,2-Dichloroethane	6.3		1.6	0.38	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	350	E	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.74	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	13		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	5.6		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	7.8		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	2900	E	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	84		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.84	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Vinyl chloride	1.2		0.51	0.37	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.6		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene - DL	510		16	4.8	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene - DL	390		16	2.8	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane - DL	4300		22	3.3	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: A-INFLUENT — Lab Sample ID: 140-6285-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	88		8.0	2.4	ppb v/v	9.96		TO 15 LL	Total/NA
1,1-Dichloroethane	17		8.0	1.0	ppb v/v	9.96		TO 15 LL	Total/NA
1,1-Dichloroethene	65		8.0	1.4	ppb v/v	9.96		TO 15 LL	Total/NA
Methylene Chloride	14	J	20	13	ppb v/v	9.96		TO 15 LL	Total/NA
1,1,1-Trichloroethane	360		8.0	1.2	ppb v/v	9.96		TO 15 LL	Total/NA
Trichloroethene	510		4.0	1.4	ppb v/v	9.96		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	350		32	9.5	ug/m3	9.96		TO 15 LL	Total/NA
1,1-Dichloroethane	68		32	4.0	ug/m3	9.96		TO 15 LL	Total/NA
1,1-Dichloroethene	260		32	5.5	ug/m3	9.96		TO 15 LL	Total/NA
Methylene Chloride	49	J	69	45	ug/m3	9.96		TO 15 LL	Total/NA
1,1,1-Trichloroethane	2000		43	6.5	ug/m3	9.96		TO 15 LL	Total/NA
Trichloroethene	2800		21	7.5	ug/m3	9.96		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: C-EFFLUENT
Lab Sample ID: 140-6285-1

Date Collected: 11/03/16 10:55
Matrix: Air
Date Received: 11/04/16 10:15
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2.5**		0.40	0.12	ppb v/v			11/07/16 20:18	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			11/07/16 20:18	1
Chlorodifluoromethane	**4.7**		0.40	0.075	ppb v/v			11/07/16 20:18	1
Chloroform	ND		0.40	0.075	ppb v/v			11/07/16 20:18	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			11/07/16 20:18	1
Dichlorodifluoromethane	**0.66**		0.40	0.14	ppb v/v			11/07/16 20:18	1
1,1-Dichloroethane	**0.35**	**J**	0.40	0.050	ppb v/v			11/07/16 20:18	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			11/07/16 20:18	1
1,1-Dichloroethene	**0.32**	**J**	0.40	0.070	ppb v/v			11/07/16 20:18	1
Ethylbenzene	**0.28**	**J**	0.40	0.14	ppb v/v			11/07/16 20:18	1
Methylene Chloride	**6.5**		1.0	0.65	ppb v/v			11/07/16 20:18	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			11/07/16 20:18	1
Naphthalene	ND		0.20	0.20	ppb v/v			11/07/16 20:18	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			11/07/16 20:18	1
Toluene	**4.0**		0.60	0.60	ppb v/v			11/07/16 20:18	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			11/07/16 20:18	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			11/07/16 20:18	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			11/07/16 20:18	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			11/07/16 20:18	1
Trichloroethene	ND		0.20	0.070	ppb v/v			11/07/16 20:18	1
1,2,3-Trimethylbenzene	**0.26**	**J**	0.40	0.17	ppb v/v			11/07/16 20:18	1
1,2,4-Trimethylbenzene	**1.1**		0.40	0.13	ppb v/v			11/07/16 20:18	1
1,3,5-Trimethylbenzene	**0.37**	**J**	0.40	0.13	ppb v/v			11/07/16 20:18	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			11/07/16 20:18	1
Xylenes, Total	**1.3**		0.80	0.12	ppb v/v			11/07/16 20:18	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**8.1**		1.3	0.37	ug/m3			11/07/16 20:18	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			11/07/16 20:18	1
Chlorodifluoromethane	**17**		1.4	0.27	ug/m3			11/07/16 20:18	1
Chloroform	ND		2.0	0.37	ug/m3			11/07/16 20:18	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			11/07/16 20:18	1
Dichlorodifluoromethane	**3.3**		2.0	0.67	ug/m3			11/07/16 20:18	1
1,1-Dichloroethane	**1.4**	**J**	1.6	0.20	ug/m3			11/07/16 20:18	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			11/07/16 20:18	1
1,1-Dichloroethene	**1.3**	**J**	1.6	0.28	ug/m3			11/07/16 20:18	1
Ethylbenzene	**1.2**	**J**	1.7	0.59	ug/m3			11/07/16 20:18	1
Methylene Chloride	**23**		3.5	2.3	ug/m3			11/07/16 20:18	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			11/07/16 20:18	1
Naphthalene	ND		1.0	1.0	ug/m3			11/07/16 20:18	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			11/07/16 20:18	1
Toluene	**15**		2.3	2.3	ug/m3			11/07/16 20:18	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			11/07/16 20:18	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			11/07/16 20:18	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			11/07/16 20:18	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			11/07/16 20:18	1
Trichloroethene	ND		1.1	0.38	ug/m3			11/07/16 20:18	1
1,2,3-Trimethylbenzene	**1.3**	**J**	2.0	0.84	ug/m3			11/07/16 20:18	1
1,2,4-Trimethylbenzene	**5.2**		2.0	0.61	ug/m3			11/07/16 20:18	1

Client Sample ID: C-EFFLUENT
Lab Sample ID: 140-6285-1
Date Collected: 11/03/16 10:55
Matrix: Air
Date Received: 11/04/16 10:15
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	**1.8**	**J**	2.0	0.64	ug/m3			11/07/16 20:18	1
Vinyl chloride	ND		0.51	0.37	ug/m3			11/07/16 20:18	1
Xylenes, Total	**5.5**		3.5	0.52	ug/m3			11/07/16 20:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*60 - 140*		*11/07/16 20:18*	*1*

Client Sample ID: C-MID-GAC
Lab Sample ID: 140-6285-2

Date Collected: 11/03/16 10:57
Matrix: Air
Date Received: 11/04/16 10:15
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**3.4**		0.40	0.12	ppb v/v			11/07/16 22:06	1
Carbon tetrachloride	**0.093**	**J**	0.40	0.075	ppb v/v			11/07/16 22:06	1
Chlorodifluoromethane	**5.6**		0.40	0.075	ppb v/v			11/07/16 22:06	1
Chloroform	**0.40**		0.40	0.075	ppb v/v			11/07/16 22:06	1
cis-1,2-Dichloroethene	**0.79**		0.40	0.12	ppb v/v			11/07/16 22:06	1
Dichlorodifluoromethane	**0.66**		0.40	0.14	ppb v/v			11/07/16 22:06	1
1,1-Dichloroethane	**1.5**		0.40	0.050	ppb v/v			11/07/16 22:06	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			11/07/16 22:06	1
1,1-Dichloroethene	**0.48**		0.40	0.070	ppb v/v			11/07/16 22:06	1
Ethylbenzene	**0.18**	**J**	0.40	0.14	ppb v/v			11/07/16 22:06	1
Methylene Chloride	**3.6**		1.0	0.65	ppb v/v			11/07/16 22:06	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			11/07/16 22:06	1
Naphthalene	ND		0.20	0.20	ppb v/v			11/07/16 22:06	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			11/07/16 22:06	1
Toluene	**2.4**		0.60	0.60	ppb v/v			11/07/16 22:06	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			11/07/16 22:06	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			11/07/16 22:06	1
1,1,1-Trichloroethane	**3.0**		0.40	0.060	ppb v/v			11/07/16 22:06	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			11/07/16 22:06	1
Trichloroethene	**0.13**	**J**	0.20	0.070	ppb v/v			11/07/16 22:06	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			11/07/16 22:06	1
1,2,4-Trimethylbenzene	**0.23**	**J**	0.40	0.13	ppb v/v			11/07/16 22:06	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			11/07/16 22:06	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			11/07/16 22:06	1
Xylenes, Total	**0.92**		0.80	0.12	ppb v/v			11/07/16 22:06	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**11**		1.3	0.37	ug/m3			11/07/16 22:06	1
Carbon tetrachloride	**0.58**	**J**	2.5	0.47	ug/m3			11/07/16 22:06	1
Chlorodifluoromethane	**20**		1.4	0.27	ug/m3			11/07/16 22:06	1
Chloroform	**1.9**		2.0	0.37	ug/m3			11/07/16 22:06	1
cis-1,2-Dichloroethene	**3.1**		1.6	0.48	ug/m3			11/07/16 22:06	1
Dichlorodifluoromethane	**3.3**		2.0	0.67	ug/m3			11/07/16 22:06	1
1,1-Dichloroethane	**6.2**		1.6	0.20	ug/m3			11/07/16 22:06	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			11/07/16 22:06	1
1,1-Dichloroethene	**1.9**		1.6	0.28	ug/m3			11/07/16 22:06	1
Ethylbenzene	**0.80**	**J**	1.7	0.59	ug/m3			11/07/16 22:06	1
Methylene Chloride	**13**		3.5	2.3	ug/m3			11/07/16 22:06	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			11/07/16 22:06	1
Naphthalene	ND		1.0	1.0	ug/m3			11/07/16 22:06	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			11/07/16 22:06	1
Toluene	**9.1**		2.3	2.3	ug/m3			11/07/16 22:06	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			11/07/16 22:06	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			11/07/16 22:06	1
1,1,1-Trichloroethane	**17**		2.2	0.33	ug/m3			11/07/16 22:06	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			11/07/16 22:06	1
Trichloroethene	**0.68**	**J**	1.1	0.38	ug/m3			11/07/16 22:06	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			11/07/16 22:06	1
1,2,4-Trimethylbenzene	**1.1**	**J**	2.0	0.61	ug/m3			11/07/16 22:06	1

Client Sample ID: C-MID-GAC
Lab Sample ID: 140-6285-2

Date Collected: 11/03/16 10:57
Matrix: Air
Date Received: 11/04/16 10:15
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			11/07/16 22:06	1
Vinyl chloride	ND		0.51	0.37	ug/m3			11/07/16 22:06	1
Xylenes, Total	**4.0**		3.5	0.52	ug/m3			11/07/16 22:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*		*11/07/16 22:06*	*1*

Client Sample ID: C-INFLUENT

Lab Sample ID: 140-6285-3

Date Collected: 11/03/16 10:59

Matrix: Air

Date Received: 11/04/16 10:15

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**3.1**		0.40	0.12	ppb v/v			11/07/16 23:00	1
Carbon tetrachloride	**0.13**	**J**	0.40	0.075	ppb v/v			11/07/16 23:00	1
Chlorodifluoromethane	**6.1**		0.40	0.075	ppb v/v			11/07/16 23:00	1
Chloroform	**0.55**		0.40	0.075	ppb v/v			11/07/16 23:00	1
cis-1,2-Dichloroethene	**0.72**		0.40	0.12	ppb v/v			11/07/16 23:00	1
Dichlorodifluoromethane	**0.61**		0.40	0.14	ppb v/v			11/07/16 23:00	1
1,1-Dichloroethane	**0.43**		0.40	0.050	ppb v/v			11/07/16 23:00	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			11/07/16 23:00	1
1,1-Dichloroethene	**0.19**	**J**	0.40	0.070	ppb v/v			11/07/16 23:00	1
Ethylbenzene	**0.43**		0.40	0.14	ppb v/v			11/07/16 23:00	1
Methylene Chloride	**3.8**		1.0	0.65	ppb v/v			11/07/16 23:00	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			11/07/16 23:00	1
Naphthalene	ND		0.20	0.20	ppb v/v			11/07/16 23:00	1
Tetrachloroethene	**0.23**	**J**	0.40	0.080	ppb v/v			11/07/16 23:00	1
Toluene	**3.7**		0.60	0.60	ppb v/v			11/07/16 23:00	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			11/07/16 23:00	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			11/07/16 23:00	1
1,1,1-Trichloroethane	**2.4**		0.40	0.060	ppb v/v			11/07/16 23:00	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			11/07/16 23:00	1
Trichloroethene	**8.7**		0.20	0.070	ppb v/v			11/07/16 23:00	1
1,2,3-Trimethylbenzene	**0.24**	**J**	0.40	0.17	ppb v/v			11/07/16 23:00	1
1,2,4-Trimethylbenzene	**0.88**		0.40	0.13	ppb v/v			11/07/16 23:00	1
1,3,5-Trimethylbenzene	**0.28**	**J**	0.40	0.13	ppb v/v			11/07/16 23:00	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			11/07/16 23:00	1
Xylenes, Total	**2.1**		0.80	0.12	ppb v/v			11/07/16 23:00	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**9.8**		1.3	0.37	ug/m3			11/07/16 23:00	1
Carbon tetrachloride	**0.80**	**J**	2.5	0.47	ug/m3			11/07/16 23:00	1
Chlorodifluoromethane	**22**		1.4	0.27	ug/m3			11/07/16 23:00	1
Chloroform	**2.7**		2.0	0.37	ug/m3			11/07/16 23:00	1
cis-1,2-Dichloroethene	**2.8**		1.6	0.48	ug/m3			11/07/16 23:00	1
Dichlorodifluoromethane	**3.0**		2.0	0.67	ug/m3			11/07/16 23:00	1
1,1-Dichloroethane	**1.7**		1.6	0.20	ug/m3			11/07/16 23:00	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			11/07/16 23:00	1
1,1-Dichloroethene	**0.76**	**J**	1.6	0.28	ug/m3			11/07/16 23:00	1
Ethylbenzene	**1.9**		1.7	0.59	ug/m3			11/07/16 23:00	1
Methylene Chloride	**13**		3.5	2.3	ug/m3			11/07/16 23:00	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			11/07/16 23:00	1
Naphthalene	ND		1.0	1.0	ug/m3			11/07/16 23:00	1
Tetrachloroethene	**1.6**	**J**	2.7	0.54	ug/m3			11/07/16 23:00	1
Toluene	**14**		2.3	2.3	ug/m3			11/07/16 23:00	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			11/07/16 23:00	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			11/07/16 23:00	1
1,1,1-Trichloroethane	**13**		2.2	0.33	ug/m3			11/07/16 23:00	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			11/07/16 23:00	1
Trichloroethene	**47**		1.1	0.38	ug/m3			11/07/16 23:00	1
1,2,3-Trimethylbenzene	**1.2**	**J**	2.0	0.84	ug/m3			11/07/16 23:00	1
1,2,4-Trimethylbenzene	**4.3**		2.0	0.61	ug/m3			11/07/16 23:00	1

Client Sample ID: C-INFLUENT
Lab Sample ID: 140-6285-3
Date Collected: 11/03/16 10:59
Matrix: Air
Date Received: 11/04/16 10:15
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	**1.4**	**J**	2.0	0.64	ug/m3			11/07/16 23:00	1
Vinyl chloride	ND		0.51	0.37	ug/m3			11/07/16 23:00	1
Xylenes, Total	**9.1**		3.5	0.52	ug/m3			11/07/16 23:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*60 - 140*		*11/07/16 23:00*	*1*

Client Sample ID: A-EFFLUENT
Lab Sample ID: 140-6285-4

Date Collected: 11/03/16 12:35
Matrix: Air
Date Received: 11/04/16 10:15
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			11/07/16 23:54	1
Carbon tetrachloride	**0.19**	**J**	0.40	0.075	ppb v/v			11/07/16 23:54	1
Chlorodifluoromethane	**0.94**		0.40	0.075	ppb v/v			11/07/16 23:54	1
Chloroform	**0.93**		0.40	0.075	ppb v/v			11/07/16 23:54	1
cis-1,2-Dichloroethene	**13**		0.40	0.12	ppb v/v			11/07/16 23:54	1
Dichlorodifluoromethane	**0.63**		0.40	0.14	ppb v/v			11/07/16 23:54	1
1,1-Dichloroethane	**17**		0.40	0.050	ppb v/v			11/07/16 23:54	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			11/07/16 23:54	1
1,1-Dichloroethene	**31**		0.40	0.070	ppb v/v			11/07/16 23:54	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			11/07/16 23:54	1
Methylene Chloride	**3.1**		1.0	0.65	ppb v/v			11/07/16 23:54	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			11/07/16 23:54	1
Naphthalene	ND		0.20	0.20	ppb v/v			11/07/16 23:54	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			11/07/16 23:54	1
Toluene	ND		0.60	0.60	ppb v/v			11/07/16 23:54	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			11/07/16 23:54	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			11/07/16 23:54	1
1,1,1-Trichloroethane	**340**	**E**	0.40	0.060	ppb v/v			11/07/16 23:54	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			11/07/16 23:54	1
Trichloroethene	ND		0.20	0.070	ppb v/v			11/07/16 23:54	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			11/07/16 23:54	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			11/07/16 23:54	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			11/07/16 23:54	1
Vinyl chloride	**0.53**		0.20	0.15	ppb v/v			11/07/16 23:54	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			11/07/16 23:54	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			11/07/16 23:54	1
Carbon tetrachloride	**1.2**	**J**	2.5	0.47	ug/m3			11/07/16 23:54	1
Chlorodifluoromethane	**3.3**		1.4	0.27	ug/m3			11/07/16 23:54	1
Chloroform	**4.5**		2.0	0.37	ug/m3			11/07/16 23:54	1
cis-1,2-Dichloroethene	**51**		1.6	0.48	ug/m3			11/07/16 23:54	1
Dichlorodifluoromethane	**3.1**		2.0	0.67	ug/m3			11/07/16 23:54	1
1,1-Dichloroethane	**68**		1.6	0.20	ug/m3			11/07/16 23:54	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			11/07/16 23:54	1
1,1-Dichloroethene	**120**		1.6	0.28	ug/m3			11/07/16 23:54	1
Ethylbenzene	ND		1.7	0.59	ug/m3			11/07/16 23:54	1
Methylene Chloride	**11**		3.5	2.3	ug/m3			11/07/16 23:54	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			11/07/16 23:54	1
Naphthalene	ND		1.0	1.0	ug/m3			11/07/16 23:54	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			11/07/16 23:54	1
Toluene	ND		2.3	2.3	ug/m3			11/07/16 23:54	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			11/07/16 23:54	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			11/07/16 23:54	1
1,1,1-Trichloroethane	**1800**	**E**	2.2	0.33	ug/m3			11/07/16 23:54	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			11/07/16 23:54	1
Trichloroethene	ND		1.1	0.38	ug/m3			11/07/16 23:54	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			11/07/16 23:54	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			11/07/16 23:54	1

Client Sample ID: A-EFFLUENT
Lab Sample ID: 140-6285-4

Date Collected: 11/03/16 12:35
Matrix: Air
Date Received: 11/04/16 10:15
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			11/07/16 23:54	1
Vinyl chloride	**1.3**		0.51	0.37	ug/m3			11/07/16 23:54	1
Xylenes, Total	ND		3.5	0.52	ug/m3			11/07/16 23:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*60 - 140*		*11/07/16 23:54*	*1*

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**290**		4.0	0.60	ppb v/v			11/08/16 16:26	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**1600**		22	3.3	ug/m3			11/08/16 16:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*60 - 140*		*11/08/16 16:26*	*1*

Client Sample ID: A-MID-GAC
Lab Sample ID: 140-6285-5

Date Collected: 11/03/16 12:37
Matrix: Air
Date Received: 11/04/16 10:15
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**13**		0.40	0.12	ppb v/v			11/08/16 00:48	1
Carbon tetrachloride	**0.49**		0.40	0.075	ppb v/v			11/08/16 00:48	1
Chlorodifluoromethane	**0.99**		0.40	0.075	ppb v/v			11/08/16 00:48	1
Chloroform	**2.5**		0.40	0.075	ppb v/v			11/08/16 00:48	1
cis-1,2-Dichloroethene	**130**	**E**	0.40	0.12	ppb v/v			11/08/16 00:48	1
Dichlorodifluoromethane	**0.58**		0.40	0.14	ppb v/v			11/08/16 00:48	1
1,1-Dichloroethane	**30**		0.40	0.050	ppb v/v			11/08/16 00:48	1
1,2-Dichloroethane	**1.6**		0.40	0.095	ppb v/v			11/08/16 00:48	1
1,1-Dichloroethene	**89**	**E**	0.40	0.070	ppb v/v			11/08/16 00:48	1
Ethylbenzene	**0.17**	**J**	0.40	0.14	ppb v/v			11/08/16 00:48	1
Methylene Chloride	**3.7**		1.0	0.65	ppb v/v			11/08/16 00:48	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			11/08/16 00:48	1
Naphthalene	ND		0.20	0.20	ppb v/v			11/08/16 00:48	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			11/08/16 00:48	1
Toluene	**1.5**		0.60	0.60	ppb v/v			11/08/16 00:48	1
trans-1,2-Dichloroethene	**2.0**		0.40	0.10	ppb v/v			11/08/16 00:48	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			11/08/16 00:48	1
1,1,1-Trichloroethane	**530**	**E**	0.40	0.060	ppb v/v			11/08/16 00:48	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			11/08/16 00:48	1
Trichloroethene	**16**		0.20	0.070	ppb v/v			11/08/16 00:48	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			11/08/16 00:48	1
1,2,4-Trimethylbenzene	**0.17**	**J**	0.40	0.13	ppb v/v			11/08/16 00:48	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			11/08/16 00:48	1
Vinyl chloride	**0.49**		0.20	0.15	ppb v/v			11/08/16 00:48	1
Xylenes, Total	**0.84**		0.80	0.12	ppb v/v			11/08/16 00:48	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**42**		1.3	0.37	ug/m3			11/08/16 00:48	1
Carbon tetrachloride	**3.1**		2.5	0.47	ug/m3			11/08/16 00:48	1
Chlorodifluoromethane	**3.5**		1.4	0.27	ug/m3			11/08/16 00:48	1
Chloroform	**12**		2.0	0.37	ug/m3			11/08/16 00:48	1
cis-1,2-Dichloroethene	**500**	**E**	1.6	0.48	ug/m3			11/08/16 00:48	1
Dichlorodifluoromethane	**2.9**		2.0	0.67	ug/m3			11/08/16 00:48	1
1,1-Dichloroethane	**120**		1.6	0.20	ug/m3			11/08/16 00:48	1
1,2-Dichloroethane	**6.3**		1.6	0.38	ug/m3			11/08/16 00:48	1
1,1-Dichloroethene	**350**	**E**	1.6	0.28	ug/m3			11/08/16 00:48	1
Ethylbenzene	**0.74**	**J**	1.7	0.59	ug/m3			11/08/16 00:48	1
Methylene Chloride	**13**		3.5	2.3	ug/m3			11/08/16 00:48	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			11/08/16 00:48	1
Naphthalene	ND		1.0	1.0	ug/m3			11/08/16 00:48	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			11/08/16 00:48	1
Toluene	**5.6**		2.3	2.3	ug/m3			11/08/16 00:48	1
trans-1,2-Dichloroethene	**7.8**		1.6	0.40	ug/m3			11/08/16 00:48	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			11/08/16 00:48	1
1,1,1-Trichloroethane	**2900**	**E**	2.2	0.33	ug/m3			11/08/16 00:48	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			11/08/16 00:48	1
Trichloroethene	**84**		1.1	0.38	ug/m3			11/08/16 00:48	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			11/08/16 00:48	1
1,2,4-Trimethylbenzene	**0.84**	**J**	2.0	0.61	ug/m3			11/08/16 00:48	1

Client Sample ID: A-MID-GAC
Lab Sample ID: 140-6285-5

Date Collected: 11/03/16 12:37
Matrix: Air
Date Received: 11/04/16 10:15
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			11/08/16 00:48	1
Vinyl chloride	**1.2**		0.51	0.37	ug/m3			11/08/16 00:48	1
Xylenes, Total	**3.6**		3.5	0.52	ug/m3			11/08/16 00:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*60 - 140*		*11/08/16 00:48*	*1*

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**130**		4.0	1.2	ppb v/v			11/08/16 17:13	1
1,1-Dichloroethene	**97**		4.0	0.70	ppb v/v			11/08/16 17:13	1
1,1,1-Trichloroethane	**790**		4.0	0.60	ppb v/v			11/08/16 17:13	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**510**		16	4.8	ug/m3			11/08/16 17:13	1
1,1-Dichloroethene	**390**		16	2.8	ug/m3			11/08/16 17:13	1
1,1,1-Trichloroethane	**4300**		22	3.3	ug/m3			11/08/16 17:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*60 - 140*		*11/08/16 17:13*	*1*

Client Sample ID: A-INFLUENT
Lab Sample ID: 140-6285-6

Date Collected: 11/03/16 12:39
Matrix: Air
Date Received: 11/04/16 10:15
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		8.0	2.3	ppb v/v			11/08/16 09:07	9.96
Carbon tetrachloride	ND		8.0	1.5	ppb v/v			11/08/16 09:07	9.96
Chlorodifluoromethane	ND		8.0	1.5	ppb v/v			11/08/16 09:07	9.96
Chloroform	ND		8.0	1.5	ppb v/v			11/08/16 09:07	9.96
cis-1,2-Dichloroethene	**88**		8.0	2.4	ppb v/v			11/08/16 09:07	9.96
Dichlorodifluoromethane	ND		8.0	2.7	ppb v/v			11/08/16 09:07	9.96
1,1-Dichloroethane	**17**		8.0	1.0	ppb v/v			11/08/16 09:07	9.96
1,2-Dichloroethane	ND		8.0	1.9	ppb v/v			11/08/16 09:07	9.96
1,1-Dichloroethene	**65**		8.0	1.4	ppb v/v			11/08/16 09:07	9.96
Ethylbenzene	ND		8.0	2.7	ppb v/v			11/08/16 09:07	9.96
Methylene Chloride	**14**	**J**	20	13	ppb v/v			11/08/16 09:07	9.96
Methyl tert-butyl ether	ND		40	6.8	ppb v/v			11/08/16 09:07	9.96
Naphthalene	ND		4.0	4.0	ppb v/v			11/08/16 09:07	9.96
Tetrachloroethene	ND		8.0	1.6	ppb v/v			11/08/16 09:07	9.96
Toluene	ND		12	12	ppb v/v			11/08/16 09:07	9.96
trans-1,2-Dichloroethene	ND		8.0	2.0	ppb v/v			11/08/16 09:07	9.96
1,2,4-Trichlorobenzene	ND		8.0	3.9	ppb v/v			11/08/16 09:07	9.96
1,1,1-Trichloroethane	**360**		8.0	1.2	ppb v/v			11/08/16 09:07	9.96
1,1,2-Trichloroethane	ND		8.0	2.1	ppb v/v			11/08/16 09:07	9.96
Trichloroethene	**510**		4.0	1.4	ppb v/v			11/08/16 09:07	9.96
1,2,3-Trimethylbenzene	ND		8.0	3.4	ppb v/v			11/08/16 09:07	9.96
1,2,4-Trimethylbenzene	ND		8.0	2.5	ppb v/v			11/08/16 09:07	9.96
1,3,5-Trimethylbenzene	ND		8.0	2.6	ppb v/v			11/08/16 09:07	9.96
Vinyl chloride	ND		4.0	2.9	ppb v/v			11/08/16 09:07	9.96
Xylenes, Total	ND		16	2.4	ppb v/v			11/08/16 09:07	9.96

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		25	7.3	ug/m3			11/08/16 09:07	9.96
Carbon tetrachloride	ND		50	9.4	ug/m3			11/08/16 09:07	9.96
Chlorodifluoromethane	ND		28	5.3	ug/m3			11/08/16 09:07	9.96
Chloroform	ND		39	7.3	ug/m3			11/08/16 09:07	9.96
cis-1,2-Dichloroethene	**350**		32	9.5	ug/m3			11/08/16 09:07	9.96
Dichlorodifluoromethane	ND		39	13	ug/m3			11/08/16 09:07	9.96
1,1-Dichloroethane	**68**		32	4.0	ug/m3			11/08/16 09:07	9.96
1,2-Dichloroethane	ND		32	7.7	ug/m3			11/08/16 09:07	9.96
1,1-Dichloroethene	**260**		32	5.5	ug/m3			11/08/16 09:07	9.96
Ethylbenzene	ND		35	12	ug/m3			11/08/16 09:07	9.96
Methylene Chloride	**49**	**J**	69	45	ug/m3			11/08/16 09:07	9.96
Methyl tert-butyl ether	ND		140	24	ug/m3			11/08/16 09:07	9.96
Naphthalene	ND		21	21	ug/m3			11/08/16 09:07	9.96
Tetrachloroethene	ND		54	11	ug/m3			11/08/16 09:07	9.96
Toluene	ND		45	45	ug/m3			11/08/16 09:07	9.96
trans-1,2-Dichloroethene	ND		32	7.9	ug/m3			11/08/16 09:07	9.96
1,2,4-Trichlorobenzene	ND		59	29	ug/m3			11/08/16 09:07	9.96
1,1,1-Trichloroethane	**2000**		43	6.5	ug/m3			11/08/16 09:07	9.96
1,1,2-Trichloroethane	ND		43	11	ug/m3			11/08/16 09:07	9.96
Trichloroethene	**2800**		21	7.5	ug/m3			11/08/16 09:07	9.96
1,2,3-Trimethylbenzene	ND		39	17	ug/m3			11/08/16 09:07	9.96
1,2,4-Trimethylbenzene	ND		39	12	ug/m3			11/08/16 09:07	9.96

Client Sample ID: A-INFLUENT
Lab Sample ID: 140-6285-6
Date Collected: 11/03/16 12:39
Matrix: Air
Date Received: 11/04/16 10:15
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		39	13	ug/m3			11/08/16 09:07	9.96
Vinyl chloride	ND		10	7.4	ug/m3			11/08/16 09:07	9.96
Xylenes, Total	ND		69	10	ug/m3			11/08/16 09:07	9.96

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*		*11/08/16 09:07*	*9.96*

Default Detection Limits

Client: Tetra Tech GEO
Project/Site: SSD OEM LMC MRC/Middle River

TestAmerica Job ID: 140-6285-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.20	0.13	ppb v/v	TO 15 LL
Methylene Chloride	0.69	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: SSD OEM LMC MRC/Middle River

TestAmerica Job ID: 140-6285-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(60-140)
140-6285-1	C-EFFLUENT	97
140-6285-2	C-MID-GAC	104
140-6285-3	C-INFLUENT	95
140-6285-4	A-EFFLUENT	98
140-6285-4 - DL	A-EFFLUENT	85
140-6285-5	A-MID-GAC	102
140-6285-5 - DL	A-MID-GAC	83
140-6285-6	A-INFLUENT	104
LCS 140-7085/1006	Lab Control Sample	106
LCS 140-7105/1002	Lab Control Sample	94
MB 140-7085/9	Method Blank	95
MB 140-7105/4	Method Blank	85

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-7085/9
Matrix: Air
Analysis Batch: 7085

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			11/07/16 14:57	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			11/07/16 14:57	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			11/07/16 14:57	1
Chloroform	ND		0.080	0.015	ppb v/v			11/07/16 14:57	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			11/07/16 14:57	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			11/07/16 14:57	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			11/07/16 14:57	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			11/07/16 14:57	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			11/07/16 14:57	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			11/07/16 14:57	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			11/07/16 14:57	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			11/07/16 14:57	1
Naphthalene	ND		0.040	0.040	ppb v/v			11/07/16 14:57	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			11/07/16 14:57	1
Toluene	ND		0.12	0.12	ppb v/v			11/07/16 14:57	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			11/07/16 14:57	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			11/07/16 14:57	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			11/07/16 14:57	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			11/07/16 14:57	1
Trichloroethene	ND		0.040	0.014	ppb v/v			11/07/16 14:57	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			11/07/16 14:57	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			11/07/16 14:57	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			11/07/16 14:57	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			11/07/16 14:57	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			11/07/16 14:57	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			11/07/16 14:57	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			11/07/16 14:57	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			11/07/16 14:57	1
Chloroform	ND		0.39	0.073	ug/m3			11/07/16 14:57	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			11/07/16 14:57	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			11/07/16 14:57	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			11/07/16 14:57	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			11/07/16 14:57	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			11/07/16 14:57	1
Ethylbenzene	ND		0.35	0.12	ug/m3			11/07/16 14:57	1
Methylene Chloride	ND		0.69	0.45	ug/m3			11/07/16 14:57	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			11/07/16 14:57	1
Naphthalene	ND		0.21	0.21	ug/m3			11/07/16 14:57	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			11/07/16 14:57	1
Toluene	ND		0.45	0.45	ug/m3			11/07/16 14:57	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			11/07/16 14:57	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			11/07/16 14:57	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			11/07/16 14:57	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			11/07/16 14:57	1
Trichloroethene	ND		0.21	0.075	ug/m3			11/07/16 14:57	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			11/07/16 14:57	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-7085/9
Matrix: Air
Analysis Batch: 7085

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			11/07/16 14:57	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			11/07/16 14:57	1
Vinyl chloride	ND		0.10	0.074	ug/m3			11/07/16 14:57	1
Xylenes, Total	ND		0.69	0.10	ug/m3			11/07/16 14:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*60 - 140*		*11/07/16 14:57*	*1*

Lab Sample ID: LCS 140-7085/1006
Matrix: Air
Analysis Batch: 7085

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	1.99	2.12		ppb v/v		107	70 - 130
Carbon tetrachloride	1.99	2.05		ppb v/v		103	70 - 130
Chlorodifluoromethane	1.99	2.30		ppb v/v		116	60 - 140
Chloroform	1.99	2.15		ppb v/v		108	70 - 130
cis-1,2-Dichloroethene	1.99	2.06		ppb v/v		103	70 - 130
Dichlorodifluoromethane	1.99	2.38		ppb v/v		119	60 - 140
1,1-Dichloroethane	1.99	2.14		ppb v/v		107	70 - 130
1,2-Dichloroethane	1.99	2.11		ppb v/v		106	70 - 130
1,1-Dichloroethene	1.99	2.25		ppb v/v		113	70 - 130
Ethylbenzene	1.99	2.03		ppb v/v		102	70 - 130
Methylene Chloride	1.99	2.09		ppb v/v		105	70 - 130
Methyl tert-butyl ether	1.99	2.16		ppb v/v		108	60 - 140
Naphthalene	1.99	1.97		ppb v/v		99	60 - 140
Tetrachloroethene	1.99	1.96		ppb v/v		98	70 - 130
Toluene	1.99	2.02		ppb v/v		101	70 - 130
trans-1,2-Dichloroethene	1.99	2.22		ppb v/v		111	70 - 130
1,2,4-Trichlorobenzene	1.99	2.01		ppb v/v		101	60 - 140
1,1,1-Trichloroethane	1.99	2.09		ppb v/v		105	70 - 130
1,1,2-Trichloroethane	1.99	1.99		ppb v/v		100	70 - 130
Trichloroethene	1.99	1.88		ppb v/v		94	70 - 130
1,2,3-Trimethylbenzene	1.99	1.95		ppb v/v		98	70 - 130
1,2,4-Trimethylbenzene	1.99	2.02		ppb v/v		102	70 - 130
1,3,5-Trimethylbenzene	1.99	1.96		ppb v/v		99	70 - 130
Vinyl chloride	1.99	2.46		ppb v/v		124	70 - 130
Xylenes, Total	5.97	6.08		ppb v/v		102	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	6.78		ug/m3		107	70 - 130
Carbon tetrachloride	13	12.9		ug/m3		103	70 - 130
Chlorodifluoromethane	7.0	8.15		ug/m3		116	60 - 140
Chloroform	9.7	10.5		ug/m3		108	70 - 130
cis-1,2-Dichloroethene	7.9	8.17		ug/m3		103	70 - 130
Dichlorodifluoromethane	9.8	11.8		ug/m3		119	60 - 140
1,1-Dichloroethane	8.1	8.64		ug/m3		107	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-7085/1006
Matrix: Air
Analysis Batch: 7085

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	8.1	8.53		ug/m3		106	70 - 130
1,1-Dichloroethene	7.9	8.94		ug/m3		113	70 - 130
Ethylbenzene	8.6	8.79		ug/m3		102	70 - 130
Methylene Chloride	6.9	7.25		ug/m3		105	70 - 130
Methyl tert-butyl ether	7.2	7.78		ug/m3		108	60 - 140
Naphthalene	10	10.3		ug/m3		99	60 - 140
Tetrachloroethene	14	13.3		ug/m3		98	70 - 130
Toluene	7.5	7.61		ug/m3		101	70 - 130
trans-1,2-Dichloroethene	7.9	8.79		ug/m3		111	70 - 130
1,2,4-Trichlorobenzene	15	14.9		ug/m3		101	60 - 140
1,1,1-Trichloroethane	11	11.4		ug/m3		105	70 - 130
1,1,2-Trichloroethane	11	10.8		ug/m3		100	70 - 130
Trichloroethene	11	10.1		ug/m3		94	70 - 130
1,2,3-Trimethylbenzene	9.8	9.57		ug/m3		98	70 - 130
1,2,4-Trimethylbenzene	9.8	9.95		ug/m3		102	70 - 130
1,3,5-Trimethylbenzene	9.8	9.64		ug/m3		99	70 - 130
Vinyl chloride	5.1	6.29		ug/m3		124	70 - 130
Xylenes, Total	26	26.4		ug/m3		102	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*60 - 140*

Lab Sample ID: MB 140-7105/4
Matrix: Air
Analysis Batch: 7105

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			11/08/16 13:19	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			11/08/16 13:19	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			11/08/16 13:19	1
Chloroform	ND		0.080	0.015	ppb v/v			11/08/16 13:19	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			11/08/16 13:19	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			11/08/16 13:19	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			11/08/16 13:19	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			11/08/16 13:19	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			11/08/16 13:19	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			11/08/16 13:19	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			11/08/16 13:19	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			11/08/16 13:19	1
Naphthalene	ND		0.040	0.040	ppb v/v			11/08/16 13:19	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			11/08/16 13:19	1
Toluene	ND		0.12	0.12	ppb v/v			11/08/16 13:19	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			11/08/16 13:19	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			11/08/16 13:19	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			11/08/16 13:19	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			11/08/16 13:19	1
Trichloroethene	ND		0.040	0.014	ppb v/v			11/08/16 13:19	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-7105/4
Matrix: Air
Analysis Batch: 7105

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			11/08/16 13:19	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			11/08/16 13:19	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			11/08/16 13:19	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			11/08/16 13:19	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			11/08/16 13:19	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			11/08/16 13:19	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			11/08/16 13:19	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			11/08/16 13:19	1
Chloroform	ND		0.39	0.073	ug/m3			11/08/16 13:19	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			11/08/16 13:19	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			11/08/16 13:19	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			11/08/16 13:19	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			11/08/16 13:19	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			11/08/16 13:19	1
Ethylbenzene	ND		0.35	0.12	ug/m3			11/08/16 13:19	1
Methylene Chloride	ND		0.69	0.45	ug/m3			11/08/16 13:19	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			11/08/16 13:19	1
Naphthalene	ND		0.21	0.21	ug/m3			11/08/16 13:19	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			11/08/16 13:19	1
Toluene	ND		0.45	0.45	ug/m3			11/08/16 13:19	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			11/08/16 13:19	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			11/08/16 13:19	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			11/08/16 13:19	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			11/08/16 13:19	1
Trichloroethene	ND		0.21	0.075	ug/m3			11/08/16 13:19	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			11/08/16 13:19	1
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			11/08/16 13:19	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			11/08/16 13:19	1
Vinyl chloride	ND		0.10	0.074	ug/m3			11/08/16 13:19	1
Xylenes, Total	ND		0.69	0.10	ug/m3			11/08/16 13:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*60 - 140*		*11/08/16 13:19*	*1*

Lab Sample ID: LCS 140-7105/1002
Matrix: Air
Analysis Batch: 7105

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	2.05		ppb v/v		102	70 - 130
Carbon tetrachloride	2.00	2.00		ppb v/v		100	70 - 130
Chlorodifluoromethane	2.00	2.23		ppb v/v		112	60 - 140
Chloroform	2.00	2.05		ppb v/v		103	70 - 130
cis-1,2-Dichloroethene	2.00	2.04		ppb v/v		102	70 - 130
Dichlorodifluoromethane	2.00	2.06		ppb v/v		103	60 - 140

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-7105/1002
Matrix: Air
Analysis Batch: 7105

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	2.00	2.11		ppb v/v		105	70 - 130
1,2-Dichloroethane	2.00	2.03		ppb v/v		101	70 - 130
1,1-Dichloroethene	2.00	2.02		ppb v/v		101	70 - 130
Ethylbenzene	2.00	1.95		ppb v/v		98	70 - 130
Methylene Chloride	2.00	2.02		ppb v/v		101	70 - 130
Methyl tert-butyl ether	2.00	2.01		ppb v/v		101	60 - 140
Naphthalene	2.00	1.72		ppb v/v		86	60 - 140
Tetrachloroethene	2.00	1.89		ppb v/v		95	70 - 130
Toluene	2.00	1.99		ppb v/v		99	70 - 130
trans-1,2-Dichloroethene	2.00	2.05		ppb v/v		103	70 - 130
1,2,4-Trichlorobenzene	2.00	1.69		ppb v/v		85	60 - 140
1,1,1-Trichloroethane	2.00	1.94		ppb v/v		97	70 - 130
1,1,2-Trichloroethane	2.00	2.02		ppb v/v		101	70 - 130
Trichloroethene	2.00	1.89		ppb v/v		95	70 - 130
1,2,3-Trimethylbenzene	2.00	1.83		ppb v/v		92	70 - 130
1,2,4-Trimethylbenzene	2.00	1.91		ppb v/v		96	70 - 130
1,3,5-Trimethylbenzene	2.00	1.94		ppb v/v		97	70 - 130
Vinyl chloride	2.00	2.19		ppb v/v		109	70 - 130
Xylenes, Total	6.00	5.91		ppb v/v		99	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	6.54		ug/m3		102	70 - 130
Carbon tetrachloride	13	12.6		ug/m3		100	70 - 130
Chlorodifluoromethane	7.1	7.89		ug/m3		112	60 - 140
Chloroform	9.8	10.0		ug/m3		103	70 - 130
cis-1,2-Dichloroethene	7.9	8.07		ug/m3		102	70 - 130
Dichlorodifluoromethane	9.9	10.2		ug/m3		103	60 - 140
1,1-Dichloroethane	8.1	8.53		ug/m3		105	70 - 130
1,2-Dichloroethane	8.1	8.20		ug/m3		101	70 - 130
1,1-Dichloroethene	7.9	8.01		ug/m3		101	70 - 130
Ethylbenzene	8.7	8.49		ug/m3		98	70 - 130
Methylene Chloride	6.9	7.01		ug/m3		101	70 - 130
Methyl tert-butyl ether	7.2	7.26		ug/m3		101	60 - 140
Naphthalene	10	9.01		ug/m3		86	60 - 140
Tetrachloroethene	14	12.8		ug/m3		95	70 - 130
Toluene	7.5	7.50		ug/m3		99	70 - 130
trans-1,2-Dichloroethene	7.9	8.13		ug/m3		103	70 - 130
1,2,4-Trichlorobenzene	15	12.5		ug/m3		85	60 - 140
1,1,1-Trichloroethane	11	10.6		ug/m3		97	70 - 130
1,1,2-Trichloroethane	11	11.0		ug/m3		101	70 - 130
Trichloroethene	11	10.2		ug/m3		95	70 - 130
1,2,3-Trimethylbenzene	9.8	9.00		ug/m3		92	70 - 130
1,2,4-Trimethylbenzene	9.8	9.41		ug/m3		96	70 - 130
1,3,5-Trimethylbenzene	9.8	9.52		ug/m3		97	70 - 130
Vinyl chloride	5.1	5.59		ug/m3		109	70 - 130
Xylenes, Total	26	25.7		ug/m3		99	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-7105/1002
Matrix: Air
Analysis Batch: 7105

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	94		60 - 140

Air - GC/MS VOA

Analysis Batch: 7085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-6285-1	C-EFFLUENT	Total/NA	Air	TO 15 LL	
140-6285-2	C-MID-GAC	Total/NA	Air	TO 15 LL	
140-6285-3	C-INFLUENT	Total/NA	Air	TO 15 LL	
140-6285-4	A-EFFLUENT	Total/NA	Air	TO 15 LL	
140-6285-5	A-MID-GAC	Total/NA	Air	TO 15 LL	
140-6285-6	A-INFLUENT	Total/NA	Air	TO 15 LL	
MB 140-7085/9	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-7085/1006	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 7105

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-6285-4 - DL	A-EFFLUENT	Total/NA	Air	TO 15 LL	
140-6285-5 - DL	A-MID-GAC	Total/NA	Air	TO 15 LL	
MB 140-7105/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-7105/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Client Sample ID: C-EFFLUENT
Lab Sample ID: 140-6285-1
Date Collected: 11/03/16 10:55
Matrix: Air
Date Received: 11/04/16 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	7085	11/07/16 20:18	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: C-MID-GAC
Lab Sample ID: 140-6285-2
Date Collected: 11/03/16 10:57
Matrix: Air
Date Received: 11/04/16 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	7085	11/07/16 22:06	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: C-INFLUENT
Lab Sample ID: 140-6285-3
Date Collected: 11/03/16 10:59
Matrix: Air
Date Received: 11/04/16 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	7085	11/07/16 23:00	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: A-EFFLUENT
Lab Sample ID: 140-6285-4
Date Collected: 11/03/16 12:35
Matrix: Air
Date Received: 11/04/16 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	7085	11/07/16 23:54	HMT	TAL KNX
	Instrument ID: MJ									
Total/NA	Analysis	TO 15 LL	DL	1	10 mL	500 mL	7105	11/08/16 16:26	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: A-MID-GAC
Lab Sample ID: 140-6285-5
Date Collected: 11/03/16 12:37
Matrix: Air
Date Received: 11/04/16 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	7085	11/08/16 00:48	HMT	TAL KNX
	Instrument ID: MJ									
Total/NA	Analysis	TO 15 LL	DL	1	10 mL	500 mL	7105	11/08/16 17:13	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: A-INFLUENT
Lab Sample ID: 140-6285-6

Date Collected: 11/03/16 12:39
Matrix: Air
Date Received: 11/04/16 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		9.96	50 mL	500 mL	7085	11/08/16 09:07	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-7085/9

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	7085	11/07/16 14:57	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-7105/4

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	7105	11/08/16 13:19	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-7085/1006

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	7085	11/07/16 11:58	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-7105/1002

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	7105	11/08/16 11:18	HMT	TAL KNX
	Instrument ID: MR									

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: SSD OEM LMC MRC/Middle River

TestAmerica Job ID: 140-6285-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: SSD OEM LMC MRC/Middle River

TestAmerica Job ID: 140-6285-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-6285-1	C-EFFLUENT	Air	11/03/16 10:55	11/04/16 10:15
140-6285-2	C-MID-GAC	Air	11/03/16 10:57	11/04/16 10:15
140-6285-3	C-INFLUENT	Air	11/03/16 10:59	11/04/16 10:15
140-6285-4	A-EFFLUENT	Air	11/03/16 12:35	11/04/16 10:15
140-6285-5	A-MID-GAC	Air	11/03/16 12:37	11/04/16 10:15
140-6285-6	A-INFLUENT	Air	11/03/16 12:39	11/04/16 10:15

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
C-EFFLUENT	140-6285-1	97
C-MID-GAC	140-6285-2	104
C-INFLUENT	140-6285-3	95
A-EFFLUENT	140-6285-4	98
A-EFFLUENT DL	140-6285-4 DL	85
A-MID-GAC	140-6285-5	102
A-MID-GAC DL	140-6285-5 DL	83
A-INFLUENT	140-6285-6	104
	MB 140-7085/9	95
	MB 140-7105/4	85
	LCS 140-7085/1006	106
	LCS 140-7105/1002	94

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Matrix: Air Level: Low Lab File ID: JCCVK07A-LCS.d

Lab ID: LCS 140-7085/1006 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	1.99	2.12	107	70-130	
Carbon tetrachloride	1.99	2.05	103	70-130	
Chlorodifluoromethane	1.99	2.30	116	60-140	
Chloroform	1.99	2.15	108	70-130	
cis-1,2-Dichloroethene	1.99	2.06	103	70-130	
Dichlorodifluoromethane	1.99	2.38	119	60-140	
1,1-Dichloroethane	1.99	2.14	107	70-130	
1,2-Dichloroethane	1.99	2.11	106	70-130	
1,1-Dichloroethene	1.99	2.25	113	70-130	
Ethylbenzene	1.99	2.03	102	70-130	
Methylene Chloride	1.99	2.09	105	70-130	
Methyl tert-butyl ether	1.99	2.16	108	60-140	
Naphthalene	1.99	1.97	99	60-140	
Tetrachloroethene	1.99	1.96	98	70-130	
Toluene	1.99	2.02	101	70-130	
trans-1,2-Dichloroethene	1.99	2.22	111	70-130	
1,2,4-Trichlorobenzene	1.99	2.01	101	60-140	
1,1,1-Trichloroethane	1.99	2.09	105	70-130	
1,1,2-Trichloroethane	1.99	1.99	100	70-130	
Trichloroethene	1.99	1.88	94	70-130	
1,2,3-Trimethylbenzene	1.99	1.95	98	70-130	
1,2,4-Trimethylbenzene	1.99	2.02	102	70-130	
1,3,5-Trimethylbenzene	1.99	1.96	99	70-130	
Vinyl chloride	1.99	2.46	124	70-130	
Xylenes, Total	5.97	6.08	102	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Matrix: Air Level: Low Lab File ID: RCCVK08-LCS.d

Lab ID: LCS 140-7105/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.05	102	70-130	
Carbon tetrachloride	2.00	2.00	100	70-130	
Chlorodifluoromethane	2.00	2.23	112	60-140	
Chloroform	2.00	2.05	103	70-130	
cis-1,2-Dichloroethene	2.00	2.04	102	70-130	
Dichlorodifluoromethane	2.00	2.06	103	60-140	
1,1-Dichloroethane	2.00	2.11	105	70-130	
1,2-Dichloroethane	2.00	2.03	101	70-130	
1,1-Dichloroethene	2.00	2.02	101	70-130	
Ethylbenzene	2.00	1.95	98	70-130	
Methylene Chloride	2.00	2.02	101	70-130	
Methyl tert-butyl ether	2.00	2.01	101	60-140	
Naphthalene	2.00	1.72	86	60-140	
Tetrachloroethene	2.00	1.89	95	70-130	
Toluene	2.00	1.99	99	70-130	
trans-1,2-Dichloroethene	2.00	2.05	103	70-130	
1,2,4-Trichlorobenzene	2.00	1.69	85	60-140	
1,1,1-Trichloroethane	2.00	1.94	97	70-130	
1,1,2-Trichloroethane	2.00	2.02	101	70-130	
Trichloroethene	2.00	1.89	95	70-130	
1,2,3-Trimethylbenzene	2.00	1.83	92	70-130	
1,2,4-Trimethylbenzene	2.00	1.91	96	70-130	
1,3,5-Trimethylbenzene	2.00	1.94	97	70-130	
Vinyl chloride	2.00	2.19	109	70-130	
Xylenes, Total	6.00	5.91	99	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Lab File ID: J500BK07.D Lab Sample ID: MB 140-7085/9

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MJ Date Analyzed: 11/07/2016 14:57

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-7085/1006	JCCVK07A-LCS.d	11/07/2016 11:58
C-EFFLUENT	140-6285-1	JK07P106D.D	11/07/2016 20:18
C-MID-GAC	140-6285-2	JK07P107.D	11/07/2016 22:06
C-INFLUENT	140-6285-3	JK07P108.D	11/07/2016 23:00
A-EFFLUENT	140-6285-4	JK07P109.D	11/07/2016 23:54
A-MID-GAC	140-6285-5	JK07P110.D	11/08/2016 00:48
A-INFLUENT	140-6285-6	JK07P111R.D	11/08/2016 09:07

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Lab File ID: R500MLK08.D Lab Sample ID: MB 140-7105/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MR Date Analyzed: 11/08/2016 13:19

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-7105/1002	RCCVK08-LCS.d	11/08/2016 11:18
A-EFFLUENT DL	140-6285-4 DL	RK08P103.D	11/08/2016 16:26
A-MID-GAC DL	140-6285-5 DL	RK08P104.D	11/08/2016 17:13

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Lab File ID: JBFBJ08.D BFB Injection Date: 10/08/2016

Instrument ID: MJ BFB Injection Time: 17:39

Analysis Batch No.: 6845

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.4	
75	30.0 - 60.0 % of mass 95	53.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	110.4	
175	5.0 - 9.0 % of mass 174	8.5	(7.7) 1
176	95.0 - 101.0 % of mass 174	108.2	(98.0) 1
177	5.0 - 9.0 % of mass 176	6.9	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-6845/3	JJ08ICAL01.D	10/08/2016	19:01
	IC 140-6845/4	JJ08ICAL02.D	10/08/2016	19:54
	IC 140-6845/5	JJ08ICAL03.D	10/08/2016	20:47
	IC 140-6845/6	JJ08ICAL04.D	10/08/2016	21:41
	IC 140-6845/7	JJ08ICAL05.D	10/08/2016	22:36
	ICIS 140-6845/8	JJ08ICAL06.D	10/08/2016	23:29
	IC 140-6845/9	JJ08ICAL07.D	10/09/2016	00:23
	IC 140-6845/10	JJ08ICAL08.D	10/09/2016	01:17
	IC 140-6845/11	JJ07ICAL09.D	10/09/2016	02:10
	ICV 140-6845/17	JJ08LCS.D	10/09/2016	07:04

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Lab File ID: JBFBK07A.D BFB Injection Date: 11/07/2016

Instrument ID: MJ BFB Injection Time: 11:32

Analysis Batch No.: 7085

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.7	
75	30.0 - 60.0 % of mass 95	53.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.6	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	103.9	
175	5.0 - 9.0 % of mass 174	7.9	(7.6) 1
176	95.0 - 101.0 % of mass 174	101.3	(97.5) 1
177	5.0 - 9.0 % of mass 176	6.6	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-7085/6	JCCVK07A.D	11/07/2016	11:58
	LCS 140-7085/1006	JCCVK07A-LCS .d	11/07/2016	11:58
	MB 140-7085/9	J500BK07.D	11/07/2016	14:57
C-EFFLUENT	140-6285-1	JK07P106D.D	11/07/2016	20:18
C-MID-GAC	140-6285-2	JK07P107.D	11/07/2016	22:06
C-INFLUENT	140-6285-3	JK07P108.D	11/07/2016	23:00
A-EFFLUENT	140-6285-4	JK07P109.D	11/07/2016	23:54
A-MID-GAC	140-6285-5	JK07P110.D	11/08/2016	00:48
A-INFLUENT	140-6285-6	JK07P111R.D	11/08/2016	09:07

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Lab File ID: RBFBJ09.D BFB Injection Date: 10/09/2016

Instrument ID: MR BFB Injection Time: 16:53

Analysis Batch No.: 6852

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.0	
75	30.0 - 60.0 % of mass 95	50.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.5	(0.6) 1
174	50.0 - 120.00 % of mass 95	94.5	
175	5.0 - 9.0 % of mass 174	6.8	(7.2) 1
176	95.0 - 101.0 % of mass 174	90.3	(95.6) 1
177	5.0 - 9.0 % of mass 176	6.0	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-6852/3	RJ09IC01.D	10/09/2016	18:12
	IC 140-6852/4	RJ09IC02.D	10/09/2016	19:00
	IC 140-6852/5	RJ09IC03.D	10/09/2016	19:48
	IC 140-6852/6	RJ09IC04.D	10/09/2016	20:35
	IC 140-6852/7	RJ09IC05.D	10/09/2016	21:23
	ICIS 140-6852/8	RJ09CIS06.D	10/09/2016	22:11
	IC 140-6852/9	RJ09IC07.D	10/09/2016	22:59
	IC 140-6852/10	RJ09IC08.D	10/09/2016	23:48
	IC 140-6852/11	RJ09IC09.D	10/10/2016	00:36
	ICV 140-6852/17	RJ09LCS.D	10/10/2016	05:03

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Lab File ID: RBFBK08.D BFB Injection Date: 11/08/2016

Instrument ID: MR BFB Injection Time: 10:46

Analysis Batch No.: 7105

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.8	
75	30.0 - 60.0 % of mass 95	56.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	92.7	
175	5.0 - 9.0 % of mass 174	6.5	(7.1) 1
176	95.0 - 101.0 % of mass 174	88.4	(95.4) 1
177	5.0 - 9.0 % of mass 176	5.7	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-7105/2	RCCVK08.D	11/08/2016	11:18
	LCS 140-7105/1002	RCCVK08-LCS.d	11/08/2016	11:18
	MB 140-7105/4	R500MLK08.D	11/08/2016	13:19
A-EFFLUENT DL	140-6285-4 DL	RK08P103.D	11/08/2016	16:26
A-MID-GAC DL	140-6285-5 DL	RK08P104.D	11/08/2016	17:13

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Sample No.: ICIS 140-6845/8 Date Analyzed: 10/08/2016 23:29

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JJ08ICAL06.D Heated Purge: (Y/N) N

Calibration ID: 771

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		292093	9.30	1340770	11.46	1141838	16.13
UPPER LIMIT		408930	9.63	1877078	11.79	1598573	16.46
LOWER LIMIT		175256	8.97	804462	11.13	685103	15.80
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-6845/17		290428	9.30	1211046	11.46	1042574	16.13

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Sample No.: CCVIS 140-7085/6 Date Analyzed: 11/07/2016 11:58

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JCCVK07A.D Heated Purge: (Y/N) N

Calibration ID: 771

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		267540	9.29	1244200	11.45	1055215	16.13
UPPER LIMIT		374556	9.62	1741880	11.78	1477301	16.46
LOWER LIMIT		160524	8.96	746520	11.12	633129	15.80
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-7085/1006		267540	9.29	1244200	11.45	1055215	16.13
MB 140-7085/9		257105	9.28	1152939	11.45	882969	16.13
140-6285-1	C-EFFLUENT	215591	9.29	968487	11.45	727953	16.12
140-6285-2	C-MID-GAC	211791	9.28	913949	11.45	748458	16.12
140-6285-3	C-INFLUENT	211780	9.28	944985	11.45	701036	16.12
140-6285-4	A-EFFLUENT	215277	9.29	1004011	11.45	778539	16.12
140-6285-5	A-MID-GAC	209654	9.29	976452	11.45	783941	16.12
140-6285-6	A-INFLUENT	237701	9.27	1101859	11.44	926530	16.12

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Sample No.: ICIS 140-6852/8 Date Analyzed: 10/09/2016 22:11

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RJ09CIS06.D Heated Purge: (Y/N) N

Calibration ID: 775

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		310122	8.27	1397792	10.44	1305166	15.32
UPPER LIMIT		434171	8.60	1956909	10.77	1827232	15.65
LOWER LIMIT		186073	7.94	838675	10.11	783100	14.99
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-6852/17		248358	8.27	1155245	10.44	1083815	15.32

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Sample No.: CCVIS 140-7105/2 Date Analyzed: 11/08/2016 11:18

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RCCVK08.D Heated Purge: (Y/N) N

Calibration ID: 775

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		285301	8.25	1323176	10.42	1209335	15.31
UPPER LIMIT		399421	8.58	1852446	10.75	1693069	15.64
LOWER LIMIT		171181	7.92	793906	10.09	725601	14.98
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-7105/1002		285301	8.25	1323176	10.42	1209335	15.31
MB 140-7105/4		243043	8.24	1115119	10.40	983228	15.31
140-6285-4 DL	A-EFFLUENT DL	229970	8.24	1116176	10.41	1016538	15.30
140-6285-5 DL	A-MID-GAC DL	222896	8.25	1085050	10.42	997168	15.31

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6285-1

SDG No.:

Client Sample ID: C-EFFLUENT | Lab Sample ID: 140-6285-1

Matrix: Air | Lab File ID: JK07P106D.D

Analysis Method: TO 15 LL | Date Collected: 11/03/2016 10:55

Sample wt/vol: 100(mL) | Date Analyzed: 11/07/2016 20:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7085 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.5		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	4.7		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.66		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.35	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.32	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.28	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	6.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	4.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.26	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	1.1		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.37	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6285-1

SDG No.:

Client Sample ID: C-EFFLUENT | Lab Sample ID: 140-6285-1

Matrix: Air | Lab File ID: JK07P106D.D

Analysis Method: TO 15 LL | Date Collected: 11/03/2016 10:55

Sample wt/vol: 100(mL) | Date Analyzed: 11/07/2016 20:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7085 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	8.1		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	17		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.4	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.3	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	1.2	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	23		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	15		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	1.3	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	5.2		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.8	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P106D.D				
Lims ID:	140-6285-A-1				
Client ID:	C-EFFLUENT				
Sample Type:	Client				
Inject. Date:	07-Nov-2016 20:18:30	ALS Bottle#:	6	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003595-015				
Misc. Info.:	140-6285-a-1				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	08-Nov-2016 10:14:16	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				
First Level Reviewer: tajh		Date:	08-Nov-2016 10:08:44		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.290	9.290	0.000	97	215591	4.00	
* 2 1,4-Difluorobenzene	114	11.446	11.446	0.000	96	968487	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.124	16.125	-0.001	90	727953	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.748	17.749	-0.001	85	423863	3.86	
6 Chlorodifluoromethane	67	3.918	3.918	0.000	96	20564	0.9369	
8 Dichlorodifluoromethane	85	3.982	3.983	-0.001	100	28034	0.1321	
27 1,1-Dichloroethene	96	6.305	6.306	-0.001	95	4362	0.0644	
31 Methylene Chloride	84	6.676	6.671	0.005	99	89018	1.30	
37 1,1-Dichloroethane	63	7.946	7.940	0.006	97	8671	0.0700	
51 Benzene	78	10.925	10.925	0.000	97	90314	0.5042	
68 Toluene	91	14.167	14.173	-0.006	92	127572	0.7994	
79 Ethylbenzene	91	16.447	16.453	-0.006	96	9797	0.0556	
81 m-Xylene & p-Xylene	91	16.608	16.614	-0.006	98	24890	0.1887	
85 o-Xylene	91	17.135	17.136	-0.001	95	9238	0.0639	
92 1,3,5-Trimethylbenzene	120	18.453	18.448	0.005	90	5787	0.0740	
96 1,2,4-Trimethylbenzene	105	18.878	18.878	0.000	98	28252	0.2130	
102 1,2,3-Trimethylbenzene	105	19.335	19.340	-0.005	92	5285	0.0516	
S 126 Xylenes, Total	100				0		0.2526	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

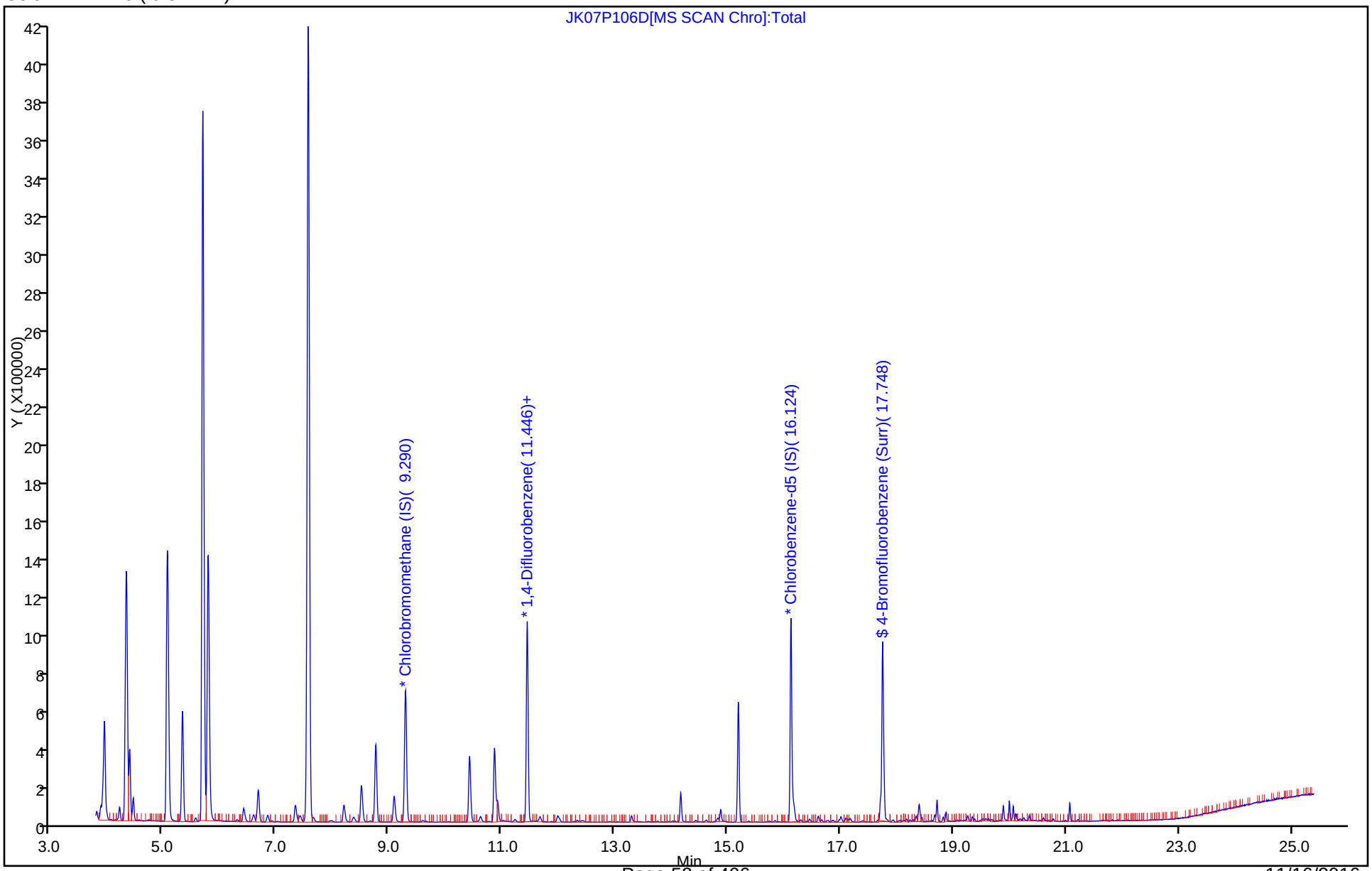
Report Date: 08-Nov-2016 10:31:48 Chrom Revision: 2.2 17-Oct-2016 09:27:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P106D.D

Injection Date:	07-Nov-2016 20:18:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-6285-A-1	Lab Sample ID:	140-6285-1	Worklist Smp#:	15
Client ID:	C-EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

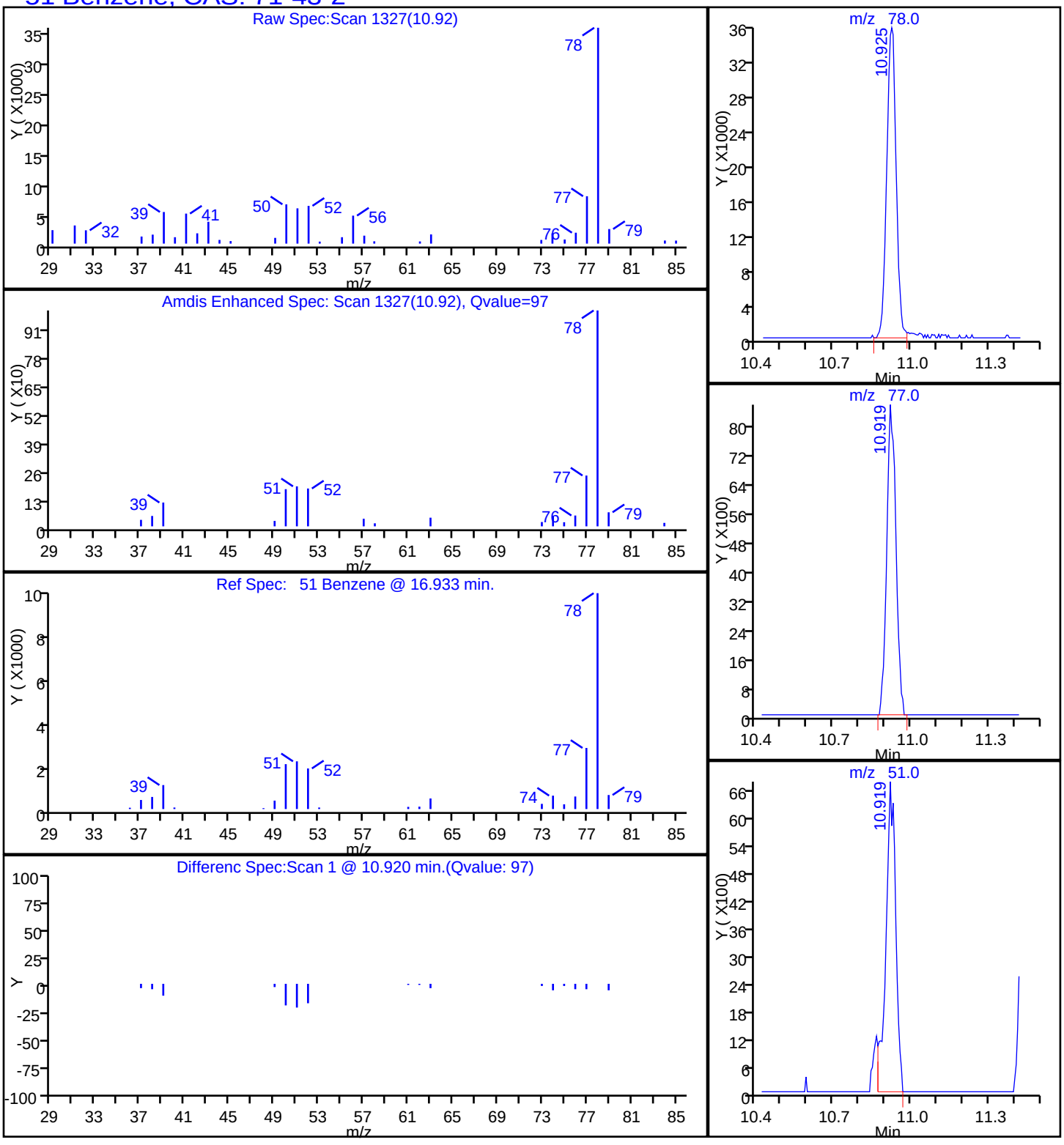
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P106D.D				
Lims ID:	140-6285-A-1				
Client ID:	C-EFFLUENT				
Sample Type:	Client				
Inject. Date:	07-Nov-2016 20:18:30	ALS Bottle#:	6	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003595-015				
Misc. Info.:	140-6285-a-1				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	08-Nov-2016 10:14:16	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				
First Level Reviewer: tajh		Date:	08-Nov-2016 10:08:44		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.86	96.56

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P106D.D		
Injection Date:	07-Nov-2016 20:18:30	Instrument ID:	MJ
Lims ID:	140-6285-A-1	Lab Sample ID:	140-6285-1
Client ID:	C-EFFLUENT		
Operator ID:	7126	ALS Bottle#:	6 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

51 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P106D.D		
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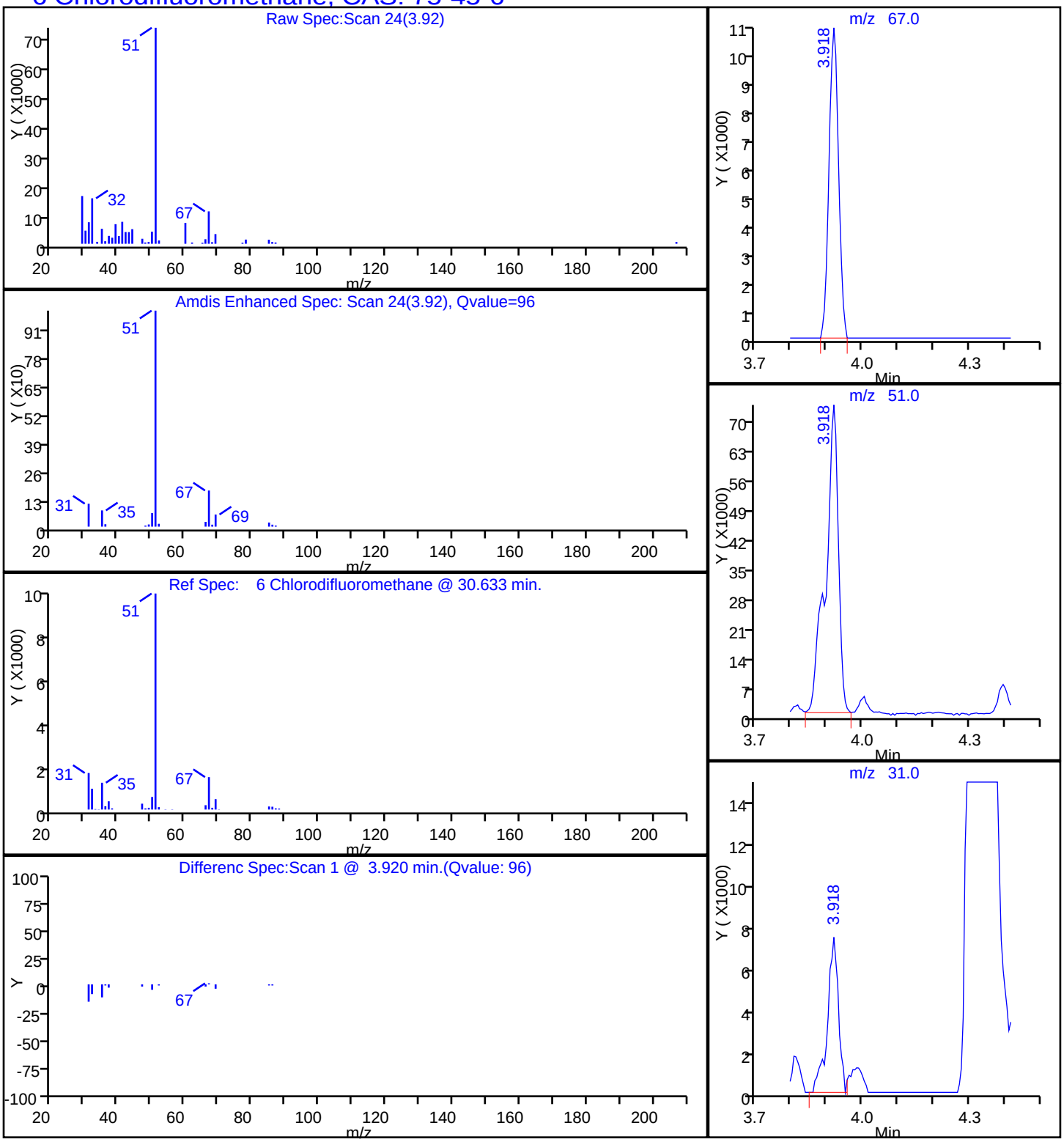
Lims ID:	140-6285-A-1	Lab Sample ID:	140-6285-1
Client ID:	C-EFFLUENT		
Operator ID:	7126	ALS Bottle#:	6 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P106D.D		
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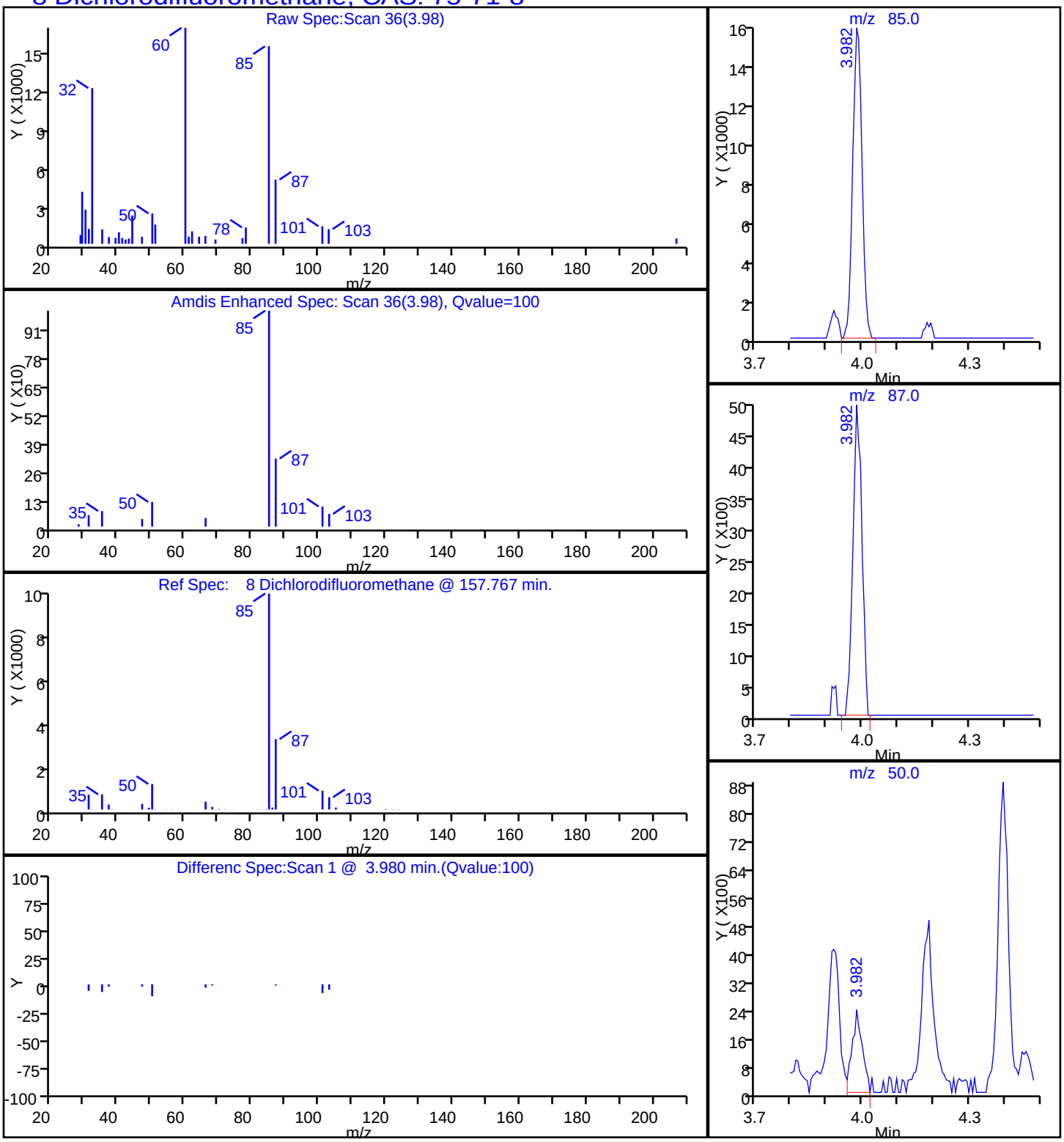
Lims ID:	140-6285-A-1	Lab Sample ID:	140-6285-1
Client ID:	C-EFFLUENT		
Operator ID:	7126	ALS Bottle#:	6 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



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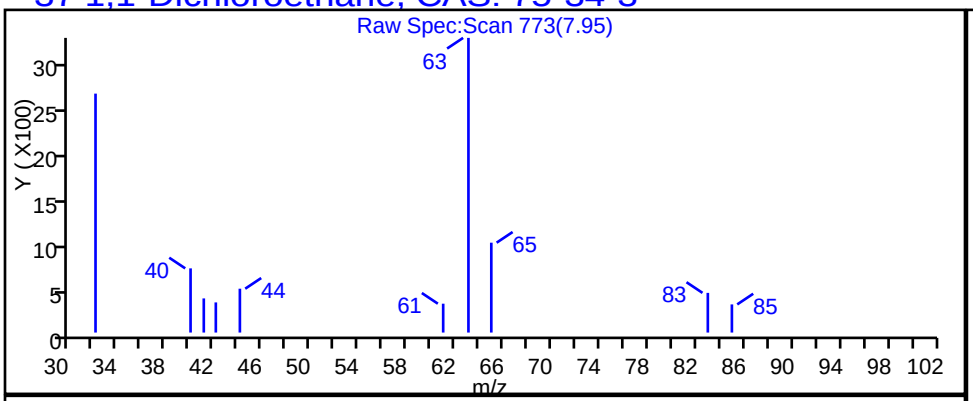
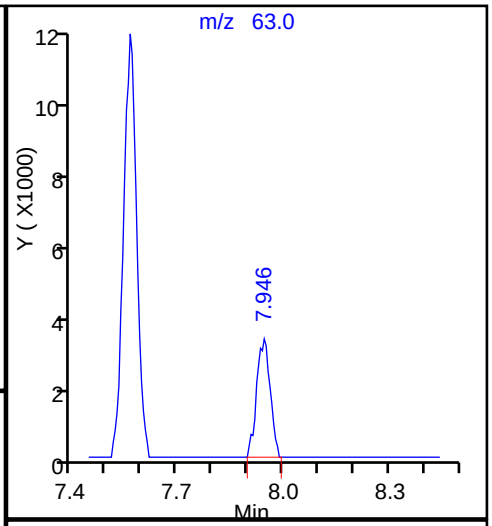
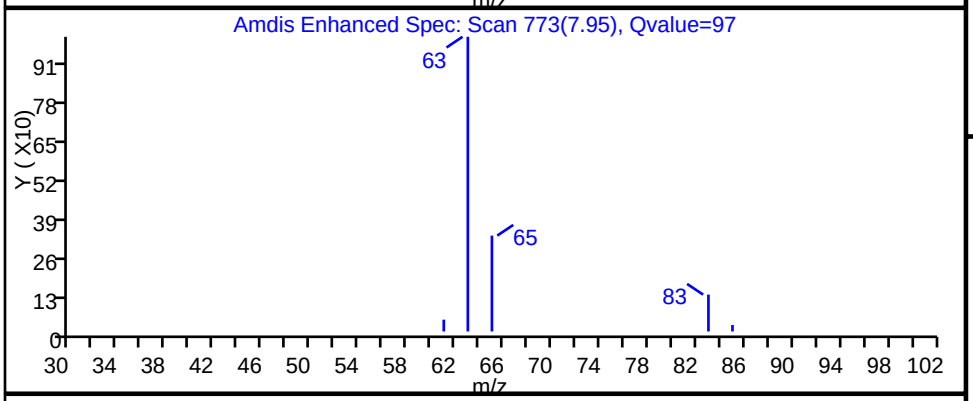
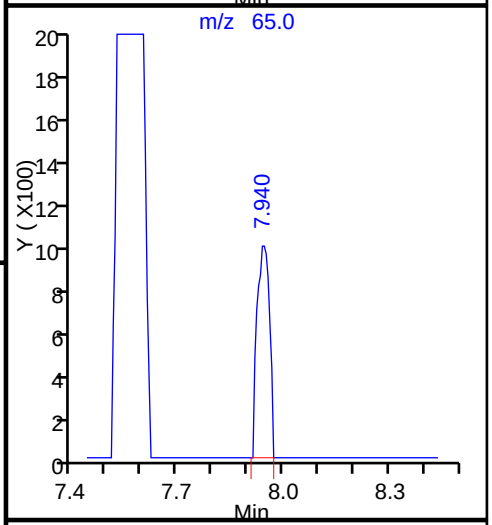
Lims ID:	140-6285-A-1	Lab Sample ID:	140-6285-1		
Client ID:	C-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	6	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

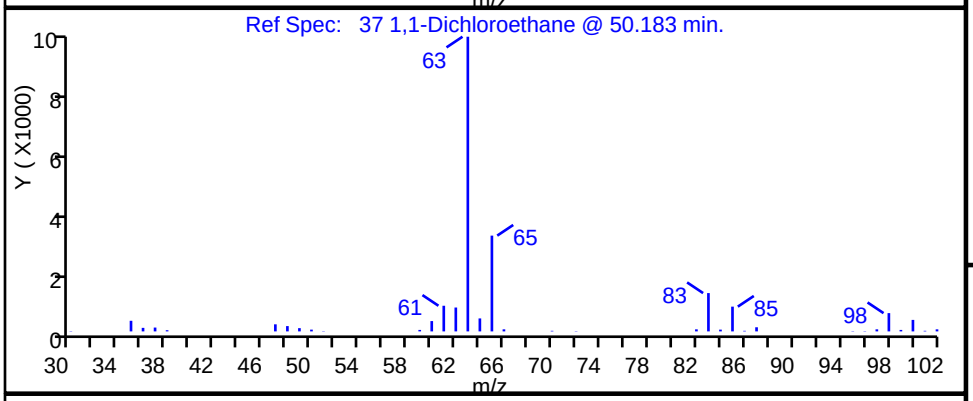
37 1,1-Dichloroethane, CAS: 75-34-3

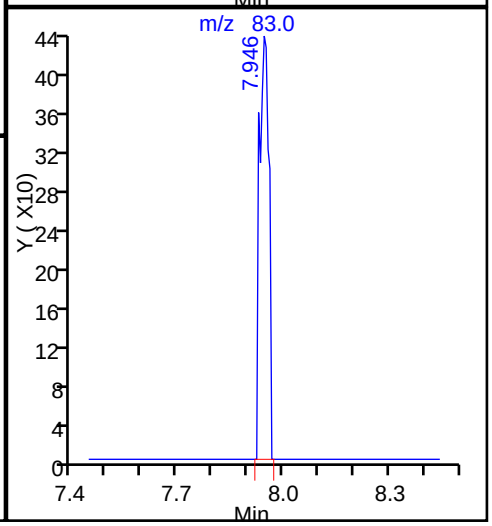


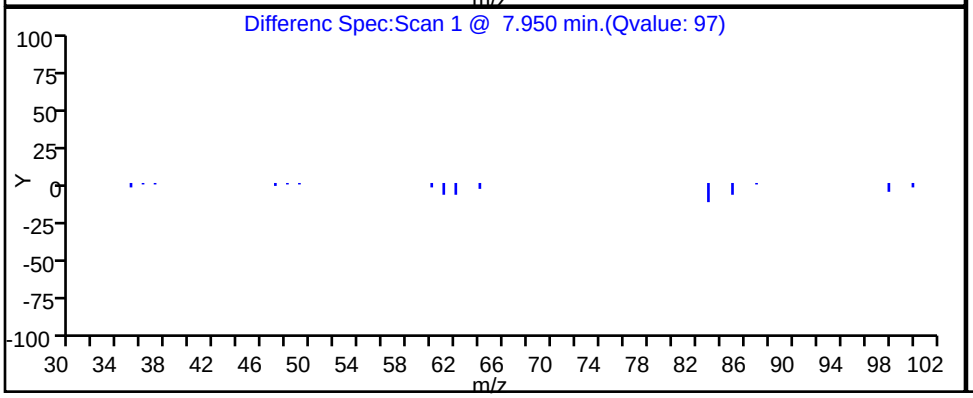












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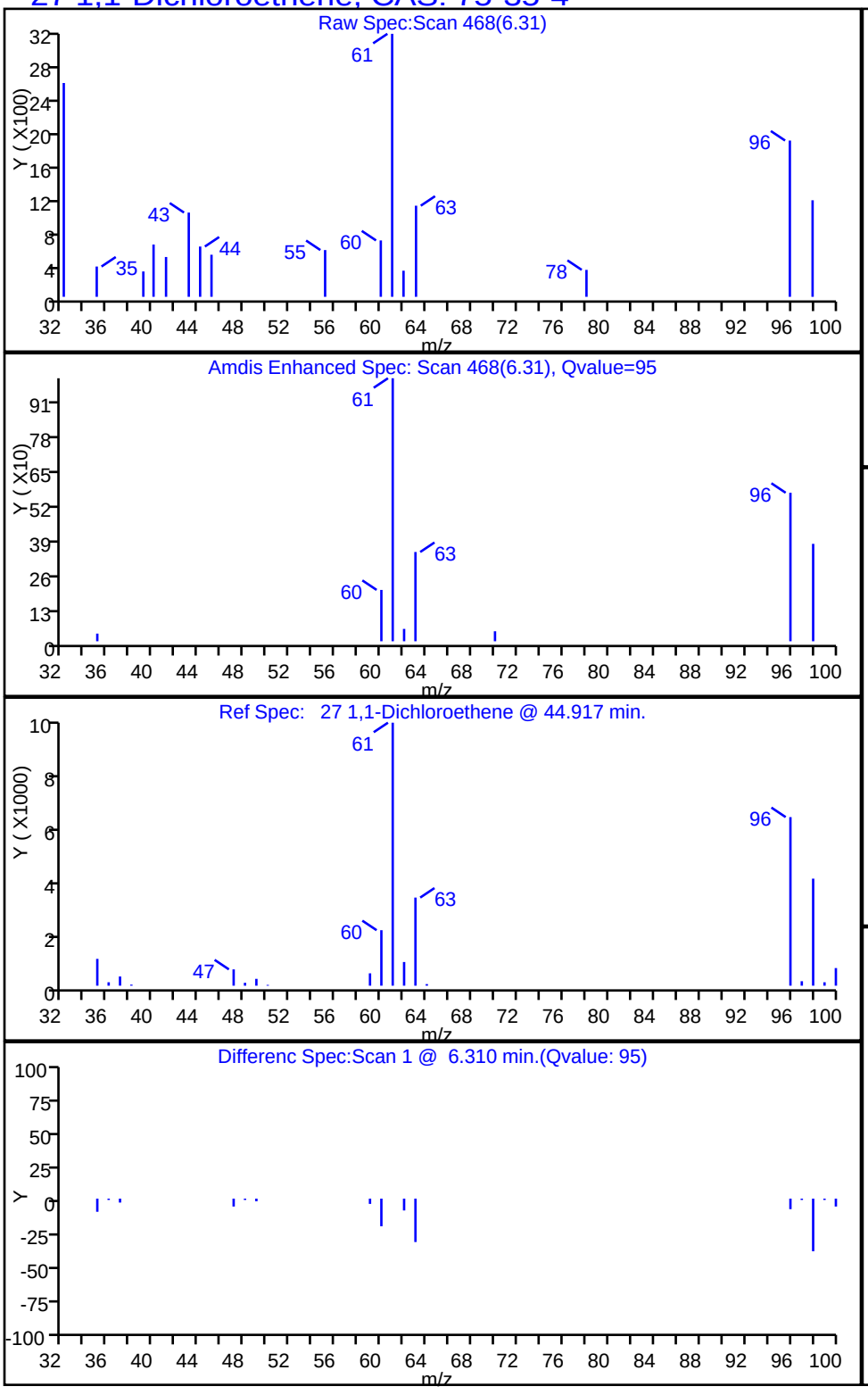
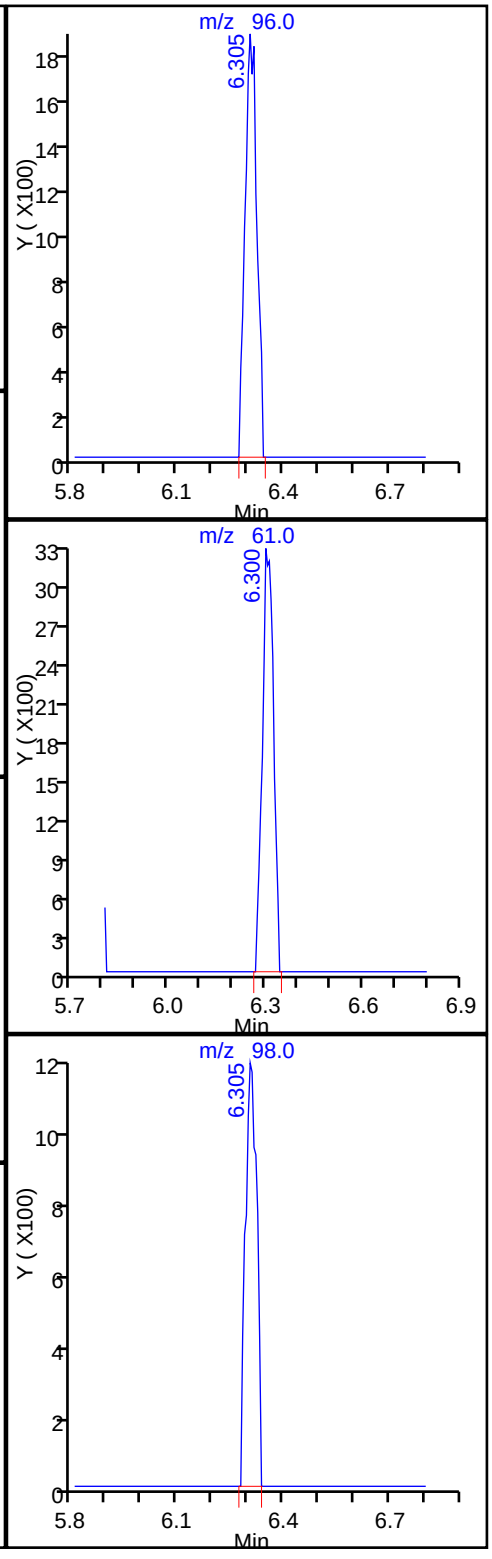
Injection Date: 07-Nov-2016 20:18:30 Instrument ID: MJ
Lims ID: 140-6285-A-1 Lab Sample ID: 140-6285-1
Client ID: C-EFFLUENT
Operator ID: 7126 ALS Bottle#: 6 Worklist Smp#: 15
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4





TestAmerica Knoxville

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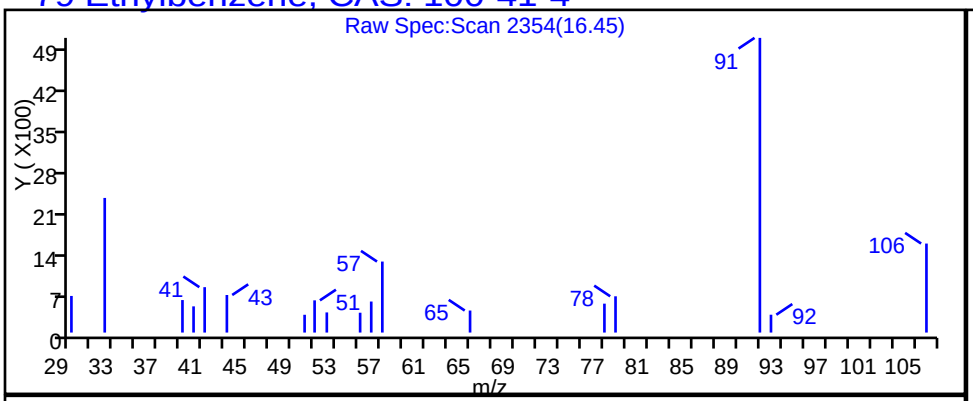
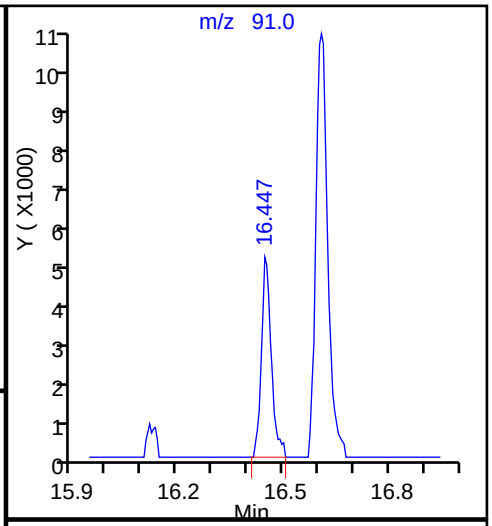
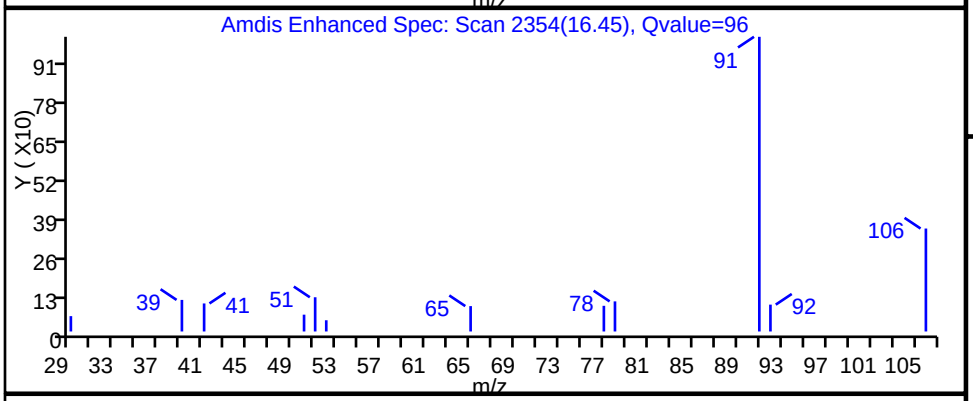
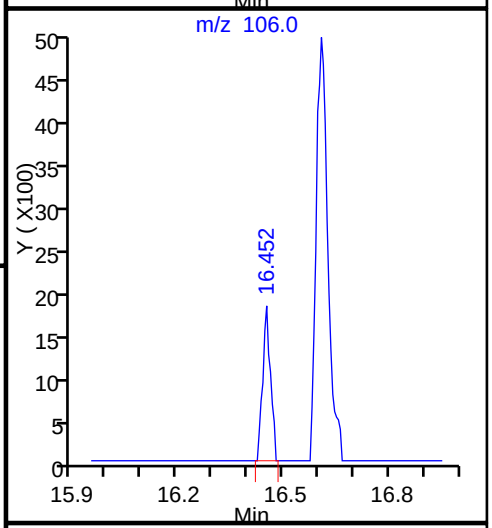
Injection Date:	07-Nov-2016 20:18:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-1	Lab Sample ID:	140-6285-1		
Client ID:	C-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	6	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

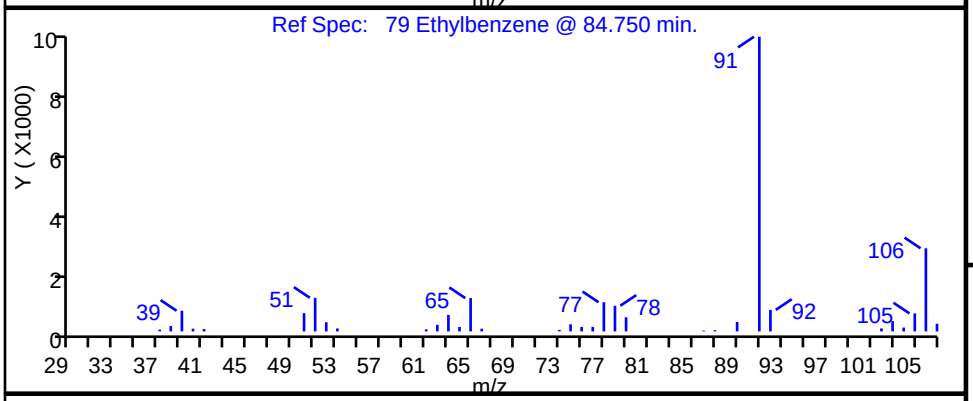
79 Ethylbenzene, CAS: 100-41-4

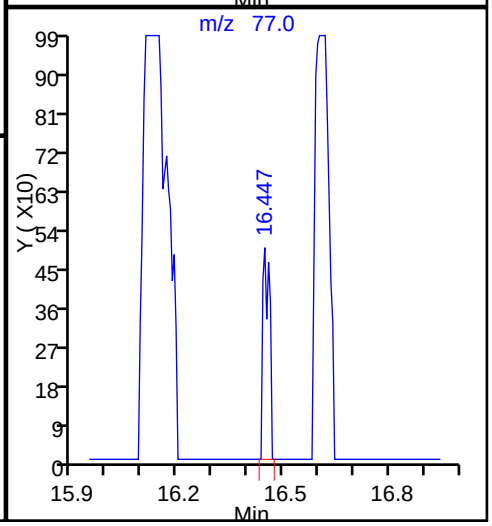


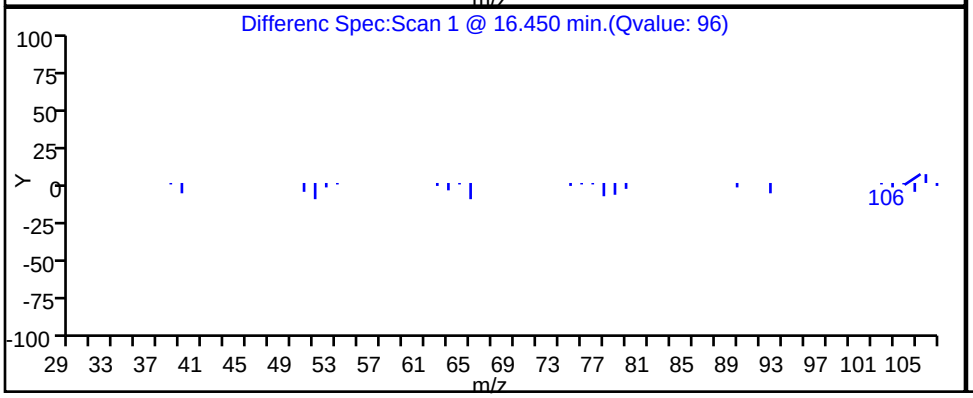








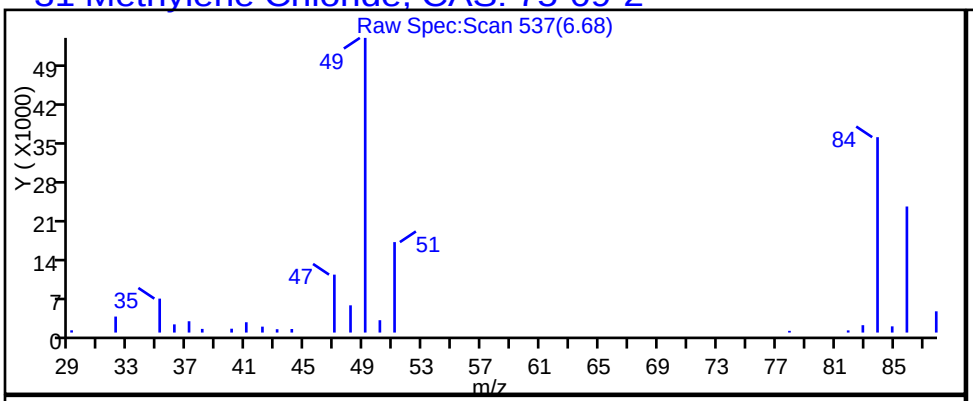


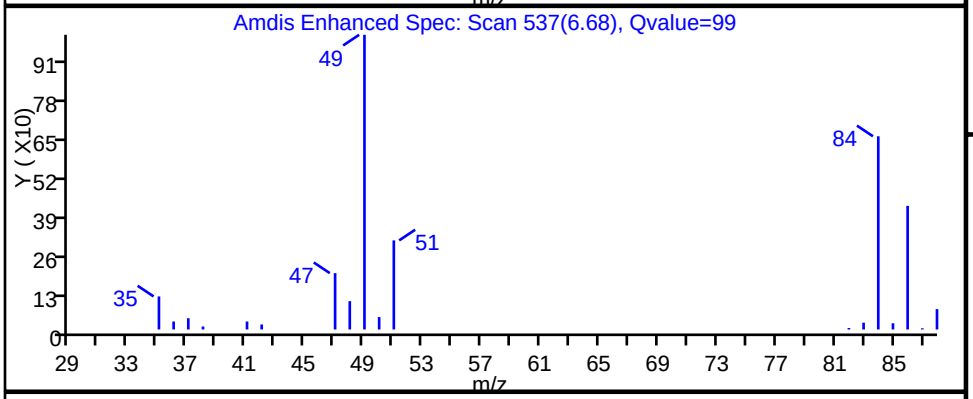


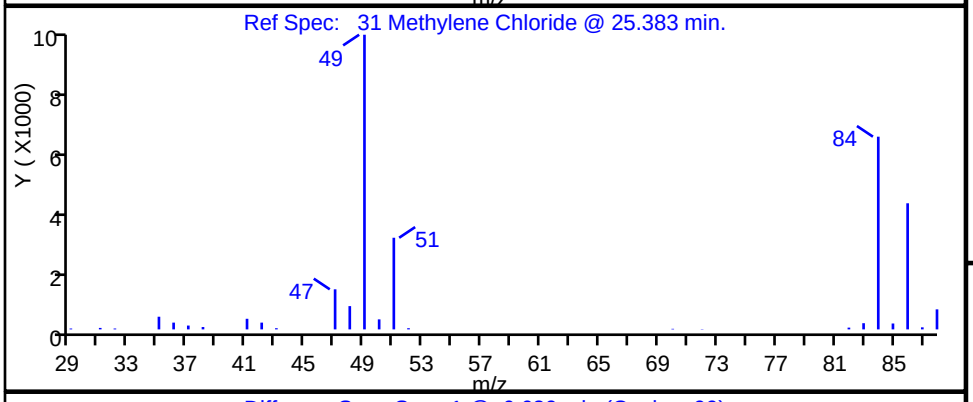
TestAmerica Knoxville

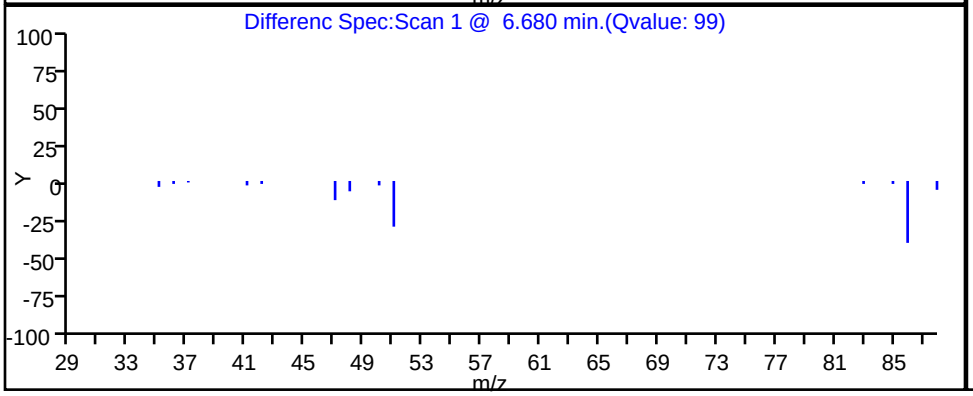
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P106D.D				
Injection Date:	07-Nov-2016 20:18:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-1	Lab Sample ID:	140-6285-1		
Client ID:	C-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	6	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

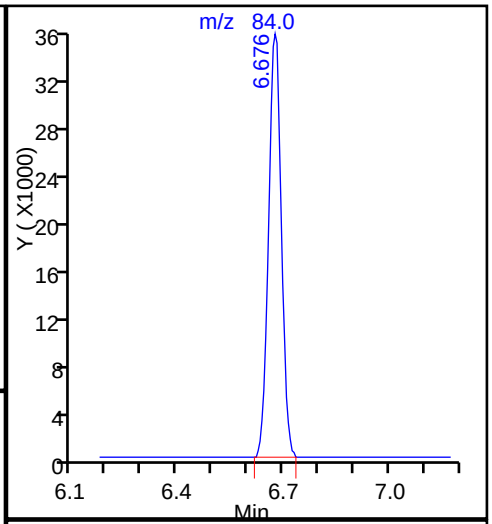
31 Methylene Chloride, CAS: 75-09-2

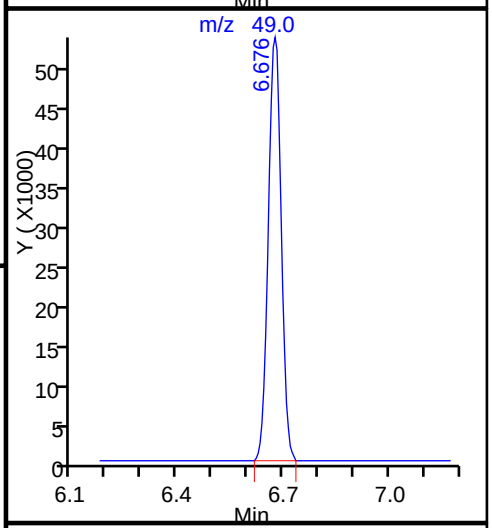


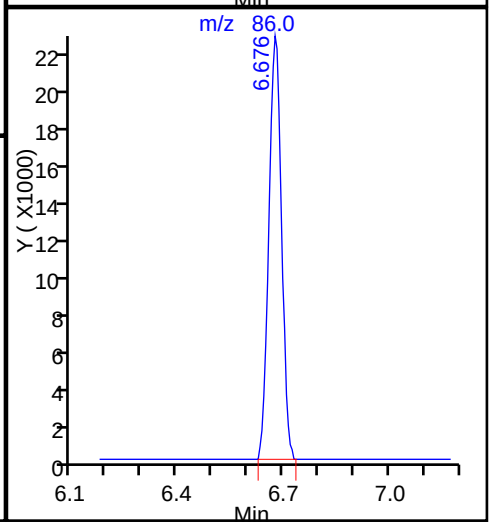








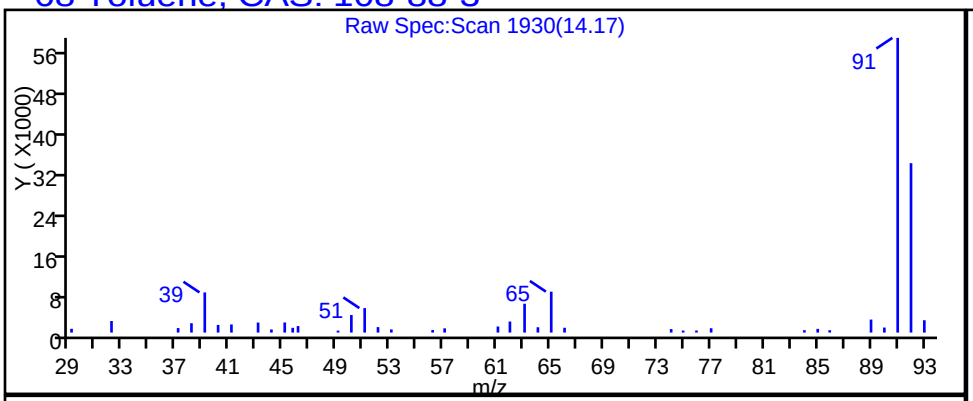


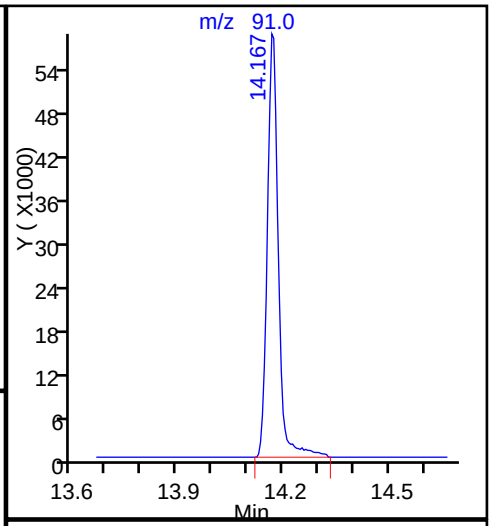


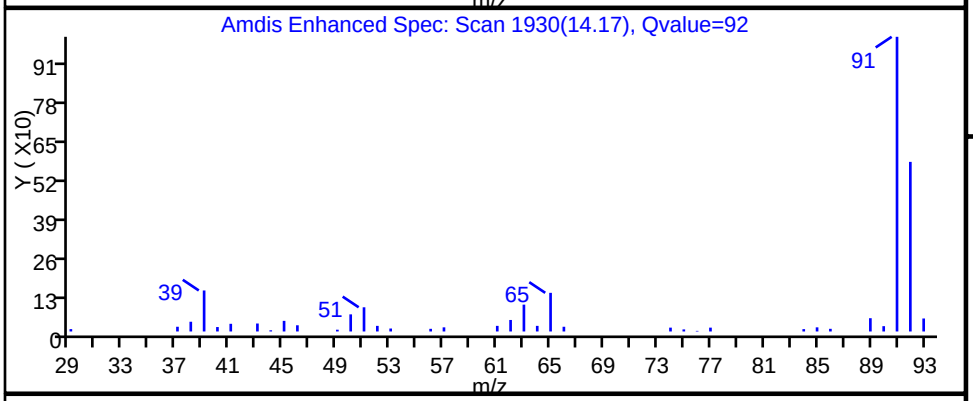
TestAmerica Knoxville

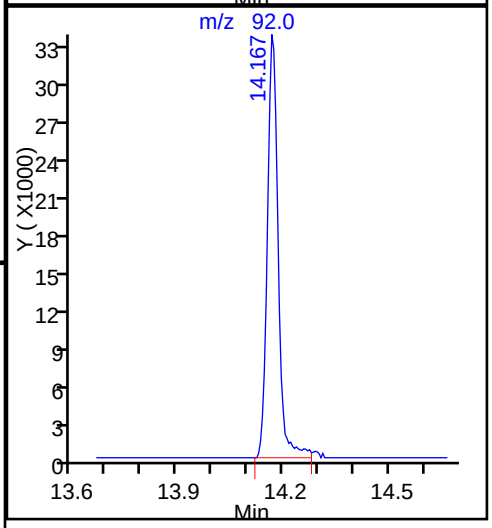
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P106D.D		
Injection Date:	07-Nov-2016 20:18:30	Instrument ID:	MJ
Lims ID:	140-6285-A-1	Lab Sample ID:	140-6285-1
Client ID:	C-EFFLUENT		
Operator ID:	7126	ALS Bottle#:	6 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

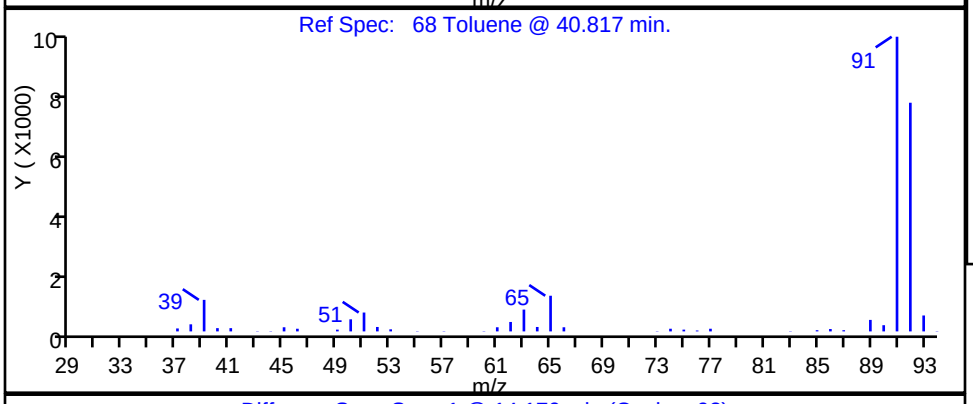
68 Toluene, CAS: 108-88-3

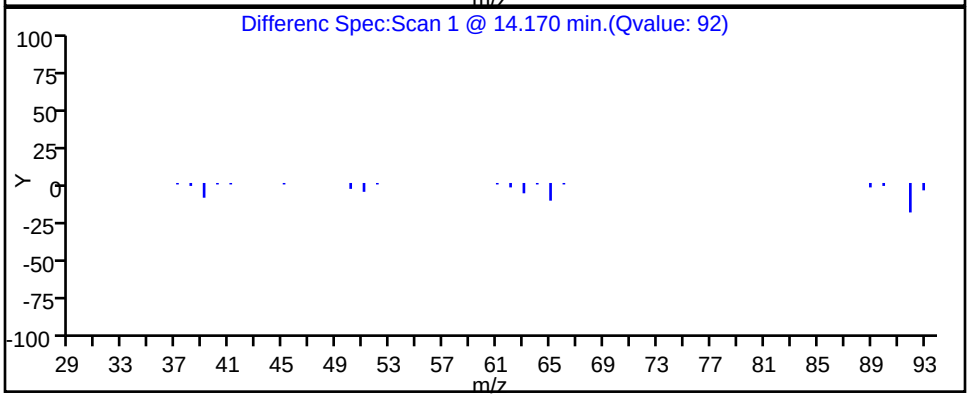








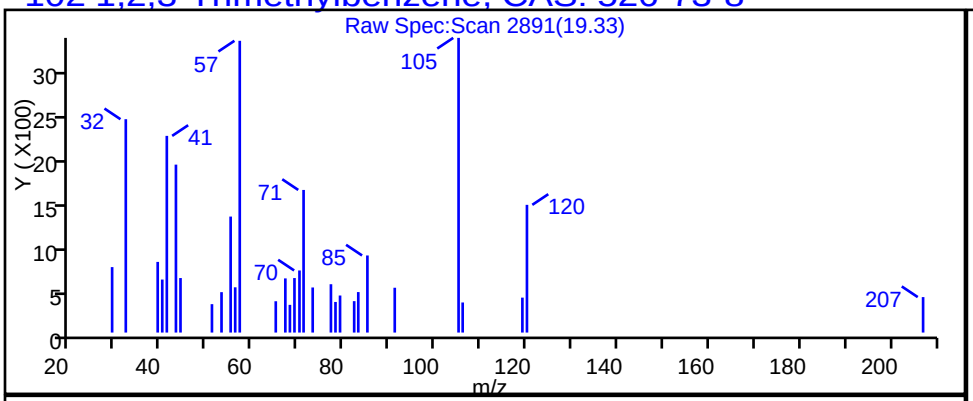


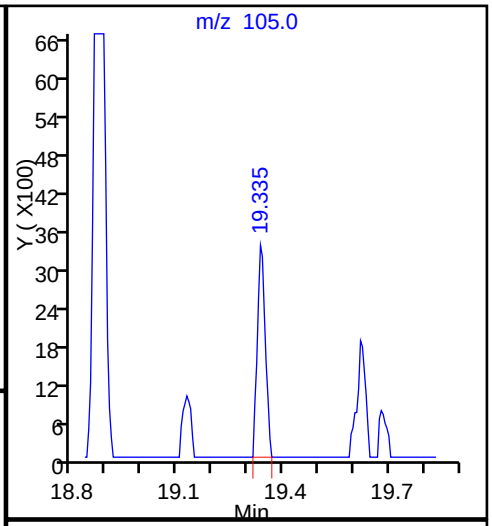


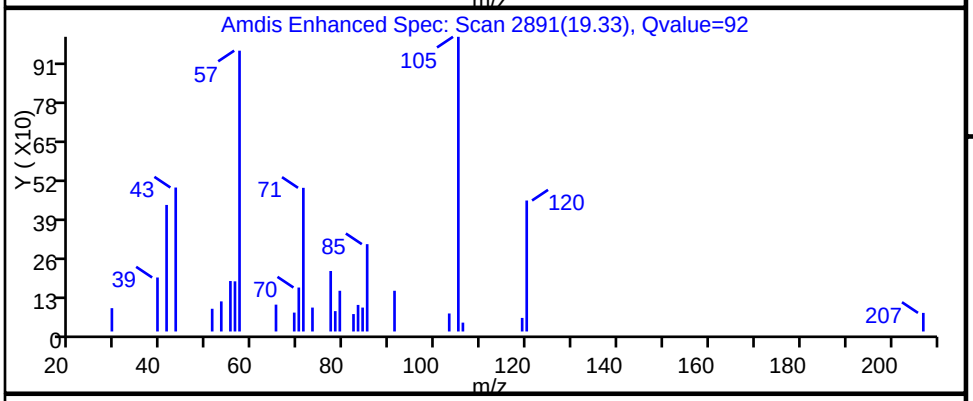
TestAmerica Knoxville

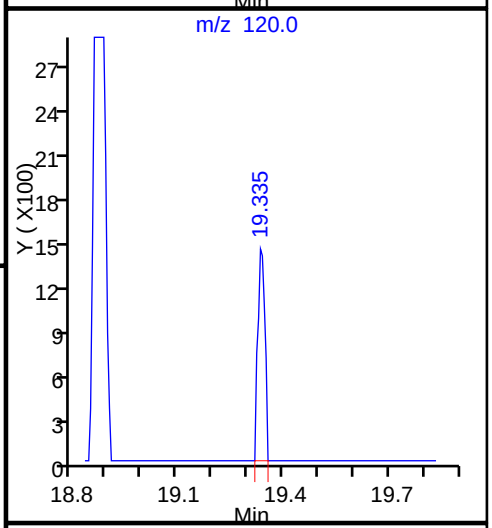
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P106D.D				
Injection Date:	07-Nov-2016 20:18:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-1	Lab Sample ID:	140-6285-1		
Client ID:	C-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	6	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

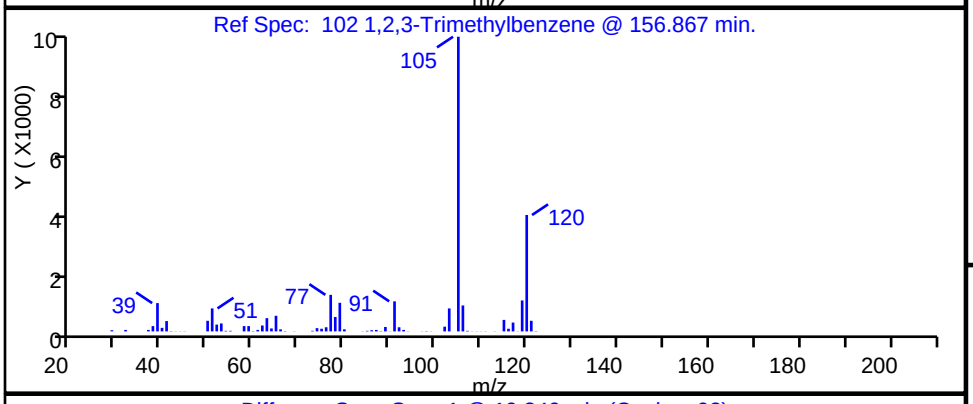
102 1,2,3-Trimethylbenzene, CAS: 526-73-8

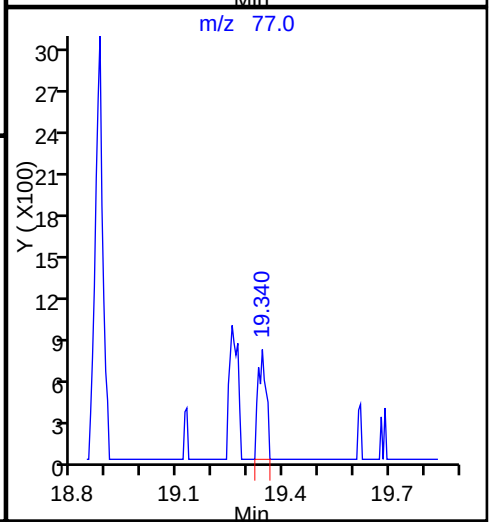


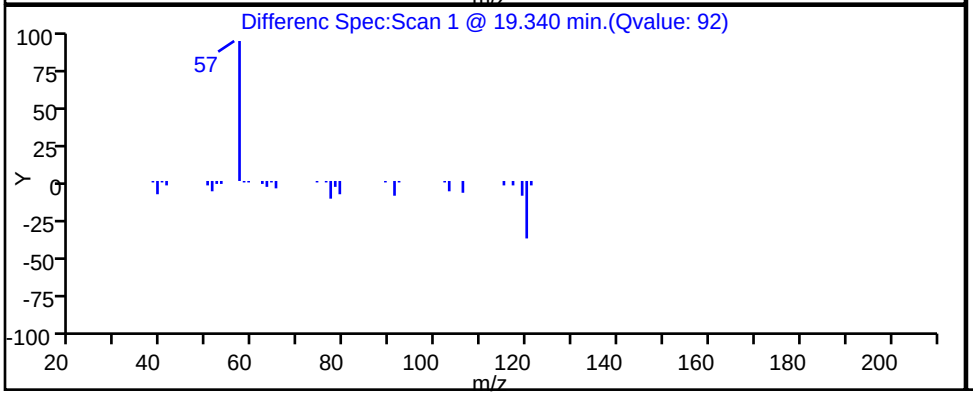








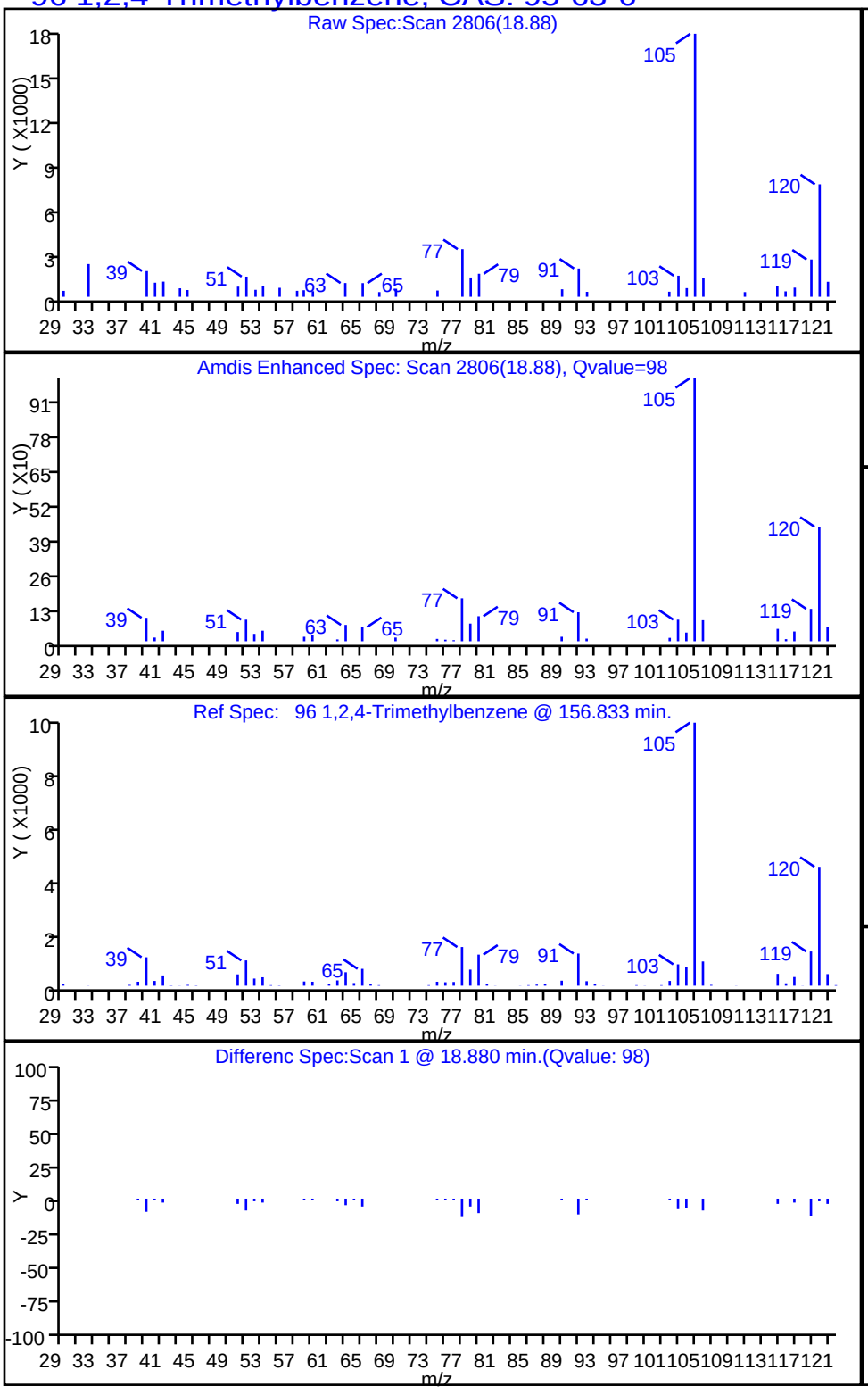


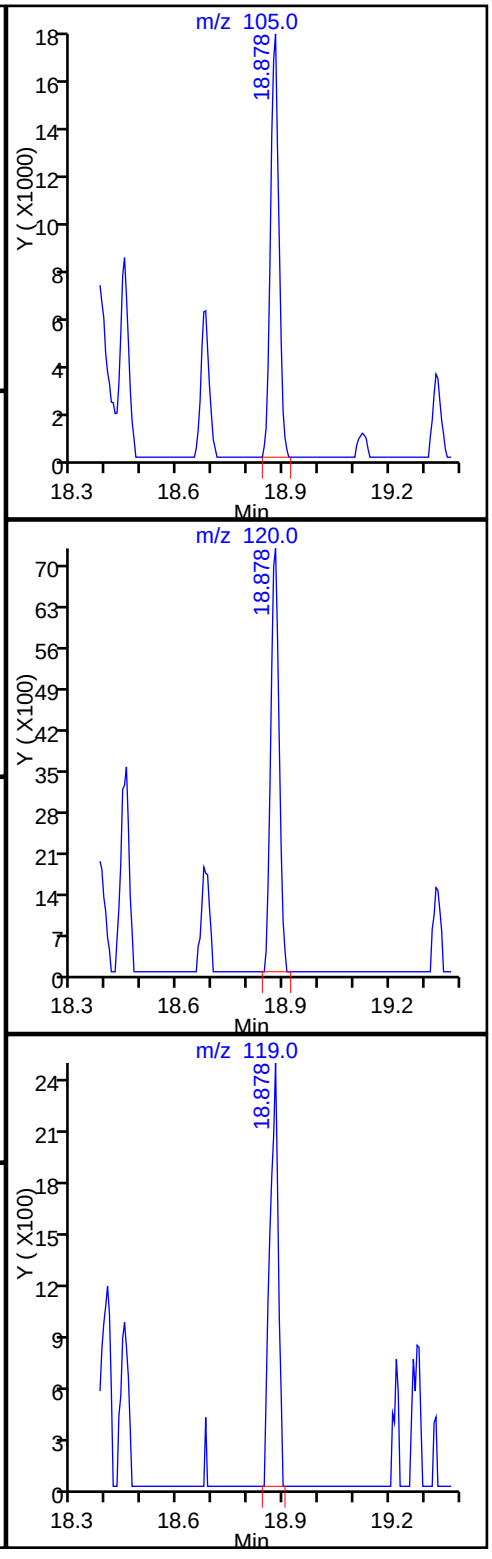


Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P106D.D

Injection Date:	07-Nov-2016 20:18:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-1	Lab Sample ID:	140-6285-1		
Client ID:	C-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	6	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

96 1,2,4-Trimethylbenzene, CAS: 95-63-6

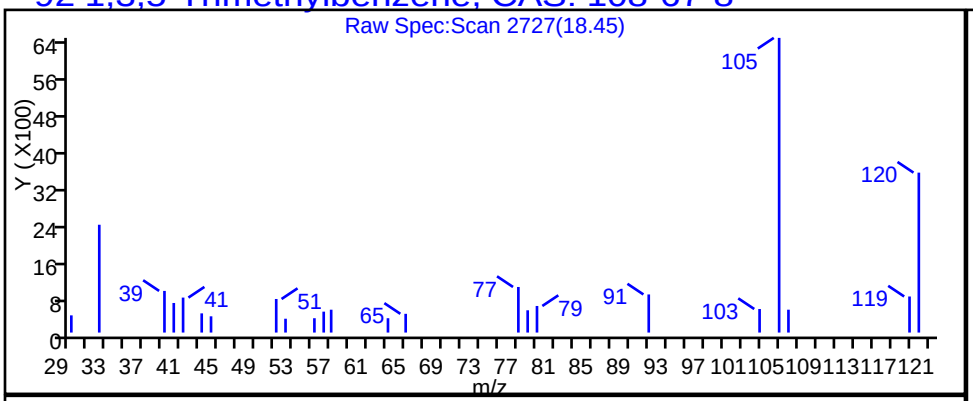


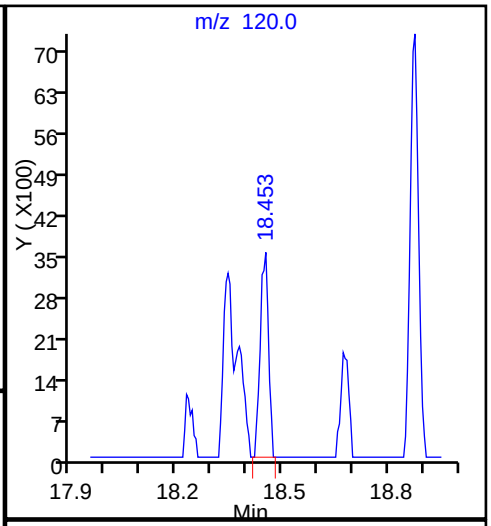


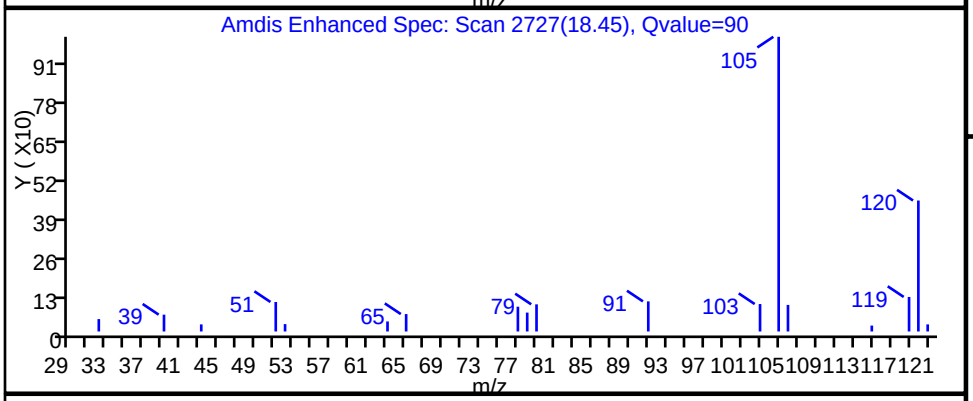
TestAmerica Knoxville

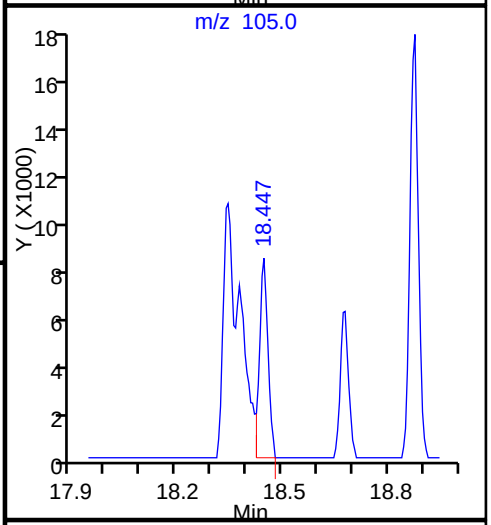
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P106D.D				
Injection Date:	07-Nov-2016 20:18:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-1	Lab Sample ID:	140-6285-1		
Client ID:	C-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	6	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

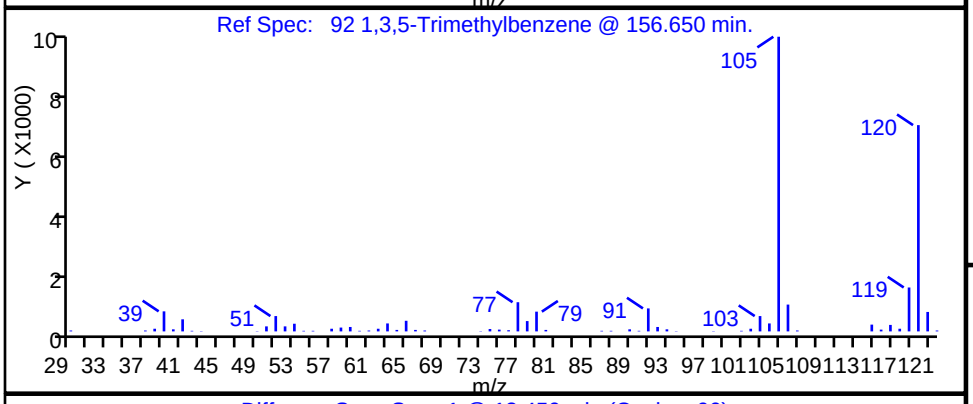
92 1,3,5-Trimethylbenzene, CAS: 108-67-8

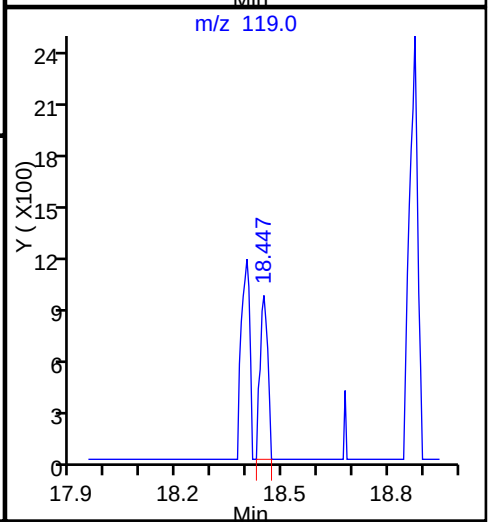


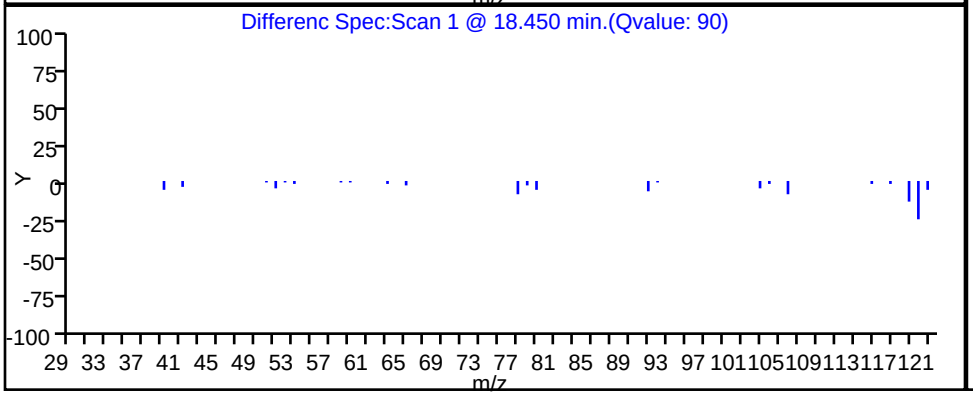








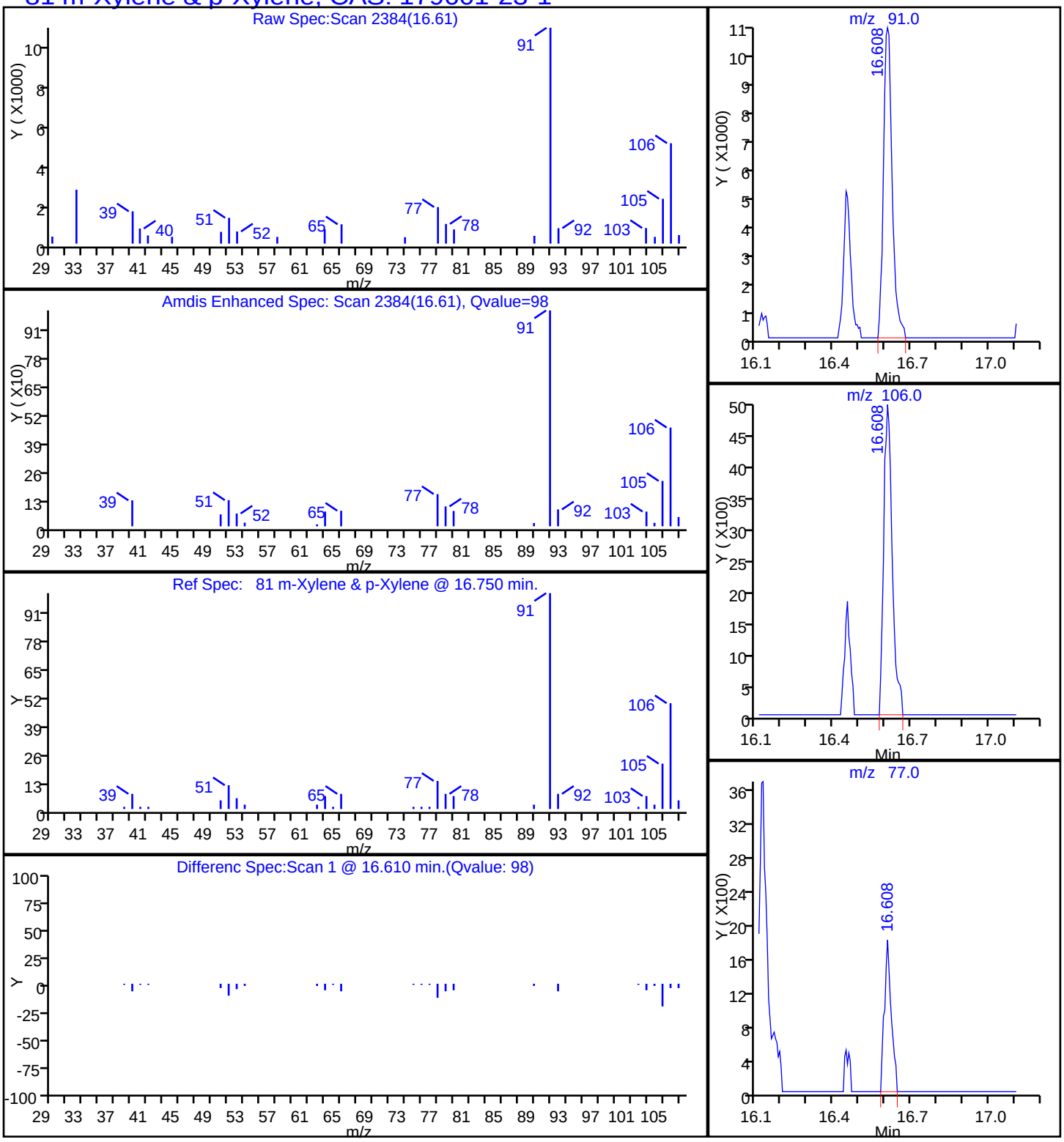




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P106D.D				
Injection Date:	07-Nov-2016 20:18:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-1	Lab Sample ID:	140-6285-1		
Client ID:	C-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	6	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

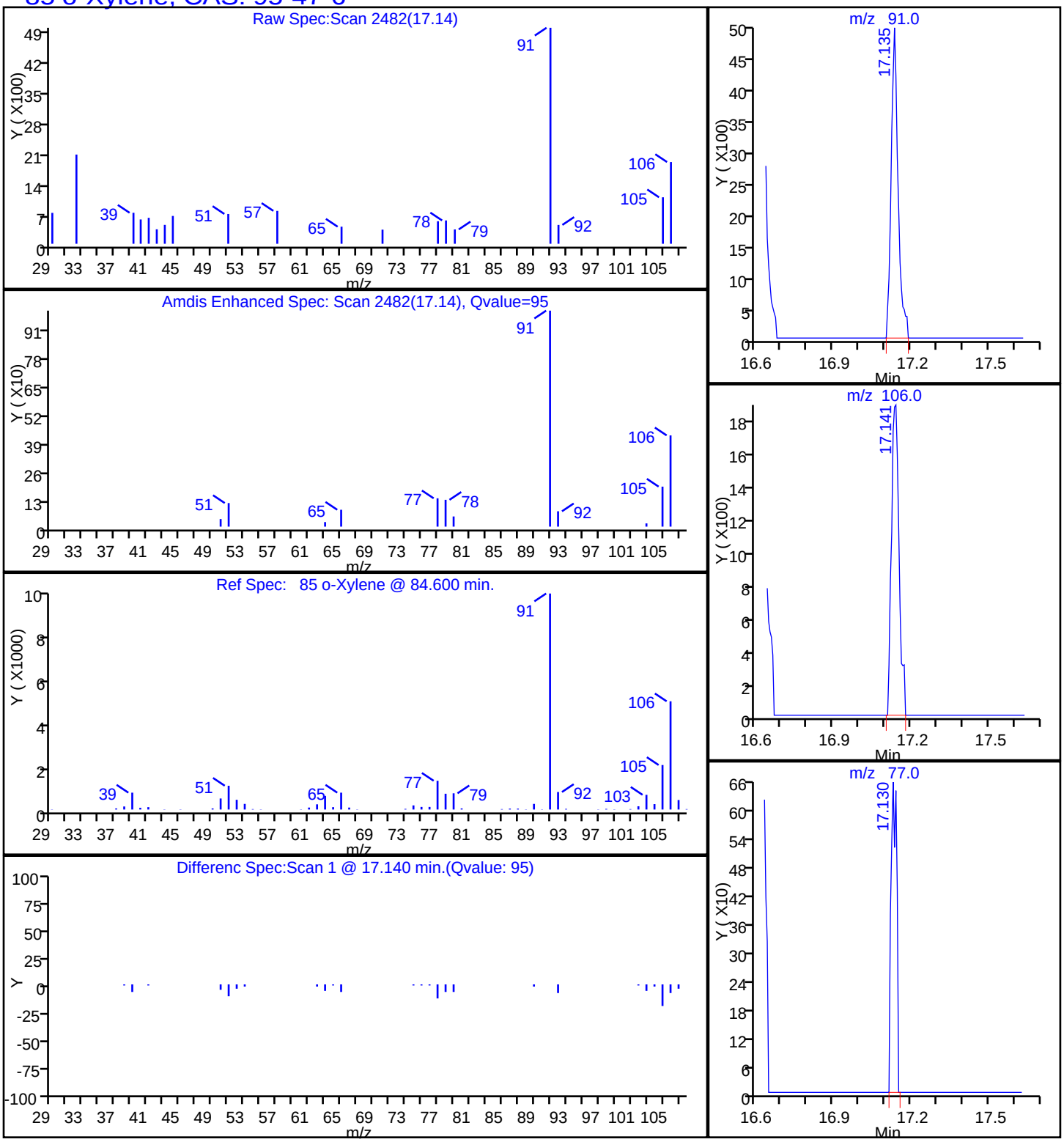
81 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P106D.D				
Injection Date:	07-Nov-2016 20:18:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-1	Lab Sample ID:	140-6285-1		
Client ID:	C-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	6	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

85 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6285-1

SDG No.:

Client Sample ID: C-MID-GAC | Lab Sample ID: 140-6285-2

Matrix: Air | Lab File ID: JK07P107.D

Analysis Method: TO 15 LL | Date Collected: 11/03/2016 10:57

Sample wt/vol: 100(mL) | Date Analyzed: 11/07/2016 22:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7085 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	3.4		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.093	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	5.6		0.40	0.075
67-66-3	Chloroform	119.38	0.40		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.79		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.66		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	1.5		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.48		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.18	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	3.6		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	3.0		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.13	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.23	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.92		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6285-1

SDG No.:

Client Sample ID: C-MID-GAC | Lab Sample ID: 140-6285-2

Matrix: Air | Lab File ID: JK07P107.D

Analysis Method: TO 15 LL | Date Collected: 11/03/2016 10:57

Sample wt/vol: 100(mL) | Date Analyzed: 11/07/2016 22:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7085 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	11		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.58	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	20		1.4	0.27
67-66-3	Chloroform	119.38	1.9		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	3.1		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	6.2		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.9		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.80	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	13		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	9.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	17		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.68	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.1	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P107.D				
Lims ID:	140-6285-A-2				
Client ID:	C-MID-GAC				
Sample Type:	Client				
Inject. Date:	07-Nov-2016 22:06:30	ALS Bottle#:	7	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003595-016				
Misc. Info.:	140-6285-a-2				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	08-Nov-2016 10:14:16	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				
First Level Reviewer: tajh		Date:	08-Nov-2016 10:09:43		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.283	9.290	-0.007	97	211791	4.00	
* 2 1,4-Difluorobenzene	114	11.445	11.446	-0.001	96	913949	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.123	16.125	-0.002	91	748458	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.747	17.749	-0.002	85	467225	4.14	
6 Chlorodifluoromethane	67	3.917	3.918	-0.001	97	24126	1.12	
8 Dichlorodifluoromethane	85	3.981	3.983	-0.002	100	27528	0.1320	
27 1,1-Dichloroethene	96	6.304	6.306	-0.002	95	6379	0.0959	
31 Methylene Chloride	84	6.665	6.671	-0.007	99	48944	0.7273	
37 1,1-Dichloroethane	63	7.939	7.940	-0.001	99	36960	0.3039	
42 cis-1,2-Dichloroethene	96	8.939	8.946	-0.007	94	10200	0.1579	
44 Chloroform	83	9.283	9.295	-0.012	28	10566	0.0793	
47 1,1,1-Trichloroethane	97	10.332	10.339	-0.007	96	83059	0.6071	
51 Benzene	78	10.918	10.925	-0.007	97	116423	0.6887	
52 Carbon tetrachloride	117	10.945	10.946	-0.001	91	2412	0.0186	
59 Trichloroethene	130	12.149	12.151	-0.002	90	1722	0.0254	
68 Toluene	91	14.166	14.173	-0.007	93	79630	0.4853	
79 Ethylbenzene	91	16.451	16.453	-0.002	95	6655	0.0367	
81 m-Xylene & p-Xylene	91	16.607	16.614	-0.007	98	18685	0.1378	
85 o-Xylene	91	17.129	17.136	-0.007	94	6940	0.0467	
96 1,2,4-Trimethylbenzene	105	18.876	18.878	-0.002	96	6343	0.0465	
S 126 Xylenes, Total	100				0		0.1844	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

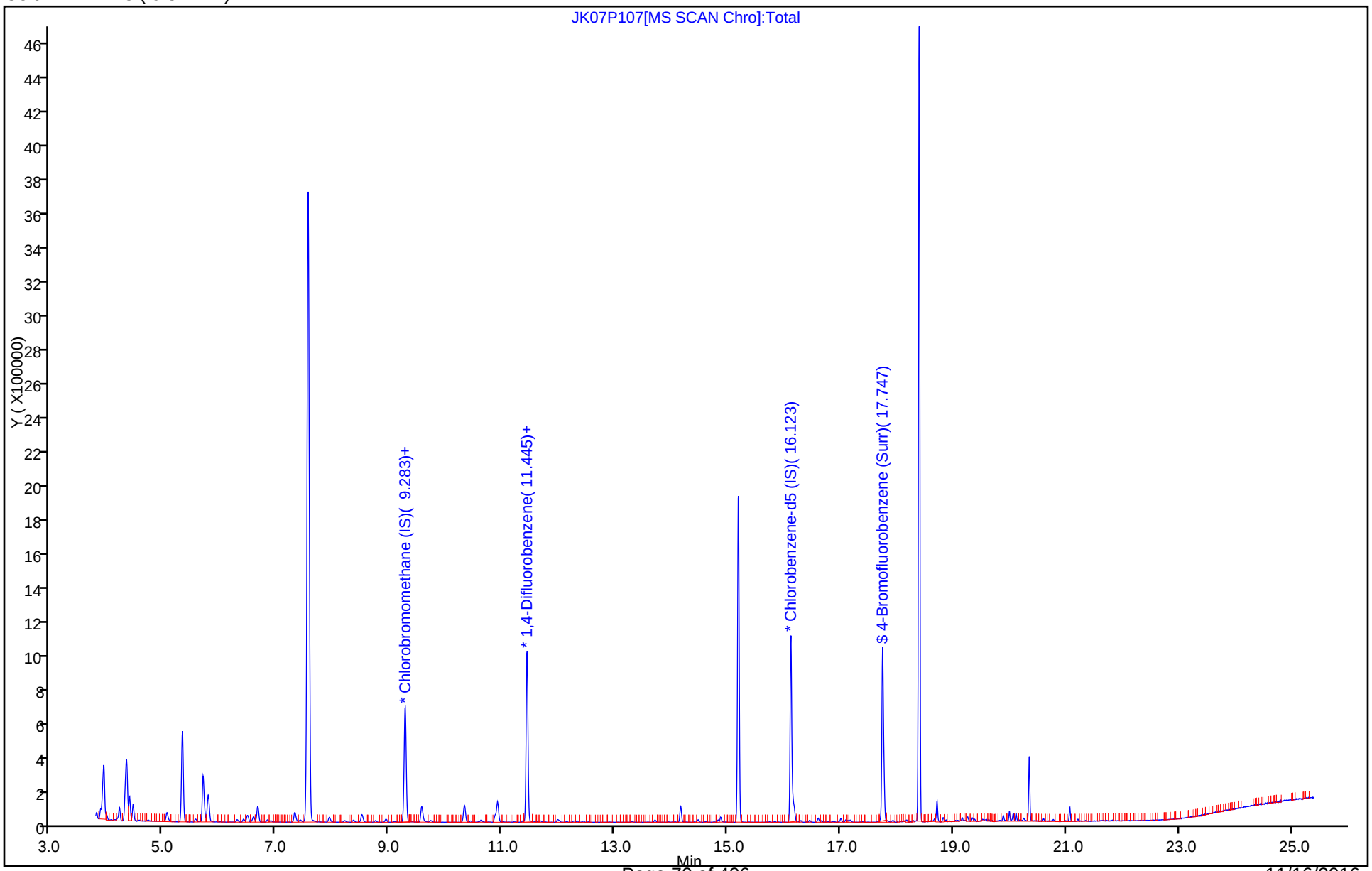
Report Date: 08-Nov-2016 10:14:42 Chrom Revision: 2.2 17-Oct-2016 09:27:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P107.D

Injection Date:	07-Nov-2016 22:06:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-6285-A-2	Lab Sample ID:	140-6285-2	Worklist Smp#:	16
Client ID:	C-MID-GAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

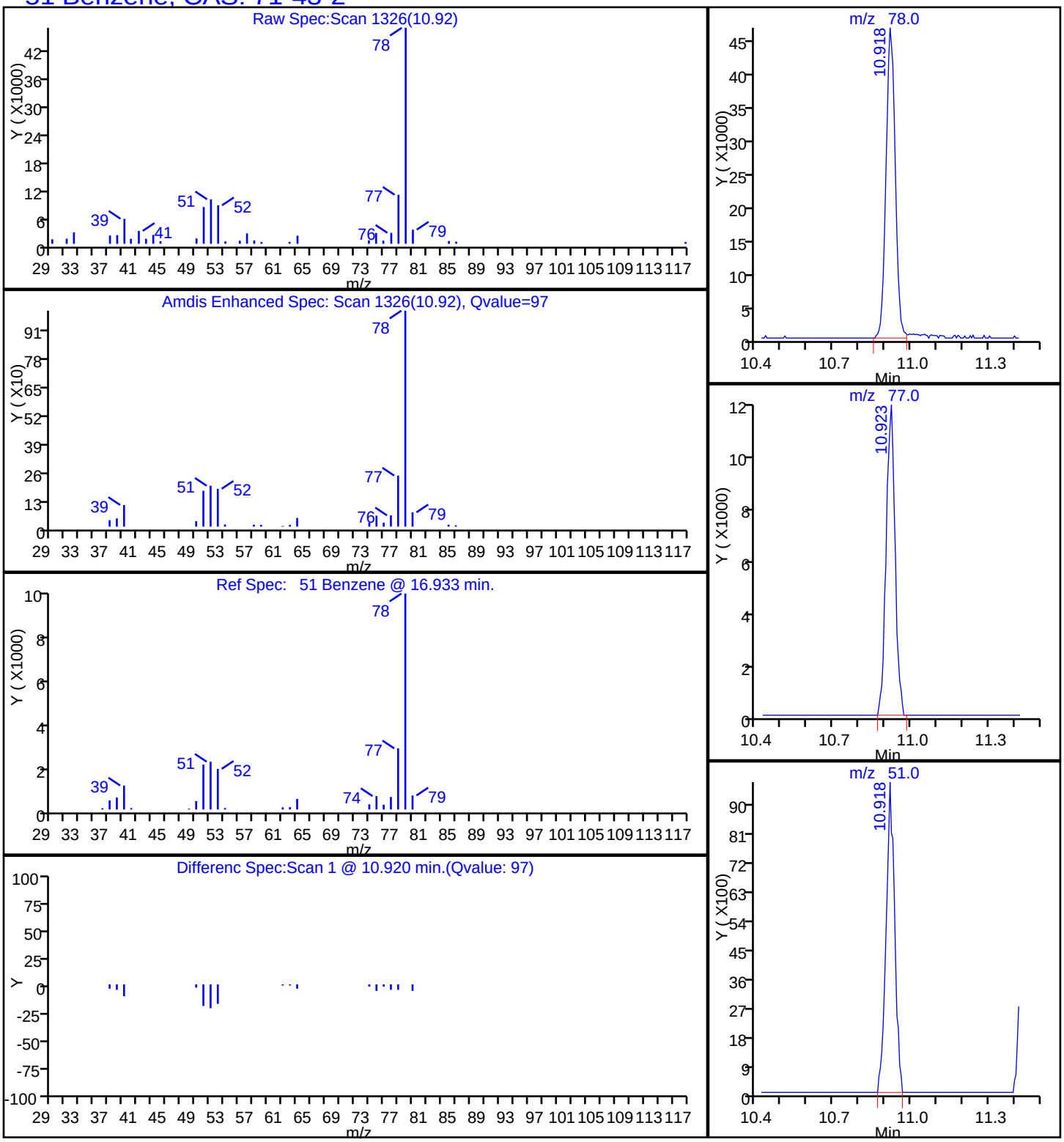
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P107.D				
Lims ID:	140-6285-A-2				
Client ID:	C-MID-GAC				
Sample Type:	Client				
Inject. Date:	07-Nov-2016 22:06:30	ALS Bottle#:	7	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003595-016				
Misc. Info.:	140-6285-a-2				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	08-Nov-2016 10:14:16	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				
First Level Reviewer: tajh		Date:	08-Nov-2016 10:09:43		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.14	103.52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P107.D				
Injection Date:	07-Nov-2016 22:06:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-2	Lab Sample ID:	140-6285-2		
Client ID:	C-MID-GAC				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

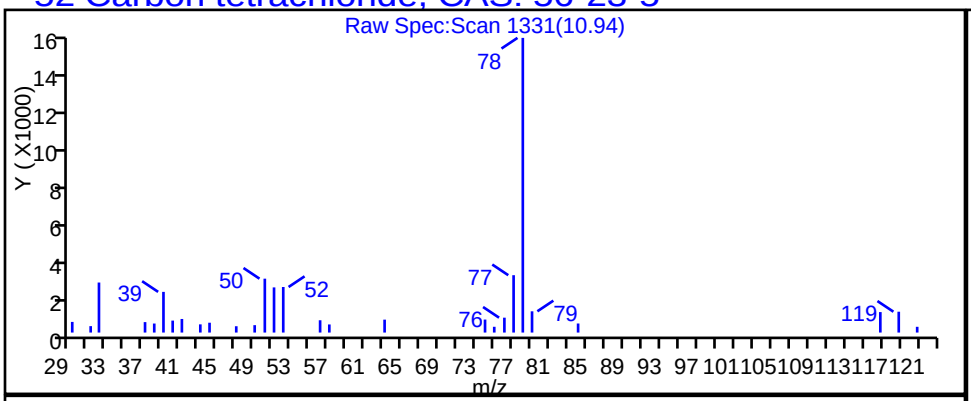
51 Benzene, CAS: 71-43-2

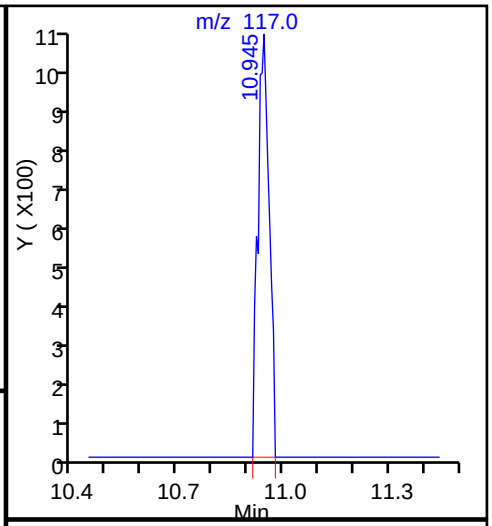


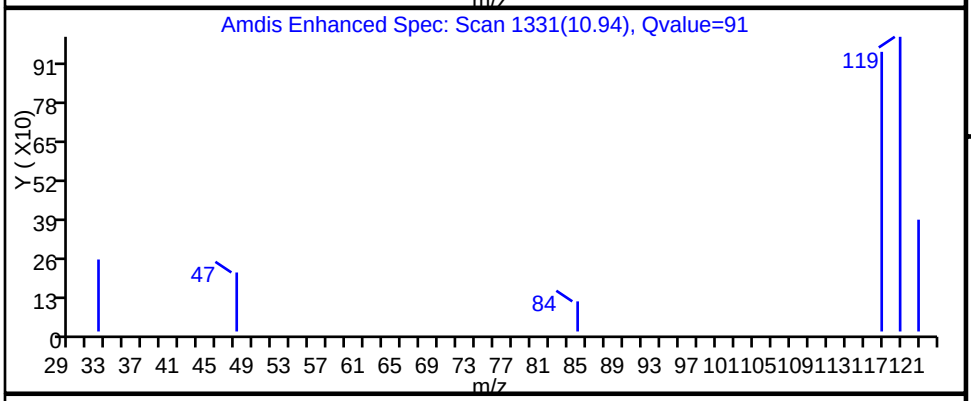
TestAmerica Knoxville

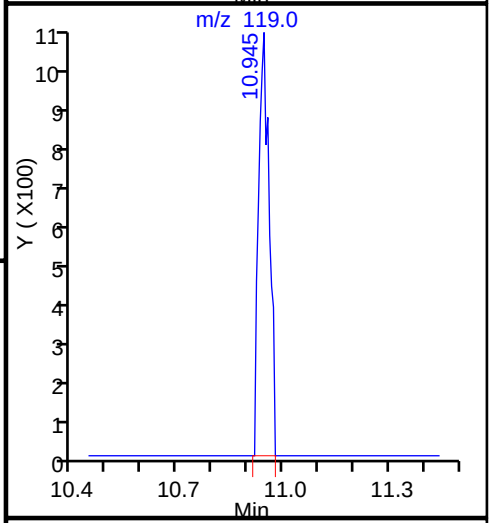
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P107.D				
Injection Date:	07-Nov-2016 22:06:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-2	Lab Sample ID:	140-6285-2		
Client ID:	C-MID-GAC				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

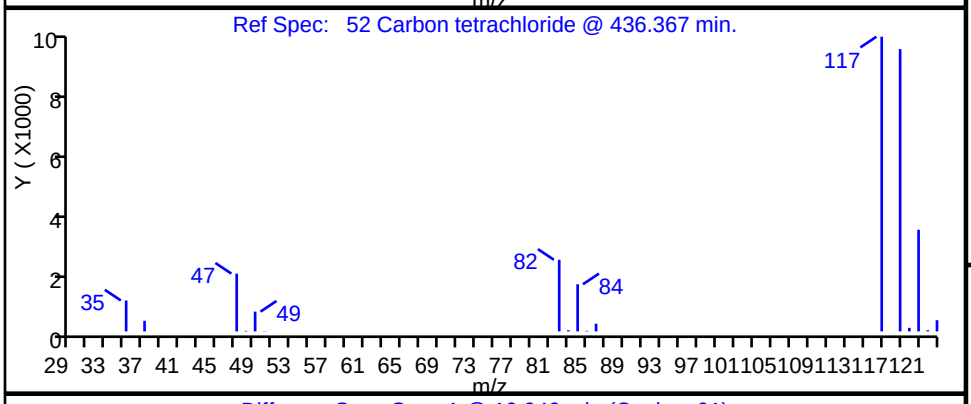
52 Carbon tetrachloride, CAS: 56-23-5

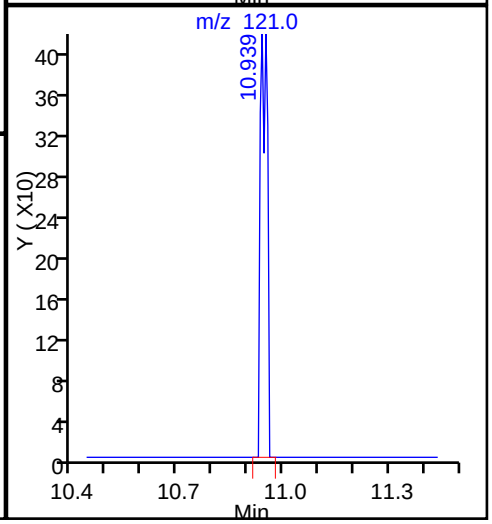


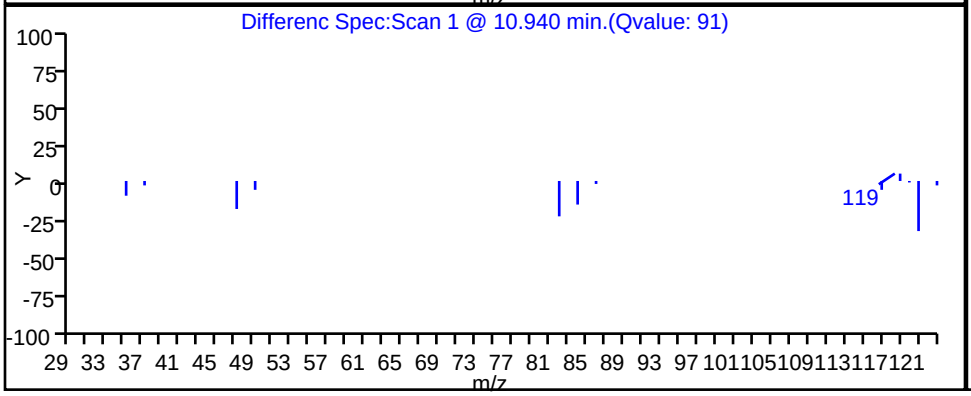








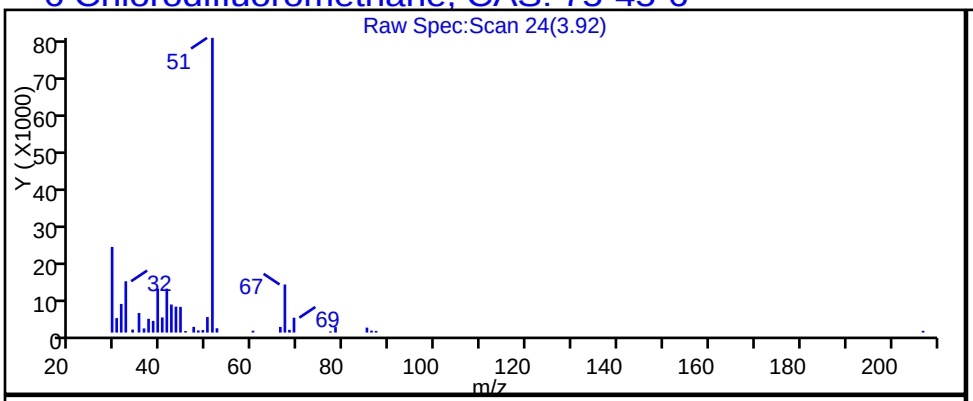


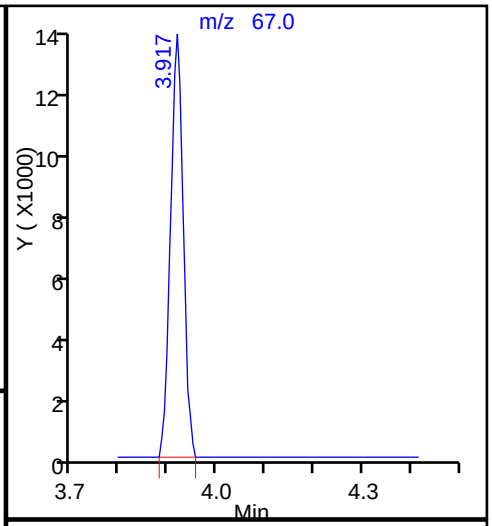


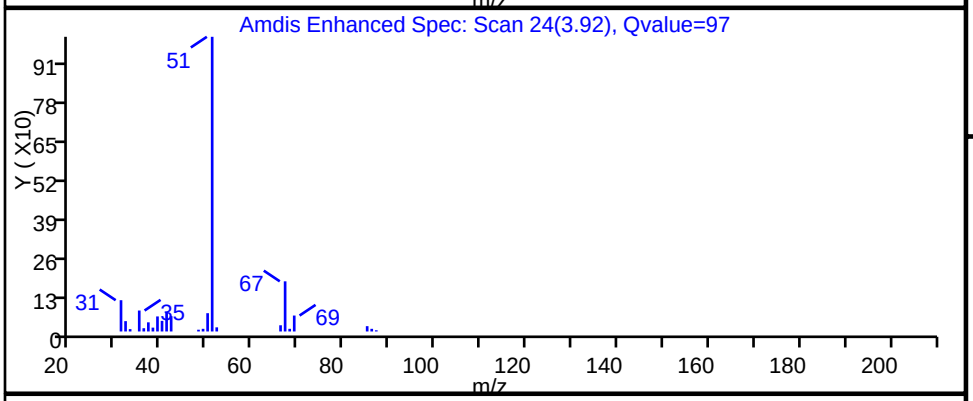
TestAmerica Knoxville

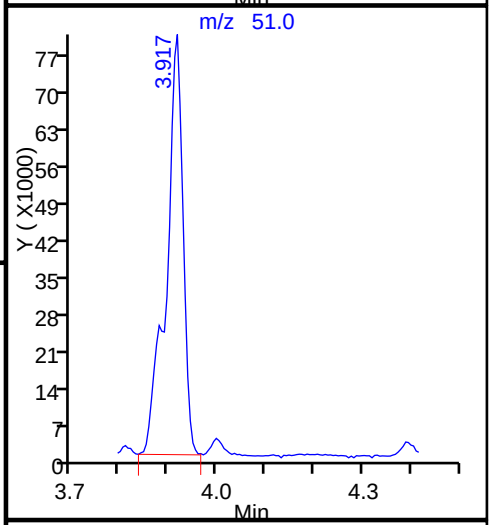
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P107.D		
Injection Date:	07-Nov-2016 22:06:30	Instrument ID:	MJ
Lims ID:	140-6285-A-2	Lab Sample ID:	140-6285-2
Client ID:	C-MID-GAC		
Operator ID:	7126	ALS Bottle#:	7 Worklist Smp#: 16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

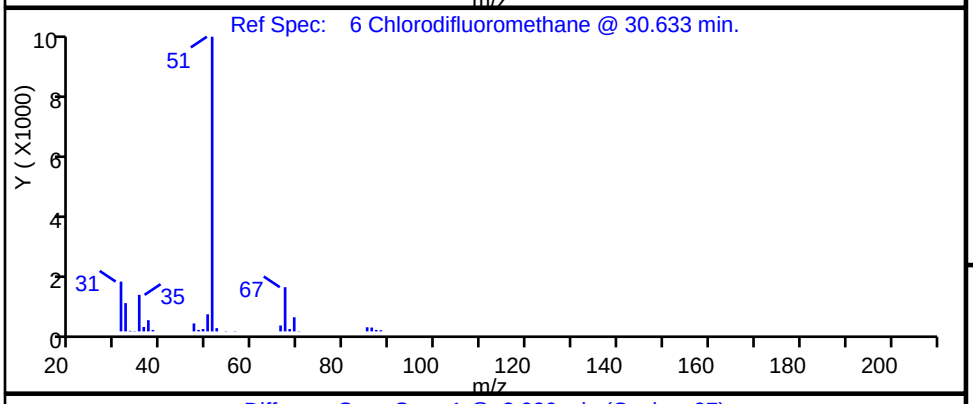
6 Chlorodifluoromethane, CAS: 75-45-6

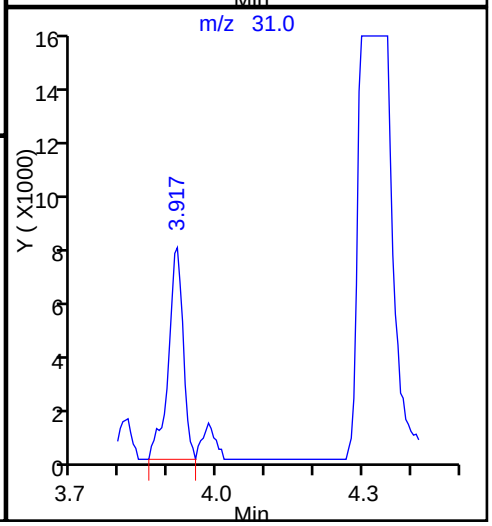


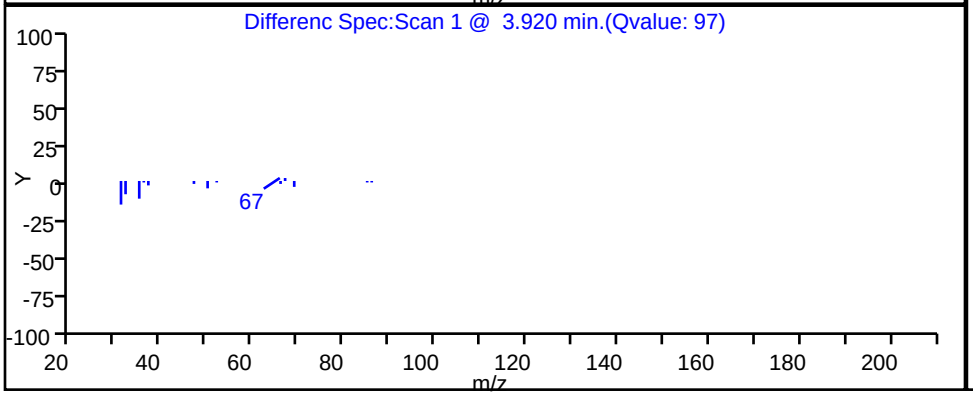








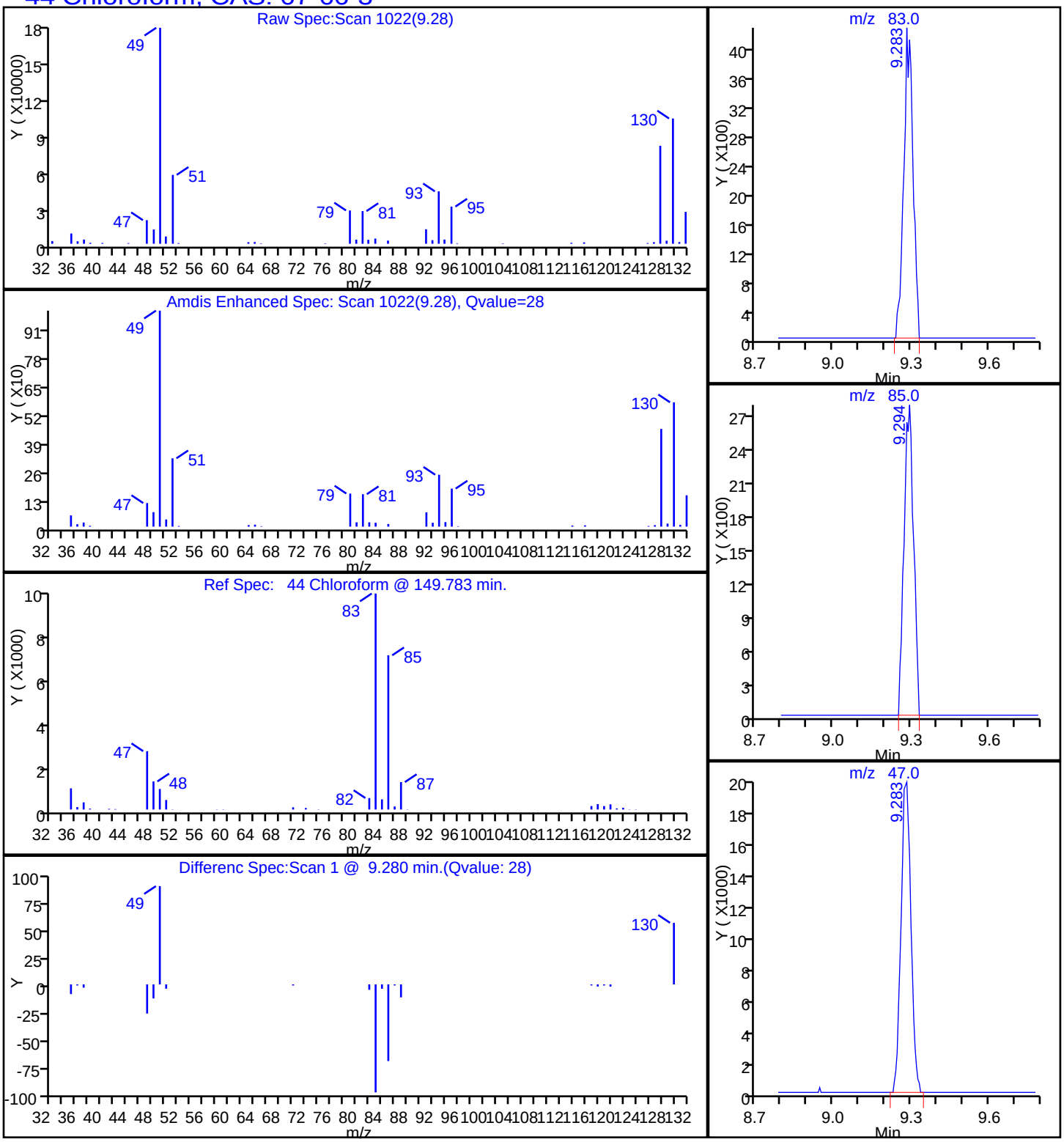




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P107.D		
Injection Date:	07-Nov-2016 22:06:30	Instrument ID:	MJ
Lims ID:	140-6285-A-2	Lab Sample ID:	140-6285-2
Client ID:	C-MID-GAC		
Operator ID:	7126	ALS Bottle#:	7 Worklist Smp#: 16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

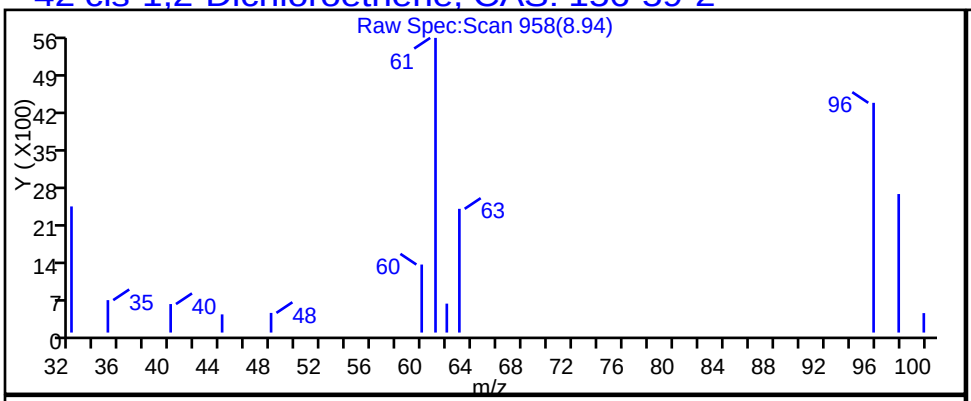
44 Chloroform, CAS: 67-66-3

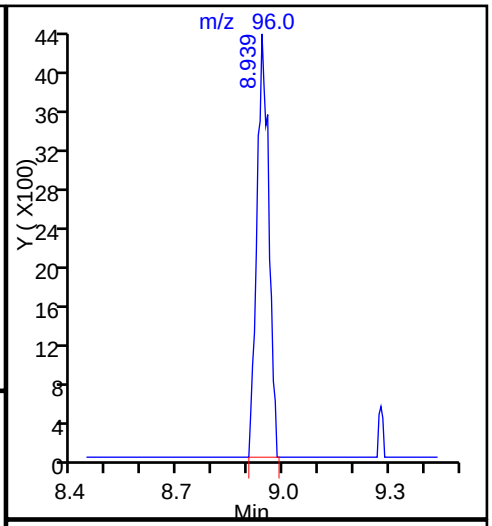


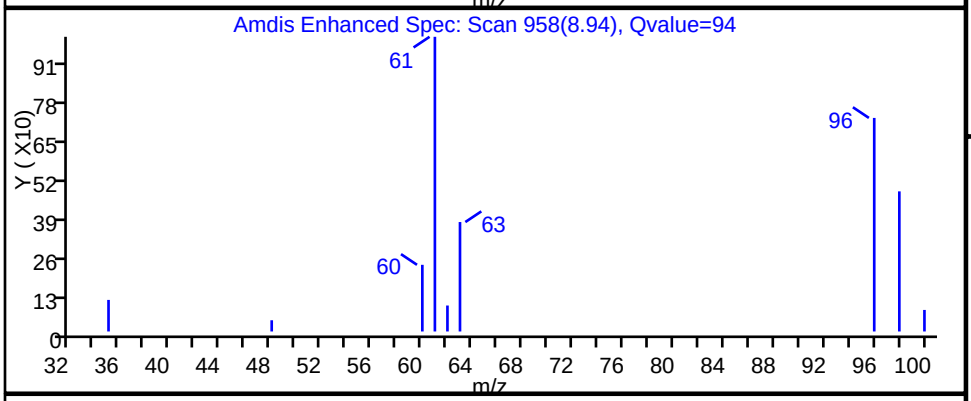
TestAmerica Knoxville

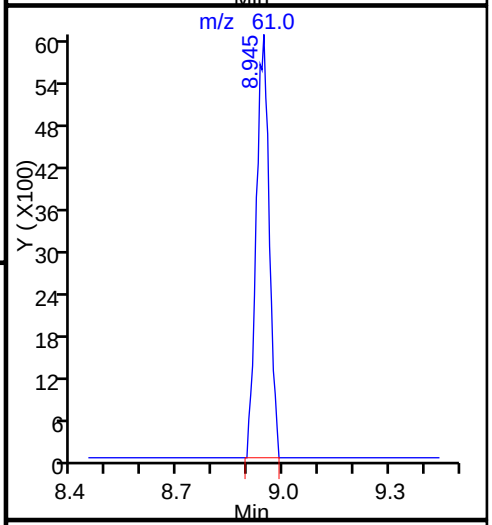
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P107.D				
Injection Date:	07-Nov-2016 22:06:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-2	Lab Sample ID:	140-6285-2		
Client ID:	C-MID-GAC				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

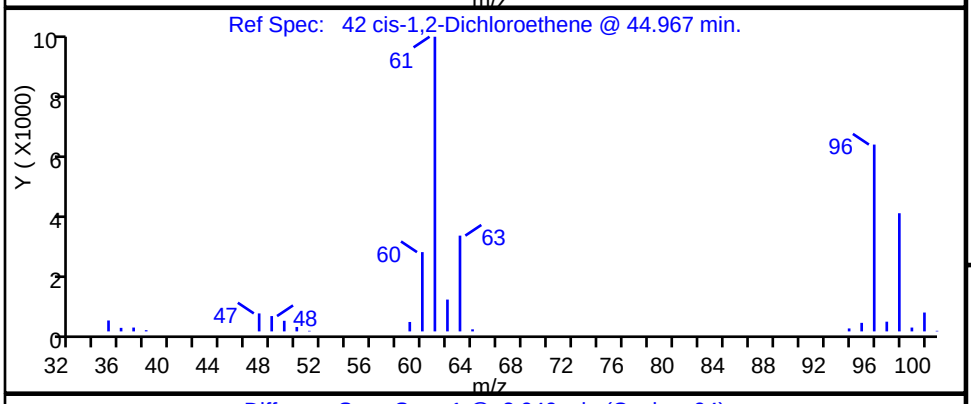
42 cis-1,2-Dichloroethene, CAS: 156-59-2

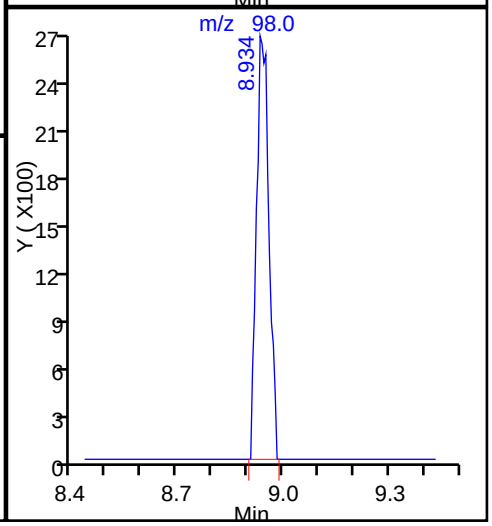


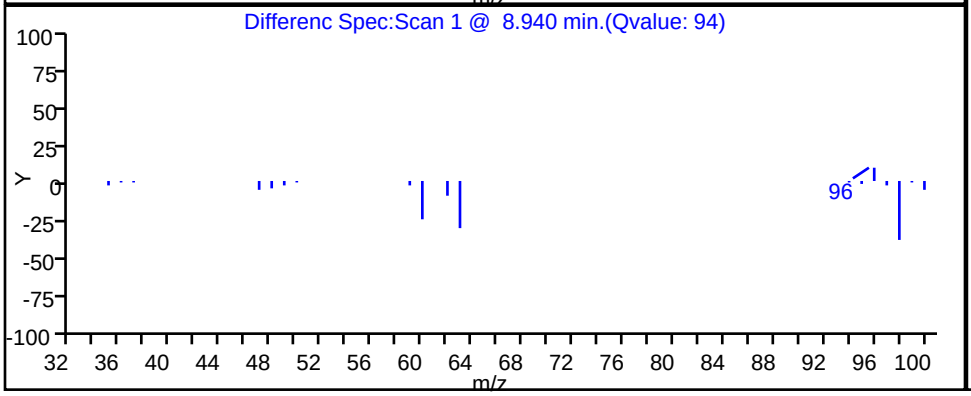








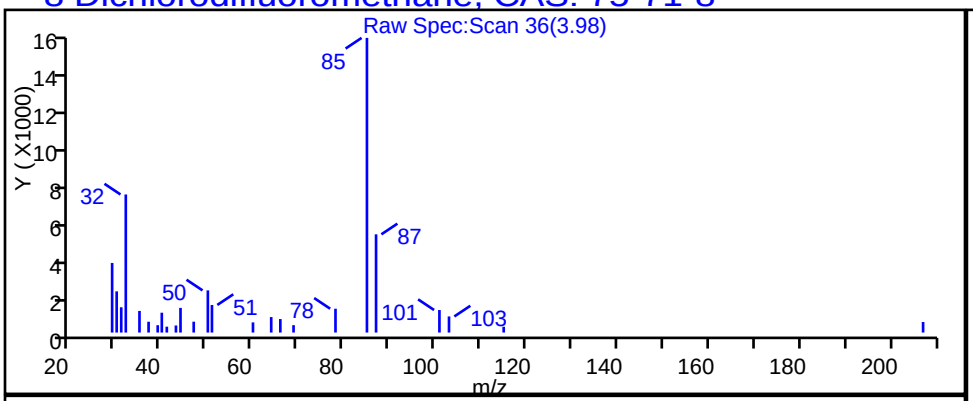


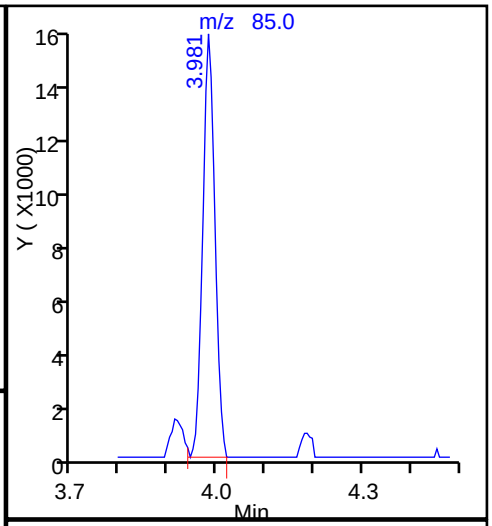


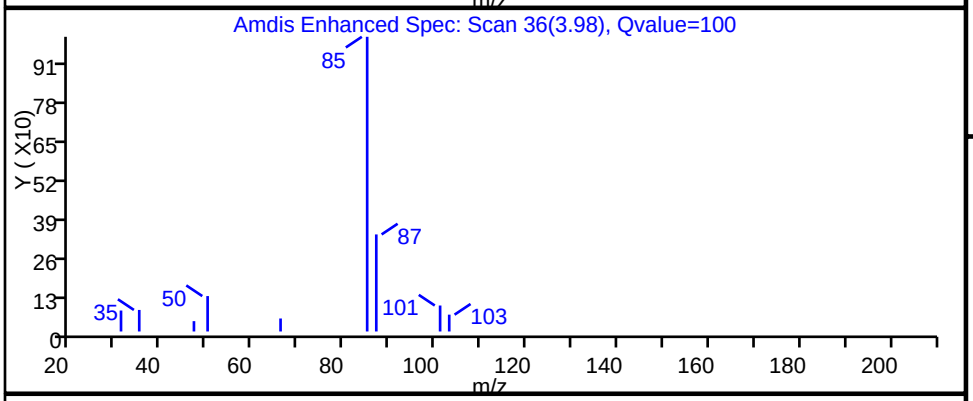
TestAmerica Knoxville

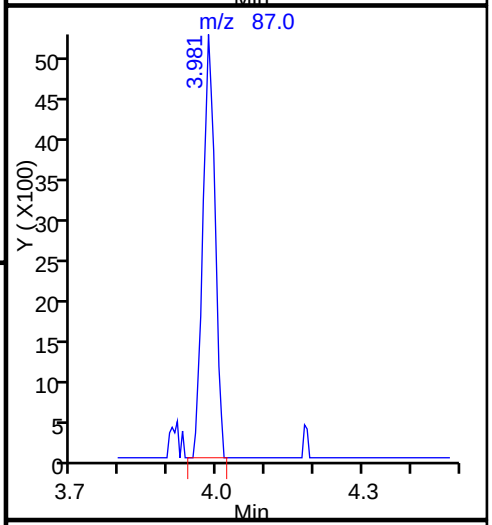
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P107.D				
Injection Date:	07-Nov-2016 22:06:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-2	Lab Sample ID:	140-6285-2		
Client ID:	C-MID-GAC				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

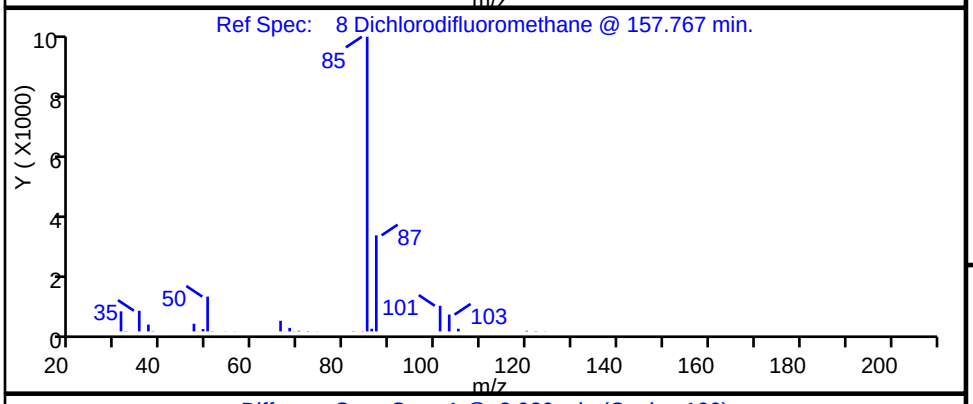
8 Dichlorodifluoromethane, CAS: 75-71-8

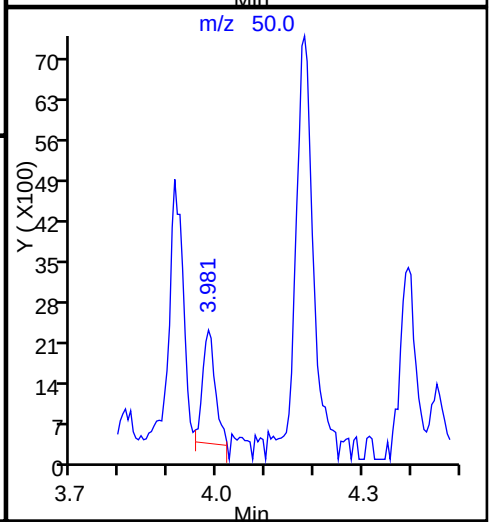


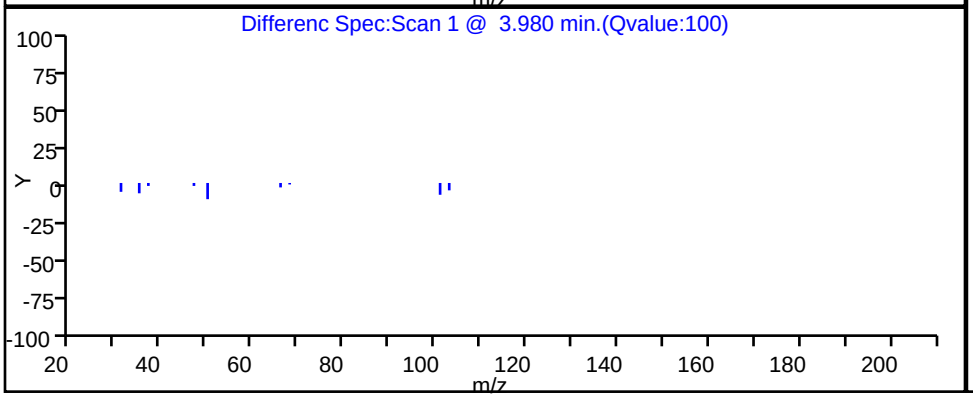








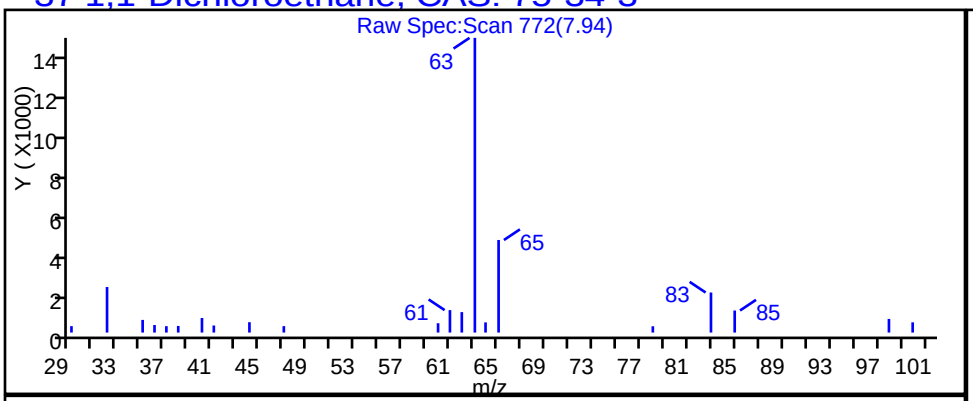


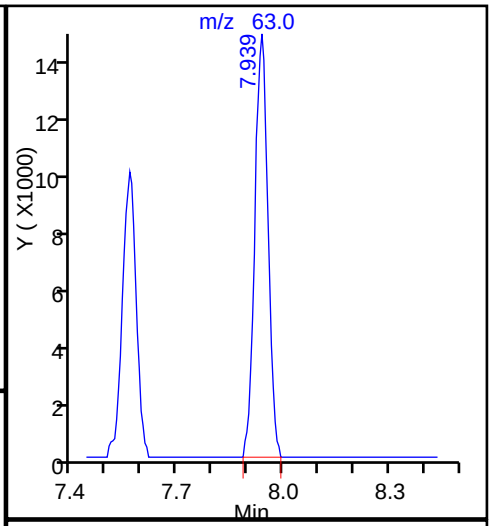


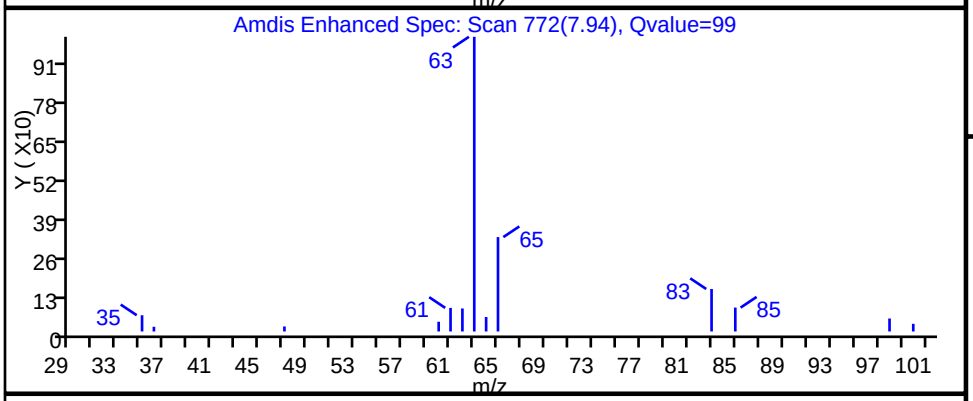
TestAmerica Knoxville

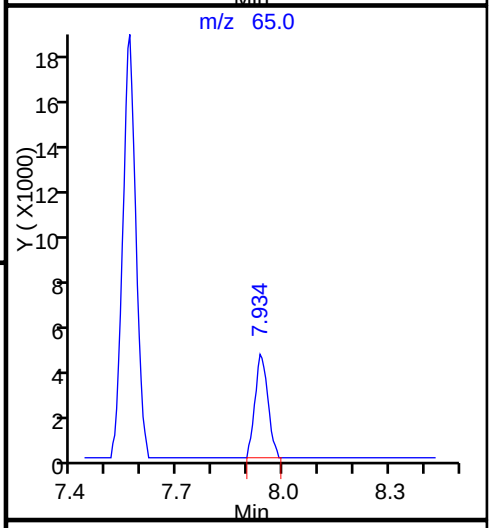
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P107.D		
Injection Date:	07-Nov-2016 22:06:30	Instrument ID:	MJ
Lims ID:	140-6285-A-2	Lab Sample ID:	140-6285-2
Client ID:	C-MID-GAC		
Operator ID:	7126	ALS Bottle#:	7 Worklist Smp#: 16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

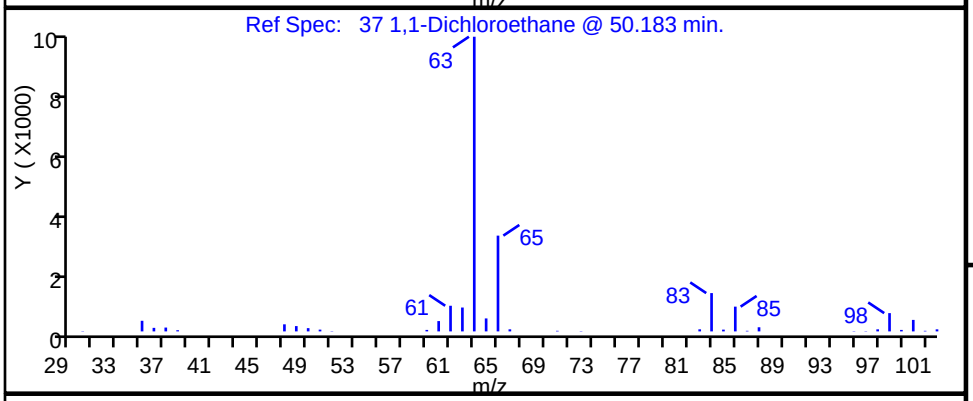
37 1,1-Dichloroethane, CAS: 75-34-3

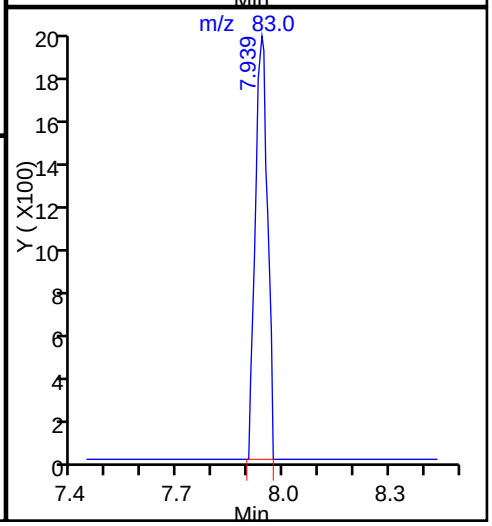


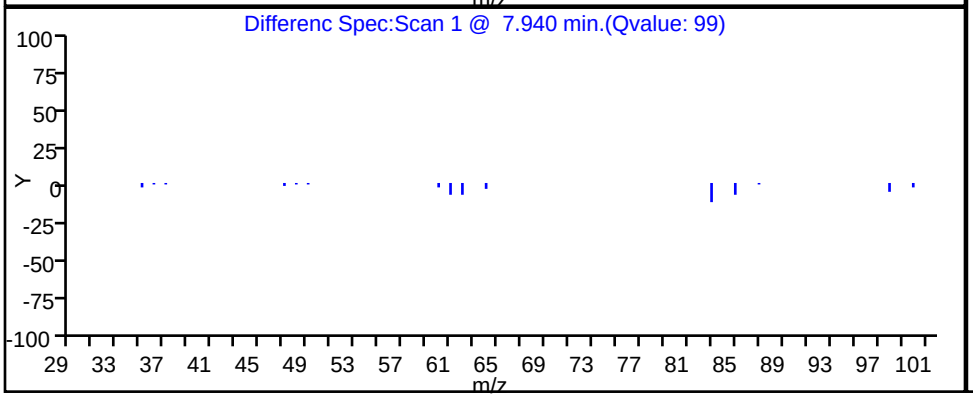








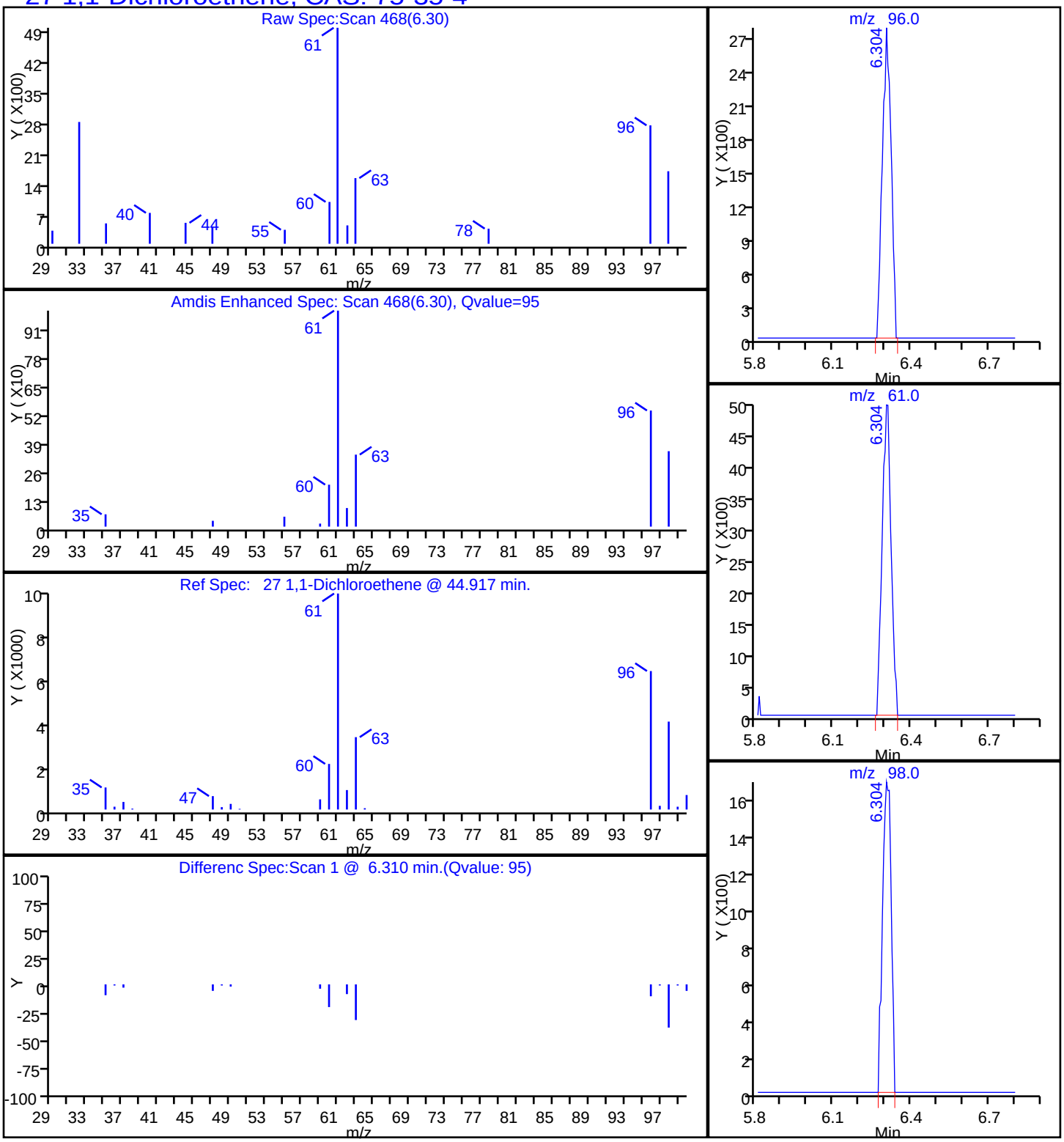




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P107.D		
Injection Date:	07-Nov-2016 22:06:30	Instrument ID:	MJ
Lims ID:	140-6285-A-2	Lab Sample ID:	140-6285-2
Client ID:	C-MID-GAC		
Operator ID:	7126	ALS Bottle#:	7 Worklist Smp#: 16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

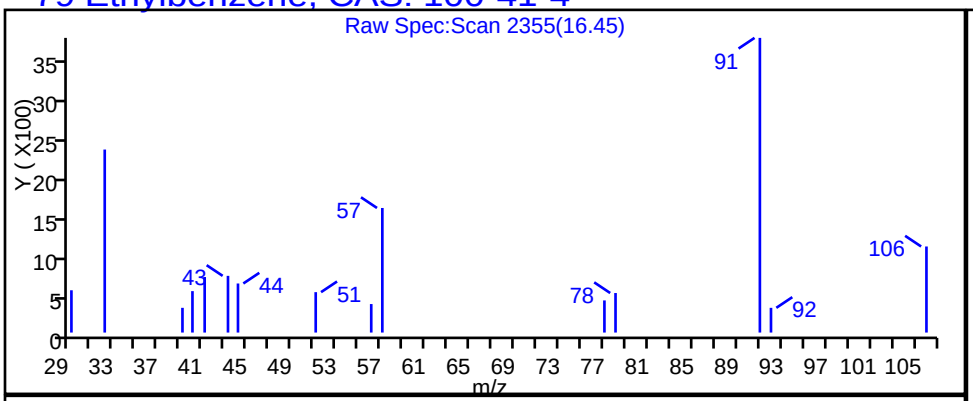
27 1,1-Dichloroethene, CAS: 75-35-4

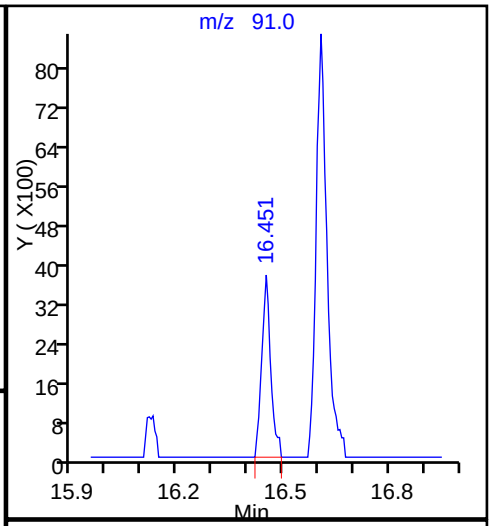


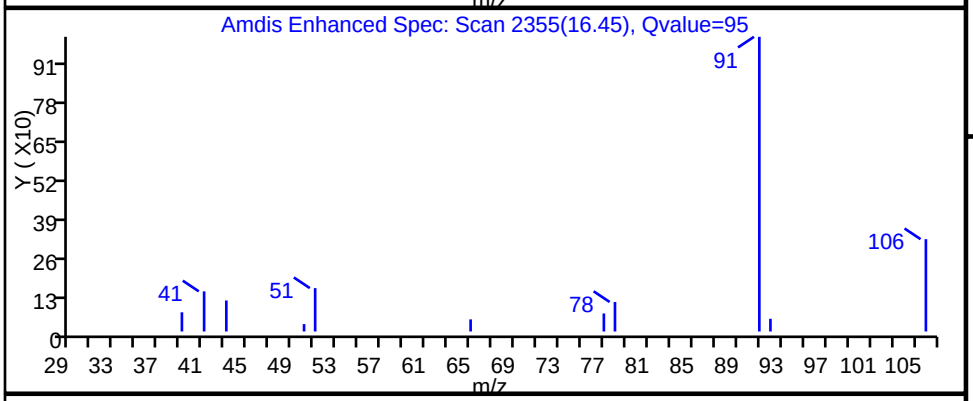
TestAmerica Knoxville

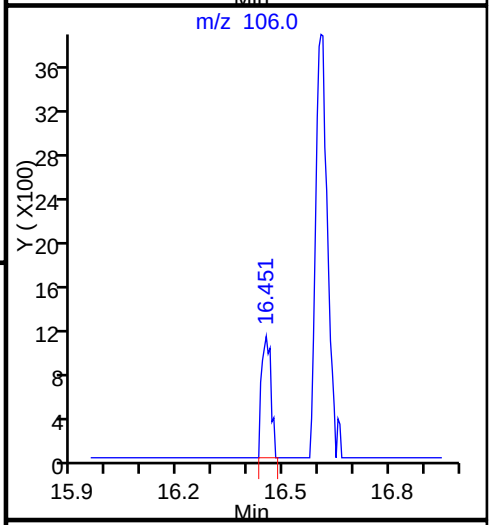
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P107.D				
Injection Date:	07-Nov-2016 22:06:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-2	Lab Sample ID:	140-6285-2		
Client ID:	C-MID-GAC				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

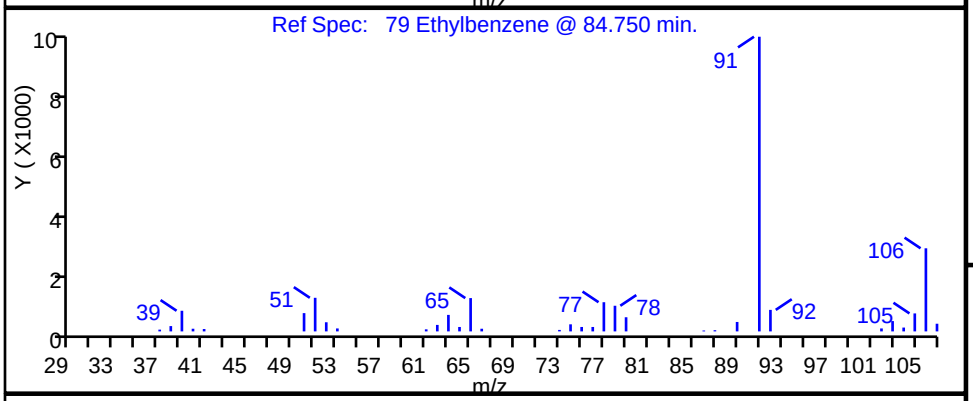
79 Ethylbenzene, CAS: 100-41-4

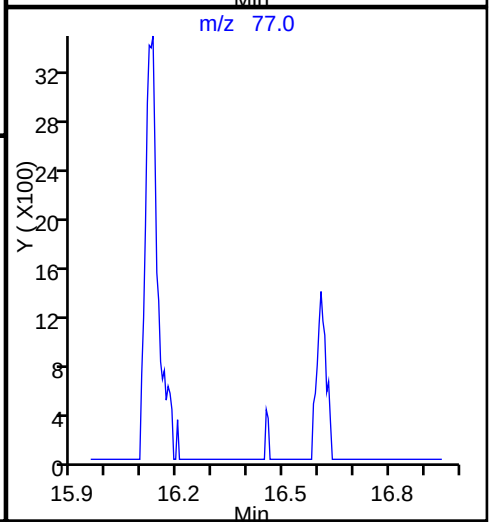


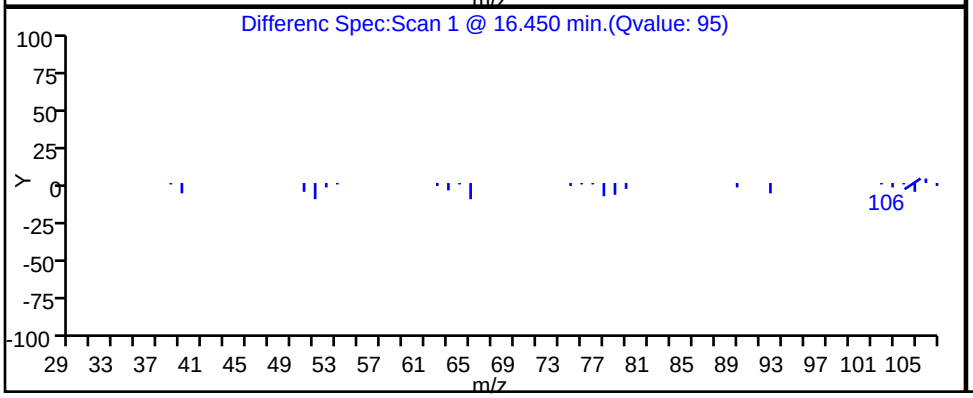








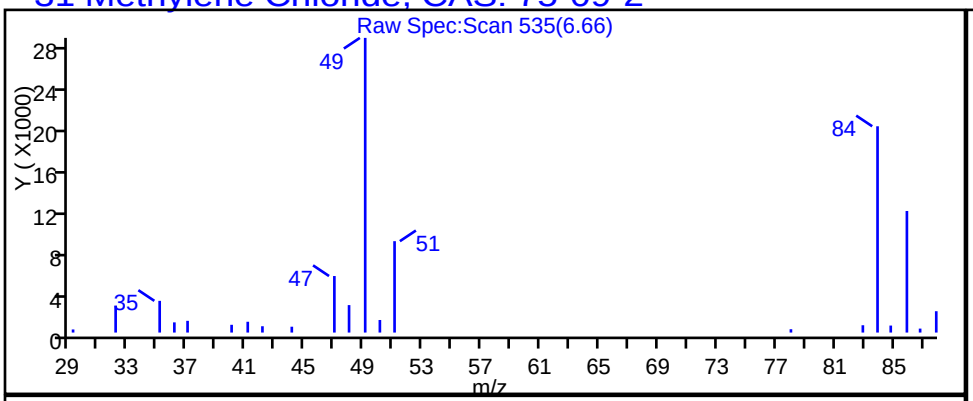


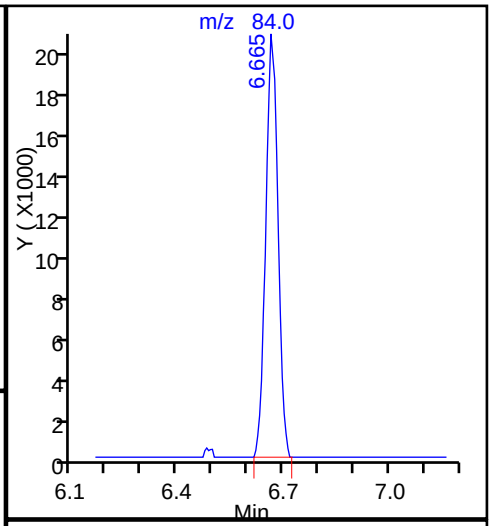


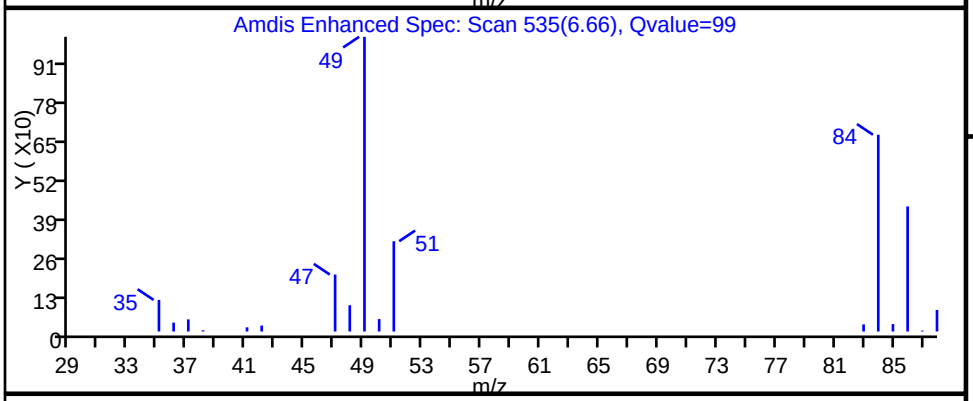
TestAmerica Knoxville

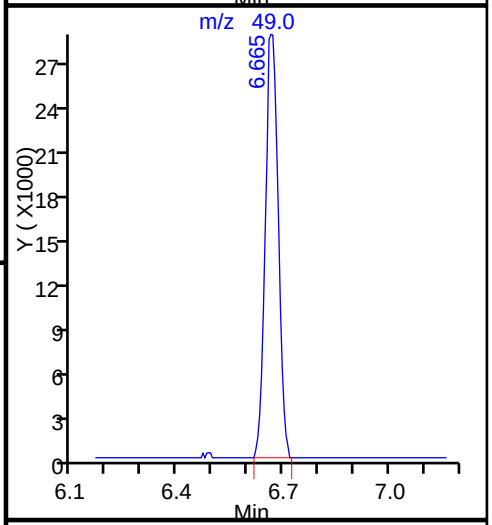
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P107.D				
Injection Date:	07-Nov-2016 22:06:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-2	Lab Sample ID:	140-6285-2		
Client ID:	C-MID-GAC				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

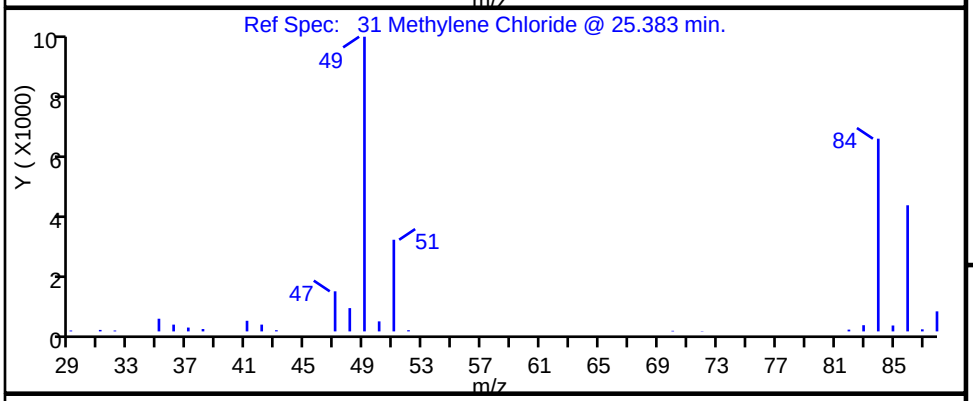
31 Methylene Chloride, CAS: 75-09-2

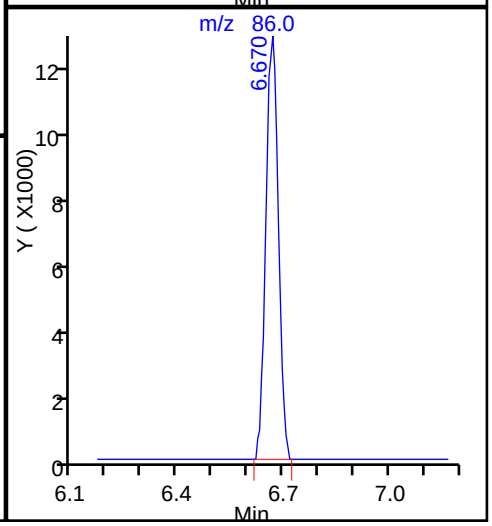


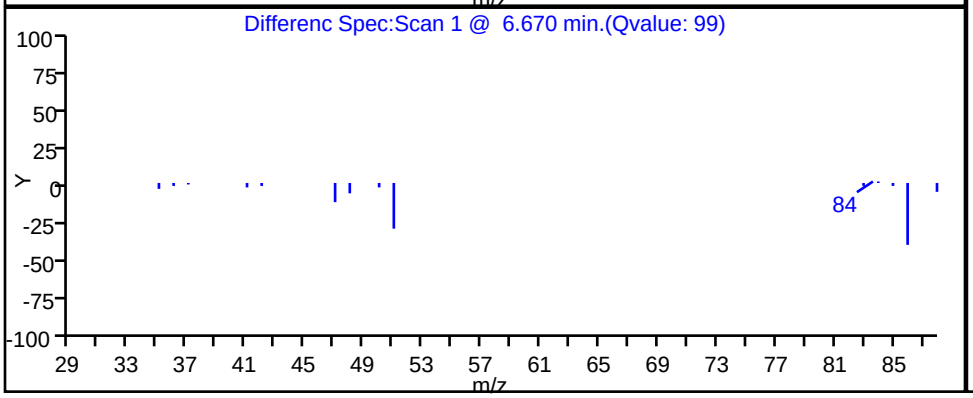








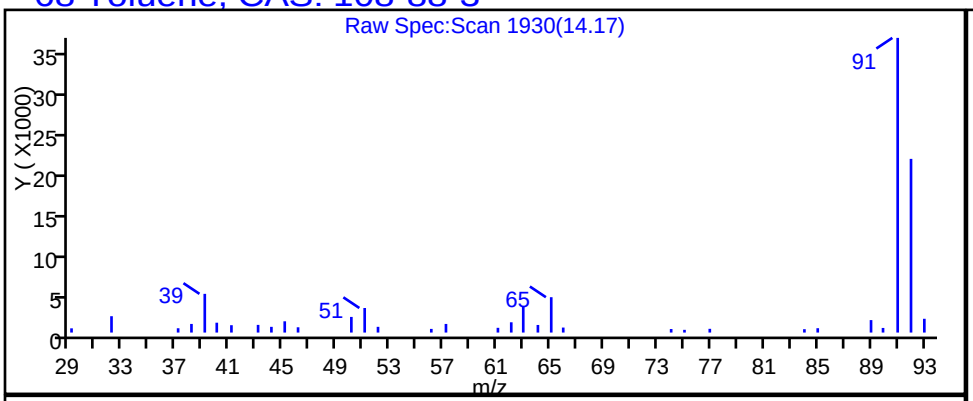


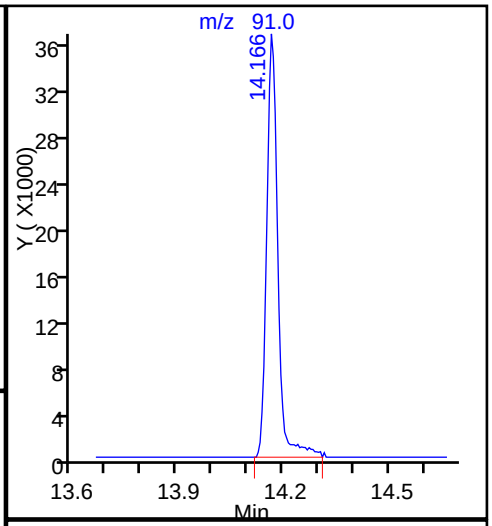


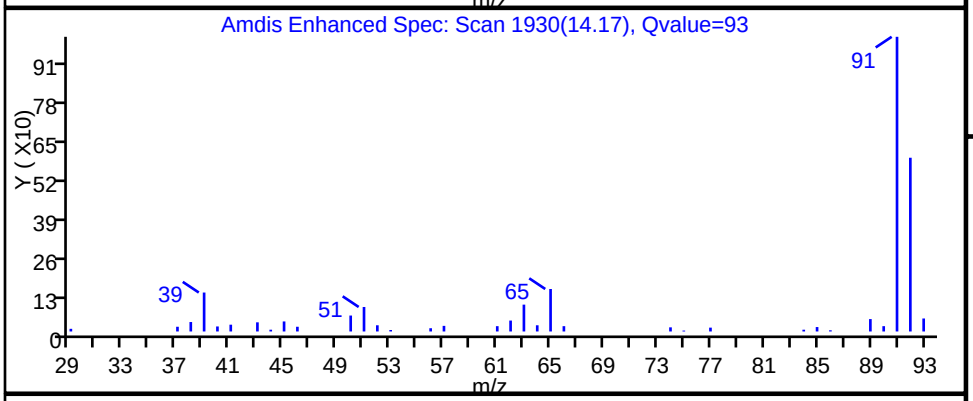
TestAmerica Knoxville

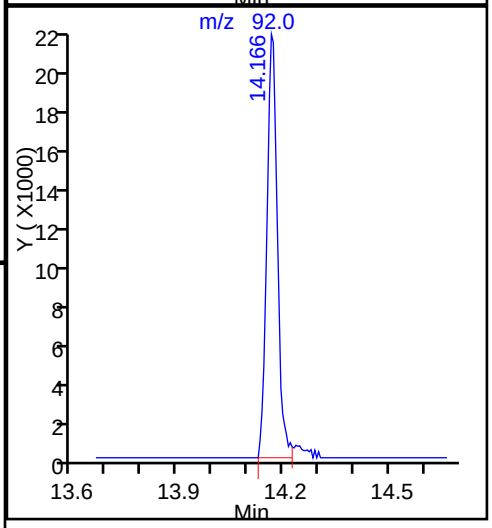
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P107.D				
Injection Date:	07-Nov-2016 22:06:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-2	Lab Sample ID:	140-6285-2		
Client ID:	C-MID-GAC				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

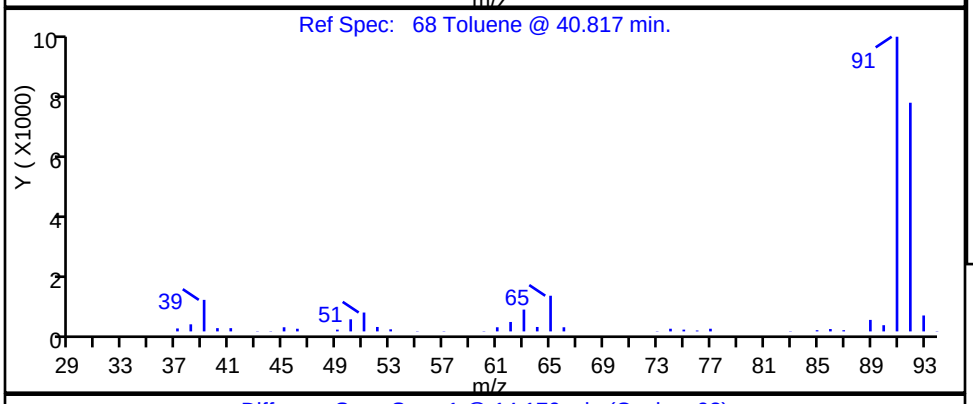
68 Toluene, CAS: 108-88-3

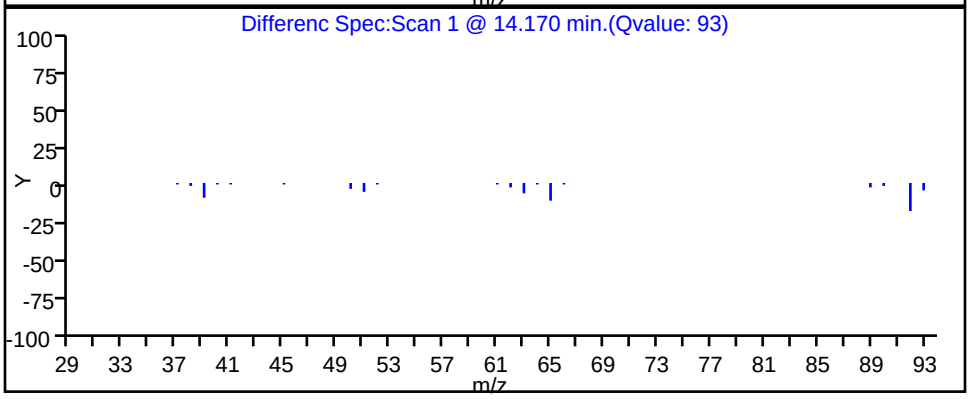










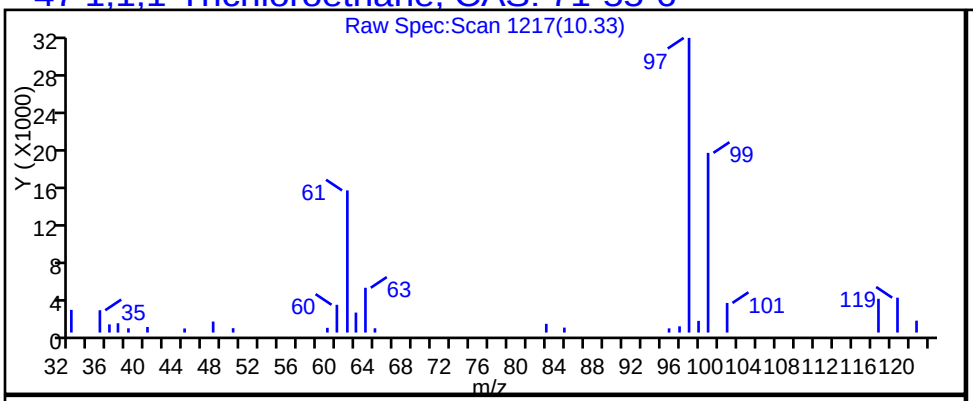


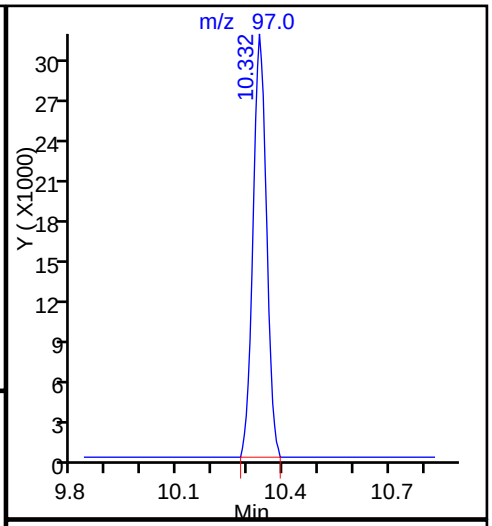
Report Date: 08-Nov-2016 10:14:43 Chrom Revision: 2.2 17-Oct-2016 09:27:18

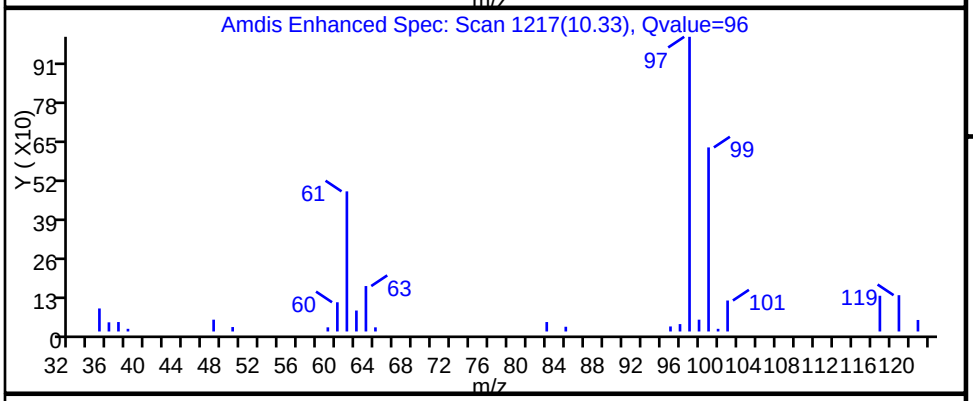
TestAmerica Knoxville

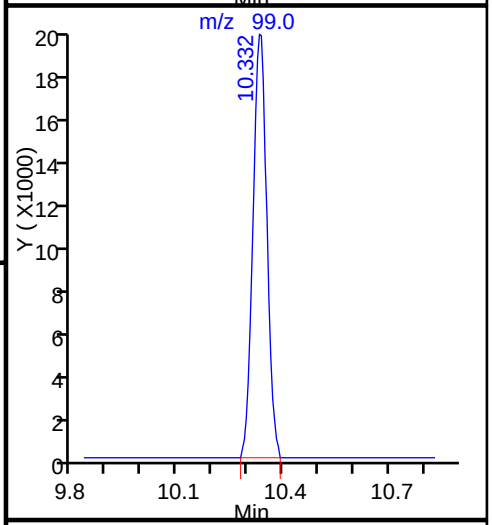
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P107.D		
Injection Date:	07-Nov-2016 22:06:30	Instrument ID:	MJ
Lims ID:	140-6285-A-2	Lab Sample ID:	140-6285-2
Client ID:	C-MID-GAC		
Operator ID:	7126	ALS Bottle#:	7 Worklist Smp#: 16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

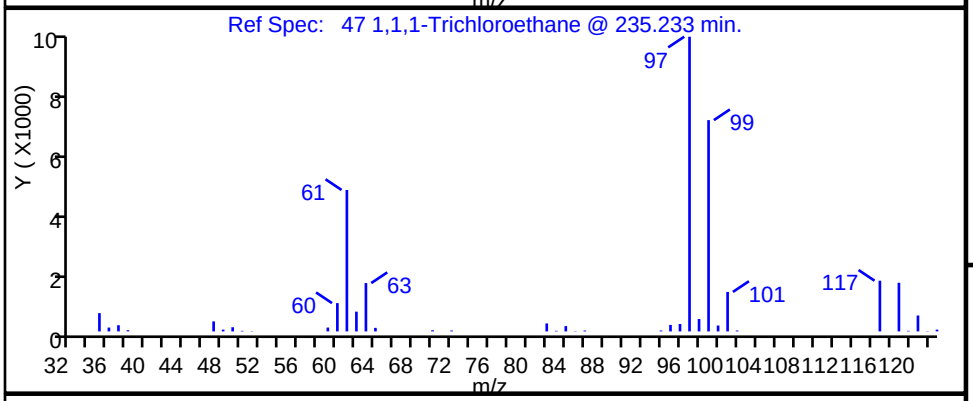
47 1,1,1-Trichloroethane, CAS: 71-55-6

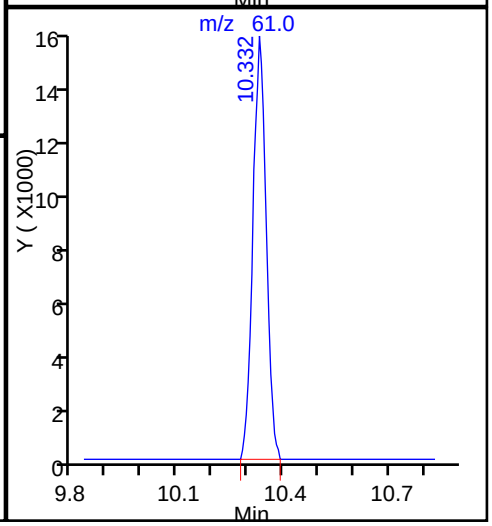


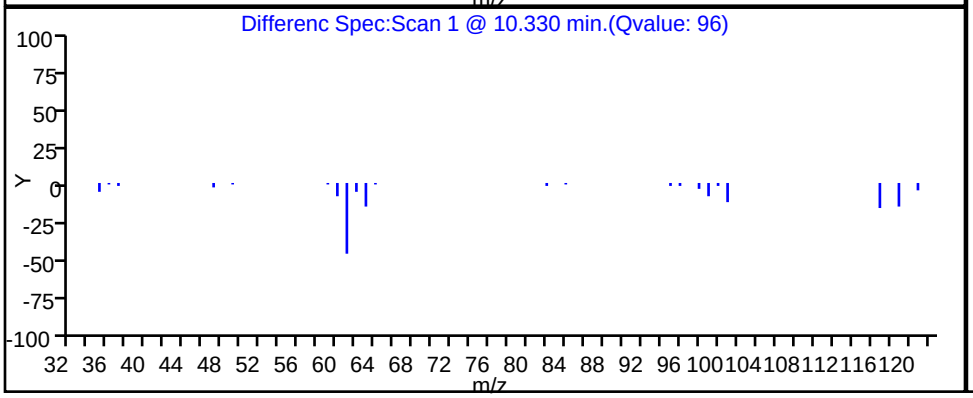










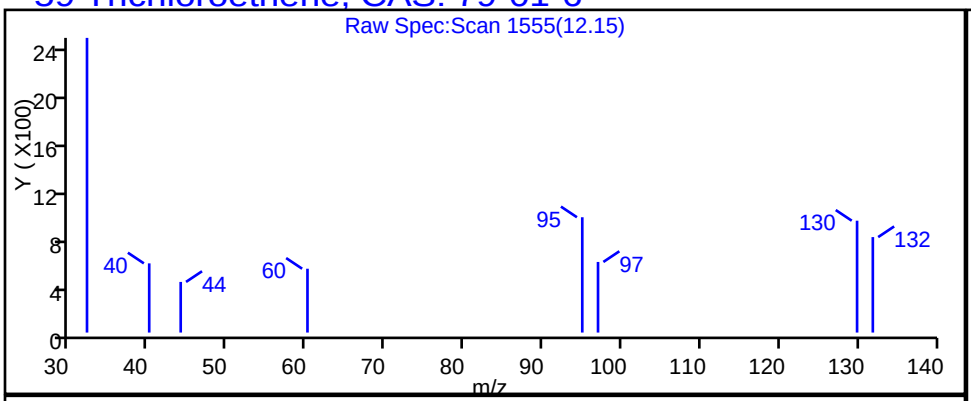


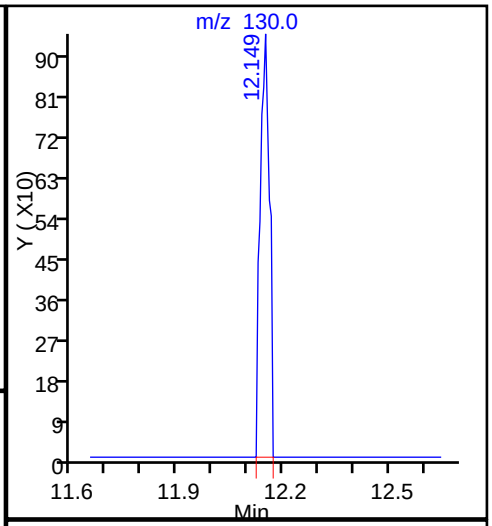
TestAmerica Knoxville

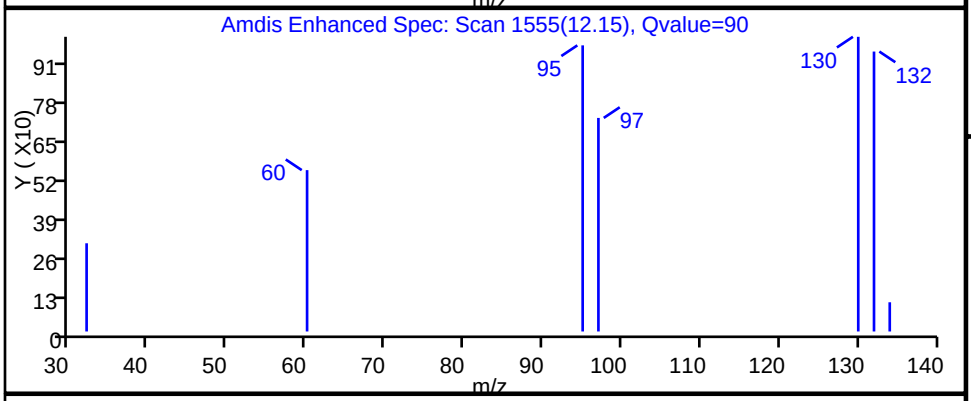
Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P107.D

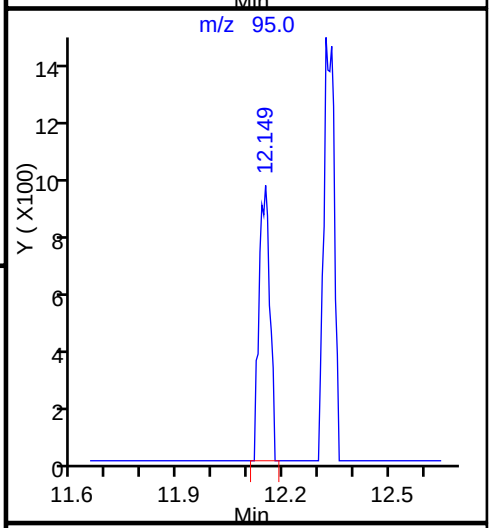
Injection Date:	07-Nov-2016 22:06:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-2	Lab Sample ID:	140-6285-2		
Client ID:	C-MID-GAC				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

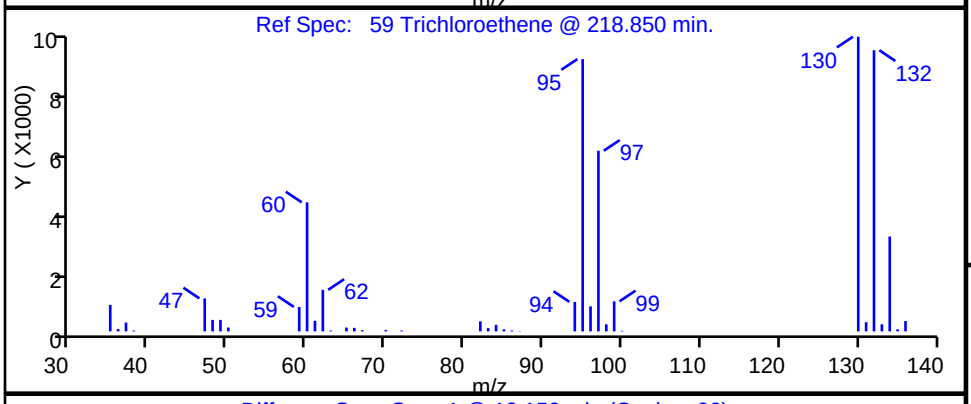
59 Trichloroethene, CAS: 79-01-6

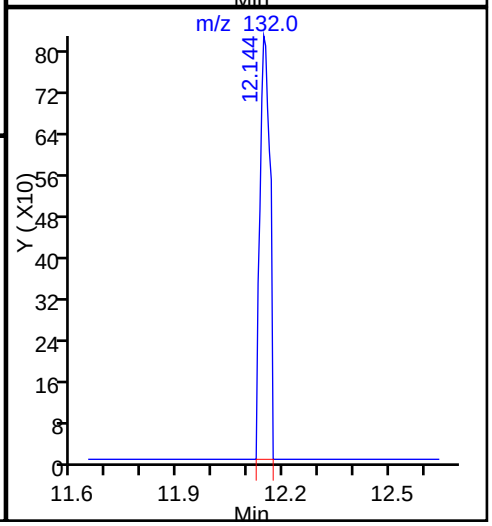


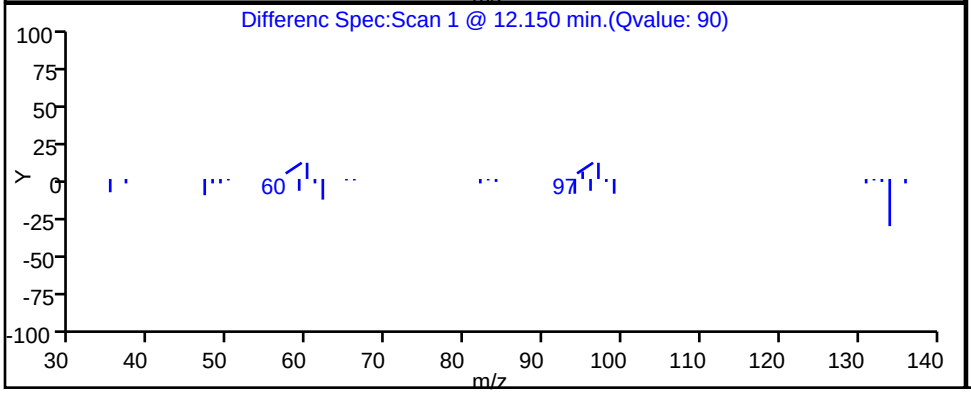








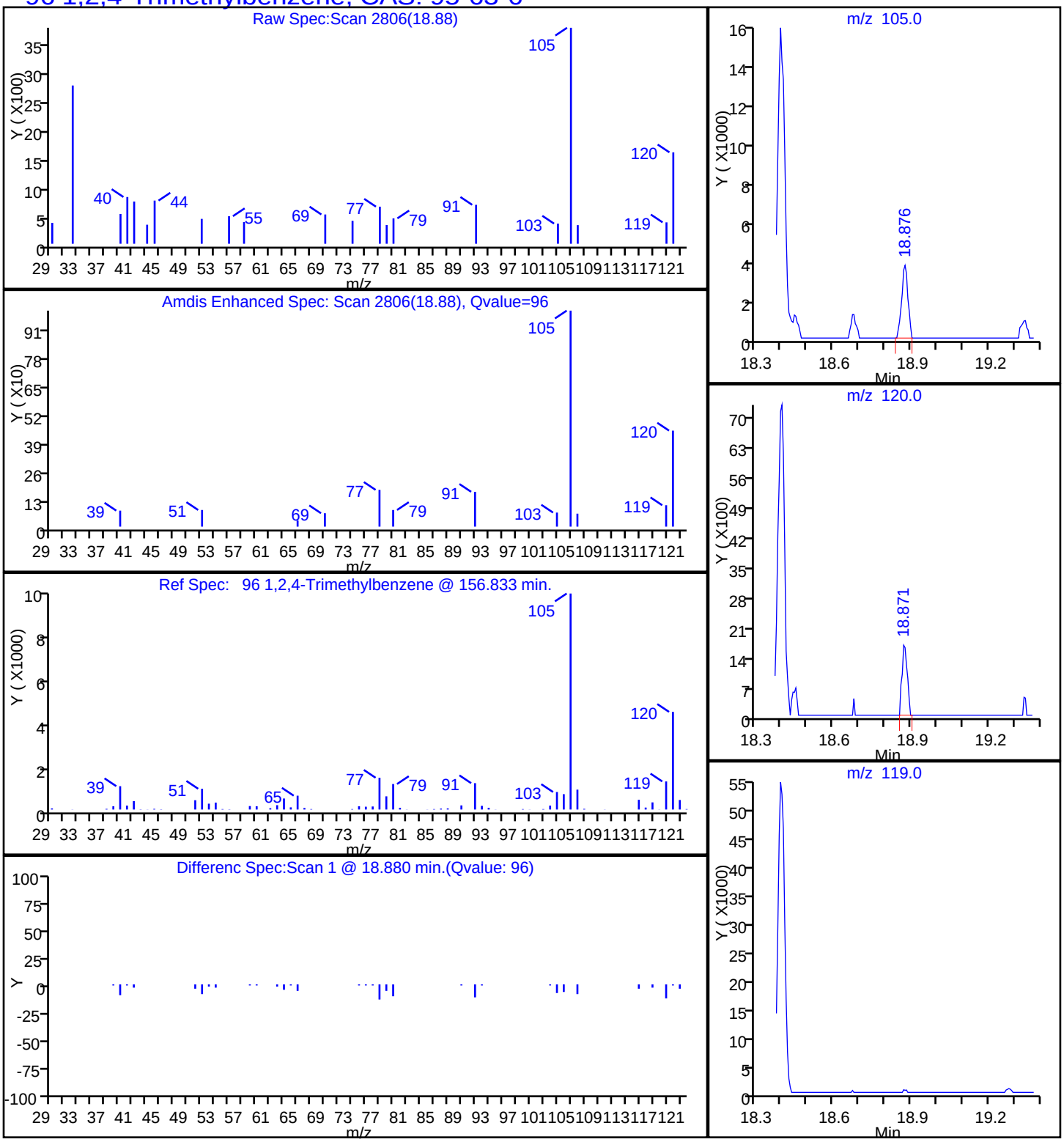




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P107.D				
Injection Date:	07-Nov-2016 22:06:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-2	Lab Sample ID:	140-6285-2		
Client ID:	C-MID-GAC				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

96 1,2,4-Trimethylbenzene, CAS: 95-63-6

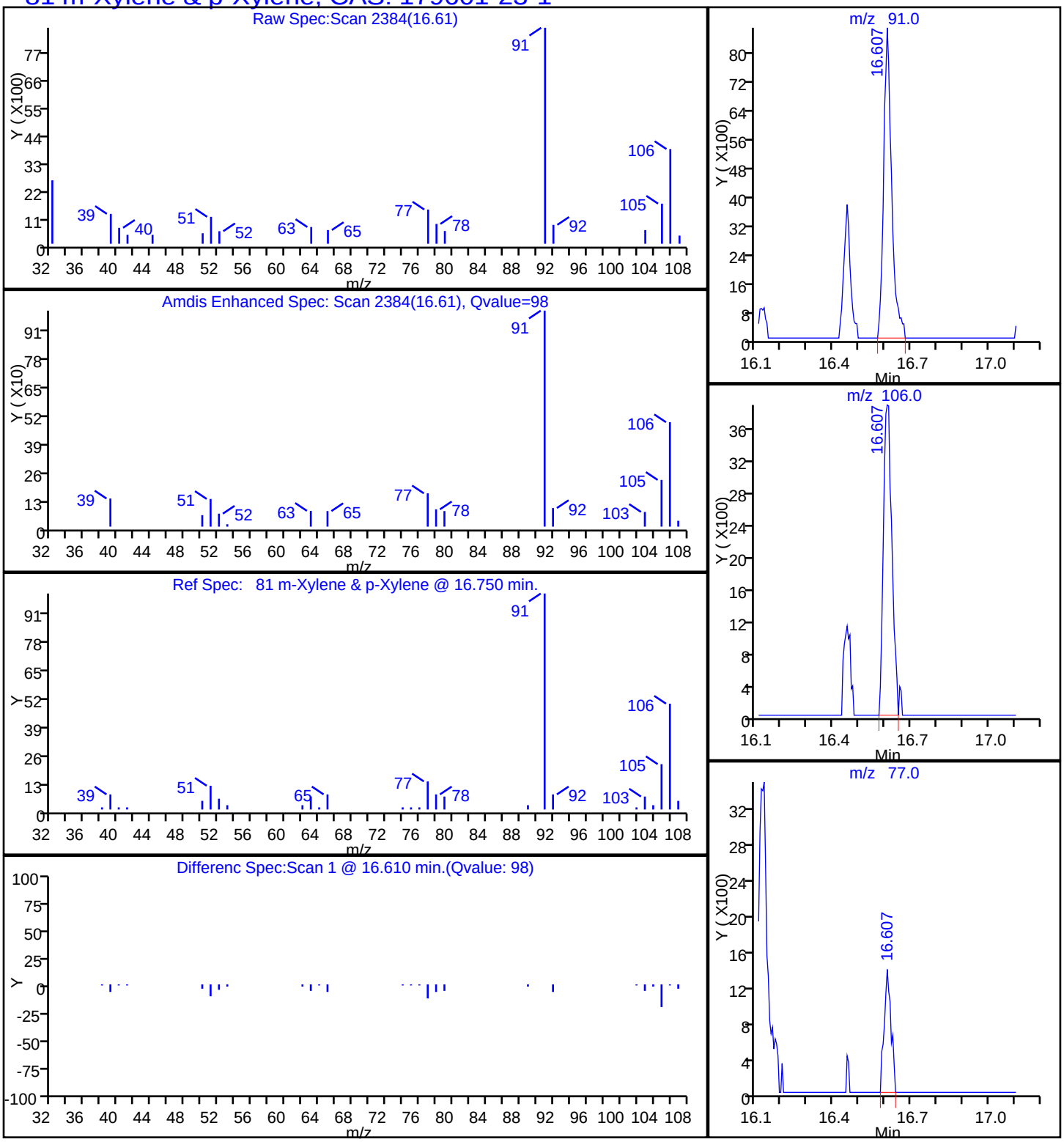


Report Date: 08-Nov-2016 10:14:43 Chrom Revision: 2.2 17-Oct-2016 09:27:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P107.D		
Injection Date:	07-Nov-2016 22:06:30	Instrument ID:	MJ
Lims ID:	140-6285-A-2	Lab Sample ID:	140-6285-2
Client ID:	C-MID-GAC		
Operator ID:	7126	ALS Bottle#:	7 Worklist Smp#: 16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

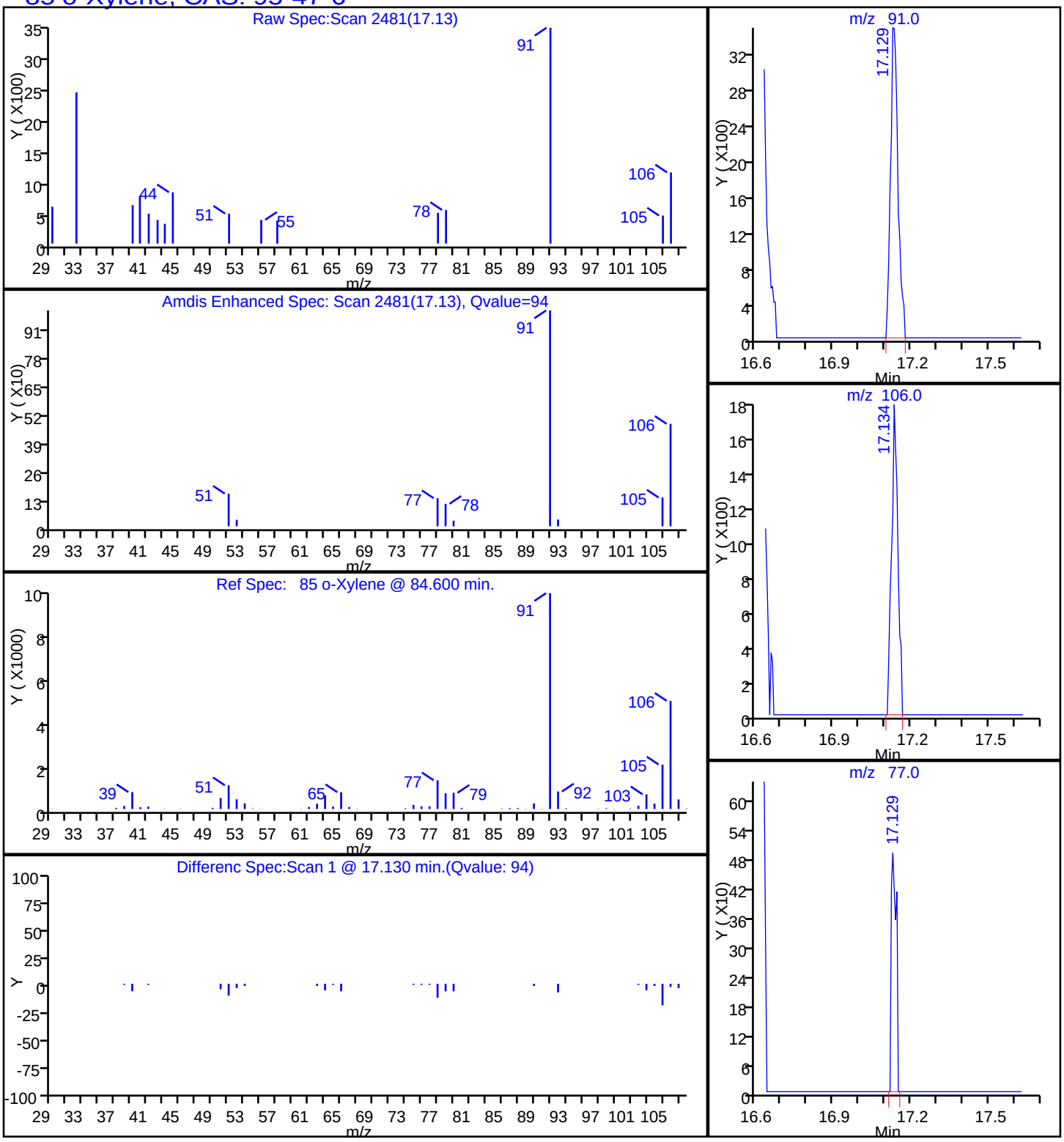
81 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P107.D				
Injection Date:	07-Nov-2016 22:06:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-2	Lab Sample ID:	140-6285-2		
Client ID:	C-MID-GAC				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

85 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Client Sample ID: C-INFLUENT Lab Sample ID: 140-6285-3

Matrix: Air Lab File ID: JK07P108.D

Analysis Method: TO 15 LL Date Collected: 11/03/2016 10:59

Sample wt/vol: 100(mL) Date Analyzed: 11/07/2016 23:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7085 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	3.1		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.13	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	6.1		0.40	0.075
67-66-3	Chloroform	119.38	0.55		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.72		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.61		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.43		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.19	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.43		0.40	0.14
75-09-2	Methylene Chloride	84.93	3.8		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.23	J	0.40	0.080
108-88-3	Toluene	92.14	3.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	2.4		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	8.7		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.24	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.88		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.28	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Client Sample ID: C-INFLUENT Lab Sample ID: 140-6285-3

Matrix: Air Lab File ID: JK07P108.D

Analysis Method: TO 15 LL Date Collected: 11/03/2016 10:59

Sample wt/vol: 100(mL) Date Analyzed: 11/07/2016 23:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7085 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	9.8		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.80	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	22		1.4	0.27
67-66-3	Chloroform	119.38	2.7		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	2.8		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.7		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.76	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	1.9		1.7	0.59
75-09-2	Methylene Chloride	84.93	13		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.6	J	2.7	0.54
108-88-3	Toluene	92.14	14		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	13		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	47		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	1.2	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	4.3		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.4	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	9.1		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P108.D
Lims ID: 140-6285-A-3
Client ID: C-INFLUENT
Sample Type: Client
Inject. Date: 07-Nov-2016 23:00:30 ALS Bottle#: 8 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003595-017
Misc. Info.: 140-6285-a-3
Operator ID: 7126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 08-Nov-2016 10:14:16 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: tajh Date: 08-Nov-2016 10:10:18

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.283	9.290	-0.007	96	211780	4.00	
* 2 1,4-Difluorobenzene	114	11.445	11.446	-0.001	96	944985	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.123	16.125	-0.002	91	701036	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.747	17.749	-0.002	85	402962	3.81	
6 Chlorodifluoromethane	67	3.916	3.918	-0.002	96	26434	1.23	
8 Dichlorodifluoromethane	85	3.986	3.983	0.003	99	25449	0.1221	
27 1,1-Dichloroethene	96	6.304	6.306	-0.002	93	2540	0.0382	
31 Methylene Chloride	84	6.670	6.671	-0.001	99	50778	0.7546	
37 1,1-Dichloroethane	63	7.939	7.940	-0.001	96	10432	0.0858	
42 cis-1,2-Dichloroethene	96	8.939	8.946	-0.007	97	9250	0.1432	
44 Chloroform	83	9.294	9.295	-0.001	37	14605	0.1097	
47 1,1,1-Trichloroethane	97	10.337	10.339	-0.002	96	66247	0.4843	
51 Benzene	78	10.923	10.925	-0.002	97	106897	0.6116	
52 Carbon tetrachloride	117	10.939	10.946	-0.007	91	3398	0.0253	
59 Trichloroethene	130	12.149	12.151	-0.002	92	121770	1.74	
68 Toluene	91	14.166	14.173	-0.007	93	114053	0.7421	
76 Tetrachloroethene	129	15.306	15.302	0.004	88	2648	0.0460	
79 Ethylbenzene	91	16.456	16.453	0.003	97	14545	0.0857	
81 m-Xylene & p-Xylene	91	16.607	16.614	-0.007	99	38740	0.3050	
85 o-Xylene	91	17.134	17.136	-0.002	98	16757	0.1203	
92 1,3,5-Trimethylbenzene	120	18.446	18.448	-0.002	90	4193	0.0557	
96 1,2,4-Trimethylbenzene	105	18.876	18.878	-0.002	98	22422	0.1755	
102 1,2,3-Trimethylbenzene	105	19.339	19.340	-0.001	88	4715	0.0478	
S 126 Xylenes, Total	100				0		0.4253	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

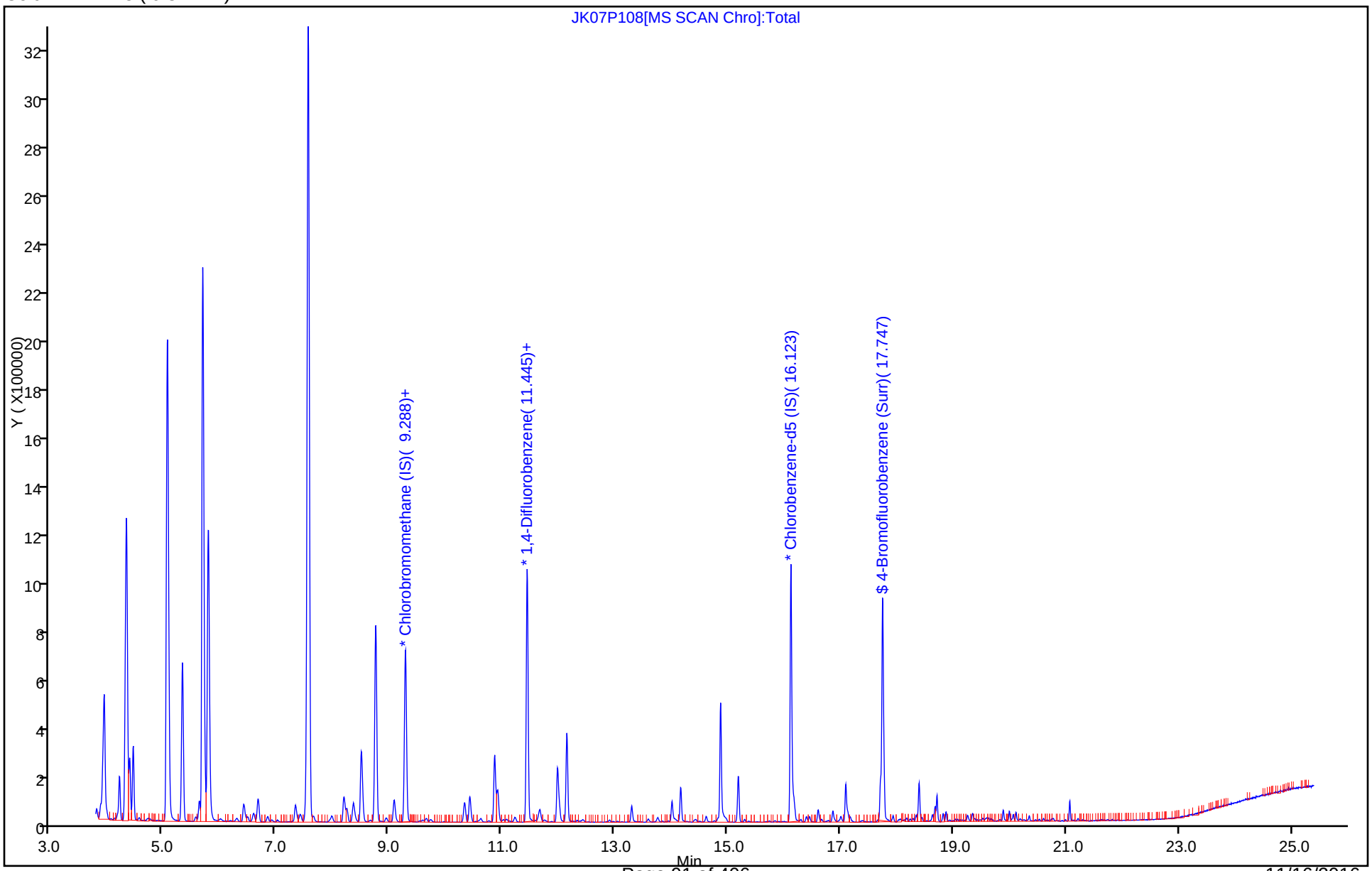
Report Date: 08-Nov-2016 10:14:44 Chrom Revision: 2.2 17-Oct-2016 09:27:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P108.D

Injection Date:	07-Nov-2016 23:00:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-6285-A-3	Lab Sample ID:	140-6285-3	Worklist Smp#:	17
Client ID:	C-INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

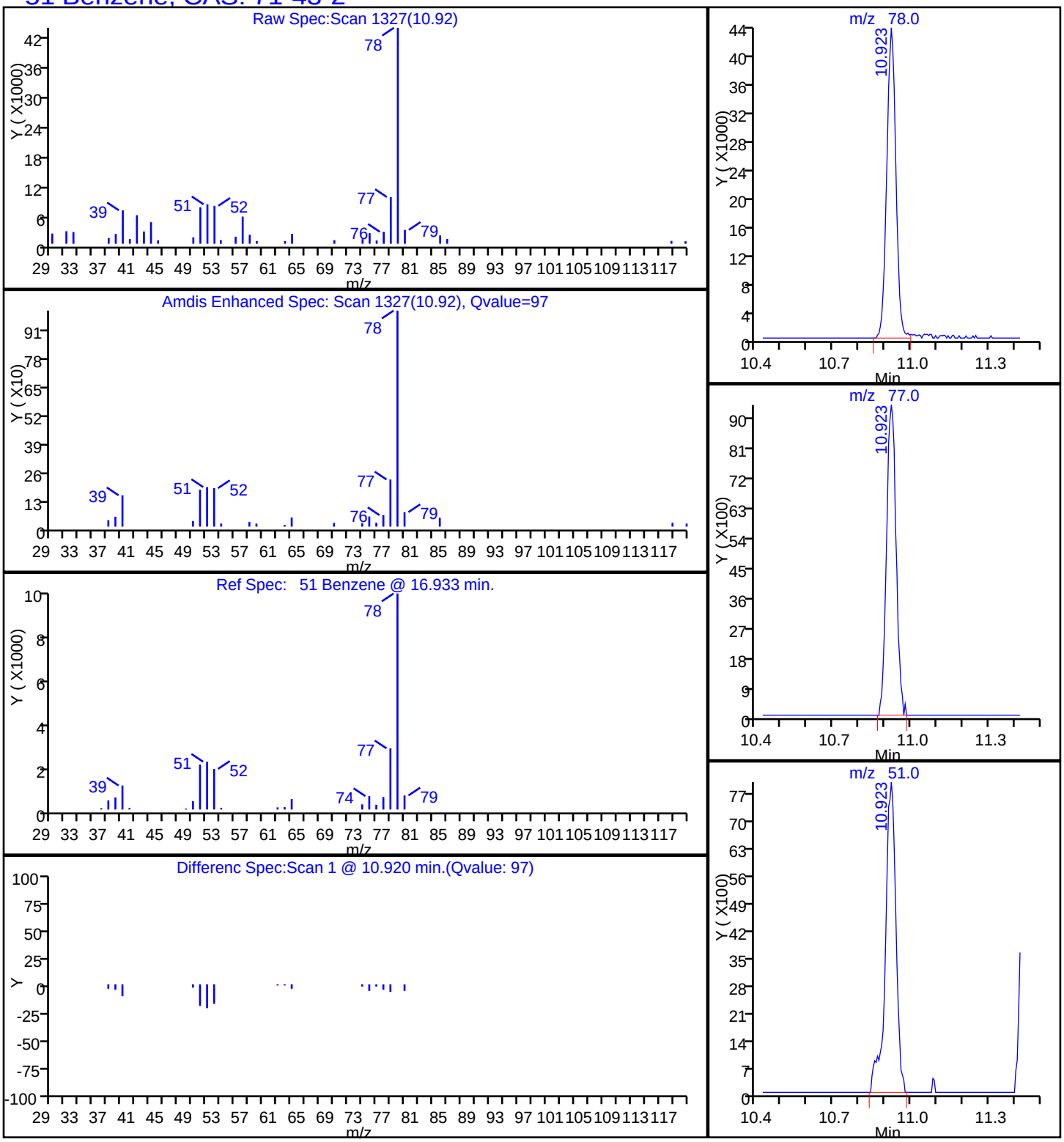
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P108.D				
Lims ID:	140-6285-A-3				
Client ID:	C-INFLUENT				
Sample Type:	Client				
Inject. Date:	07-Nov-2016 23:00:30	ALS Bottle#:	8	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003595-017				
Misc. Info.:	140-6285-a-3				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	08-Nov-2016 10:14:16	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				
First Level Reviewer: tajh		Date:	08-Nov-2016 10:10:18		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.81	95.32

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P108.D				
Injection Date:	07-Nov-2016 23:00:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-3	Lab Sample ID:	140-6285-3		
Client ID:	C-INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

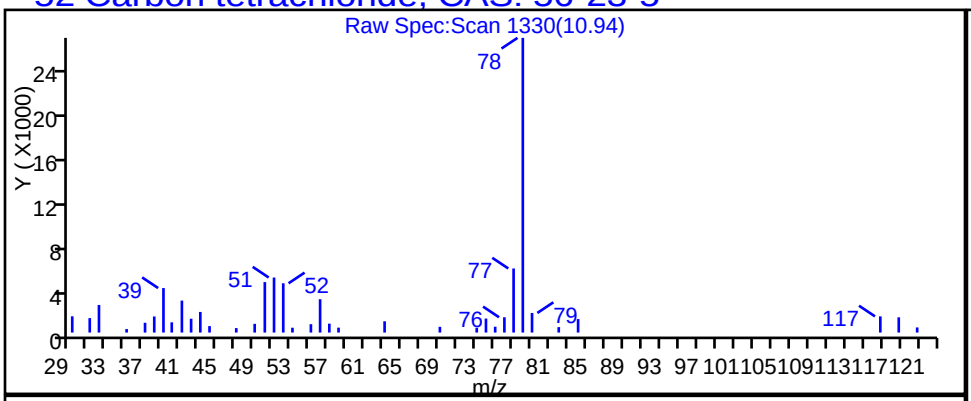
51 Benzene, CAS: 71-43-2

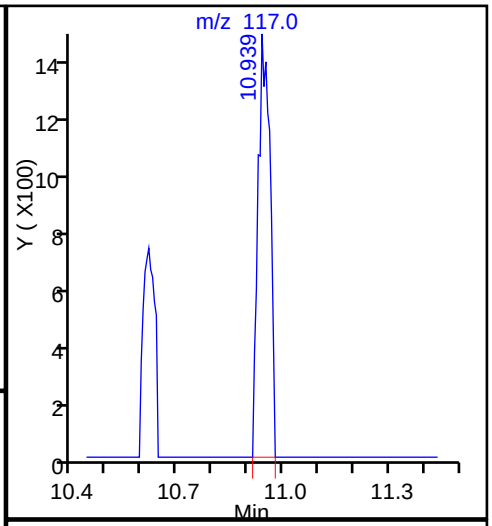


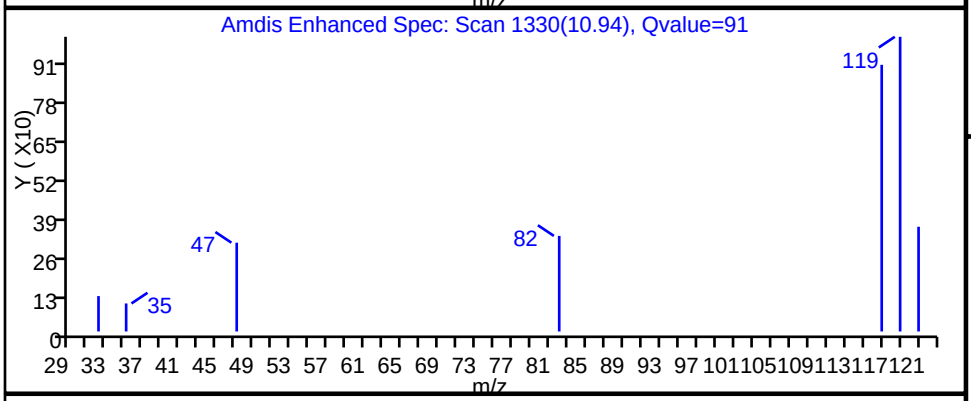
TestAmerica Knoxville

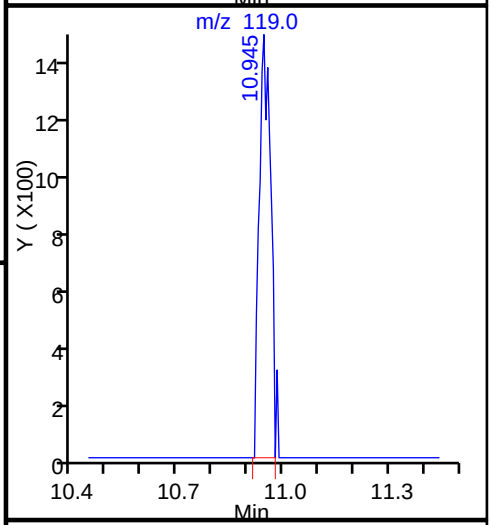
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P108.D				
Injection Date:	07-Nov-2016 23:00:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-3	Lab Sample ID:	140-6285-3		
Client ID:	C-INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

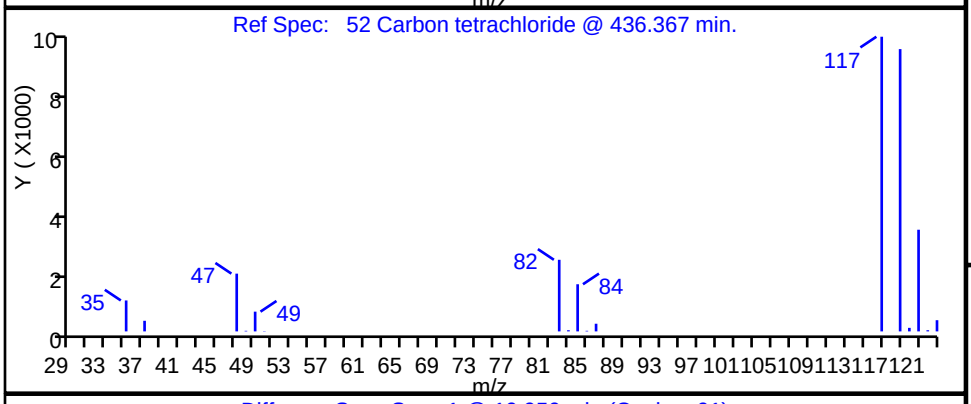
52 Carbon tetrachloride, CAS: 56-23-5

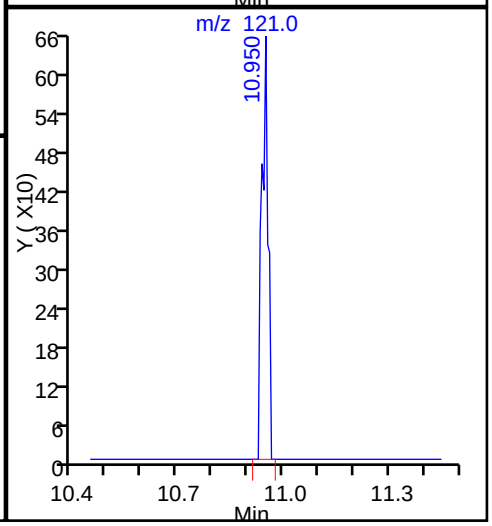


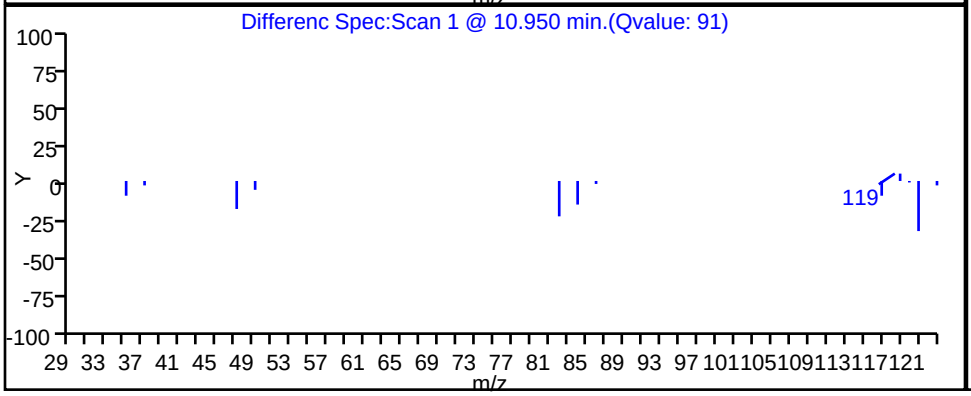










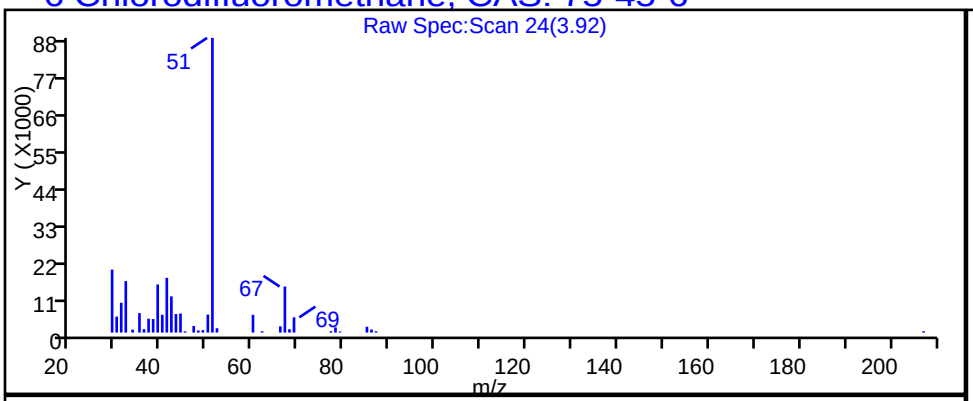


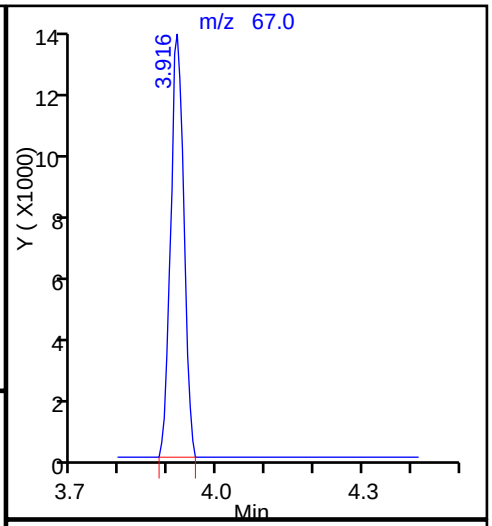
TestAmerica Knoxville

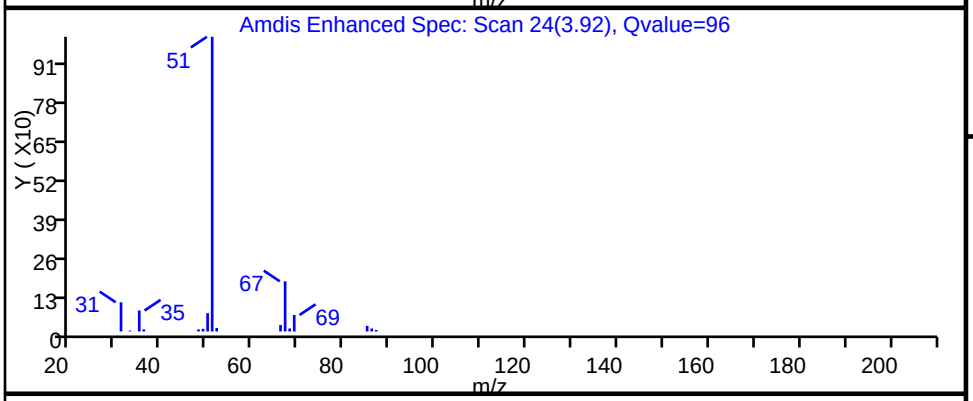
Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P108.D

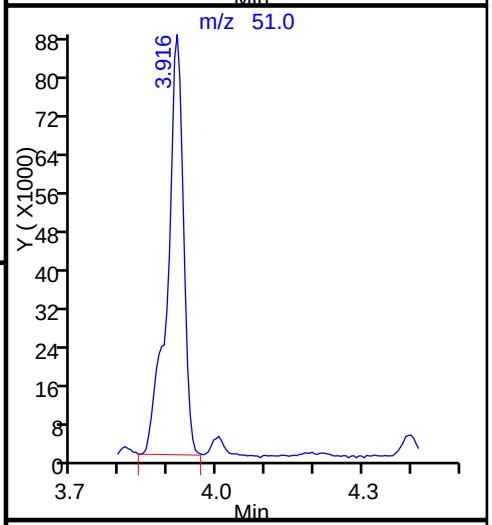
Injection Date:	07-Nov-2016 23:00:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-3	Lab Sample ID:	140-6285-3		
Client ID:	C-INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

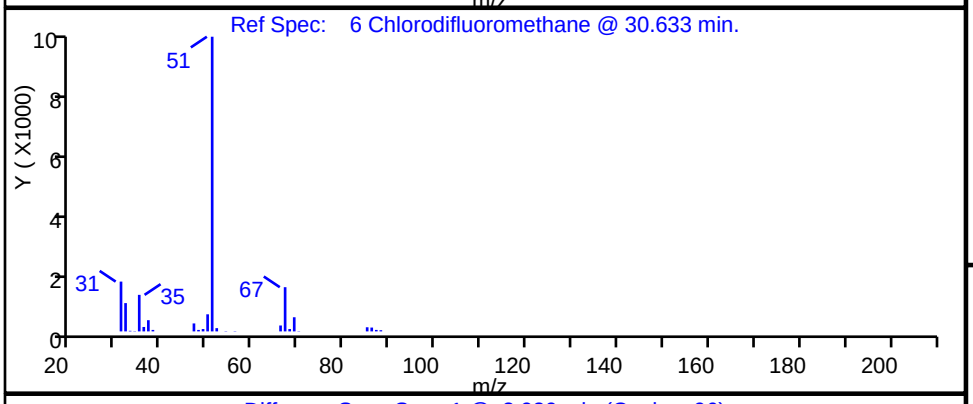
6 Chlorodifluoromethane, CAS: 75-45-6

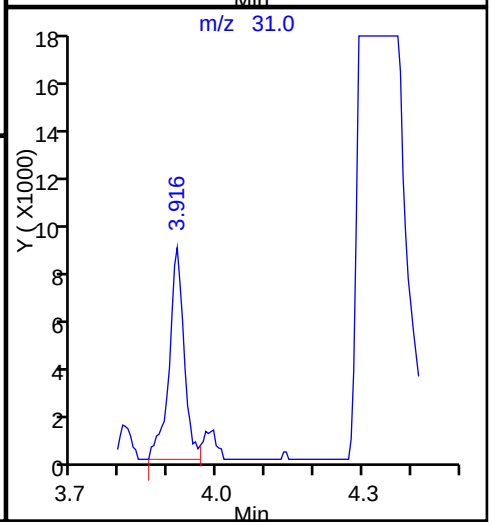


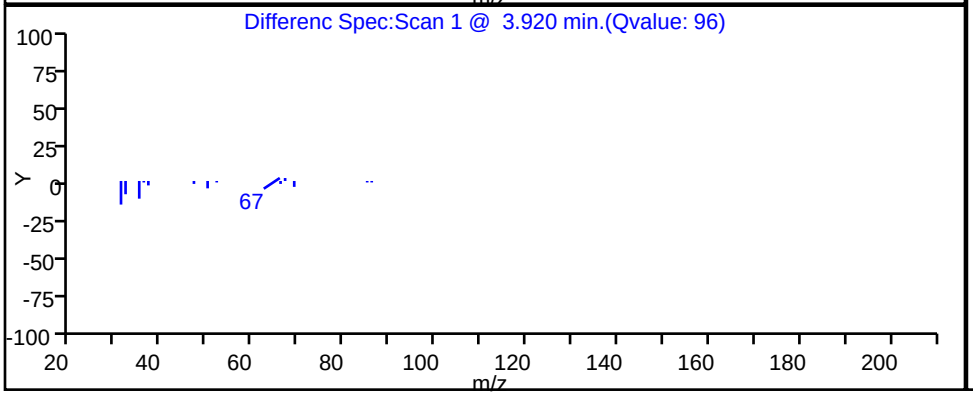








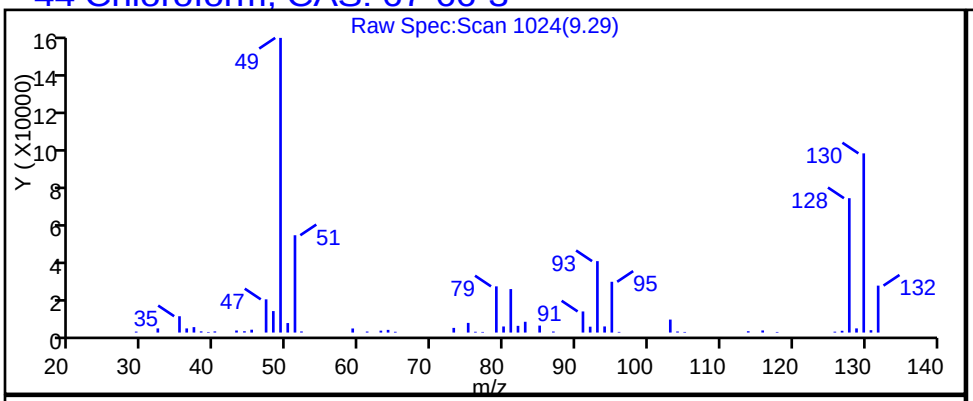


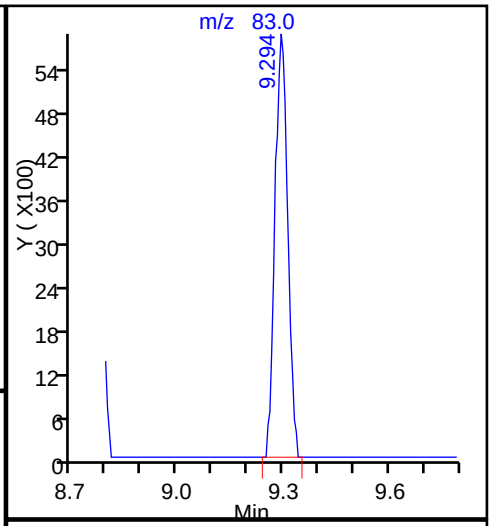


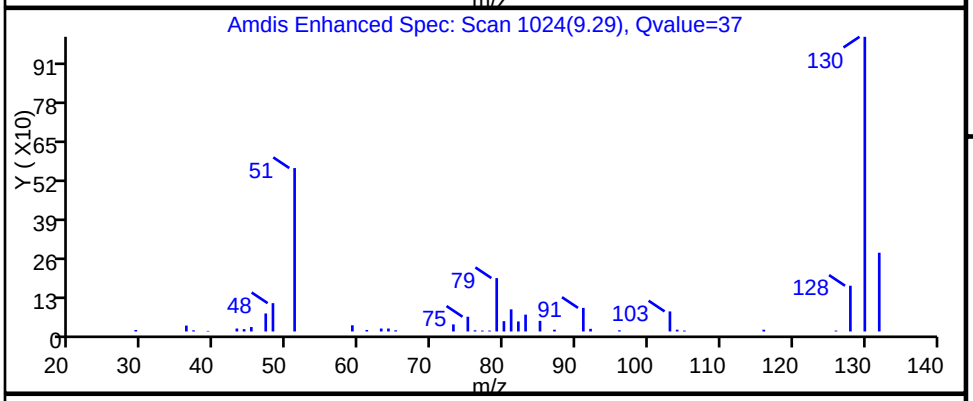
TestAmerica Knoxville

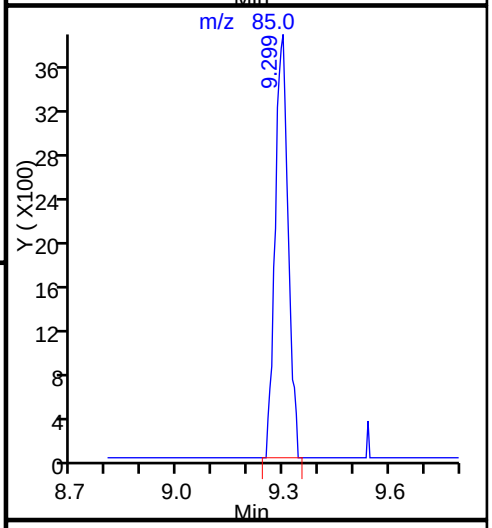
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P108.D				
Injection Date:	07-Nov-2016 23:00:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-3	Lab Sample ID:	140-6285-3		
Client ID:	C-INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

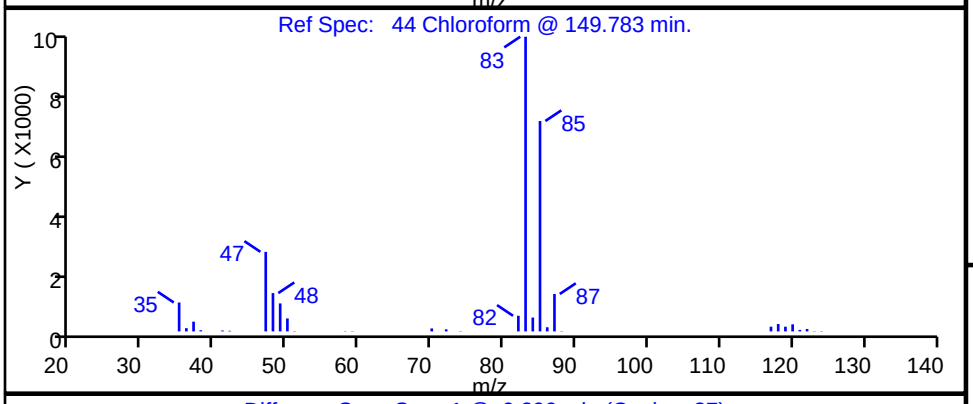
44 Chloroform, CAS: 67-66-3

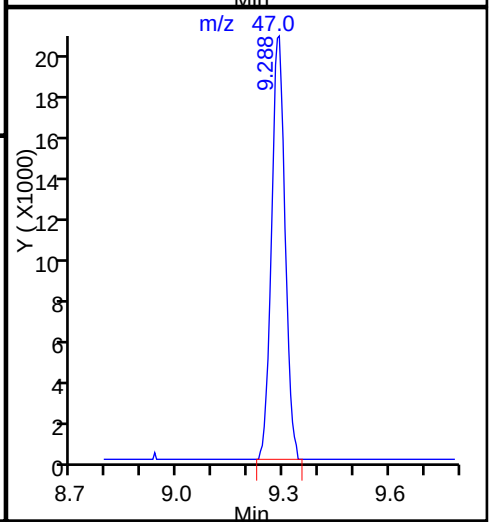


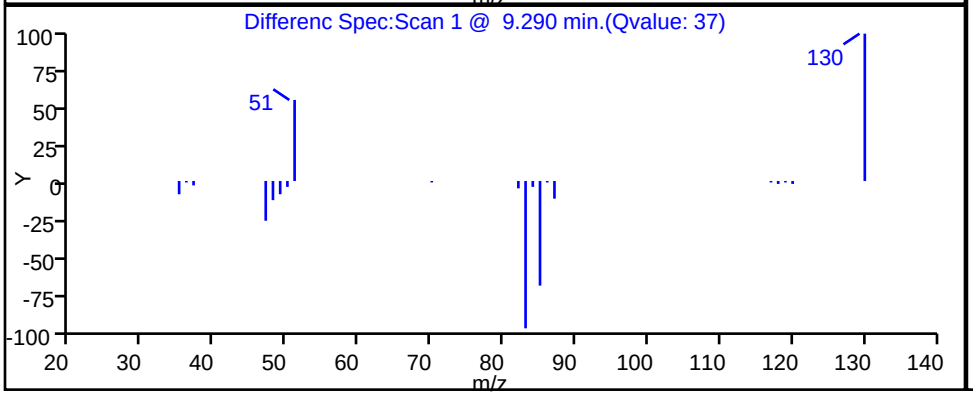










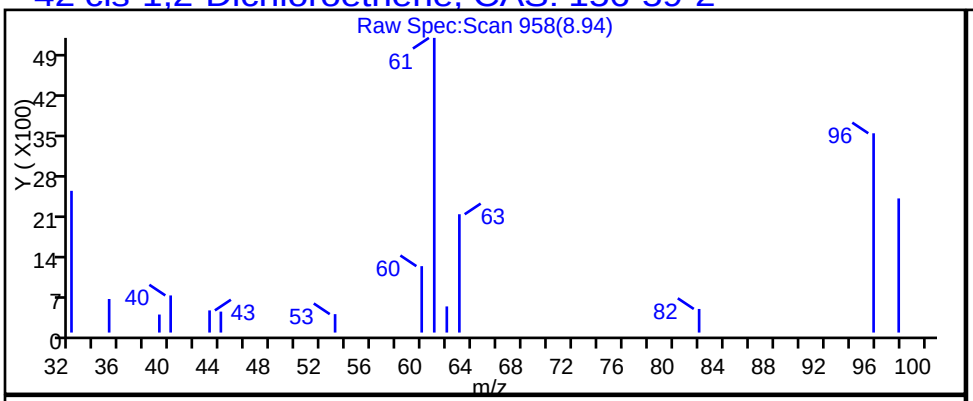


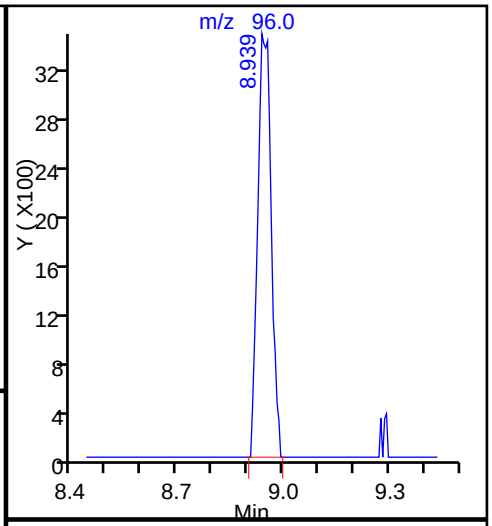
Report Date: 08-Nov-2016 10:14:45 Chrom Revision: 2.2 17-Oct-2016 09:27:18

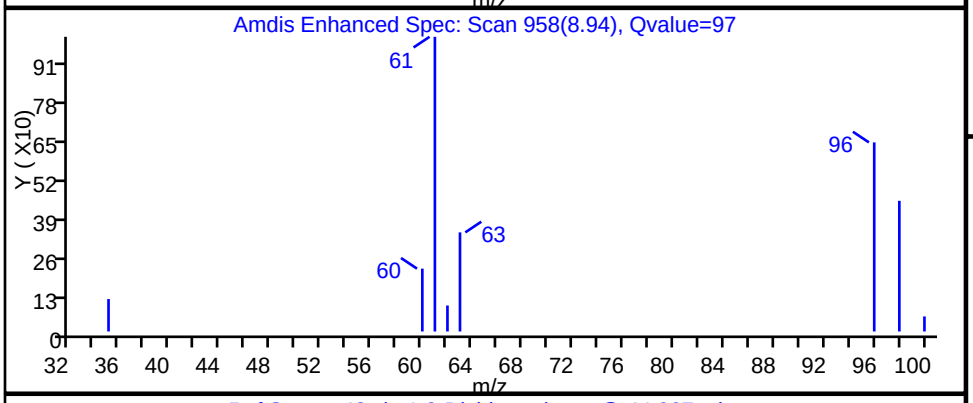
TestAmerica Knoxville

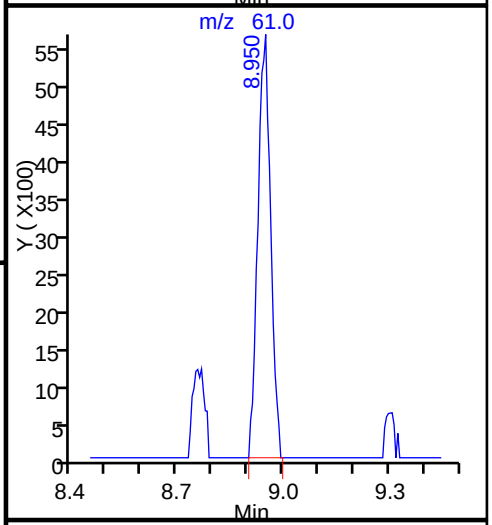
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P108.D		
Injection Date:	07-Nov-2016 23:00:30	Instrument ID:	MJ
Lims ID:	140-6285-A-3	Lab Sample ID:	140-6285-3
Client ID:	C-INFLUENT		
Operator ID:	7126	ALS Bottle#:	8 Worklist Smp#: 17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

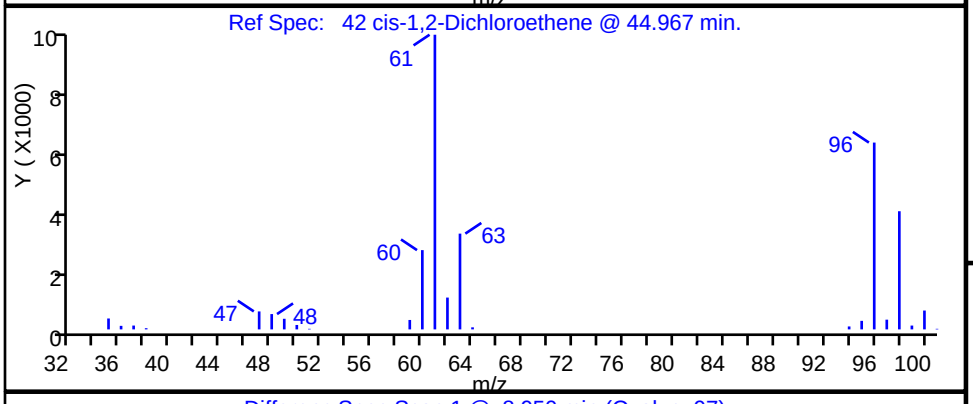
42 cis-1,2-Dichloroethene, CAS: 156-59-2

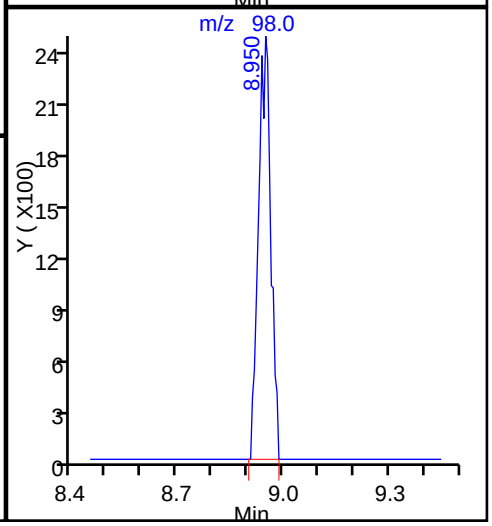


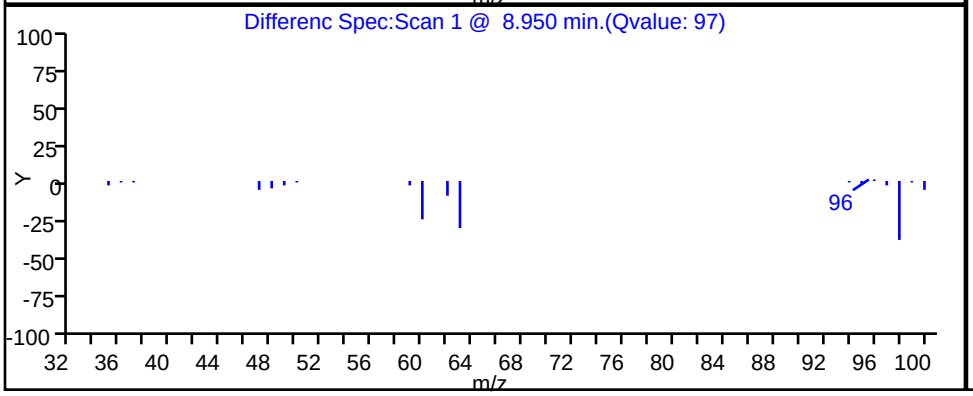






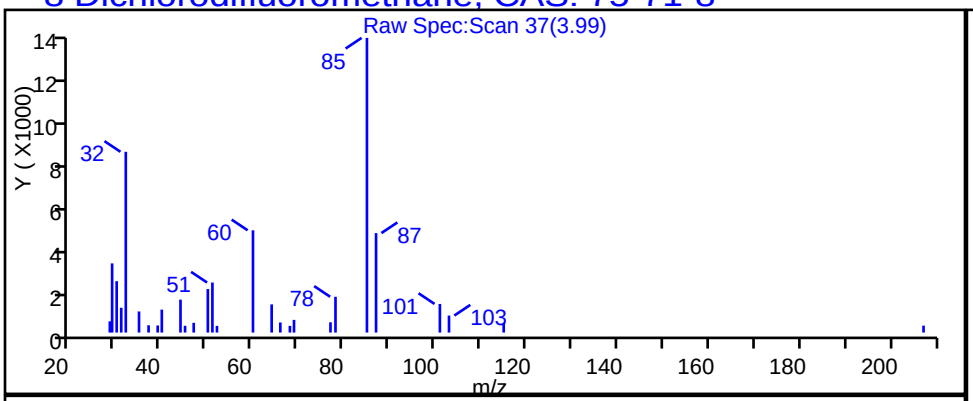


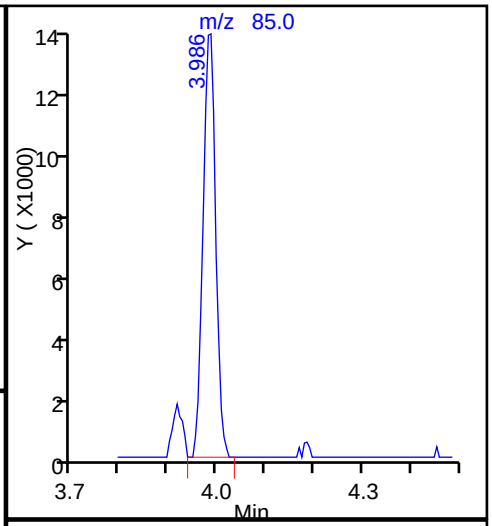


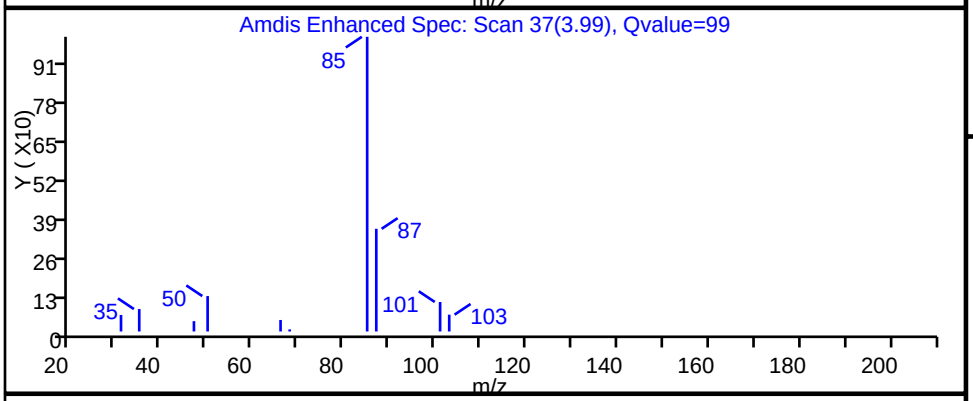


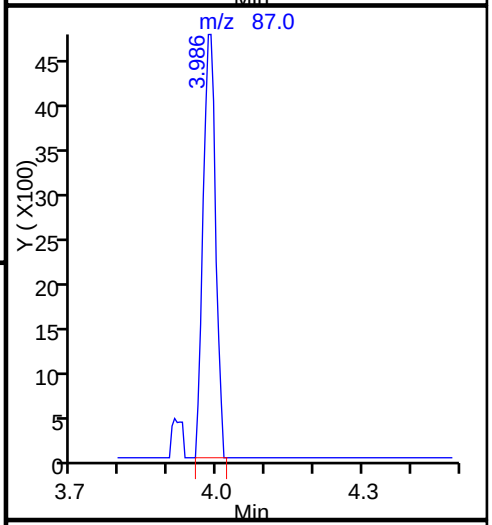
Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P108.D
Injection Date: 07-Nov-2016 23:00:30 Instrument ID: MJ
Lims ID: 140-6285-A-3 Lab Sample ID: 140-6285-3
Client ID: C-INFLUENT
Operator ID: 7126 ALS Bottle#: 8 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

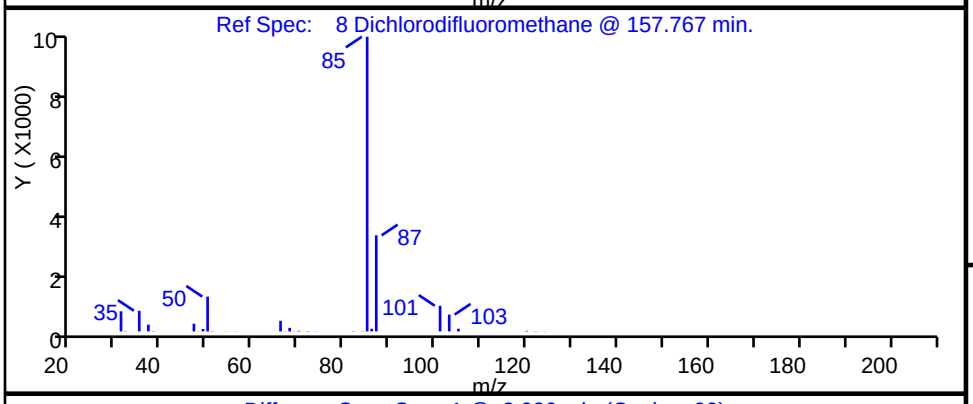
8 Dichlorodifluoromethane, CAS: 75-71-8

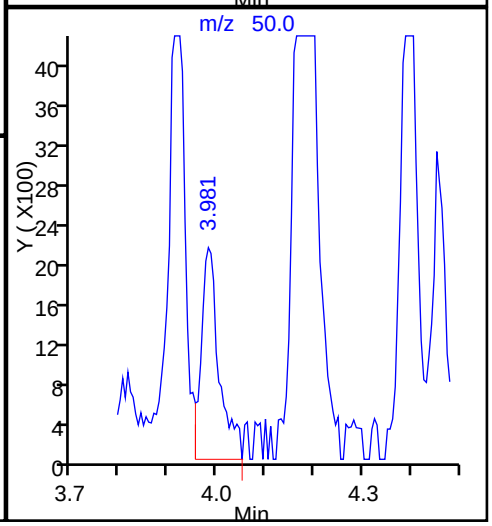


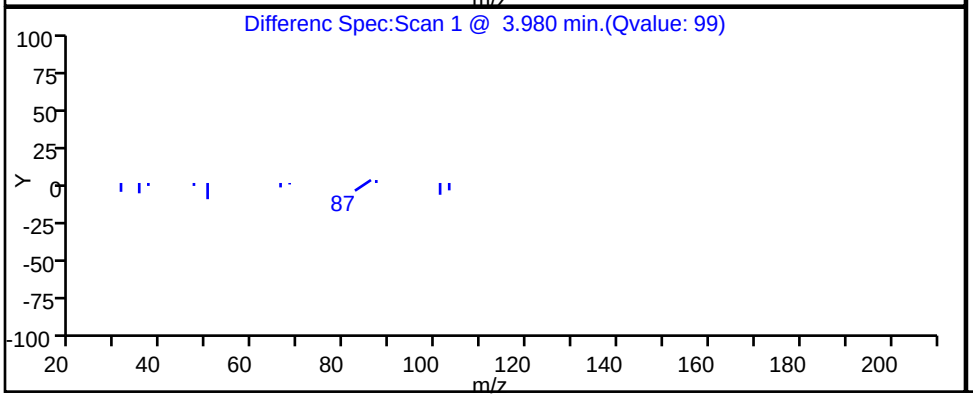








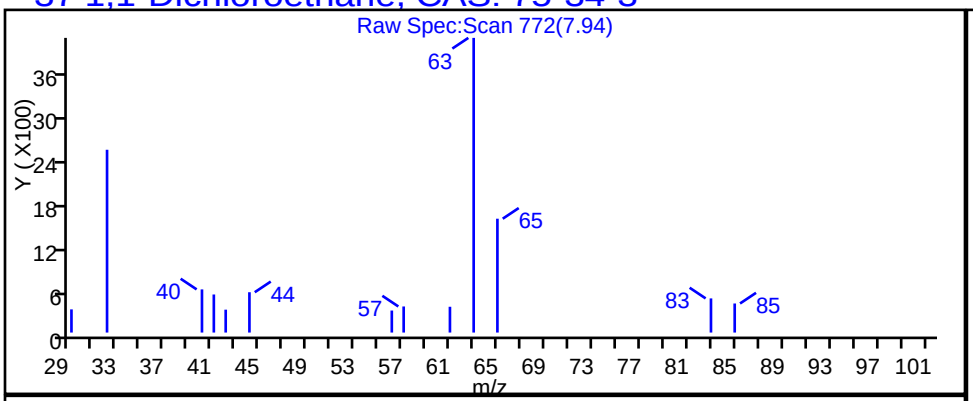


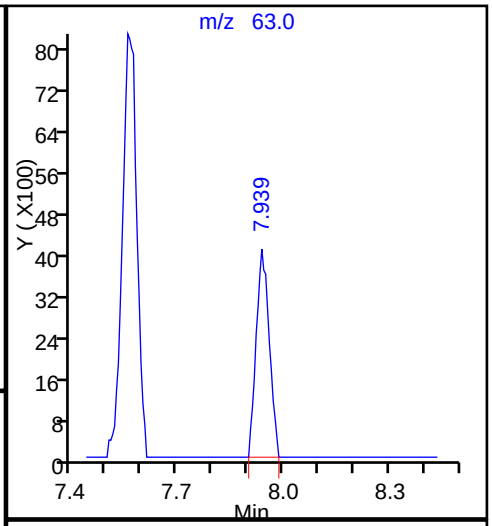


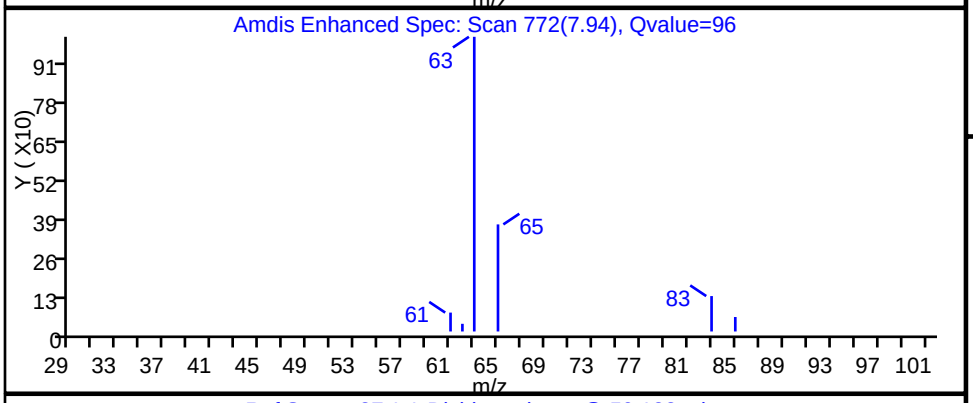
TestAmerica Knoxville

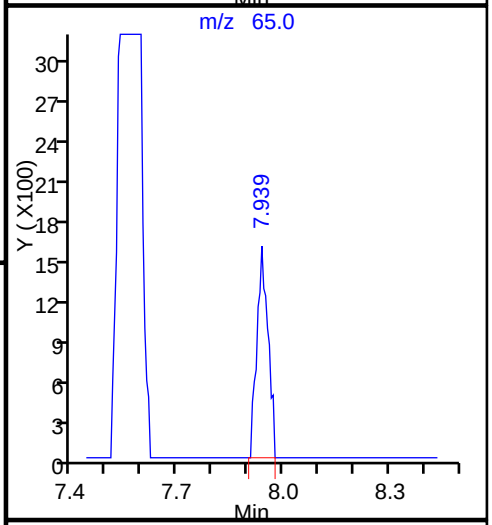
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P108.D		
Injection Date:	07-Nov-2016 23:00:30	Instrument ID:	MJ
Lims ID:	140-6285-A-3	Lab Sample ID:	140-6285-3
Client ID:	C-INFLUENT		
Operator ID:	7126	ALS Bottle#:	8 Worklist Smp#: 17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

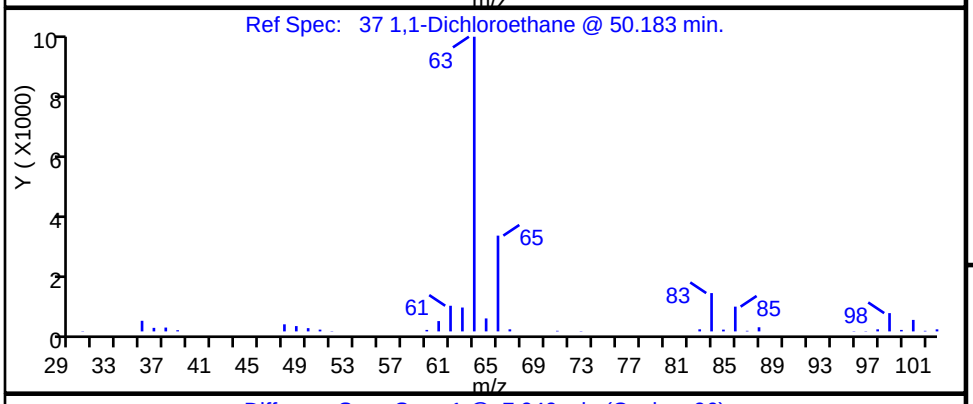
37 1,1-Dichloroethane, CAS: 75-34-3

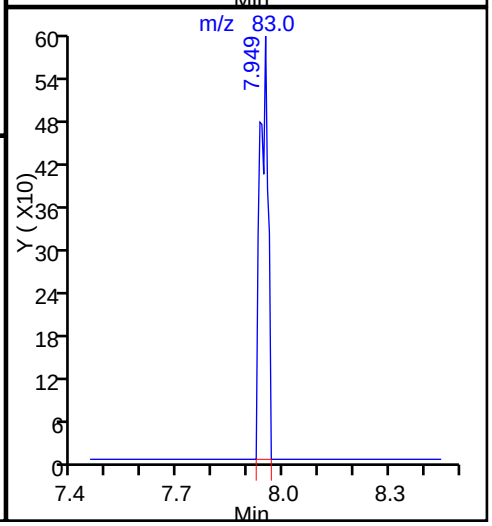


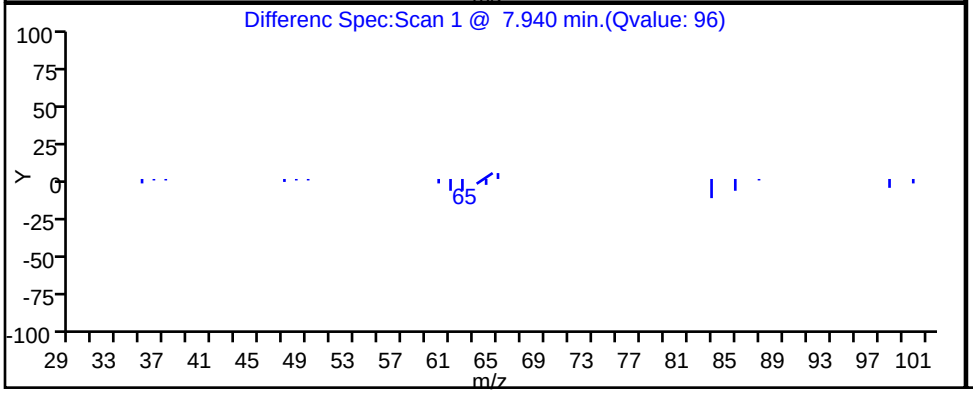








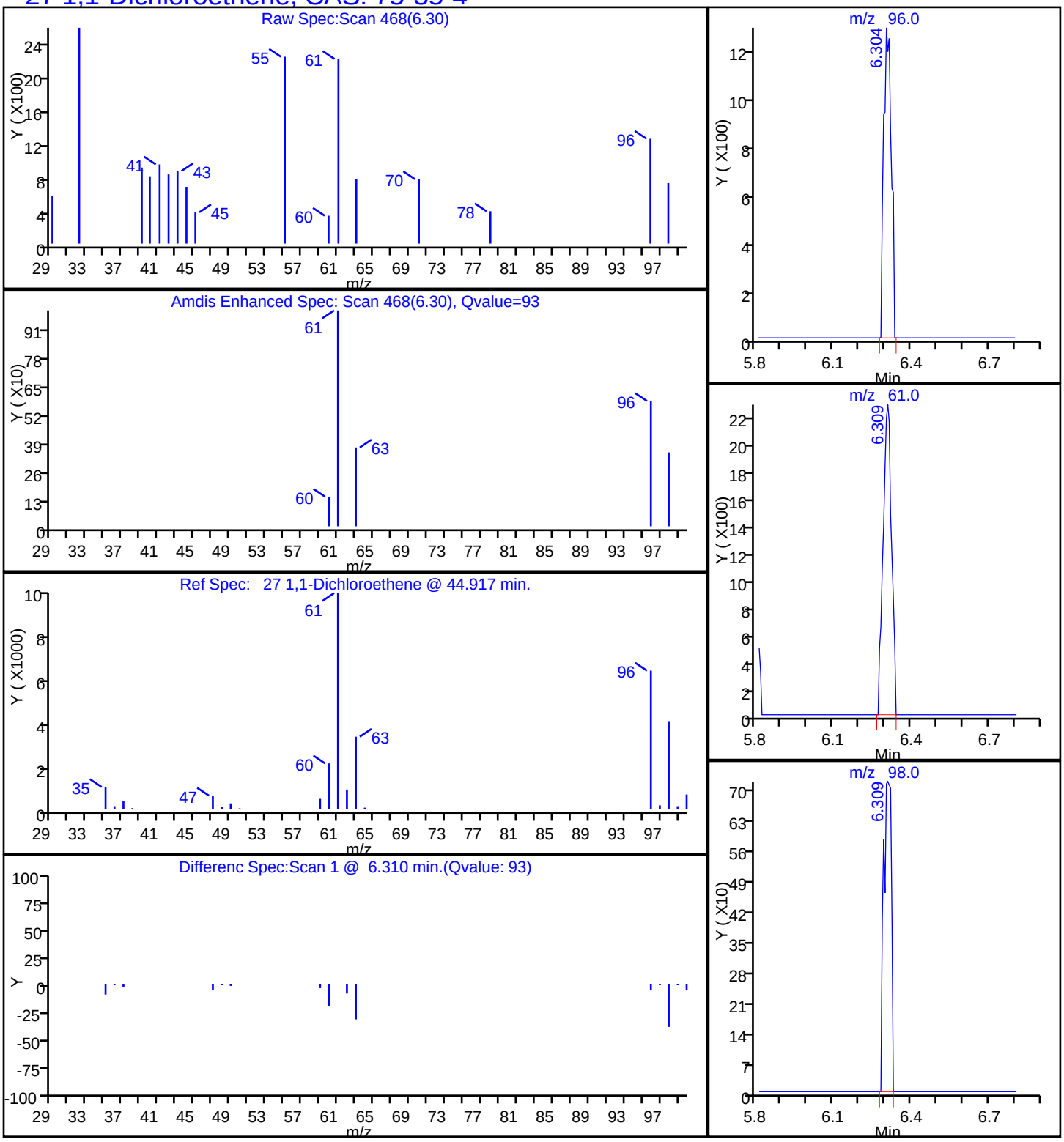




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P108.D				
Injection Date:	07-Nov-2016 23:00:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-3	Lab Sample ID:	140-6285-3		
Client ID:	C-INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

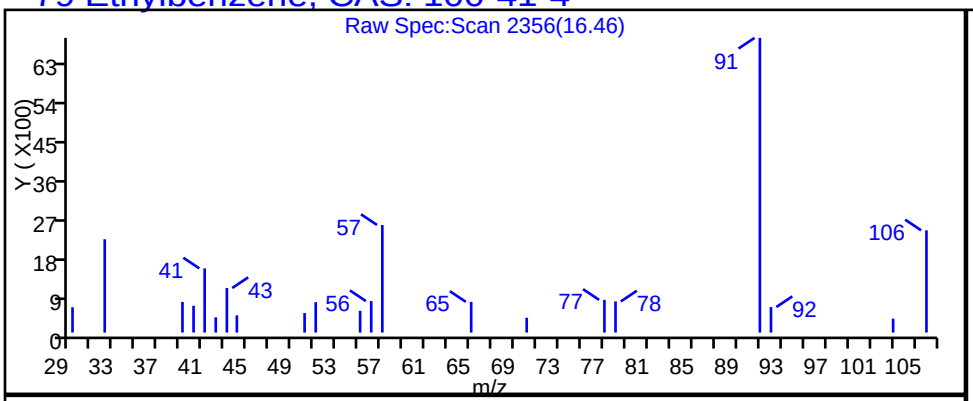
27 1,1-Dichloroethene, CAS: 75-35-4

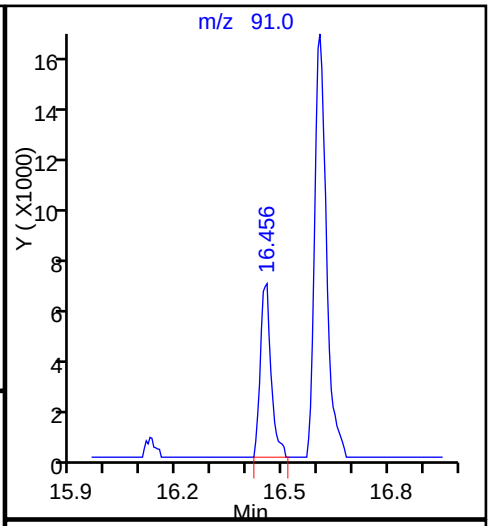


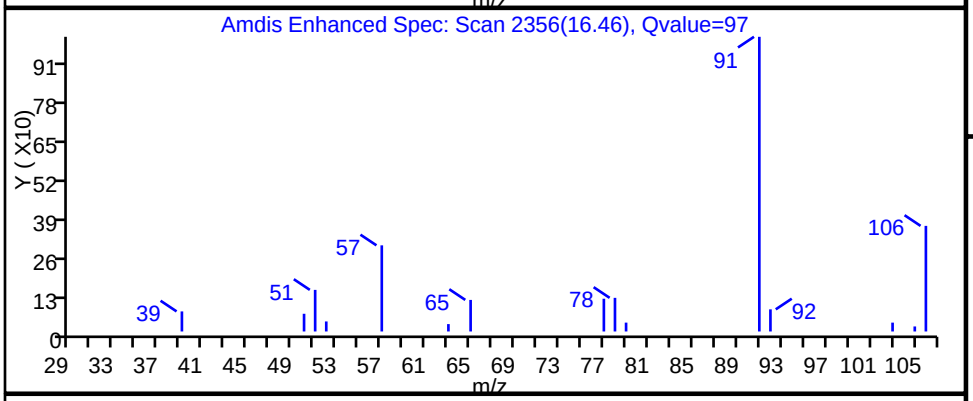
TestAmerica Knoxville

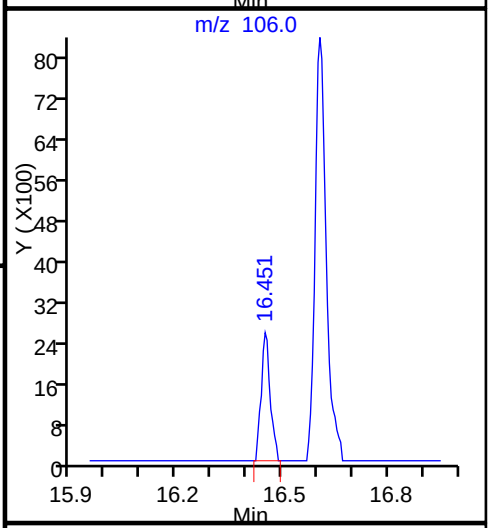
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P108.D				
Injection Date:	07-Nov-2016 23:00:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-3	Lab Sample ID:	140-6285-3		
Client ID:	C-INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

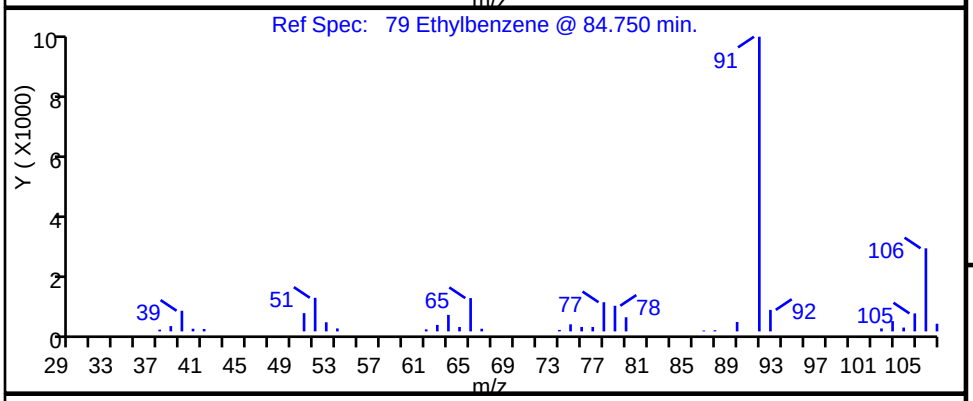
79 Ethylbenzene, CAS: 100-41-4

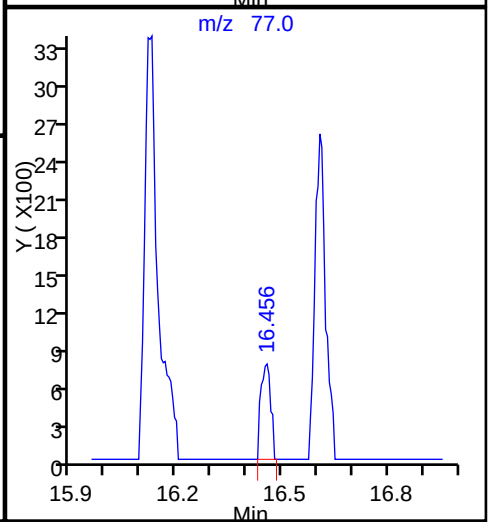


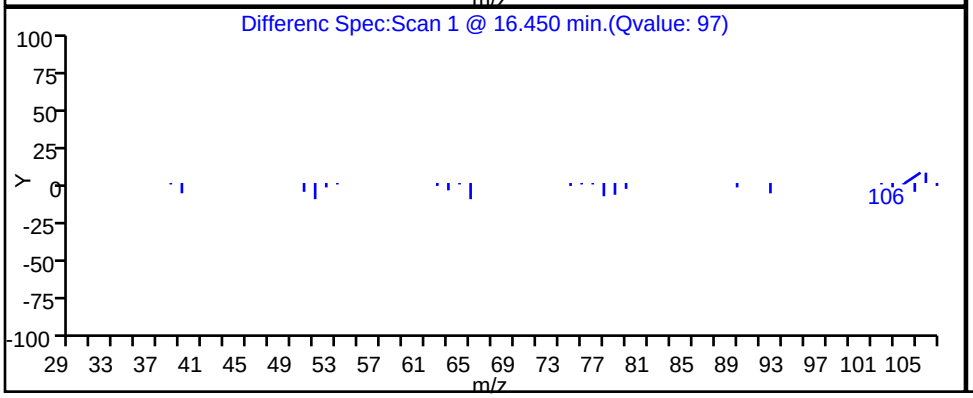








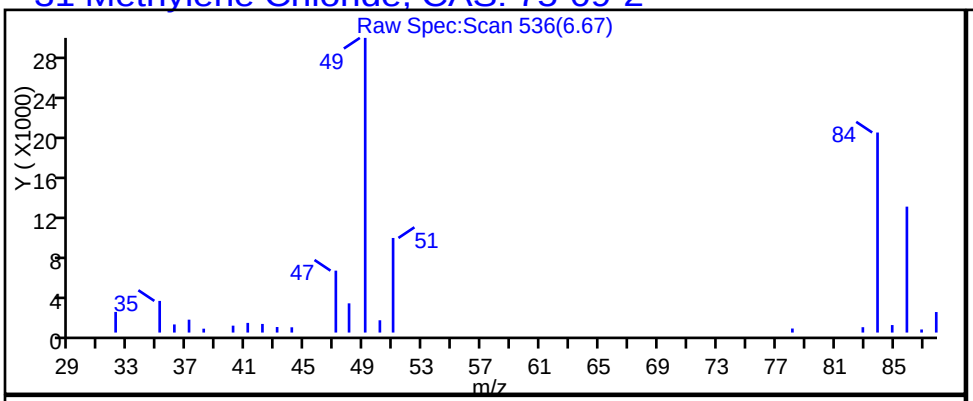


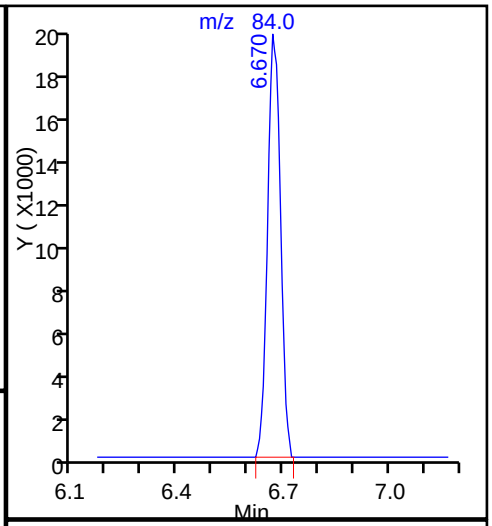


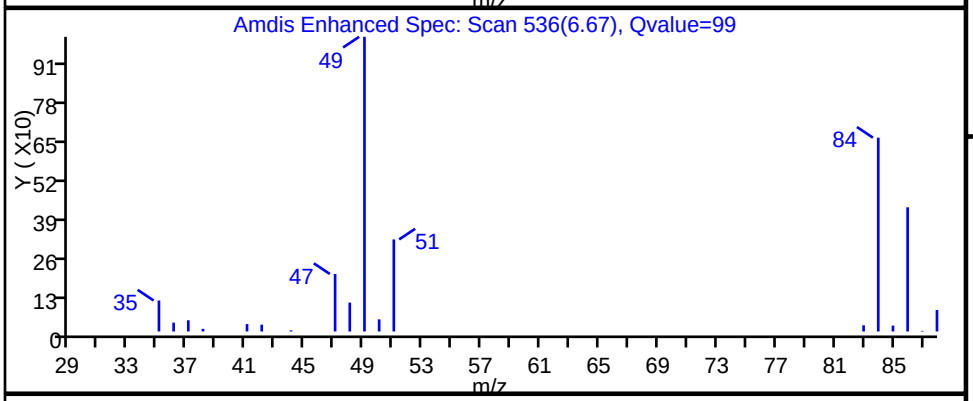
TestAmerica Knoxville

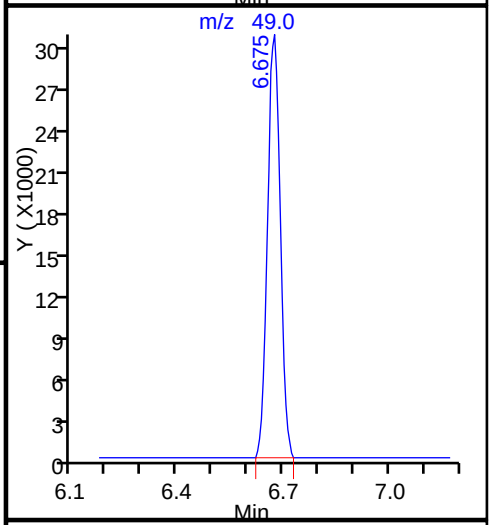
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P108.D				
Injection Date:	07-Nov-2016 23:00:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-3	Lab Sample ID:	140-6285-3		
Client ID:	C-INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

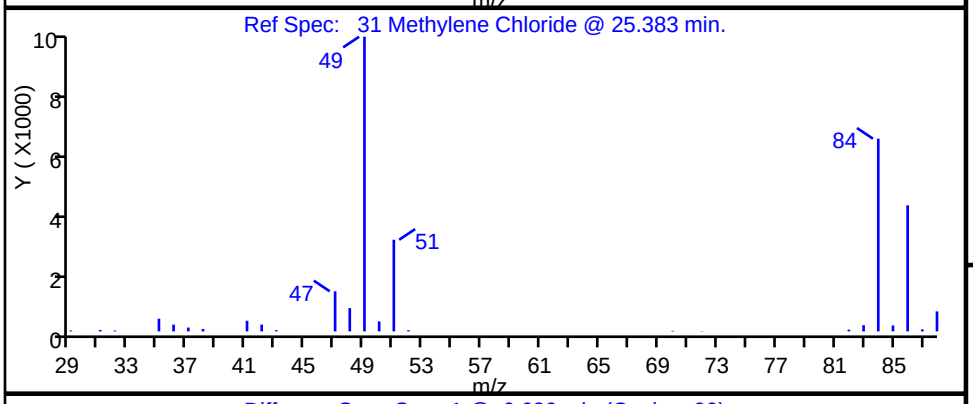
31 Methylene Chloride, CAS: 75-09-2

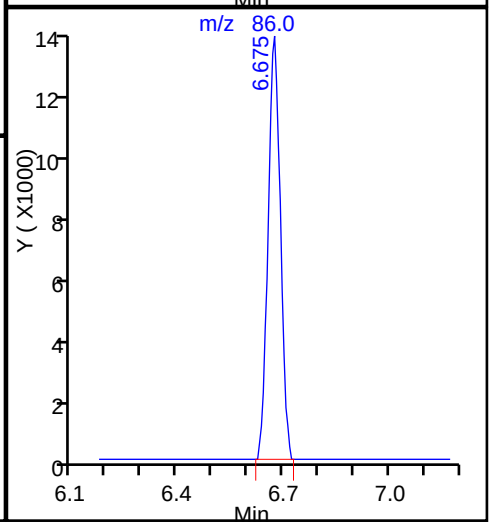


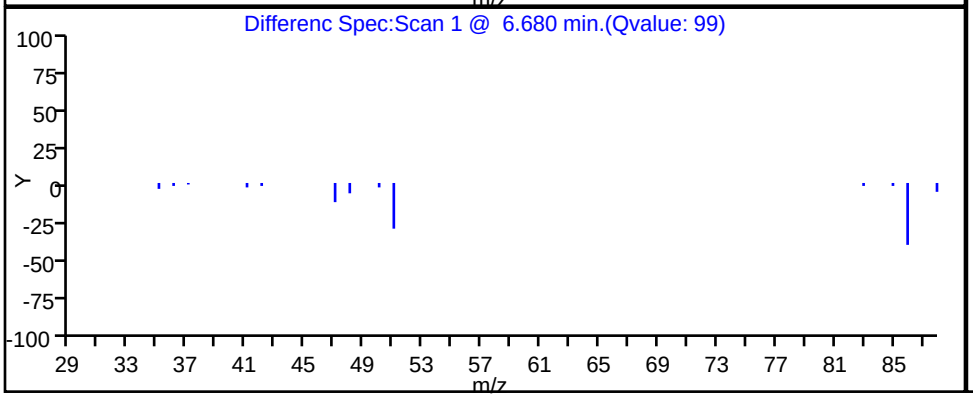










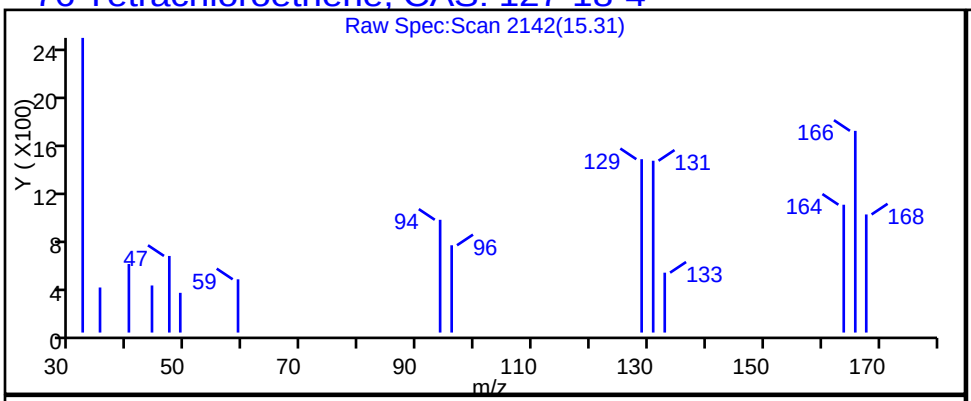


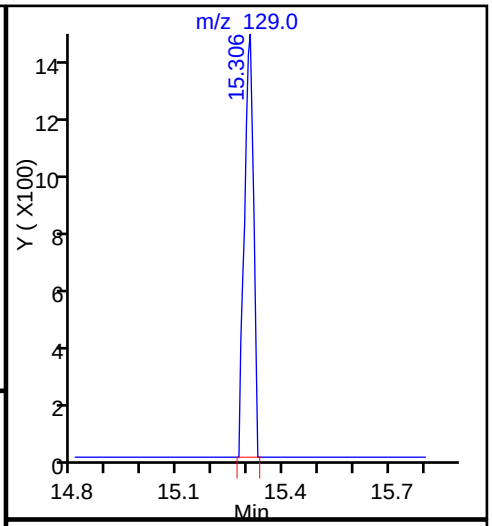
TestAmerica Knoxville

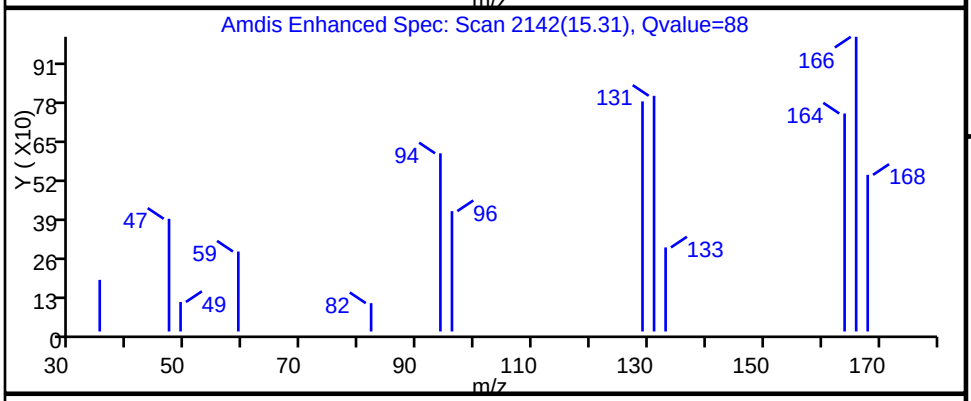
Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P108.D

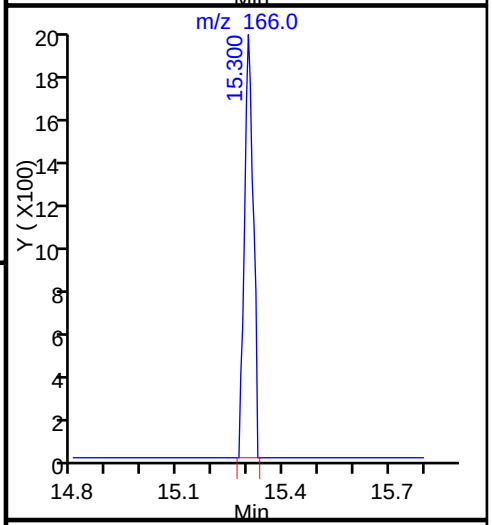
Injection Date:	07-Nov-2016 23:00:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-3	Lab Sample ID:	140-6285-3		
Client ID:	C-INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

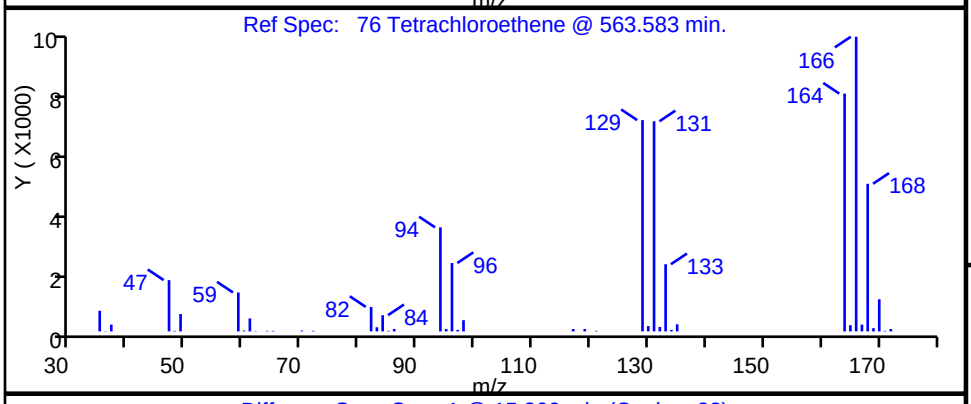
76 Tetrachloroethene, CAS: 127-18-4

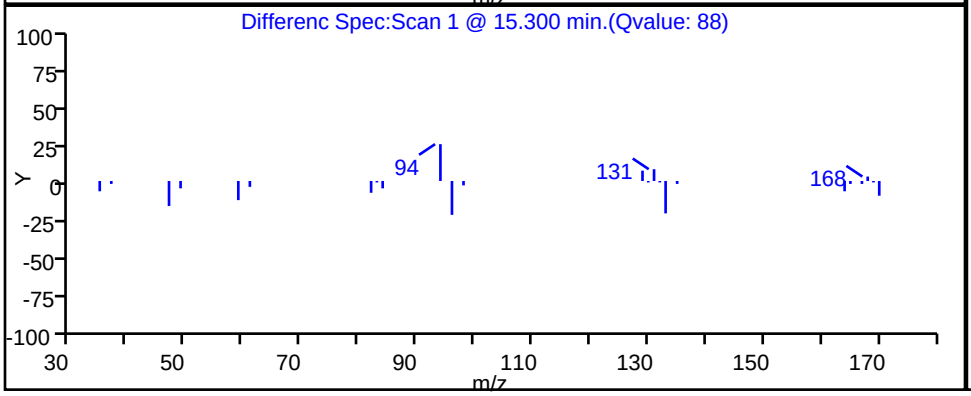


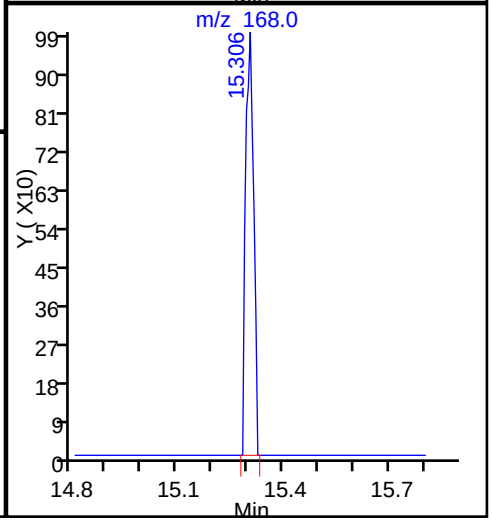








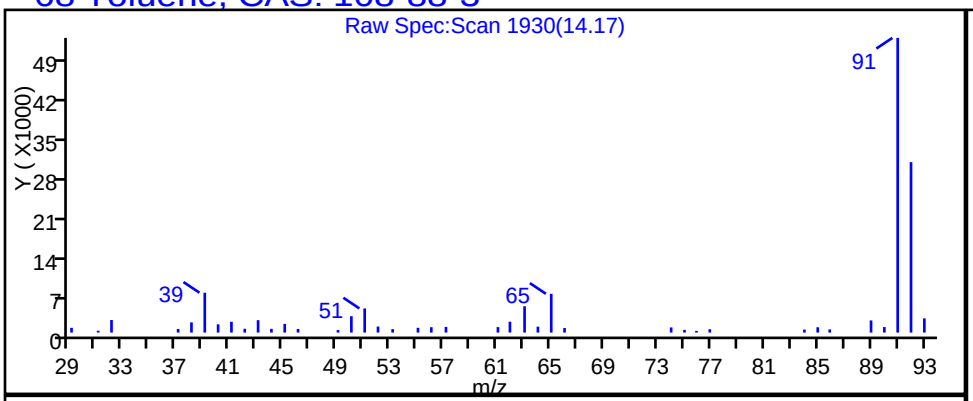


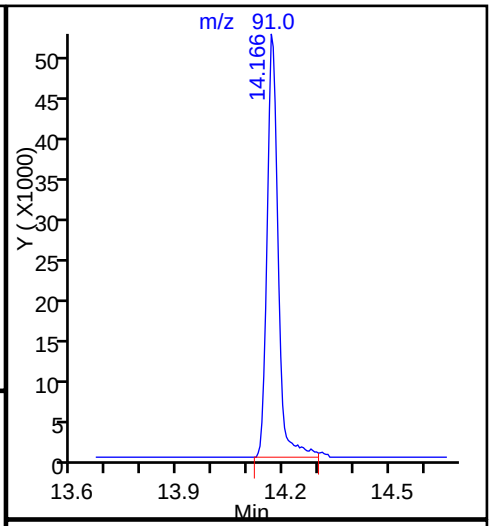


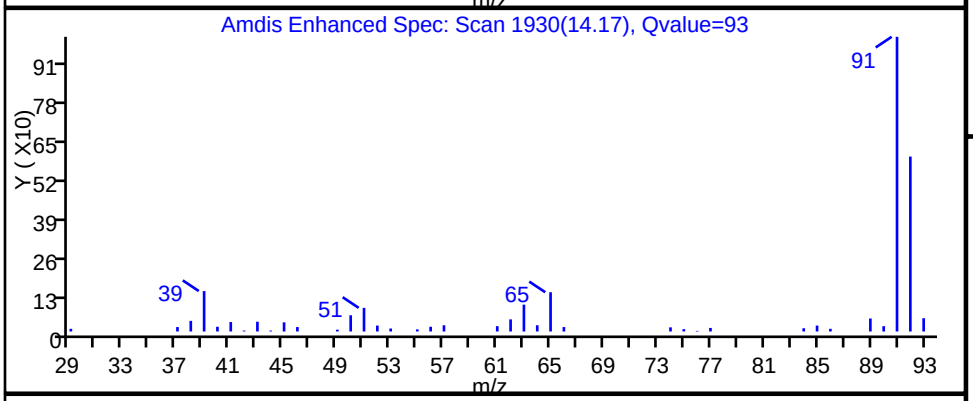
TestAmerica Knoxville

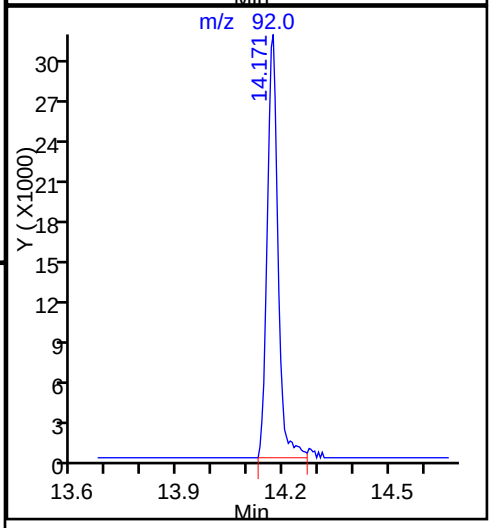
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P108.D				
Injection Date:	07-Nov-2016 23:00:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-3	Lab Sample ID:	140-6285-3		
Client ID:	C-INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

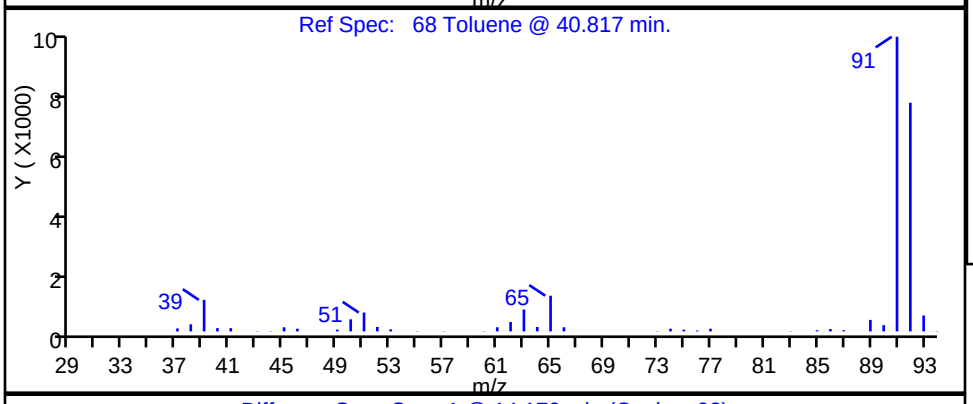
68 Toluene, CAS: 108-88-3

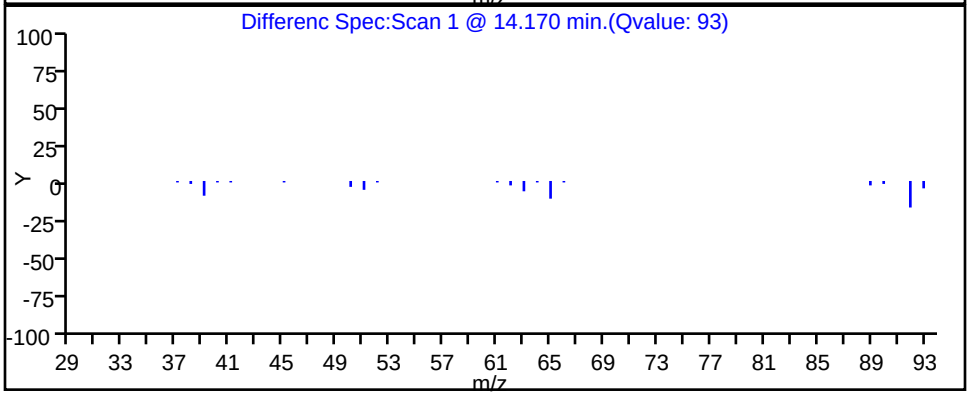








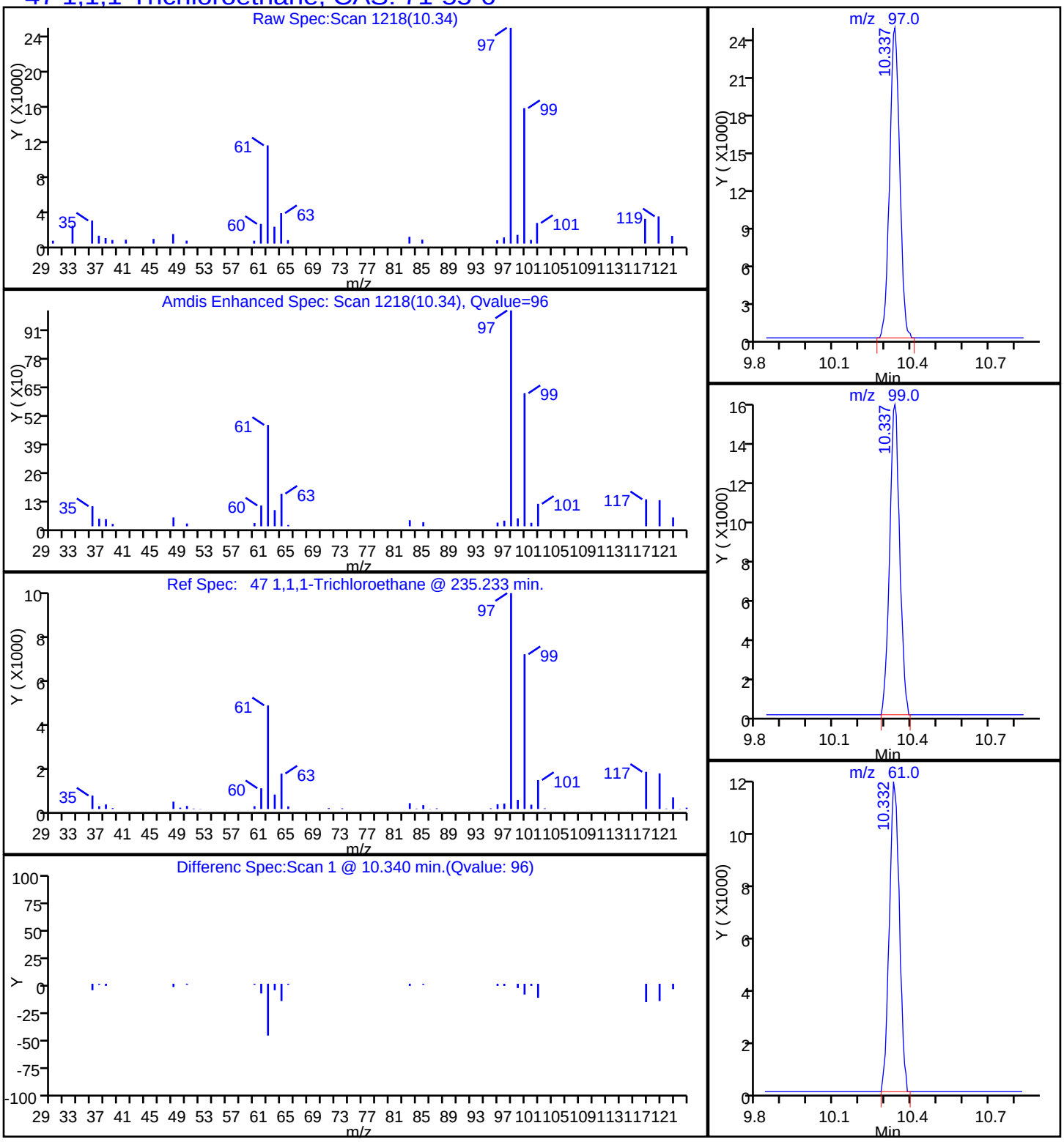




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P108.D				
Injection Date:	07-Nov-2016 23:00:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-3	Lab Sample ID:	140-6285-3		
Client ID:	C-INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

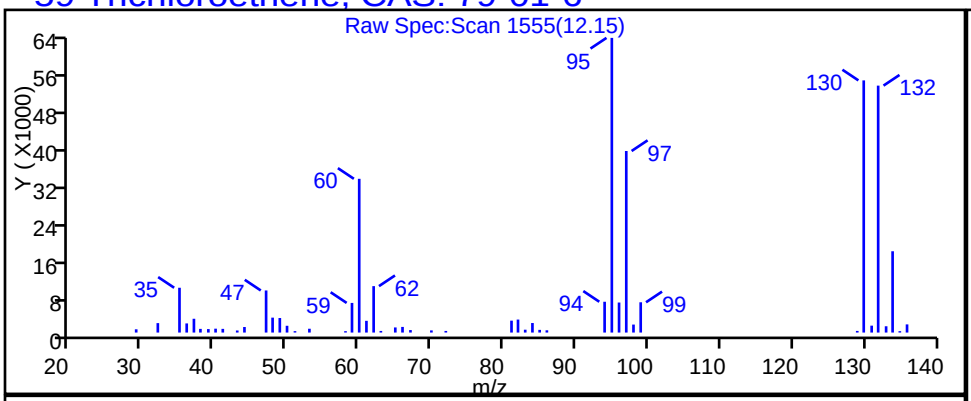
47 1,1,1-Trichloroethane, CAS: 71-55-6

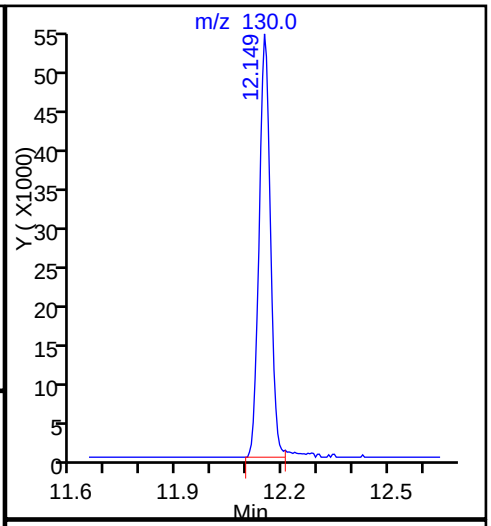


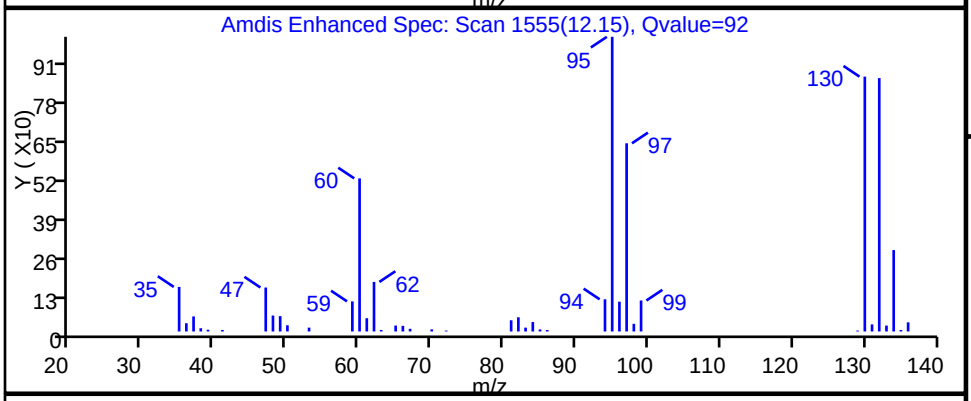
TestAmerica Knoxville

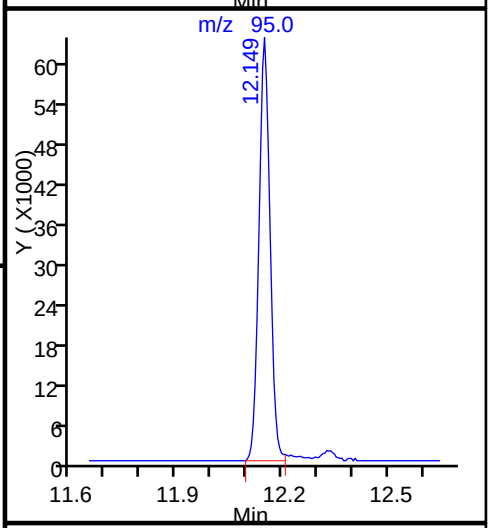
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P108.D				
Injection Date:	07-Nov-2016 23:00:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-3	Lab Sample ID:	140-6285-3		
Client ID:	C-INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

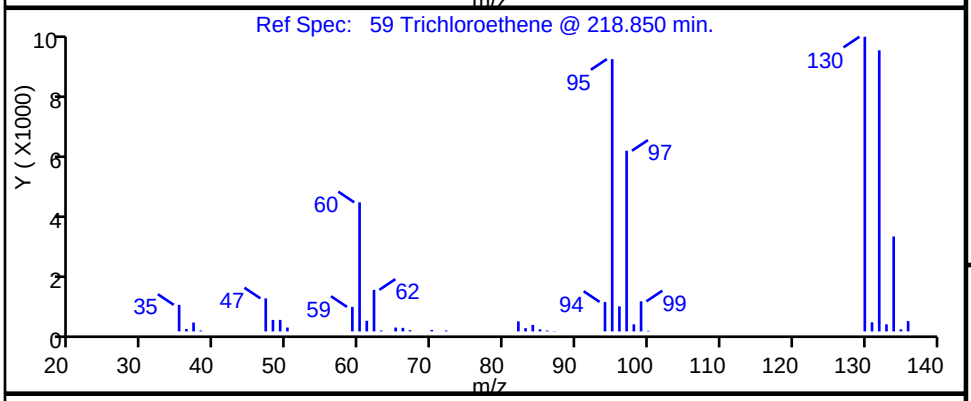
59 Trichloroethene, CAS: 79-01-6

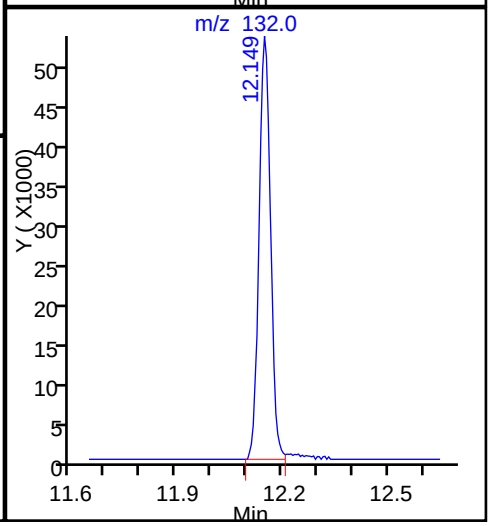


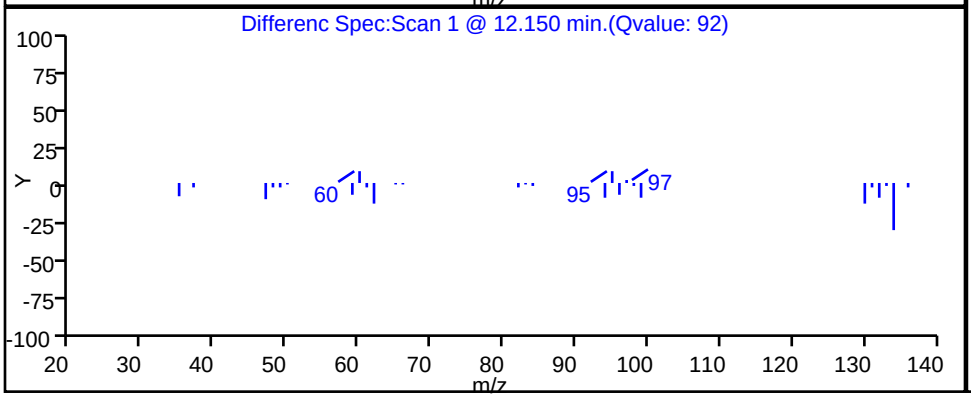








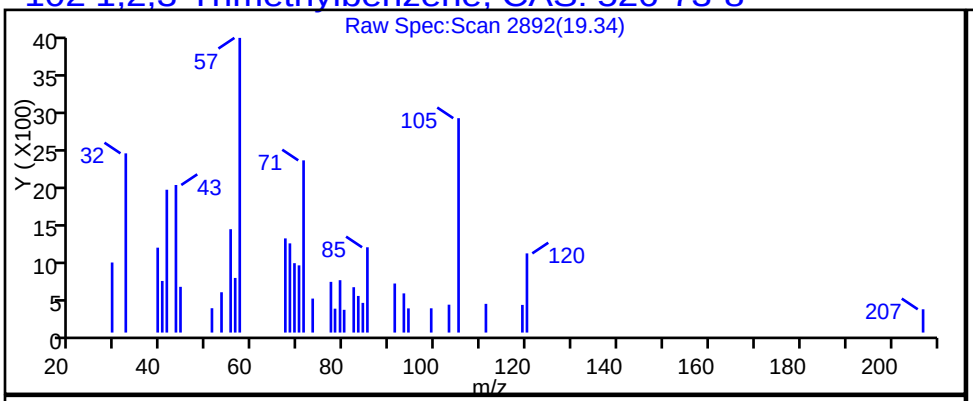


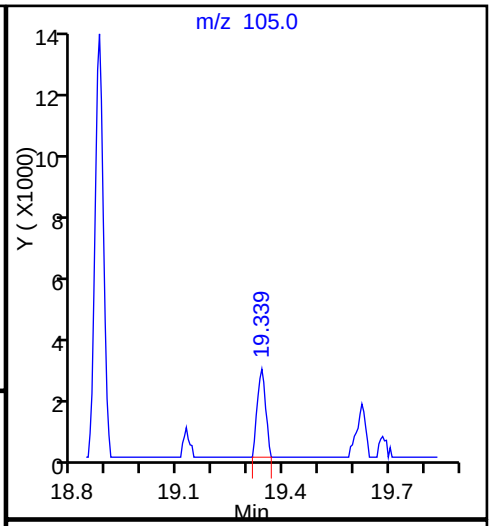


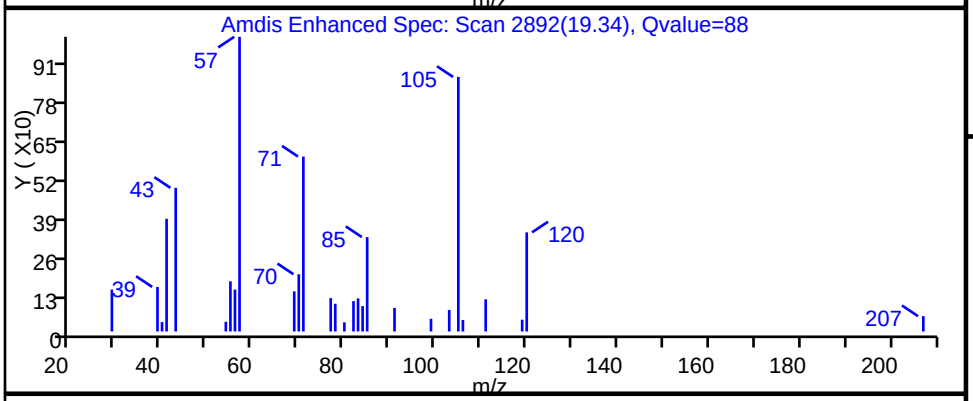
TestAmerica Knoxville

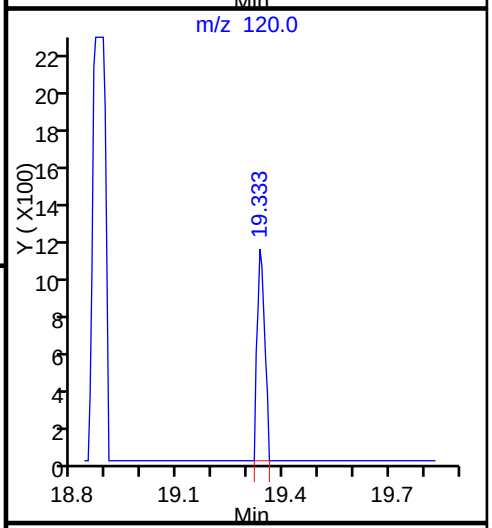
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P108.D				
Injection Date:	07-Nov-2016 23:00:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-3	Lab Sample ID:	140-6285-3		
Client ID:	C-INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

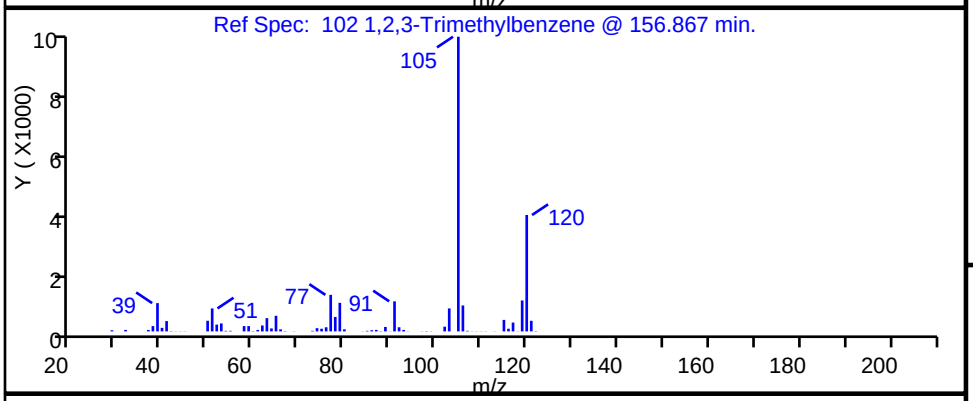
102 1,2,3-Trimethylbenzene, CAS: 526-73-8

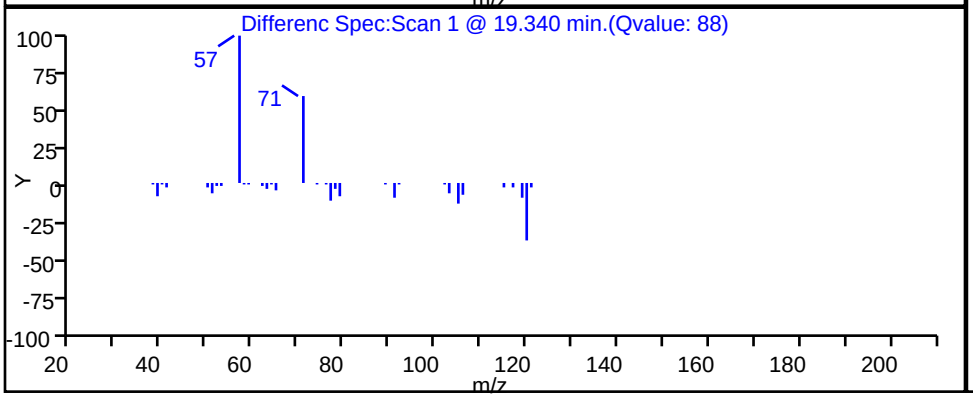


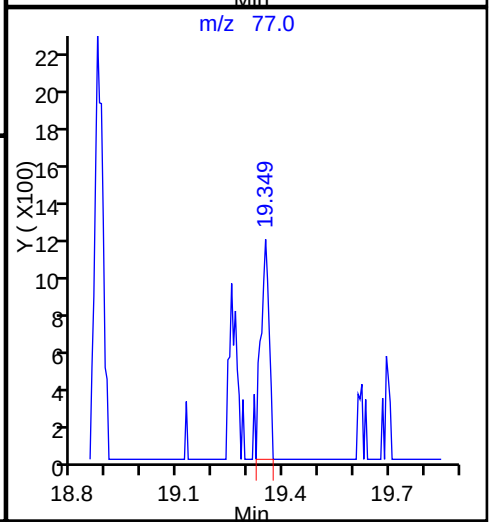








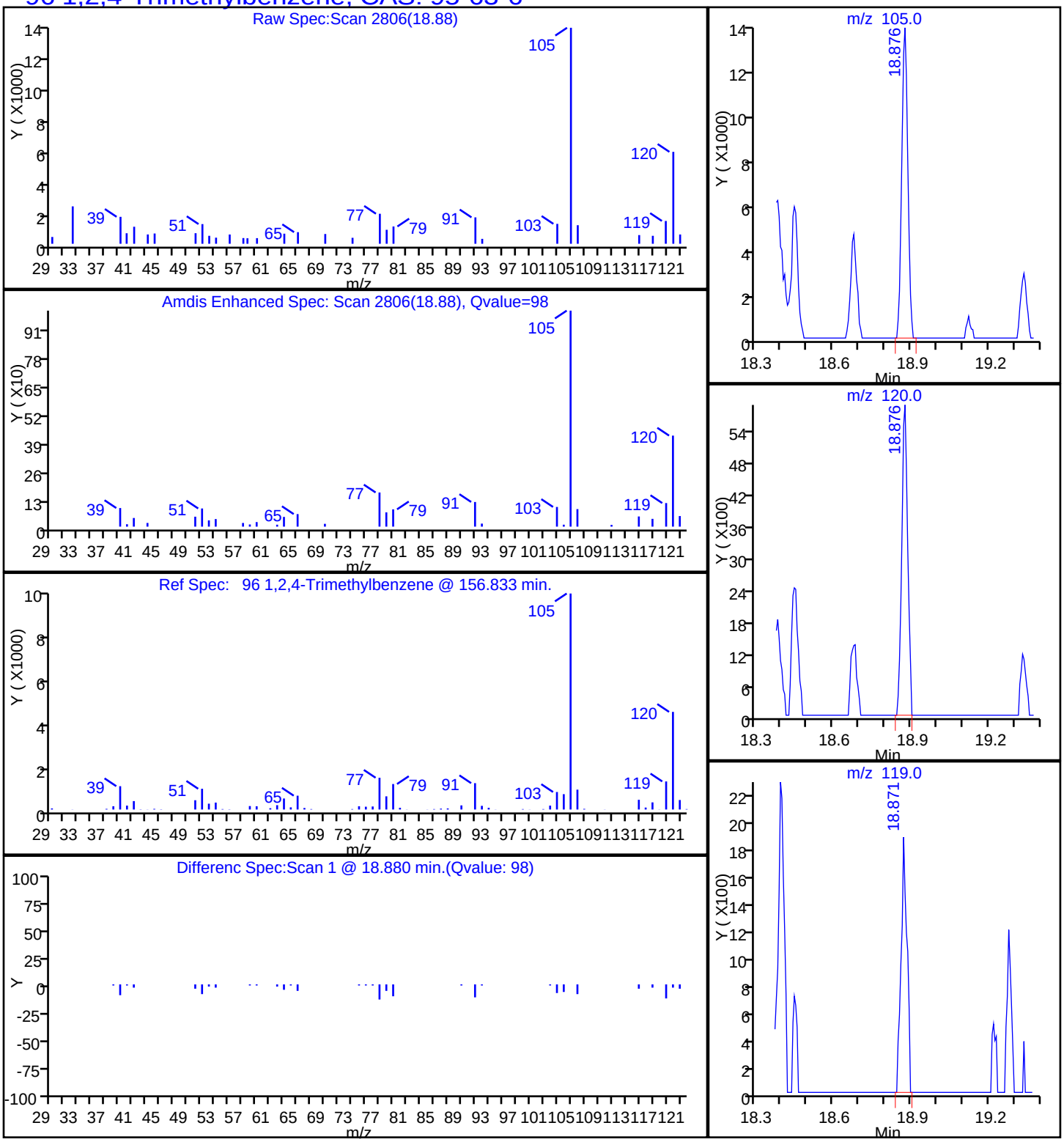




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P108.D				
Injection Date:	07-Nov-2016 23:00:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-3	Lab Sample ID:	140-6285-3		
Client ID:	C-INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

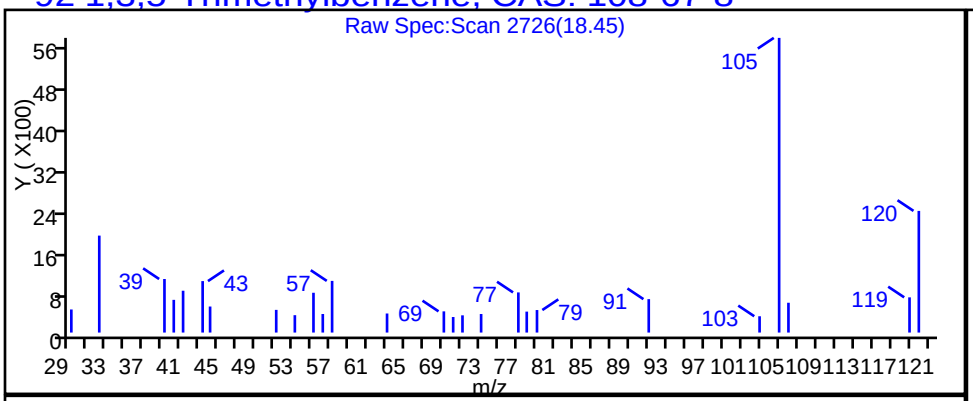
96 1,2,4-Trimethylbenzene, CAS: 95-63-6

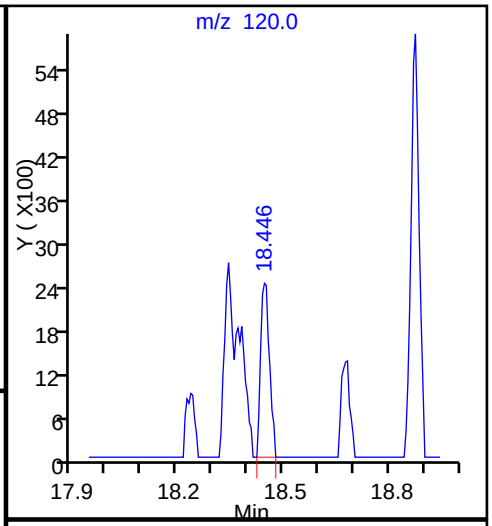


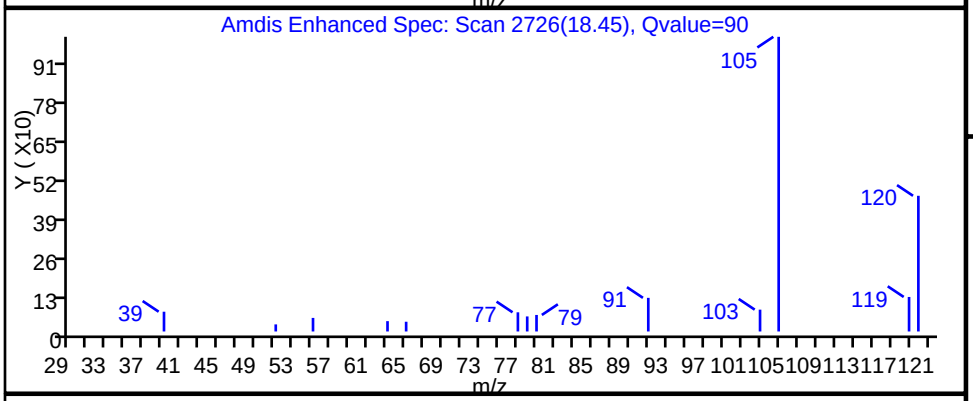
TestAmerica Knoxville

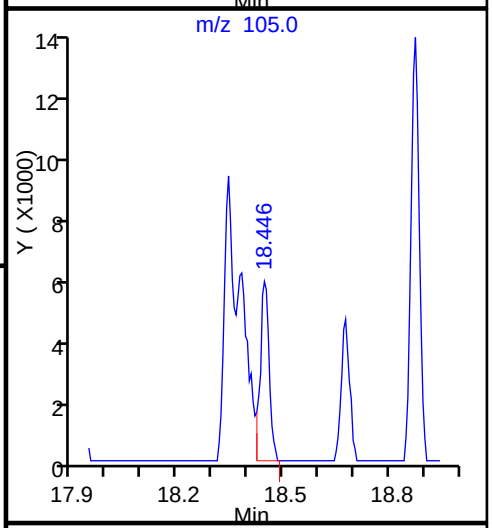
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P108.D				
Injection Date:	07-Nov-2016 23:00:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-3	Lab Sample ID:	140-6285-3		
Client ID:	C-INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

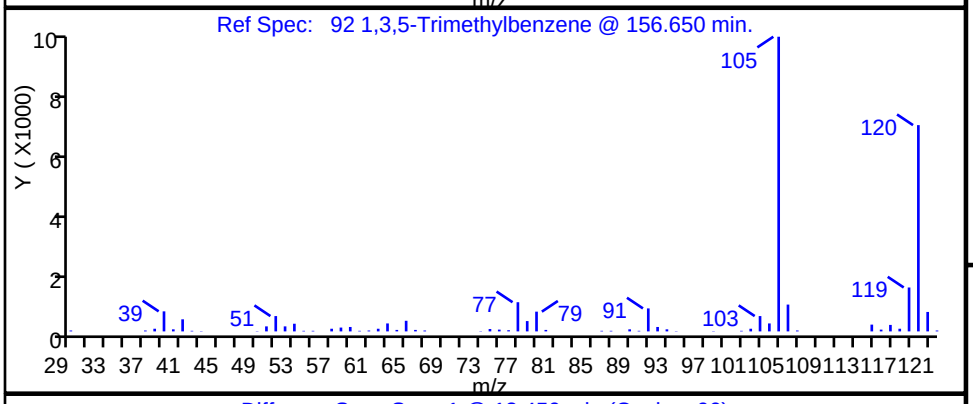
92 1,3,5-Trimethylbenzene, CAS: 108-67-8

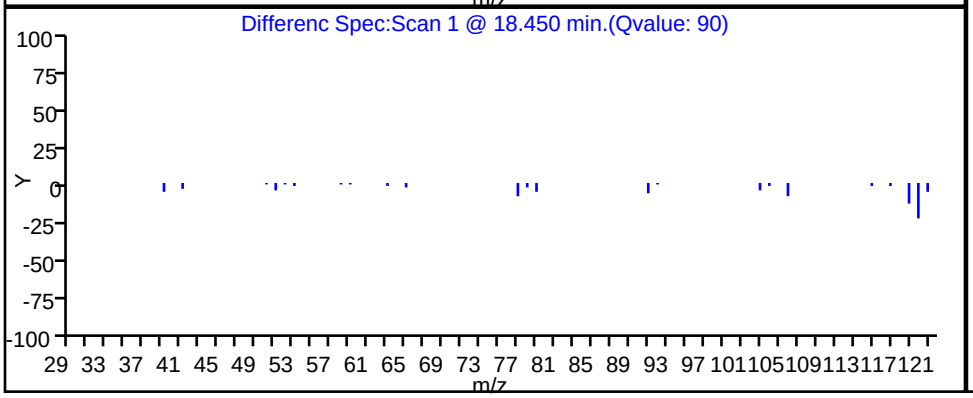


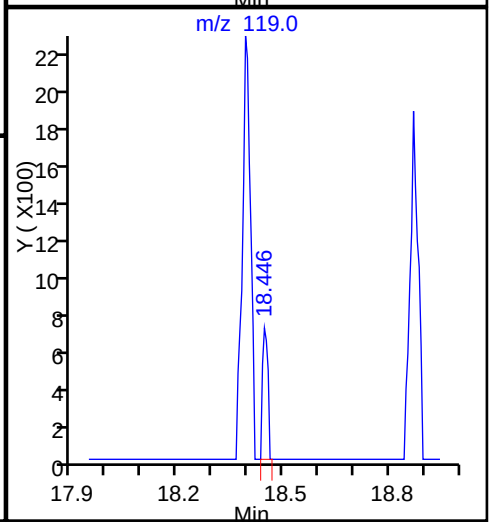








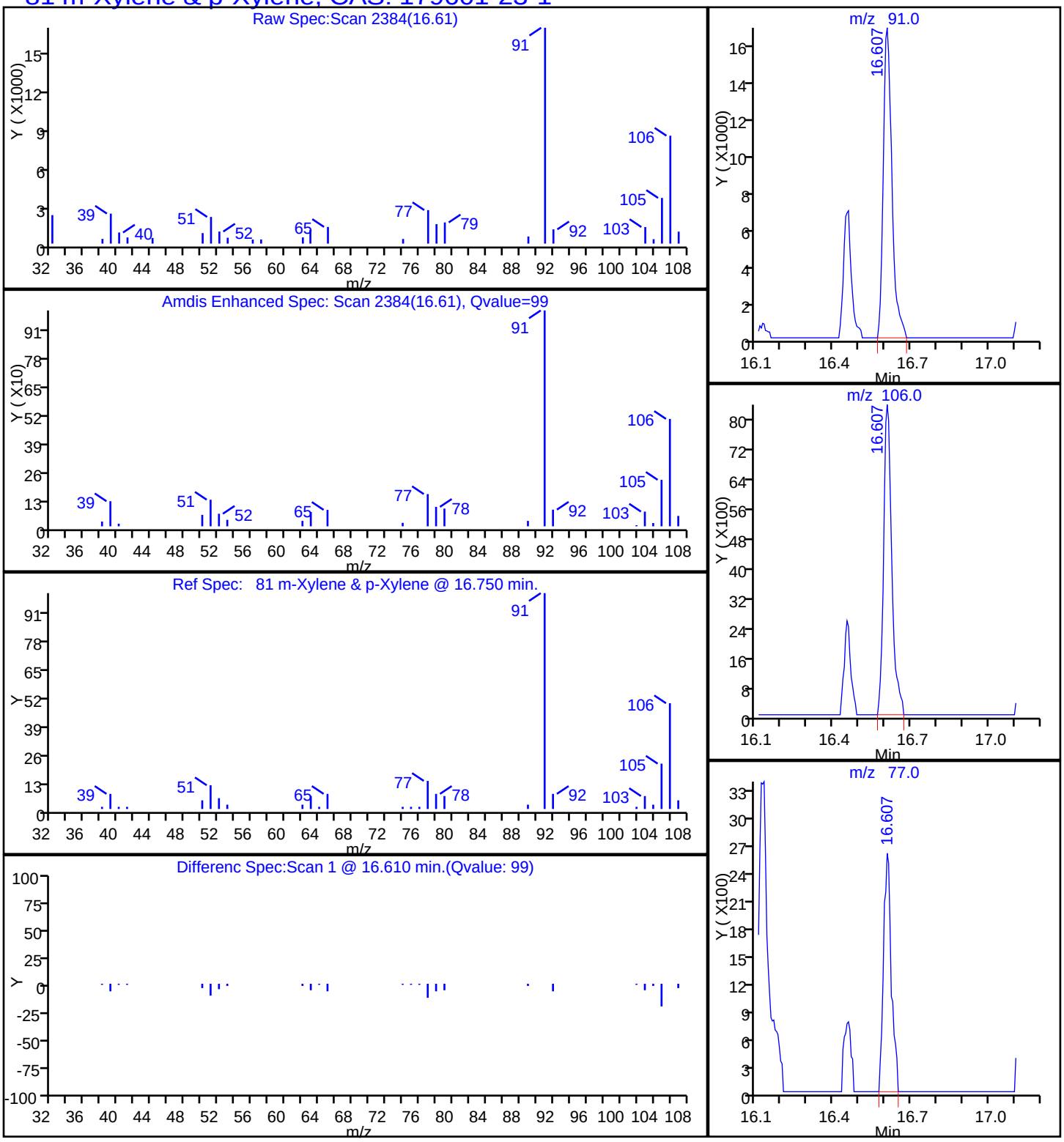




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P108.D				
Injection Date:	07-Nov-2016 23:00:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-3	Lab Sample ID:	140-6285-3		
Client ID:	C-INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

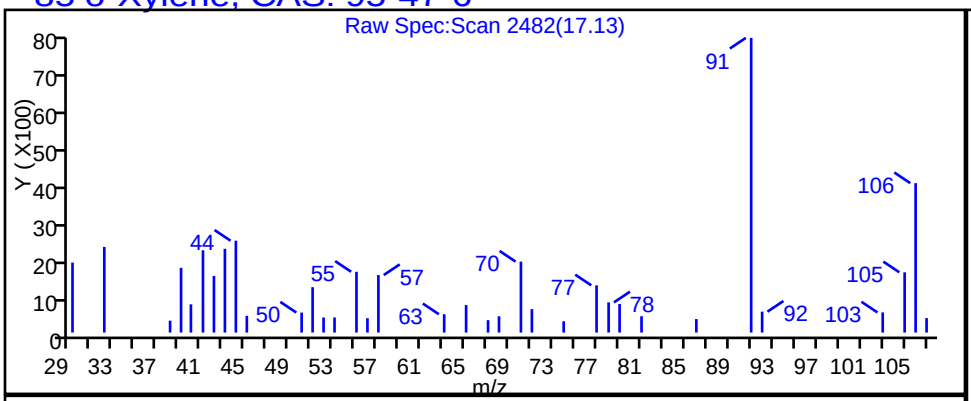
81 m-Xylene & p-Xylene, CAS: 179601-23-1

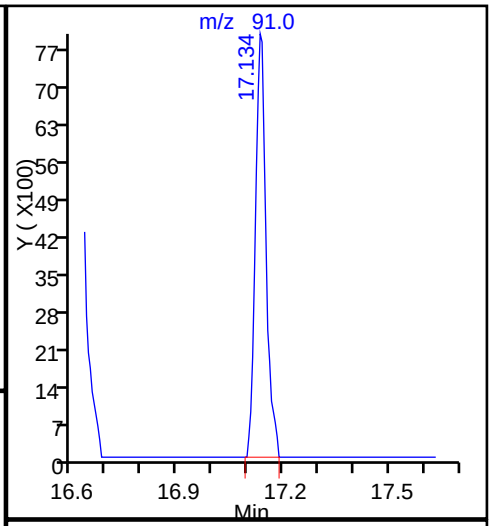


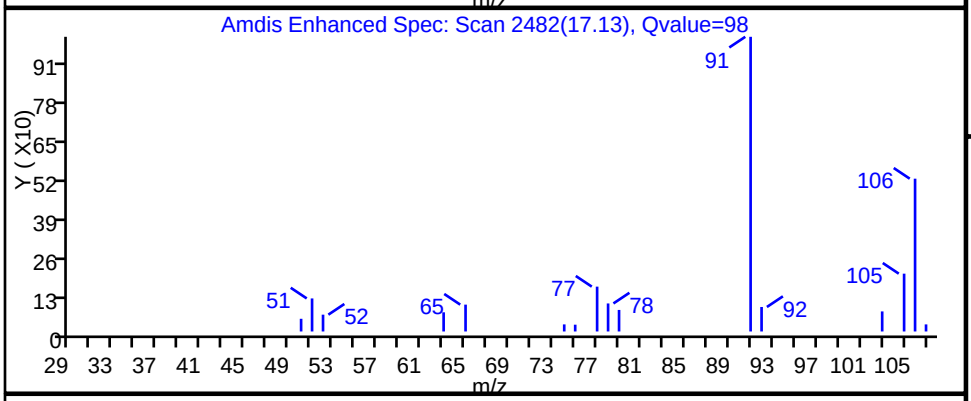
TestAmerica Knoxville

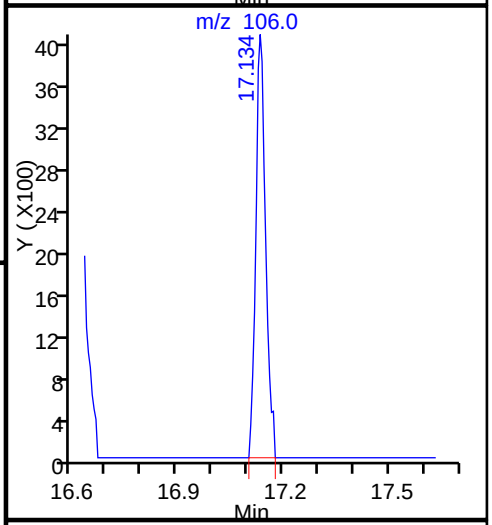
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P108.D				
Injection Date:	07-Nov-2016 23:00:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-3	Lab Sample ID:	140-6285-3		
Client ID:	C-INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

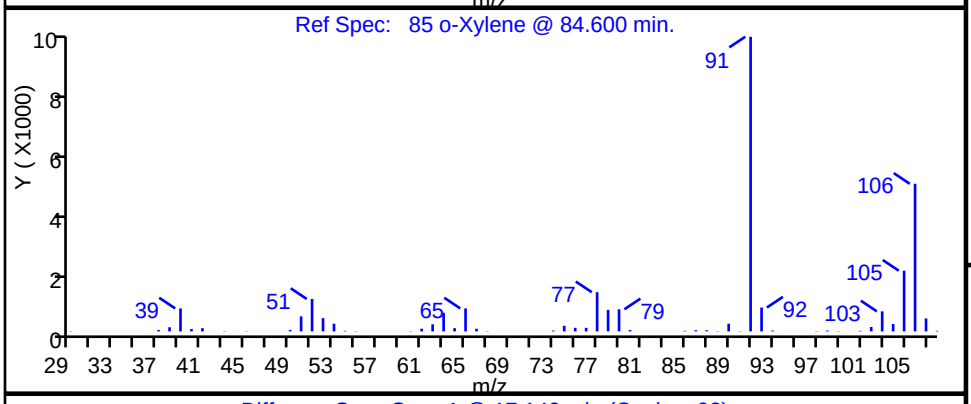
85 o-Xylene, CAS: 95-47-6

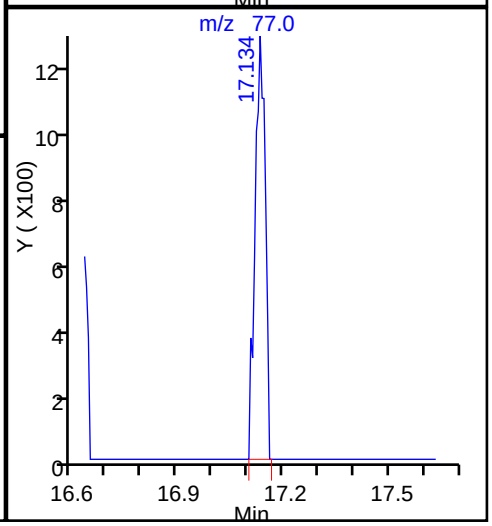


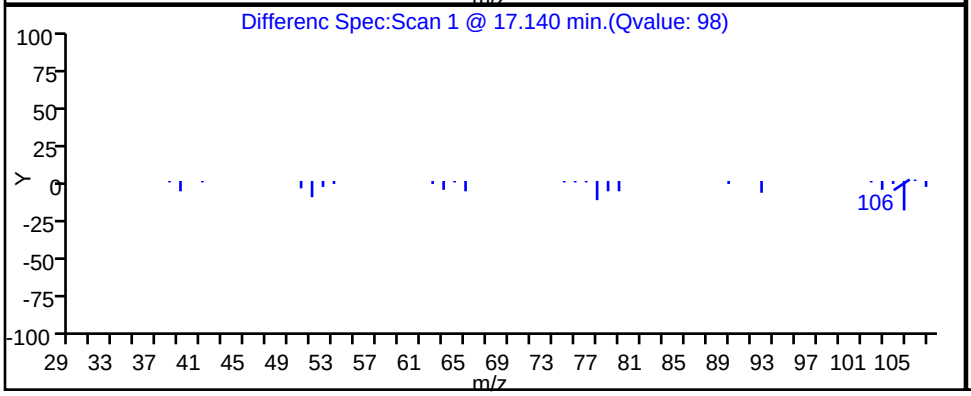












FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Client Sample ID: A-EFFLUENT Lab Sample ID: 140-6285-4

Matrix: Air Lab File ID: JK07P109.D

Analysis Method: TO 15 LL Date Collected: 11/03/2016 12:35

Sample wt/vol: 100(mL) Date Analyzed: 11/07/2016 23:54

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7085 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.19	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.94		0.40	0.075
67-66-3	Chloroform	119.38	0.93		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	13		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.63		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	17		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	31		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	3.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	*1,1,1-Trichloroethane*	*133.41*	*340*	*E*	*0.40*	*0.060*
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	0.53		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6285-1

SDG No.:

Client Sample ID: A-EFFLUENT | Lab Sample ID: 140-6285-4

Matrix: Air | Lab File ID: JK07P109.D

Analysis Method: TO 15 LL | Date Collected: 11/03/2016 12:35

Sample wt/vol: 100(mL) | Date Analyzed: 11/07/2016 23:54

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7085 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	1.2	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.3		1.4	0.27
67-66-3	Chloroform	119.38	4.5		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	51		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	68		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	120		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	11		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	*1,1,1-Trichloroethane*	*133.41*	*1800*	*E*	*2.2*	*0.33*
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	1.3		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P109.D				
Lims ID:	140-6285-A-4				
Client ID:	A-EFFLUENT				
Sample Type:	Client				
Inject. Date:	07-Nov-2016 23:54:30	ALS Bottle#:	9	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003595-018				
Misc. Info.:	140-6285-a-4				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	08-Nov-2016 10:14:16	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				
First Level Reviewer: tajh		Date:	08-Nov-2016 08:52:51		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.289	9.290	-0.001	97	215277	4.00	
* 2 1,4-Difluorobenzene	114	11.445	11.446	-0.001	96	1004011	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.123	16.125	-0.002	90	778539	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.747	17.749	-0.002	84	461895	3.94	
6 Chlorodifluoromethane	67	3.917	3.918	-0.001	96	4125	0.1882	
8 Dichlorodifluoromethane	85	3.981	3.983	-0.002	100	26646	0.1257	
12 Vinyl chloride	62	4.368	4.364	0.004	95	7703	0.1053	
27 1,1-Dichloroethene	96	6.304	6.306	-0.002	96	416013	6.15	
31 Methylene Chloride	84	6.670	6.671	-0.001	98	42955	0.6280	
37 1,1-Dichloroethane	63	7.939	7.940	-0.001	100	414838	3.36	
42 cis-1,2-Dichloroethene	96	8.944	8.946	-0.002	98	167827	2.56	
44 Chloroform	83	9.289	9.295	-0.006	30	25064	0.1852	
47 1,1,1-Trichloroethane	97	10.337	10.339	-0.002	99	9418720	67.7	E
52 Carbon tetrachloride	117	10.945	10.946	-0.001	94	5330	0.0374	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

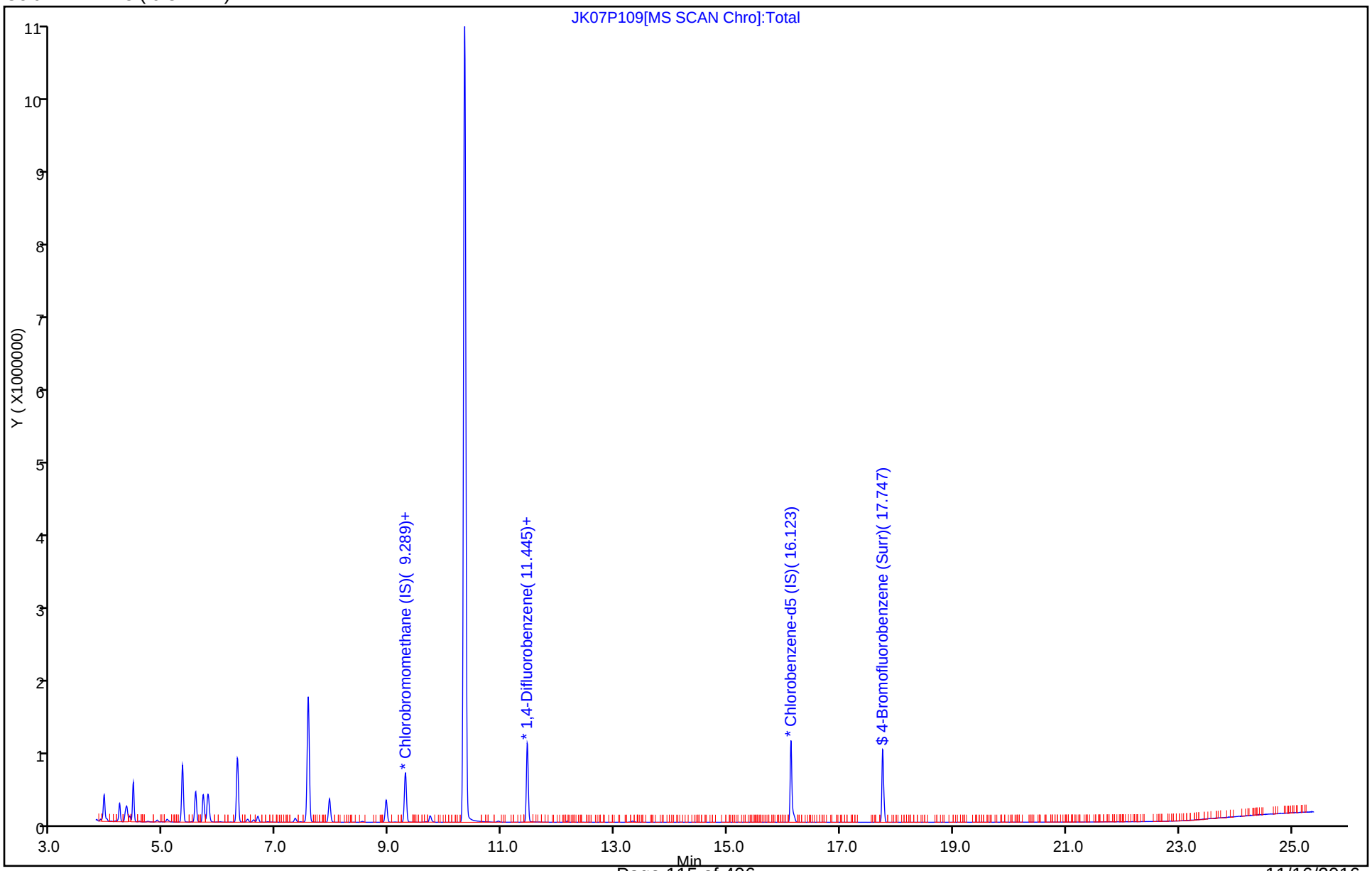
Report Date: 08-Nov-2016 10:14:47 Chrom Revision: 2.2 17-Oct-2016 09:27:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P109.D

Injection Date:	07-Nov-2016 23:54:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-6285-A-4	Lab Sample ID:	140-6285-4	Worklist Smp#:	18
Client ID:	A-EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

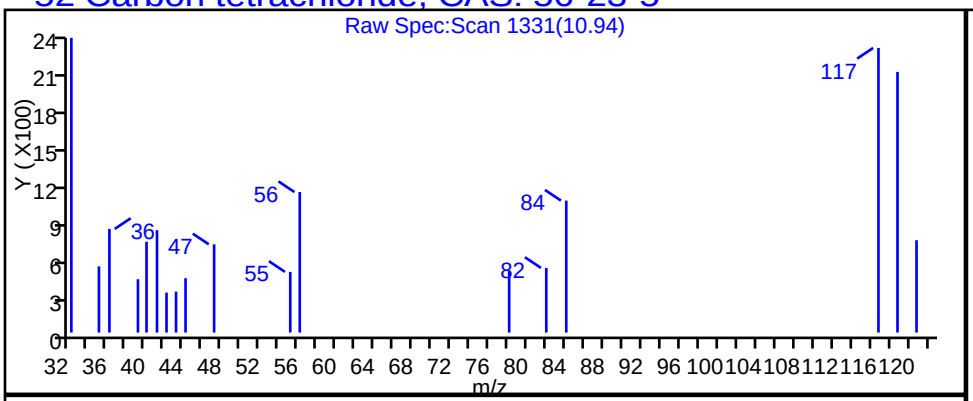
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P109.D				
Lims ID:	140-6285-A-4				
Client ID:	A-EFFLUENT				
Sample Type:	Client				
Inject. Date:	07-Nov-2016 23:54:30	ALS Bottle#:	9	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003595-018				
Misc. Info.:	140-6285-a-4				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	08-Nov-2016 10:14:16	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				
First Level Reviewer: tajh		Date:	08-Nov-2016 08:52:51		

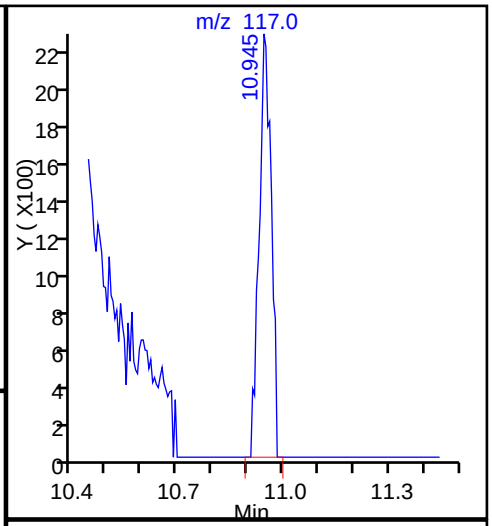
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.94	98.38

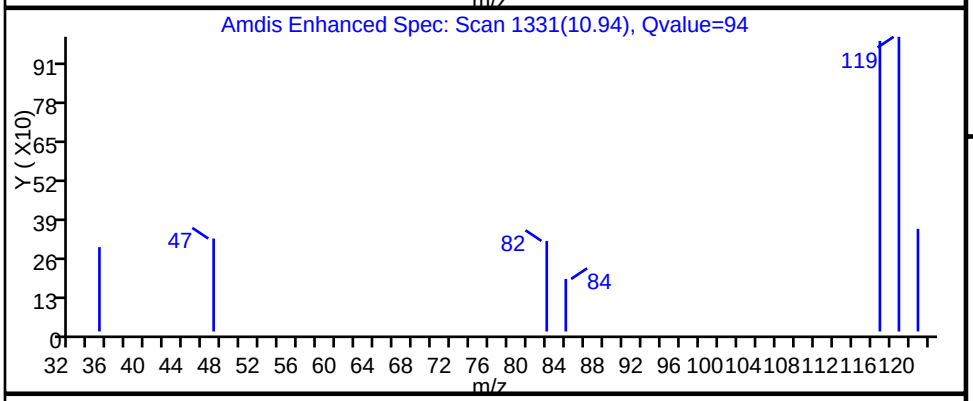
TestAmerica Knoxville

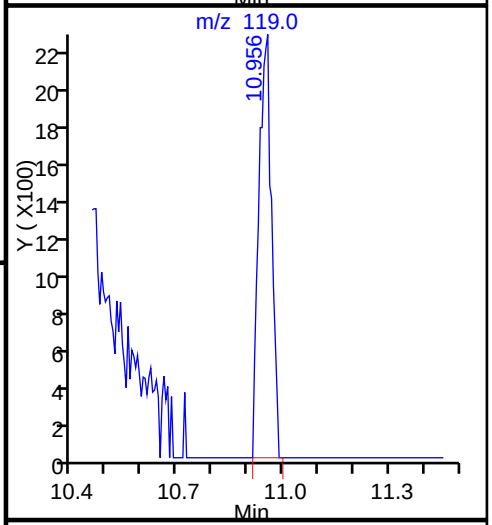
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P109.D				
Injection Date:	07-Nov-2016 23:54:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-4	Lab Sample ID:	140-6285-4		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

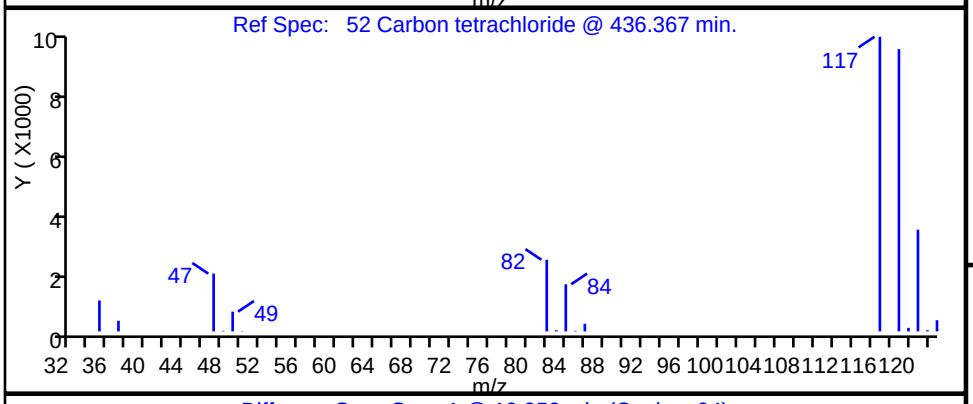
52 Carbon tetrachloride, CAS: 56-23-5

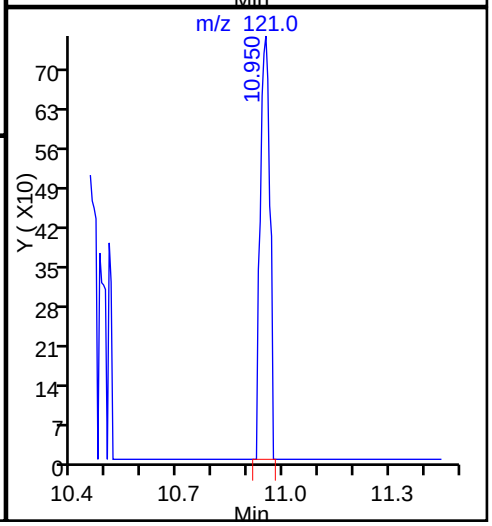


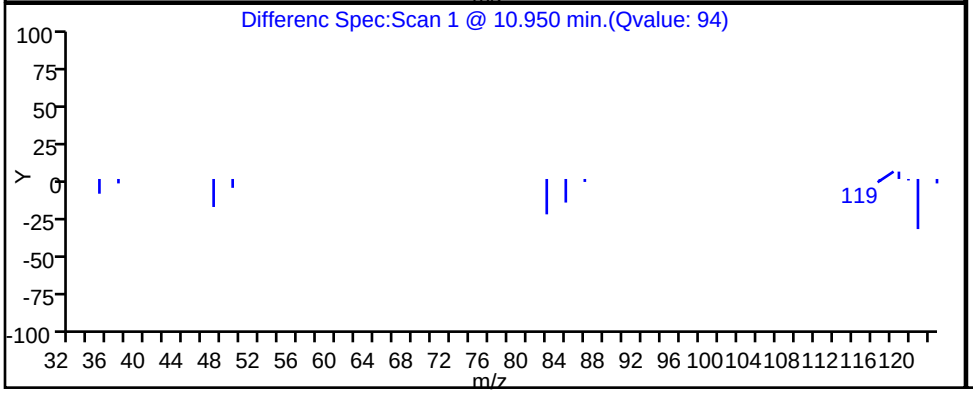








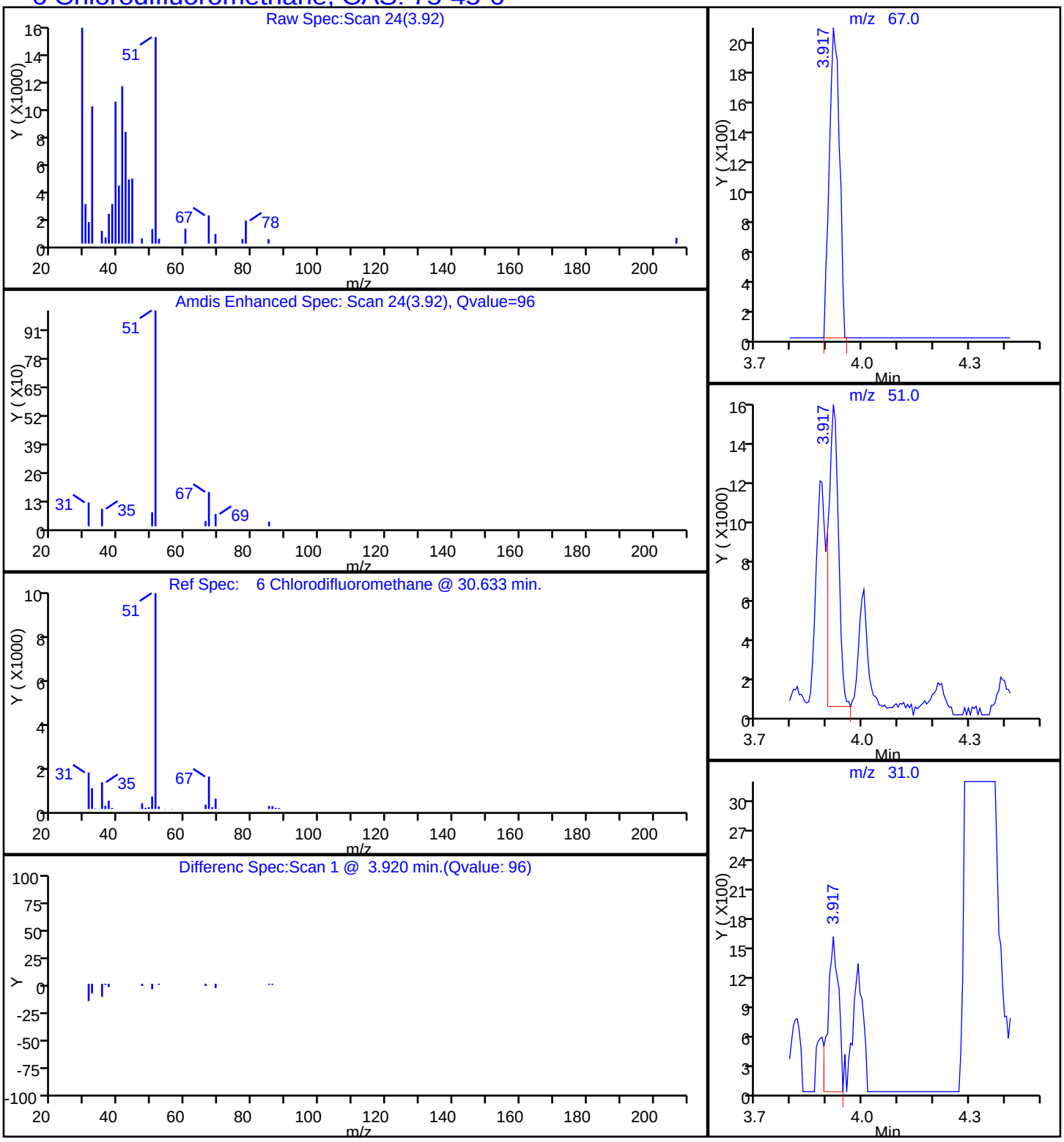




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P109.D		
Injection Date:	07-Nov-2016 23:54:30	Instrument ID:	MJ
Lims ID:	140-6285-A-4	Lab Sample ID:	140-6285-4
Client ID:	A-EFFLUENT		
Operator ID:	7126	ALS Bottle#:	9 Worklist Smp#: 18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

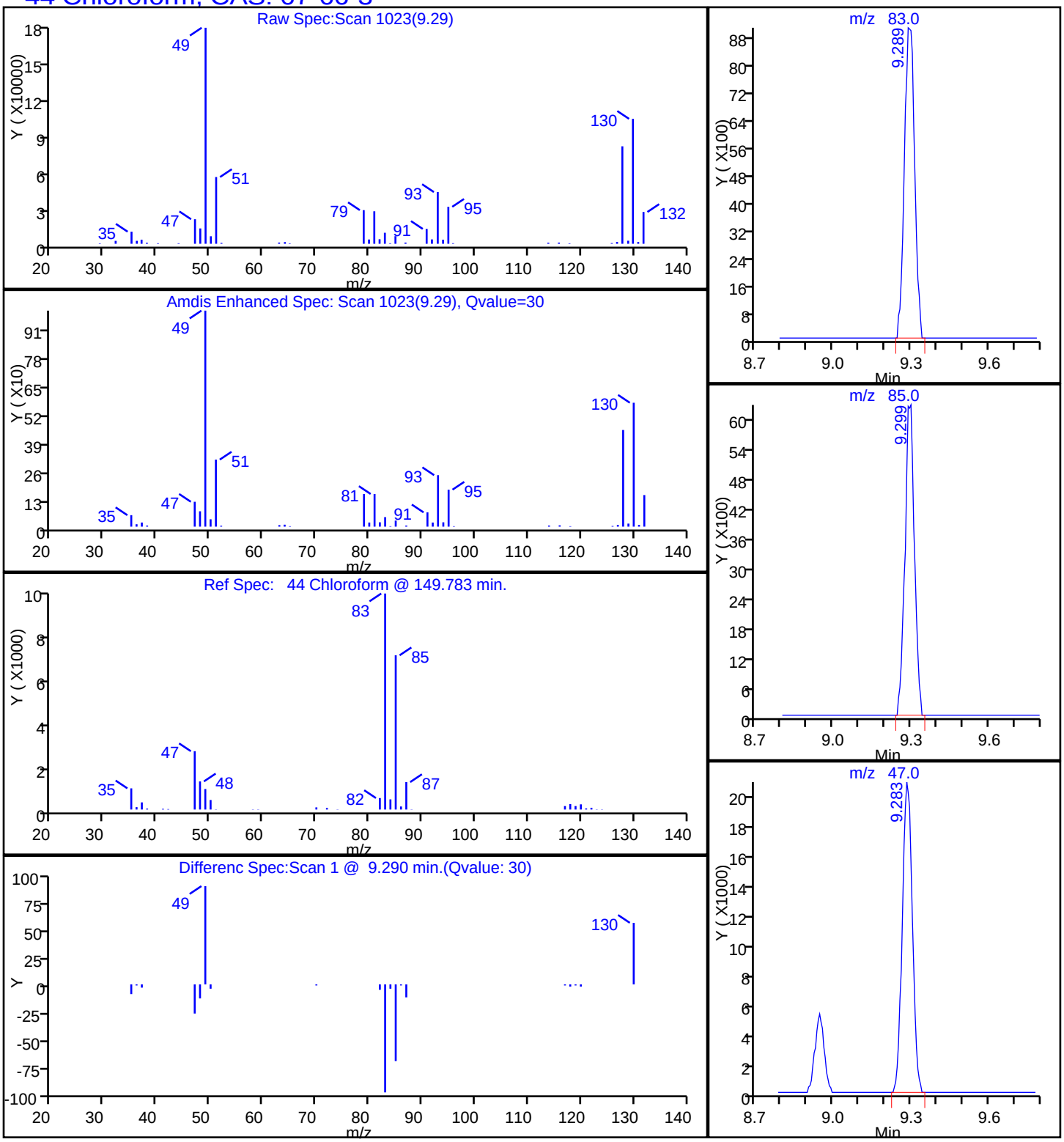


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P109.D

Injection Date:	07-Nov-2016 23:54:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-4	Lab Sample ID:	140-6285-4		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

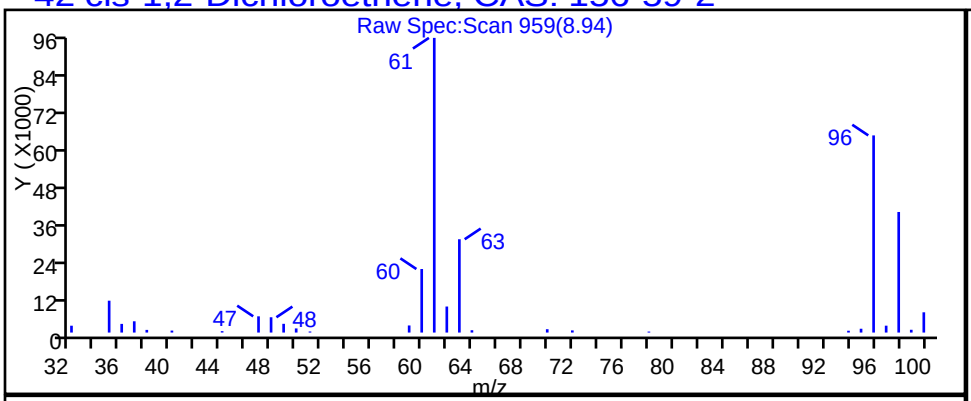
44 Chloroform, CAS: 67-66-3

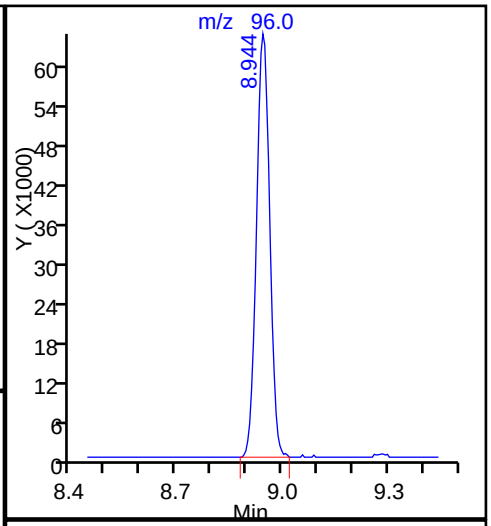


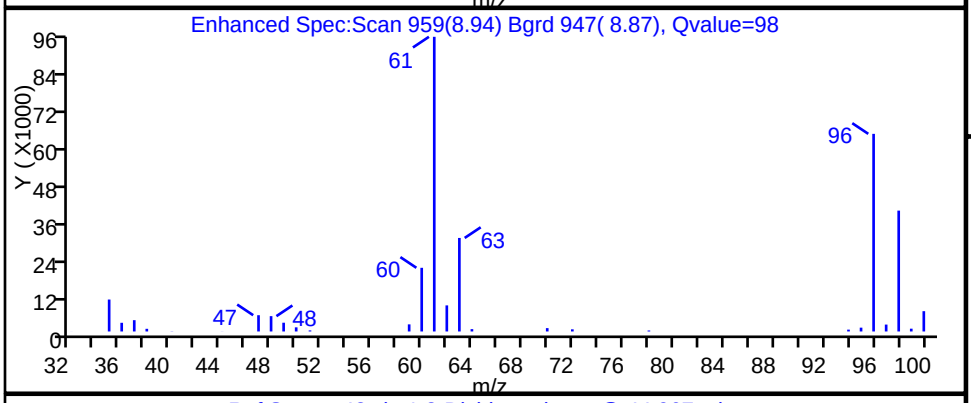
TestAmerica Knoxville

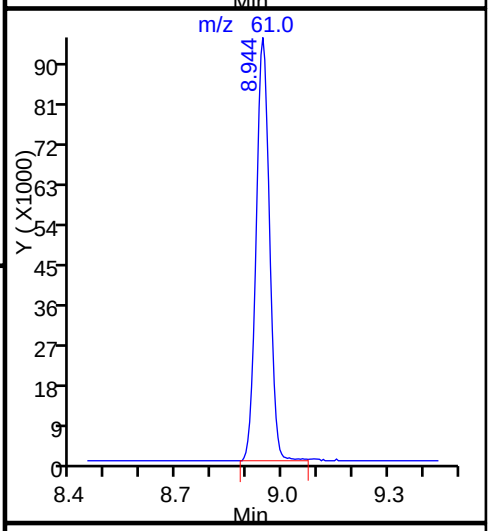
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P109.D				
Injection Date:	07-Nov-2016 23:54:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-4	Lab Sample ID:	140-6285-4		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

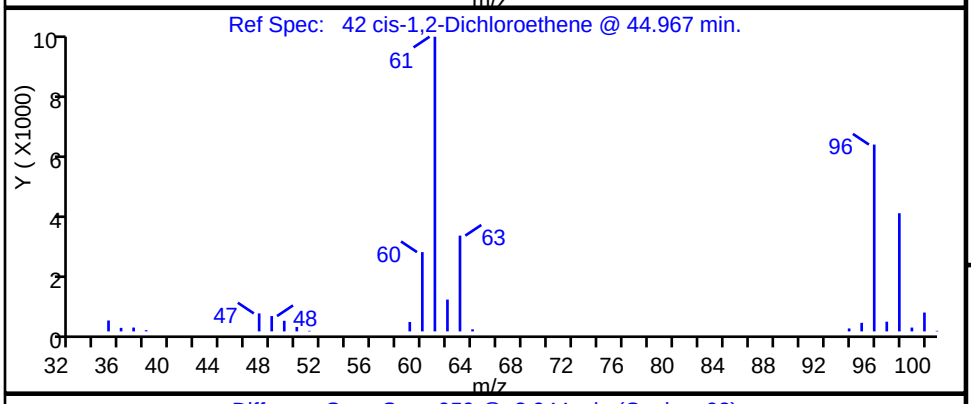
42 cis-1,2-Dichloroethene, CAS: 156-59-2

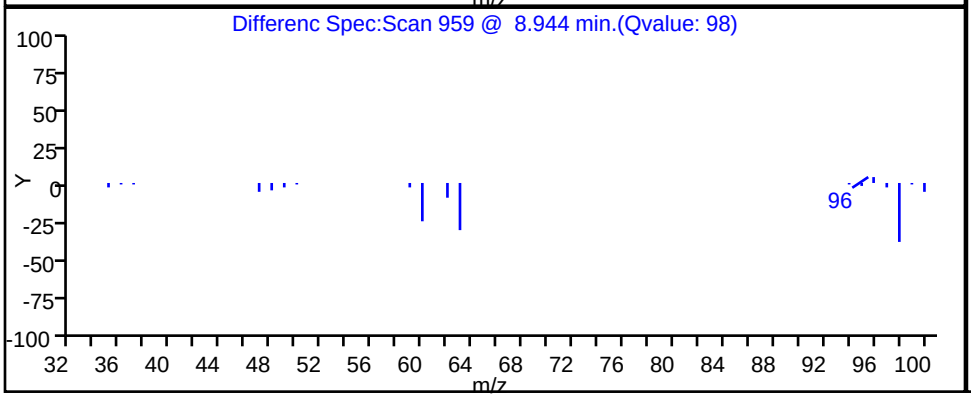


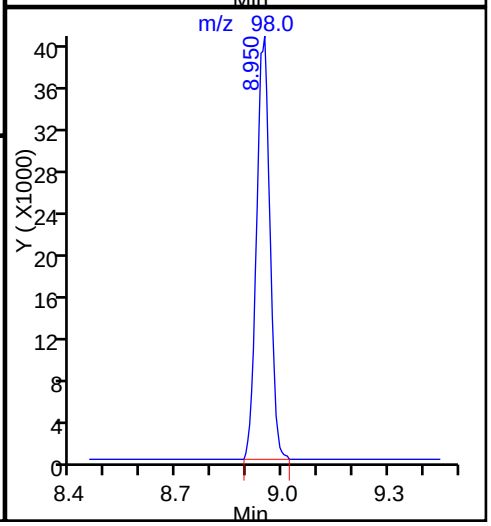








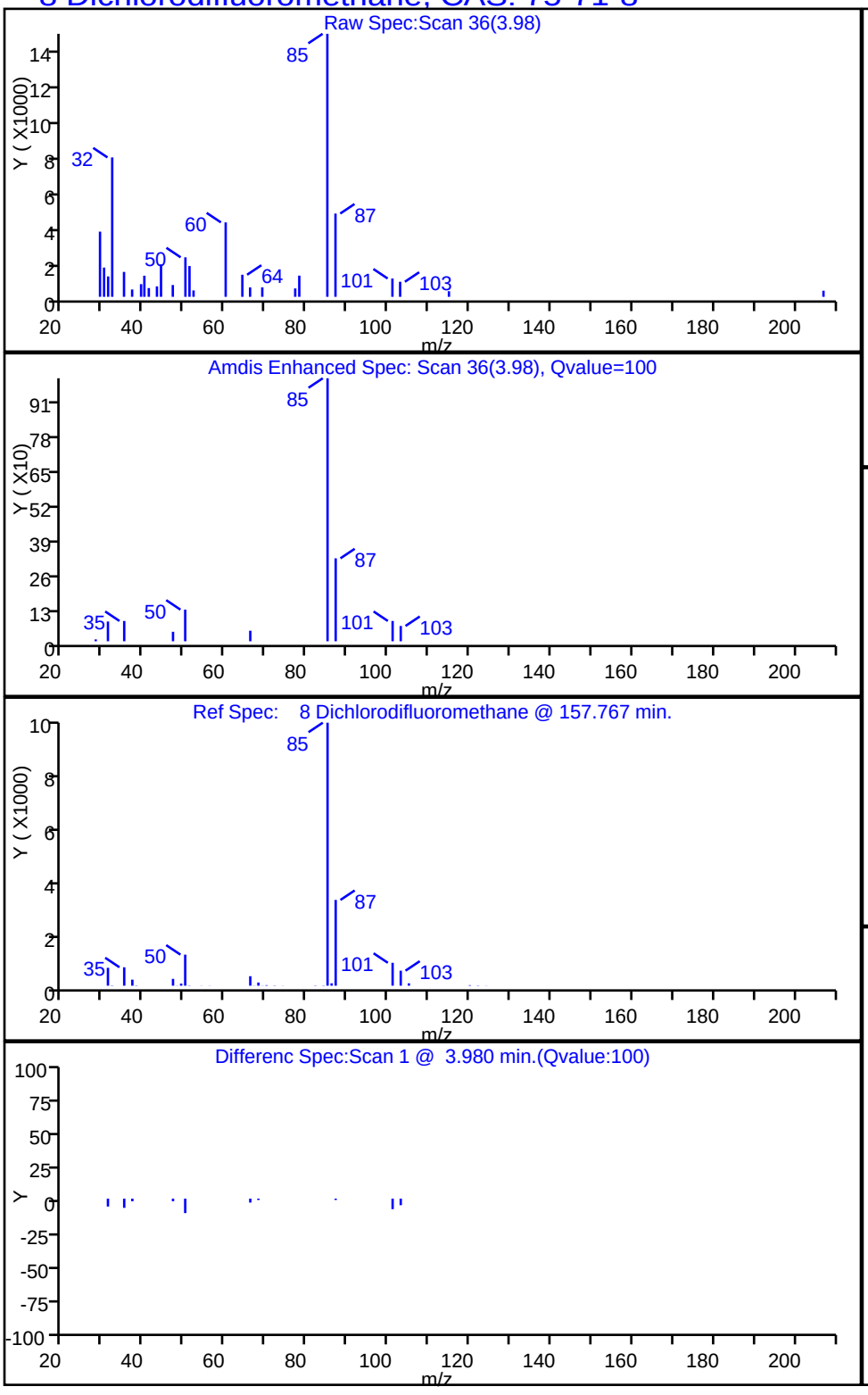


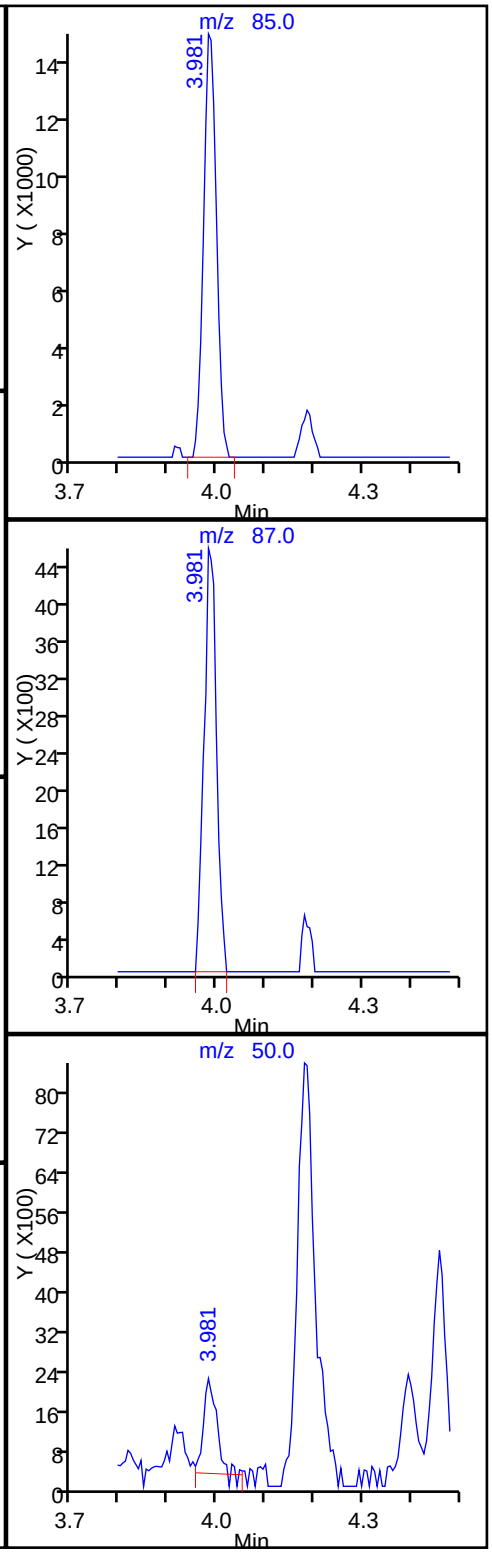


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P109.D		
Injection Date:	07-Nov-2016 23:54:30	Instrument ID:	MJ
Lims ID:	140-6285-A-4	Lab Sample ID:	140-6285-4
Client ID:	A-EFFLUENT		
Operator ID:	7126	ALS Bottle#:	9 Worklist Smp#: 18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8

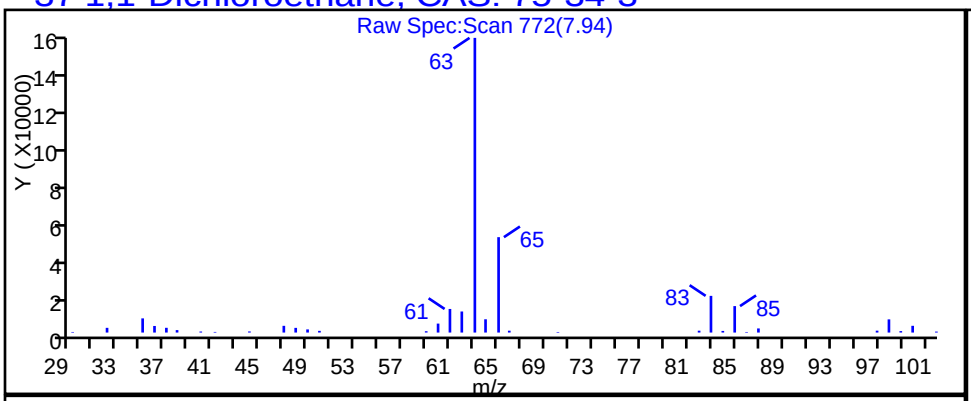


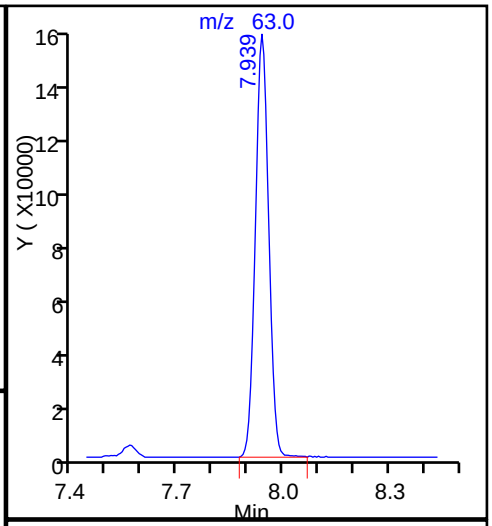


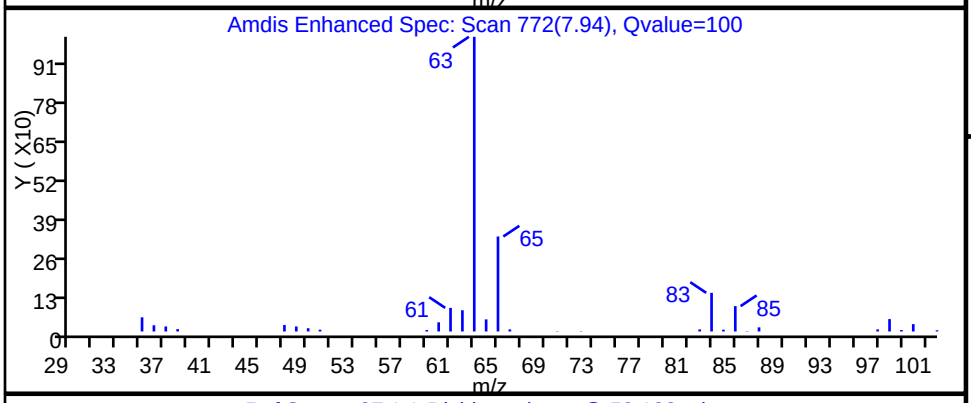
TestAmerica Knoxville

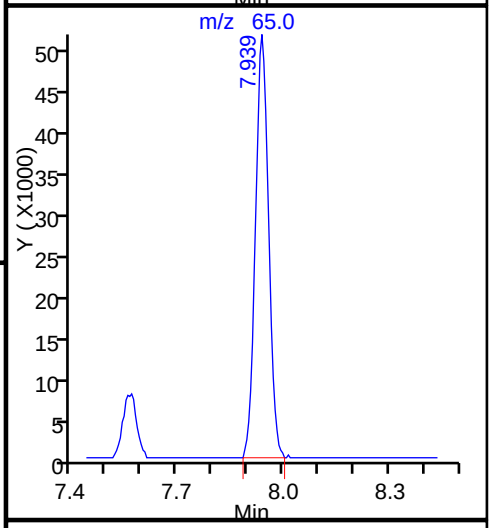
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P109.D				
Injection Date:	07-Nov-2016 23:54:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-4	Lab Sample ID:	140-6285-4		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

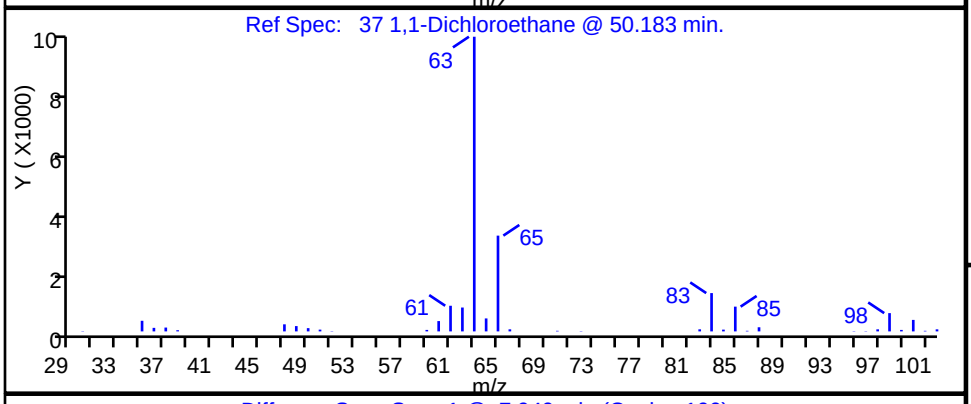
37 1,1-Dichloroethane, CAS: 75-34-3

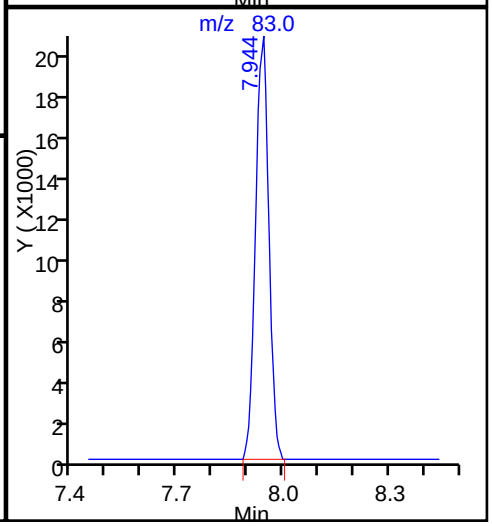


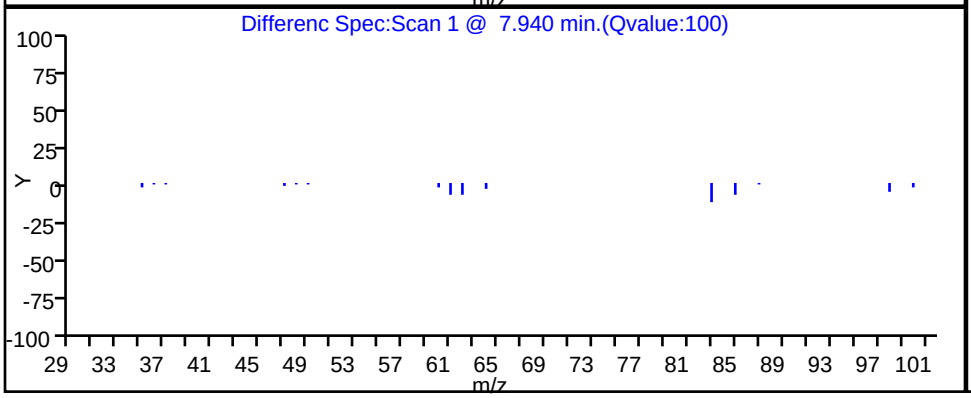










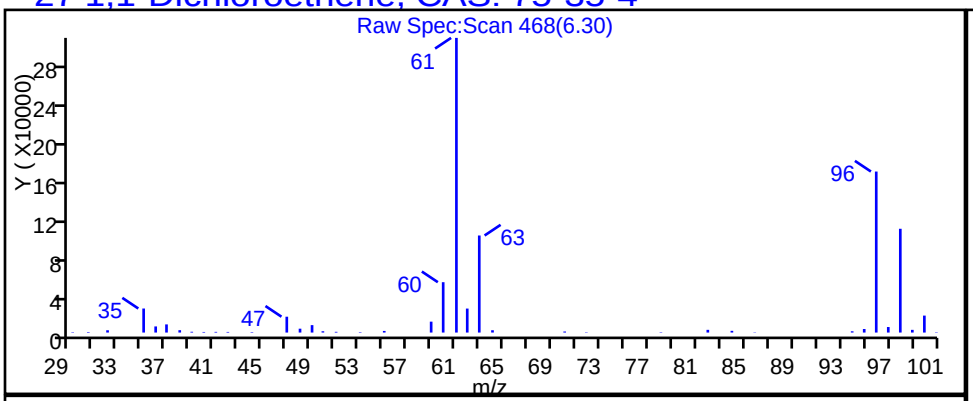


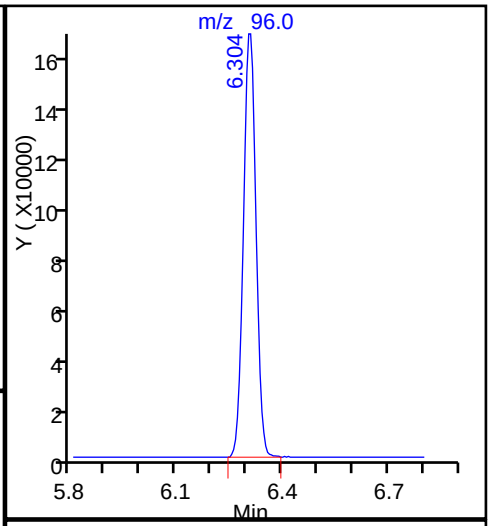
TestAmerica Knoxville

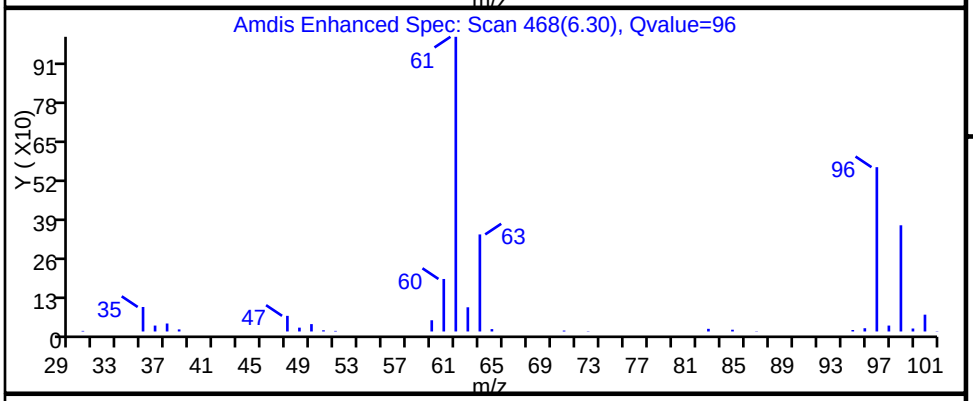
Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P109.D

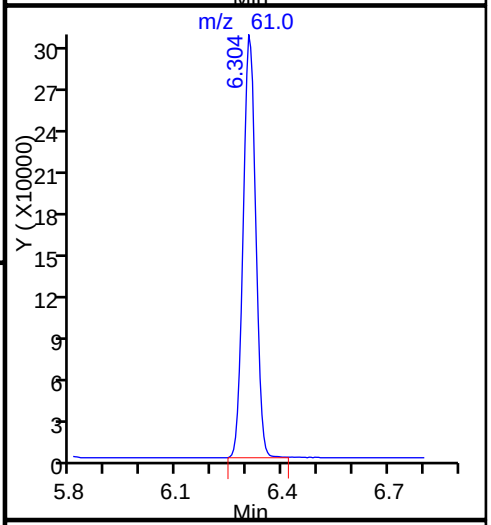
Injection Date:	07-Nov-2016 23:54:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-4	Lab Sample ID:	140-6285-4		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

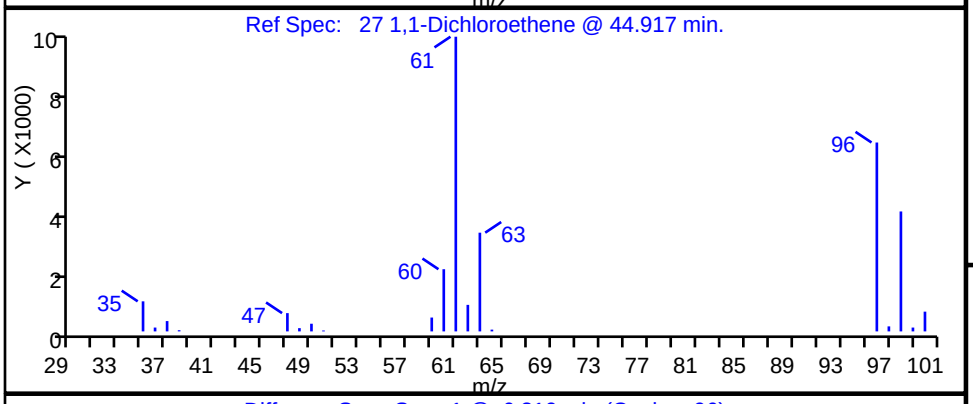
27 1,1-Dichloroethene, CAS: 75-35-4

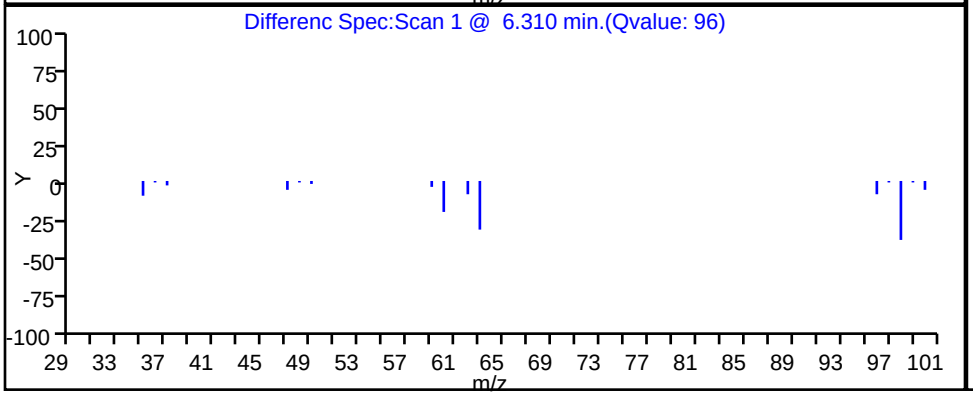


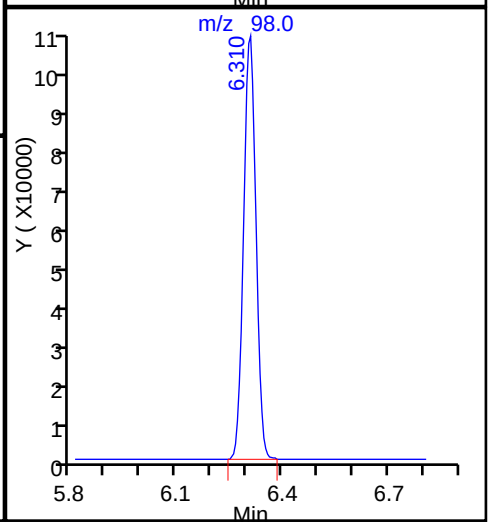








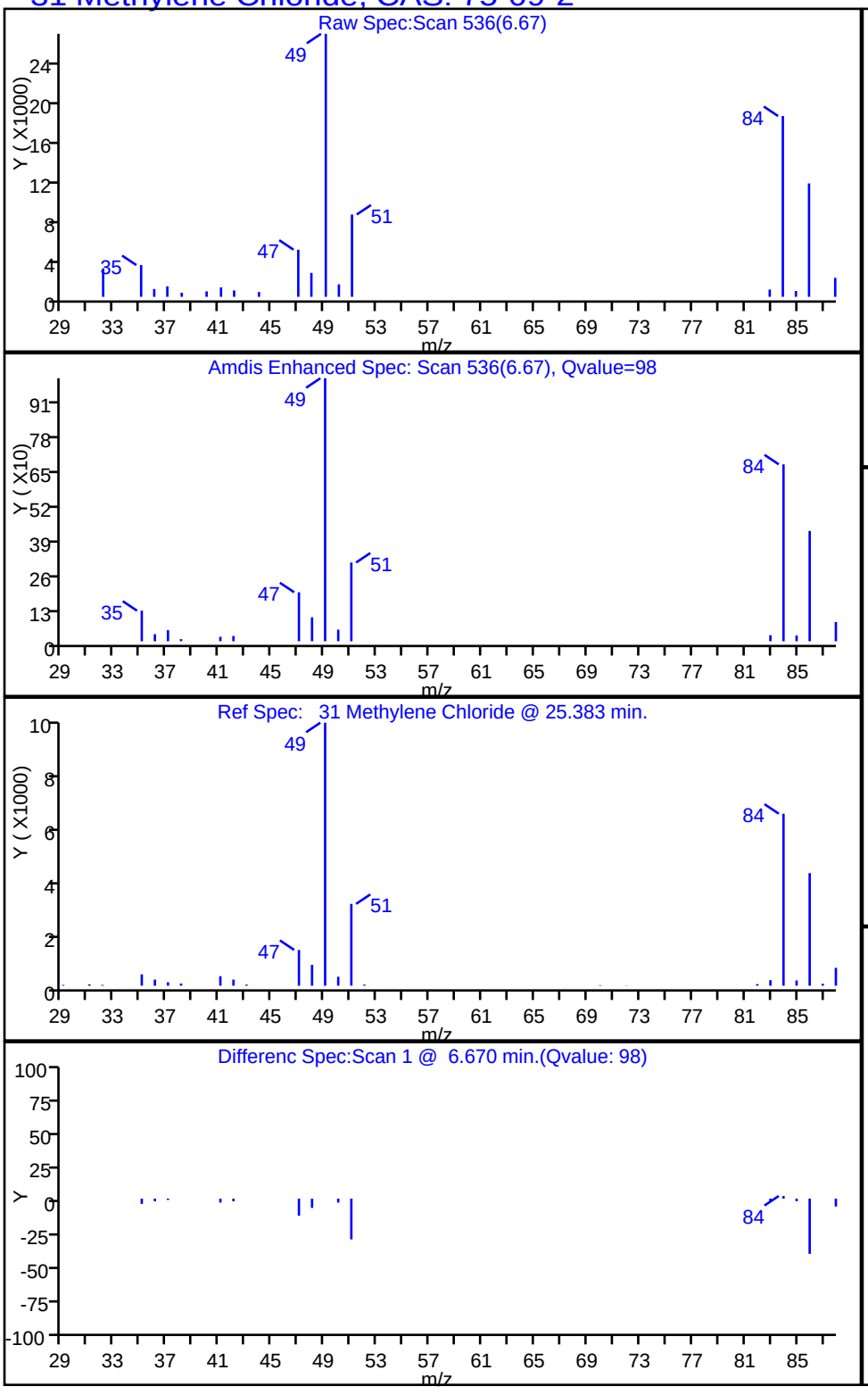


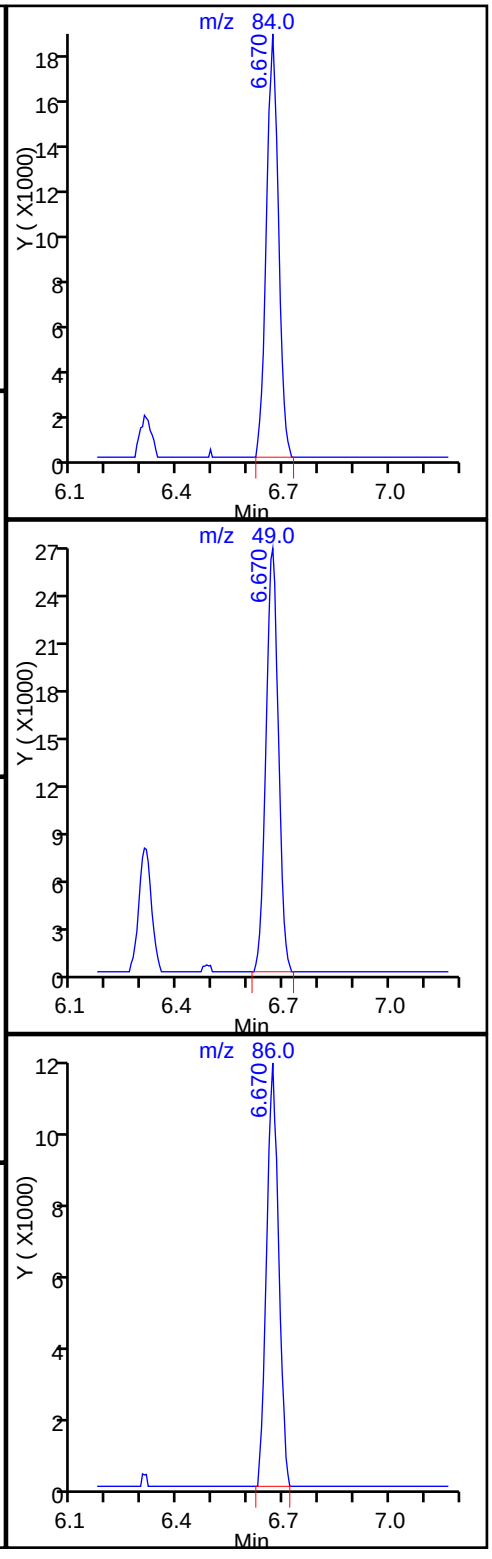


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P109.D		
Injection Date:	07-Nov-2016 23:54:30	Instrument ID:	MJ
Lims ID:	140-6285-A-4	Lab Sample ID:	140-6285-4
Client ID:	A-EFFLUENT		
Operator ID:	7126	ALS Bottle#:	9 Worklist Smp#: 18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

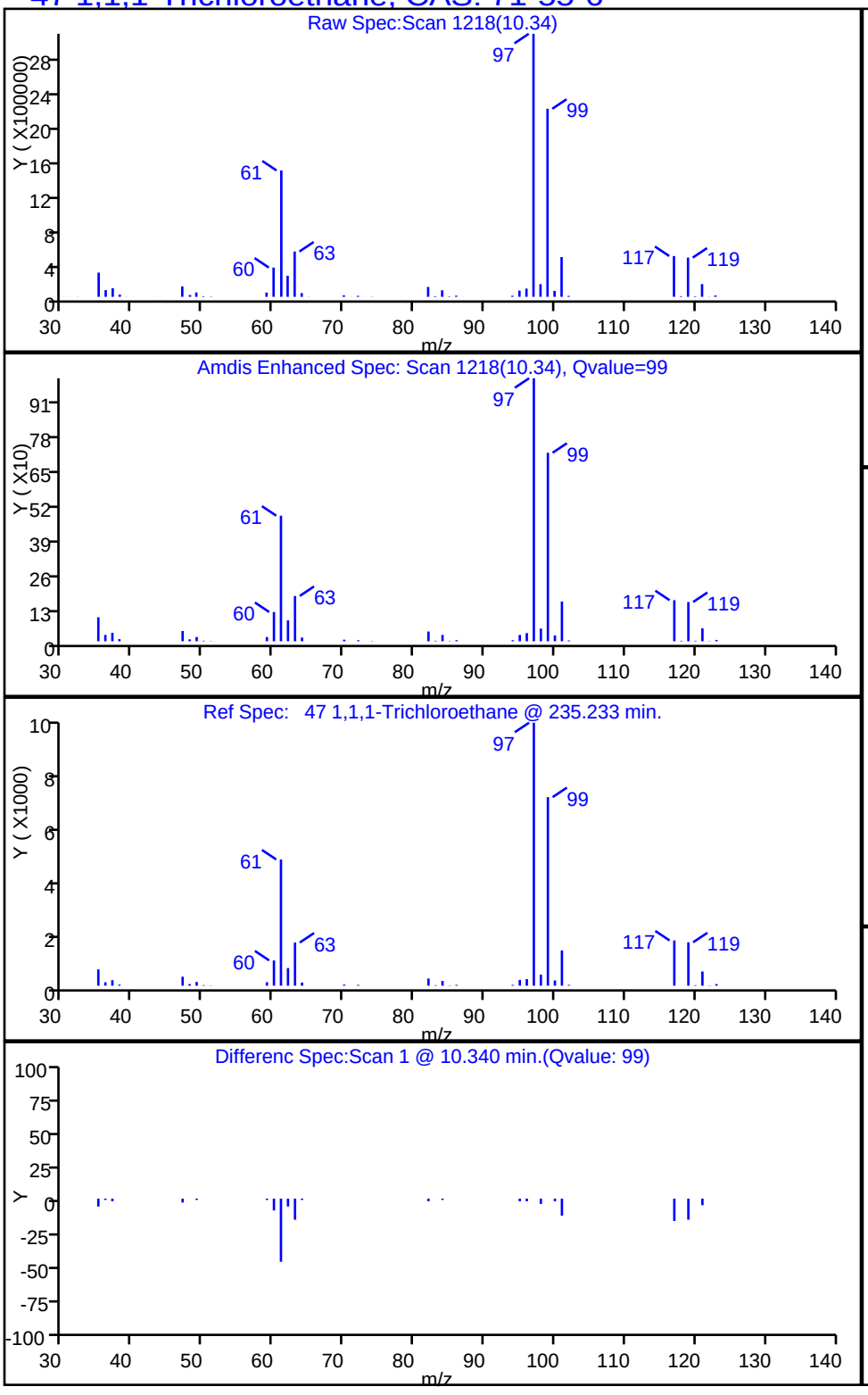
31 Methylene Chloride, CAS: 75-09-2

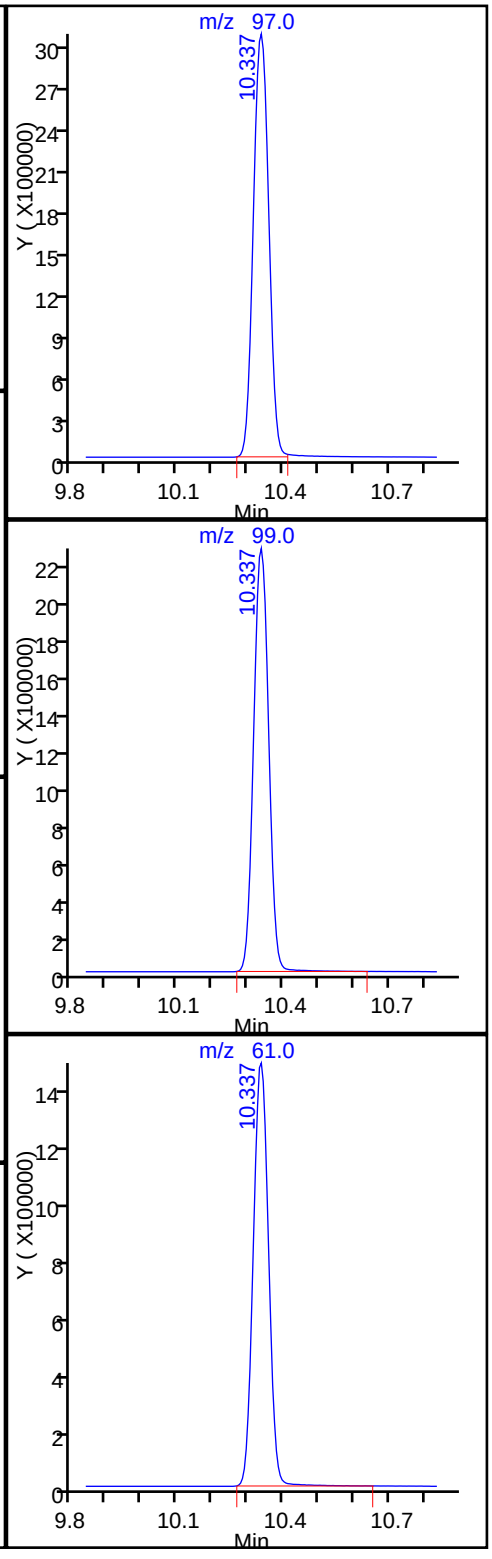




Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P109.D
Injection Date: 07-Nov-2016 23:54:30 Instrument ID: MJ
Lims ID: 140-6285-A-4 Lab Sample ID: 140-6285-4
Client ID: A-EFFLUENT
Operator ID: 7126 ALS Bottle#: 9 Worklist Smp#: 18
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

47 1,1,1-Trichloroethane, CAS: 71-55-6

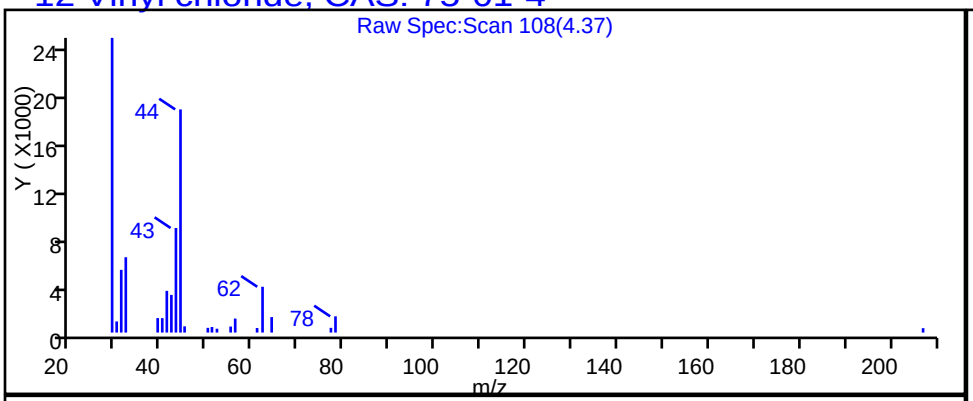


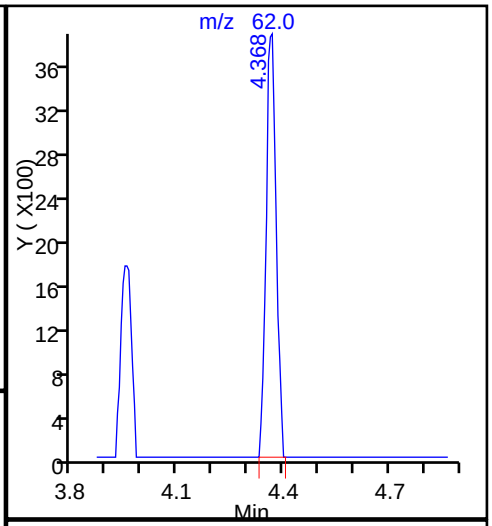


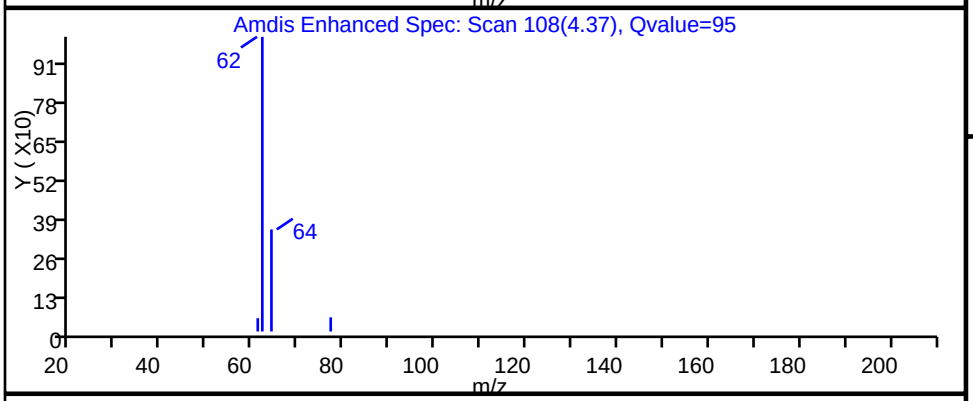
TestAmerica Knoxville

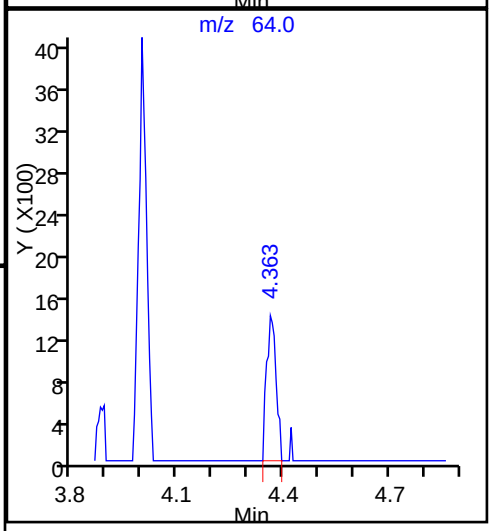
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P109.D		
Injection Date:	07-Nov-2016 23:54:30	Instrument ID:	MJ
Lims ID:	140-6285-A-4	Lab Sample ID:	140-6285-4
Client ID:	A-EFFLUENT		
Operator ID:	7126	ALS Bottle#:	9 Worklist Smp#: 18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

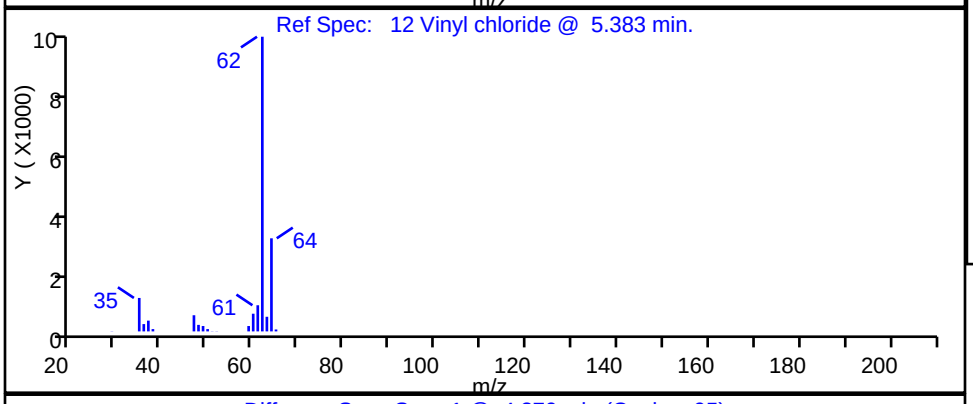
12 Vinyl chloride, CAS: 75-01-4

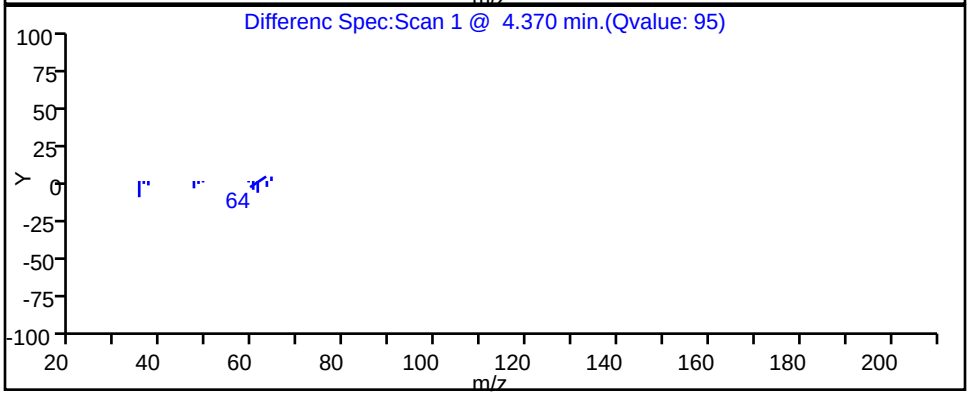












FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Client Sample ID: A-EFFLUENT DL Lab Sample ID: 140-6285-4 DL

Matrix: Air Lab File ID: RK08P103.D

Analysis Method: TO 15 LL Date Collected: 11/03/2016 12:35

Sample wt/vol: 10(mL) Date Analyzed: 11/08/2016 16:26

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7105 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	133.41	290		4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Client Sample ID: A-EFFLUENT DL Lab Sample ID: 140-6285-4 DL

Matrix: Air Lab File ID: RK08P103.D

Analysis Method: TO 15 LL Date Collected: 11/03/2016 12:35

Sample wt/vol: 10(mL) Date Analyzed: 11/08/2016 16:26

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7105 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	133.41	1600		22	3.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\RK08P103.D
Lims ID: 140-6285-A-4
Client ID: A-EFFLUENT
Sample Type: Client
Inject. Date: 08-Nov-2016 16:26:30 ALS Bottle#: 3 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003605-008
Misc. Info.: 140-6285-a-4
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 09-Nov-2016 10:05:59 Calib Date: 10-Oct-2016 00:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 08-Nov-2016 18:55:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.236	8.247	-0.011	98	229970	4.00	
* 2 1,4-Difluorobenzene	114	10.410	10.415	-0.005	96	1116176	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.300	15.306	-0.006	89	1016538	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.994	16.994	0.000	87	643475	3.39	
7 Chlorodifluoromethane	67	3.707	3.718	-0.011	24	613	0.0254	
27 1,1-Dichloroethene	96	5.627	5.637	-0.010	95	48859	0.6019	
31 Methylene Chloride	84	5.912	5.934	-0.022	97	7744	0.0985	
37 1,1-Dichloroethane	63	7.023	7.039	-0.016	99	43190	0.2742	
42 cis-1,2-Dichloroethene	96	7.940	7.951	-0.011	98	17419	0.2080	
47 1,1,1-Trichloroethane	97	9.256	9.267	-0.010	95	938144	5.71	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

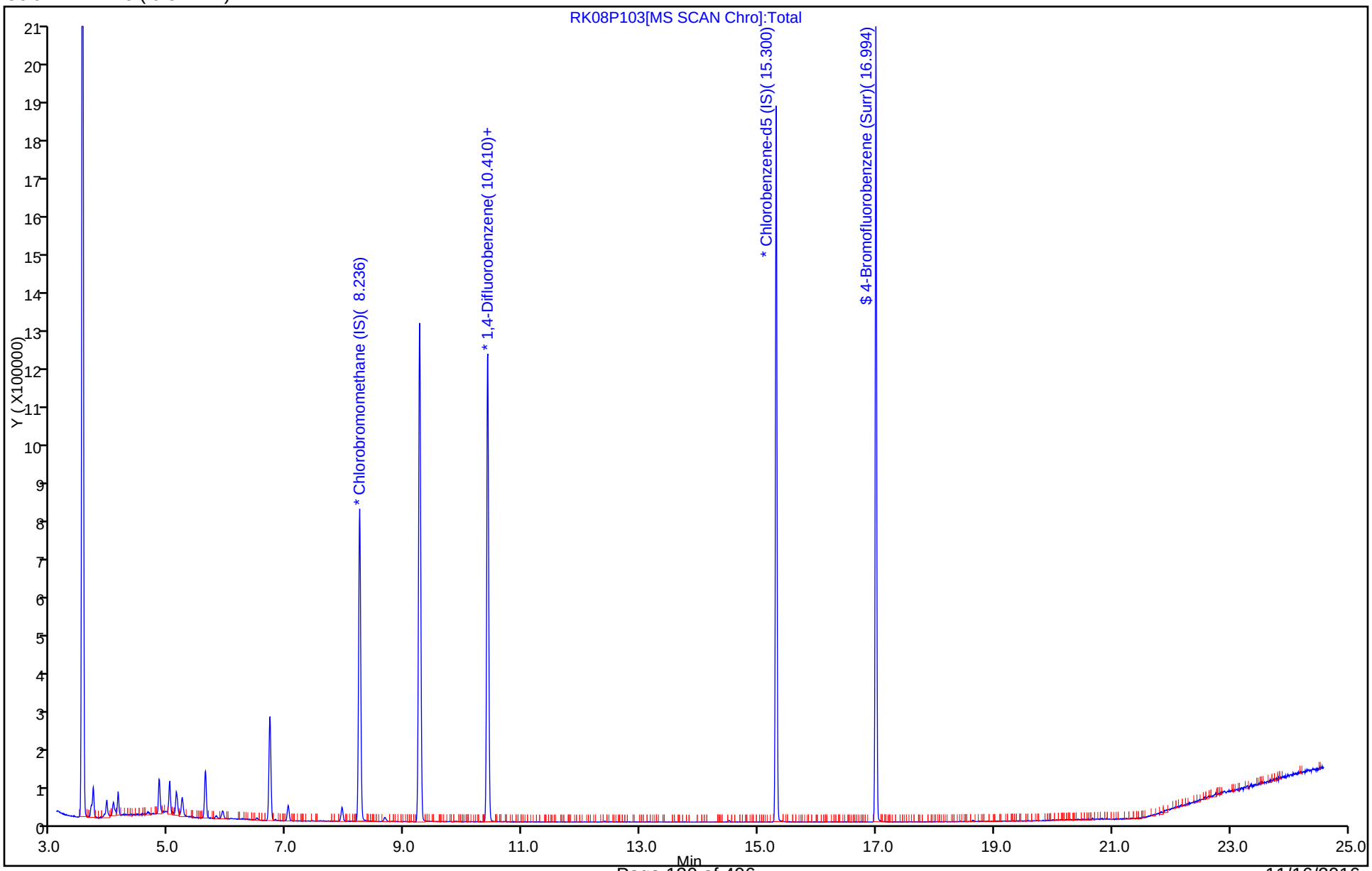
Report Date: 09-Nov-2016 10:06:53 Chrom Revision: 2.2 17-Oct-2016 09:27:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\RK08P103.D

Injection Date:	08-Nov-2016 16:26:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-6285-A-4	Lab Sample ID:	140-6285-4	Worklist Smp#:	8
Client ID:	A-EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\RK08P103.D				
Lims ID:	140-6285-A-4				
Client ID:	A-EFFLUENT				
Sample Type:	Client				
Inject. Date:	08-Nov-2016 16:26:30	ALS Bottle#:	3	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003605-008				
Misc. Info.:	140-6285-a-4				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	09-Nov-2016 10:05:59	Calib Date:	10-Oct-2016 00:36:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: barlozhetskayaa		Date:	08-Nov-2016 18:55:12		

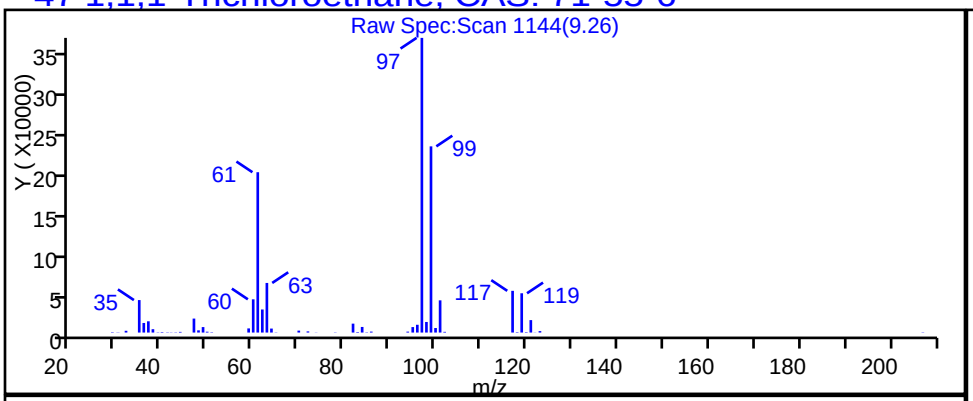
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.39	84.73

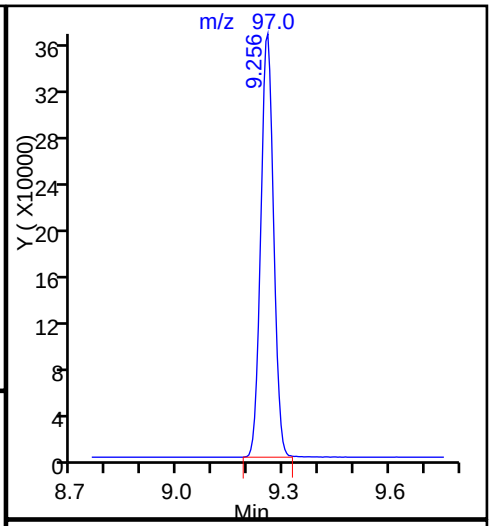
TestAmerica Knoxville

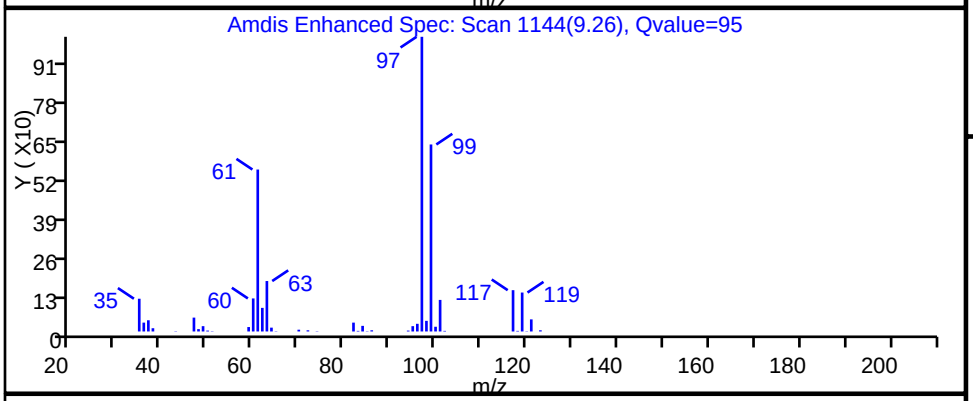
Data File: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\RK08P103.D

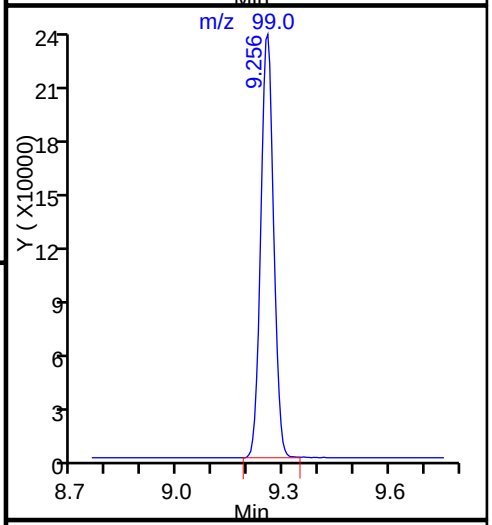
Injection Date:	08-Nov-2016 16:26:30	Instrument ID:	MR		
Lims ID:	140-6285-A-4	Lab Sample ID:	140-6285-4		
Client ID:	A-EFFLUENT				
Operator ID:		ALS Bottle#:	3	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

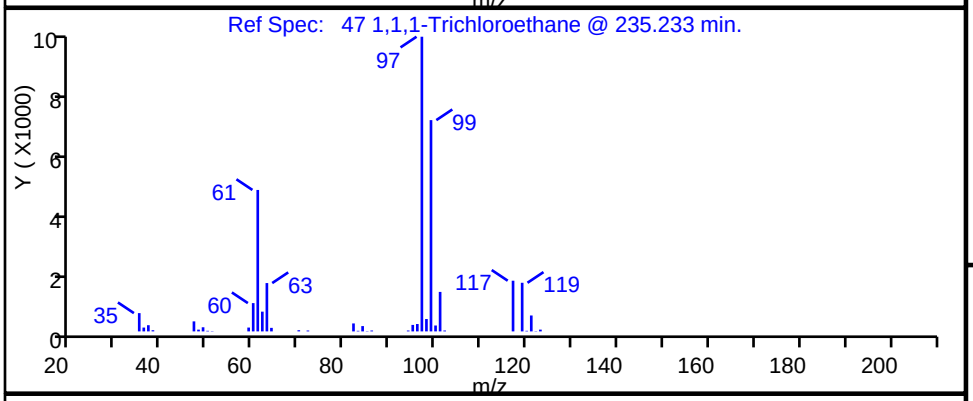
47 1,1,1-Trichloroethane, CAS: 71-55-6

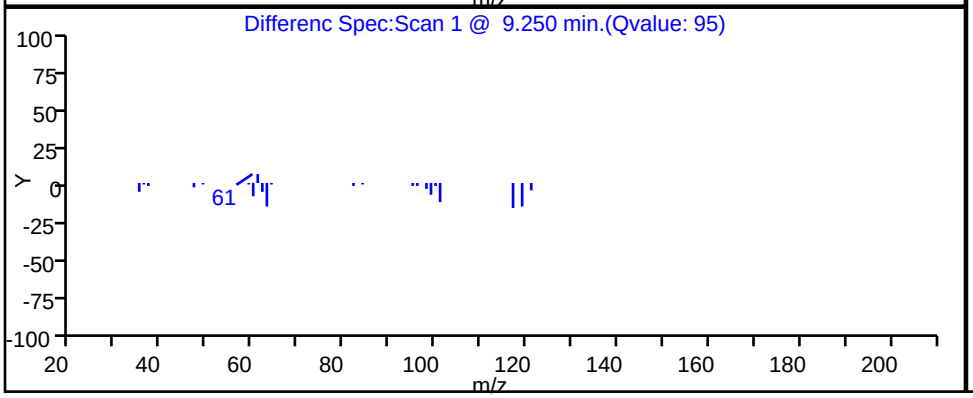


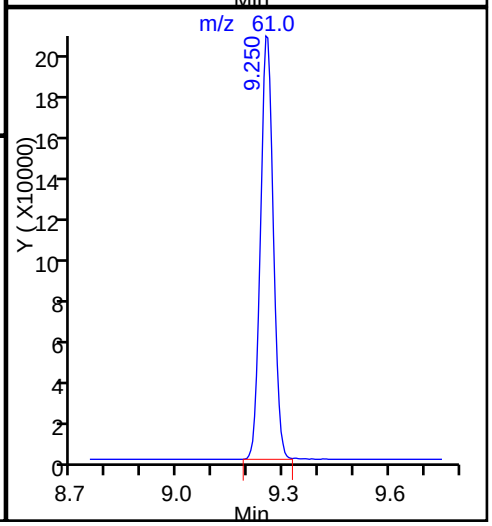












FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6285-1

SDG No.:

Client Sample ID: A-MID-GAC | Lab Sample ID: 140-6285-5

Matrix: Air | Lab File ID: JK07P110.D

Analysis Method: TO 15 LL | Date Collected: 11/03/2016 12:37

Sample wt/vol: 100(mL) | Date Analyzed: 11/08/2016 00:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7085 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	13		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.49		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.99		0.40	0.075
67-66-3	Chloroform	119.38	2.5		0.40	0.075
156-59-2	*cis-1,2-Dichloroethene*	*96.94*	*130*	*E*	*0.40*	*0.12*
75-71-8	Dichlorodifluoromethane	120.91	0.58		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	30		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	1.6		0.40	0.095
75-35-4	*1,1-Dichloroethene*	*96.94*	*89*	*E*	*0.40*	*0.070*
100-41-4	Ethylbenzene	106.17	0.17	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	3.7		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.5		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	2.0		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	*1,1,1-Trichloroethane*	*133.41*	*530*	*E*	*0.40*	*0.060*
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	16		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.17	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	0.49		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.84		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Client Sample ID: A-MID-GAC Lab Sample ID: 140-6285-5

Matrix: Air Lab File ID: JK07P110.D

Analysis Method: TO 15 LL Date Collected: 11/03/2016 12:37

Sample wt/vol: 100(mL) Date Analyzed: 11/08/2016 00:48

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7085 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	42		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	3.1		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.5		1.4	0.27
67-66-3	Chloroform	119.38	12		2.0	0.37
156-59-2	*cis-1,2-Dichloroethene*	*96.94*	*500*	*E*	*1.6*	*0.48*
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	120		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	6.3		1.6	0.38
75-35-4	*1,1-Dichloroethene*	*96.94*	*350*	*E*	*1.6*	*0.28*
100-41-4	Ethylbenzene	106.17	0.74	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	13		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.6		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	7.8		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	*1,1,1-Trichloroethane*	*133.41*	*2900*	*E*	*2.2*	*0.33*
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	84		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.84	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	1.2		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P110.D
Lims ID: 140-6285-A-5
Client ID: A-MID-GAC
Sample Type: Client
Inject. Date: 08-Nov-2016 00:48:30 ALS Bottle#: 10 Worklist Smp#: 19
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003595-019
Misc. Info.: 140-6285-a-5
Operator ID: 7126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 08-Nov-2016 10:14:16 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: tajh Date: 08-Nov-2016 10:10:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.287	9.290	-0.003	97	209654	4.00	
* 2 1,4-Difluorobenzene	114	11.449	11.446	0.003	96	976452	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.122	16.125	-0.003	91	783941	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.751	17.749	0.002	92	480552	4.07	
6 Chlorodifluoromethane	67	3.920	3.918	0.002	96	4231	0.1982	
8 Dichlorodifluoromethane	85	3.985	3.983	0.002	99	24038	0.1165	
12 Vinyl chloride	62	4.367	4.364	0.003	95	6929	0.0973	
27 1,1-Dichloroethene	96	6.308	6.306	0.002	98	1176230	17.9	E
31 Methylene Chloride	84	6.668	6.671	-0.003	99	49313	0.7403	
34 trans-1,2-Dichloroethene	96	7.507	7.510	-0.003	95	25589	0.3941	
37 1,1-Dichloroethane	63	7.943	7.940	0.003	100	718320	5.97	
42 cis-1,2-Dichloroethene	96	8.948	8.946	0.002	95	1626005	25.4	E
44 Chloroform	83	9.292	9.295	-0.003	56	65040	0.4934	
47 1,1,1-Trichloroethane	97	10.341	10.339	0.002	98	14240346	105.2	E
48 1,2-Dichloroethane	62	10.454	10.446	0.008	95	26017	0.3110	
51 Benzene	78	10.927	10.925	0.002	98	476751	2.64	
52 Carbon tetrachloride	117	10.949	10.946	0.003	96	13652	0.0985	
59 Trichloroethene	130	12.153	12.151	0.002	92	226005	3.12	
68 Toluene	91	14.170	14.173	-0.003	92	51430	0.2992	
79 Ethylbenzene	91	16.455	16.453	0.002	96	6443	0.0339	
81 m-Xylene & p-Xylene	91	16.606	16.614	-0.008	98	17857	0.1257	
85 o-Xylene	91	17.138	17.136	0.002	95	6618	0.0425	
96 1,2,4-Trimethylbenzene	105	18.875	18.878	-0.003	94	4907	0.0343	
S 126 Xylenes, Total	100				0		0.1682	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

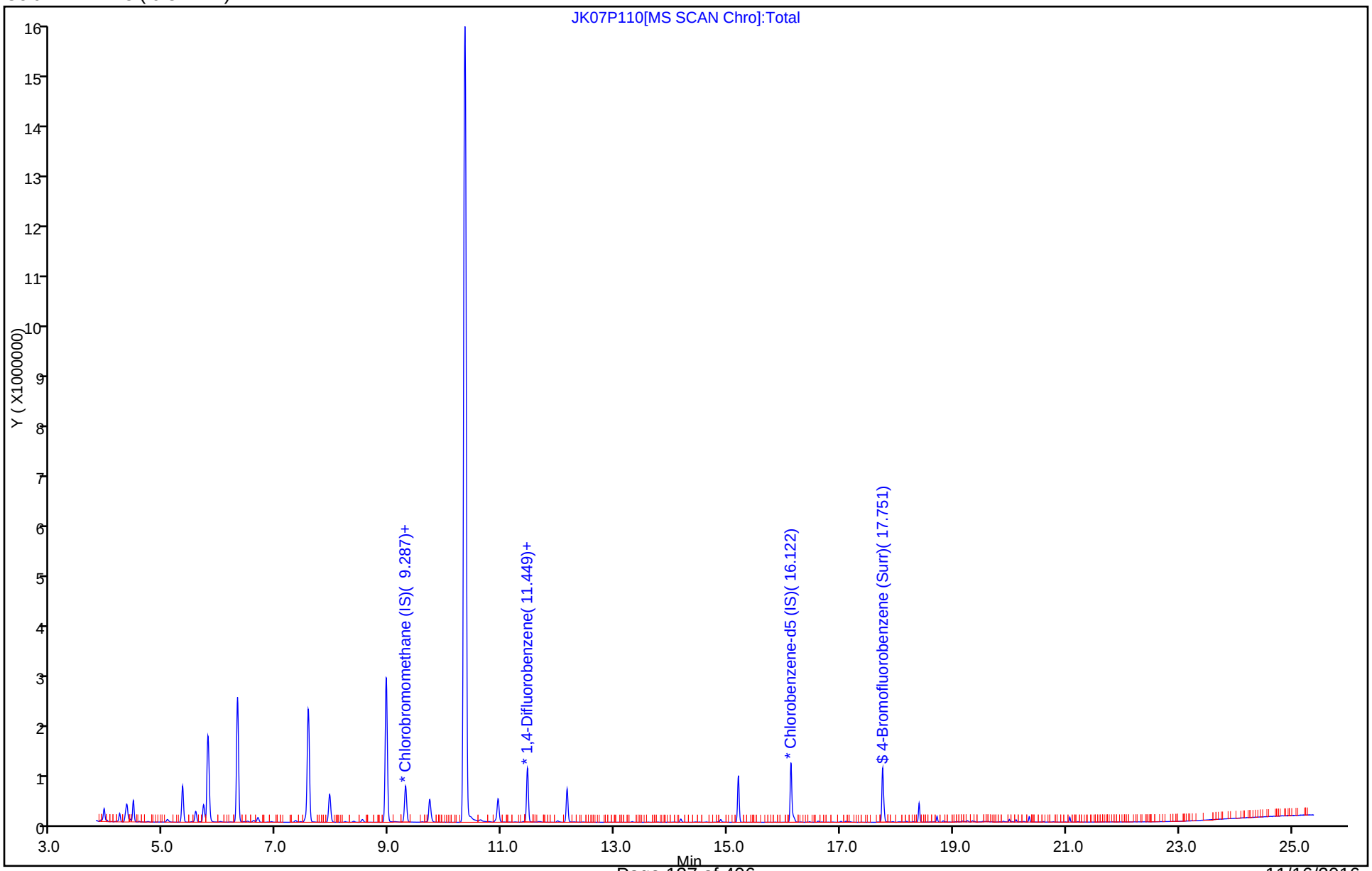
Report Date: 08-Nov-2016 10:14:55 Chrom Revision: 2.2 17-Oct-2016 09:27:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P110.D

Injection Date:	08-Nov-2016 00:48:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-6285-A-5	Lab Sample ID:	140-6285-5	Worklist Smp#:	19
Client ID:	A-MID-GAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P110.D				
Lims ID:	140-6285-A-5				
Client ID:	A-MID-GAC				
Sample Type:	Client				
Inject. Date:	08-Nov-2016 00:48:30	ALS Bottle#:	10	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003595-019				
Misc. Info.:	140-6285-a-5				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	08-Nov-2016 10:14:16	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				

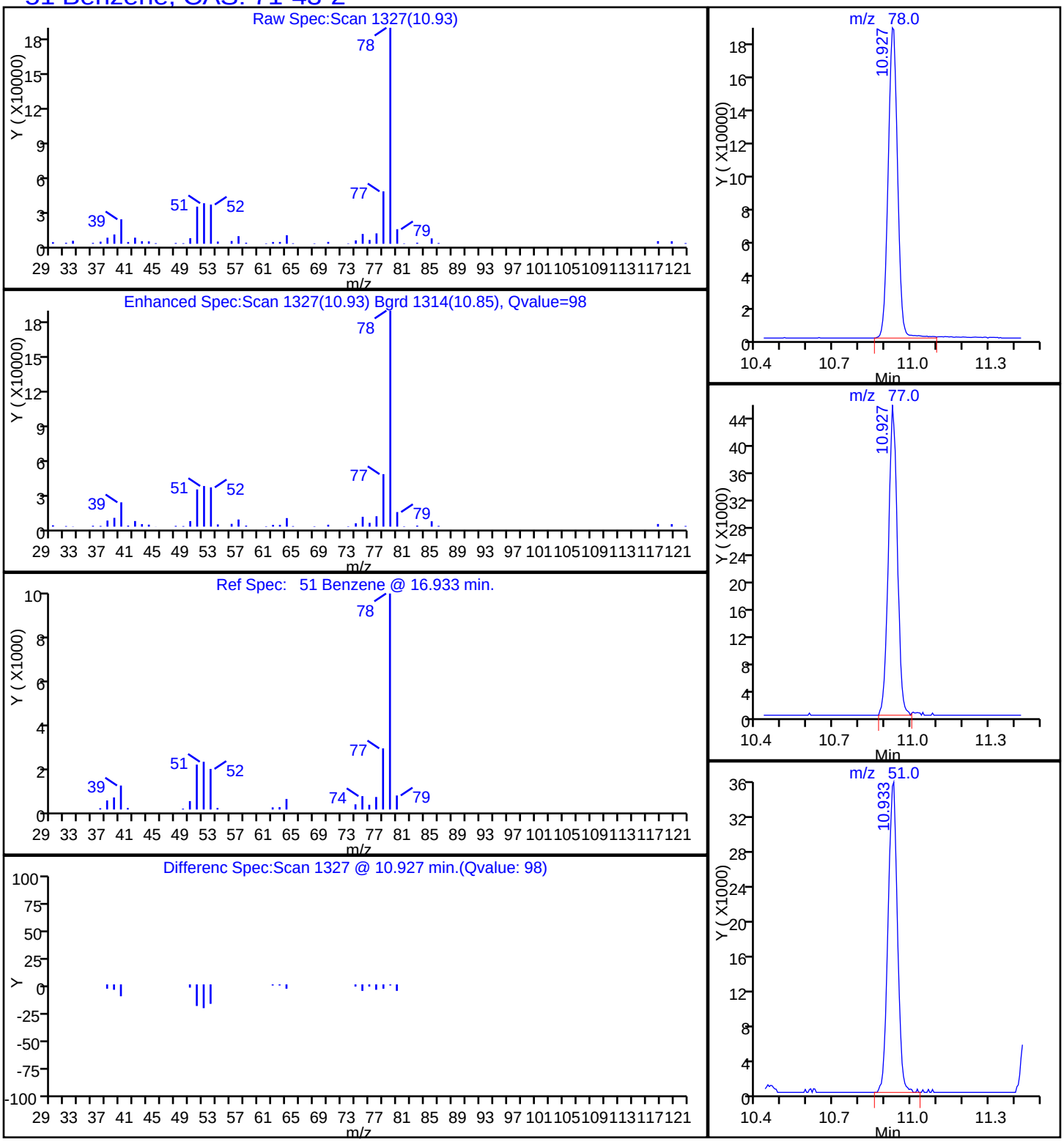
First Level Reviewer: tajh Date: 08-Nov-2016 10:10:54

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.07	101.65

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P110.D				
Injection Date:	08-Nov-2016 00:48:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-5	Lab Sample ID:	140-6285-5		
Client ID:	A-MID-GAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

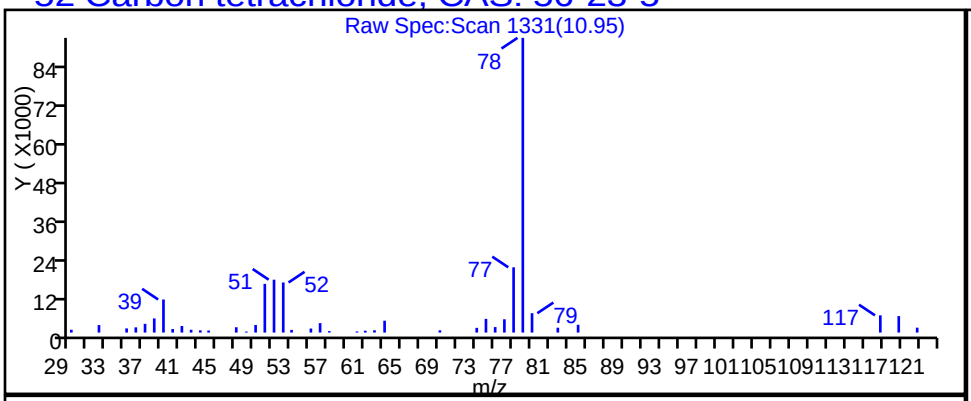
51 Benzene, CAS: 71-43-2

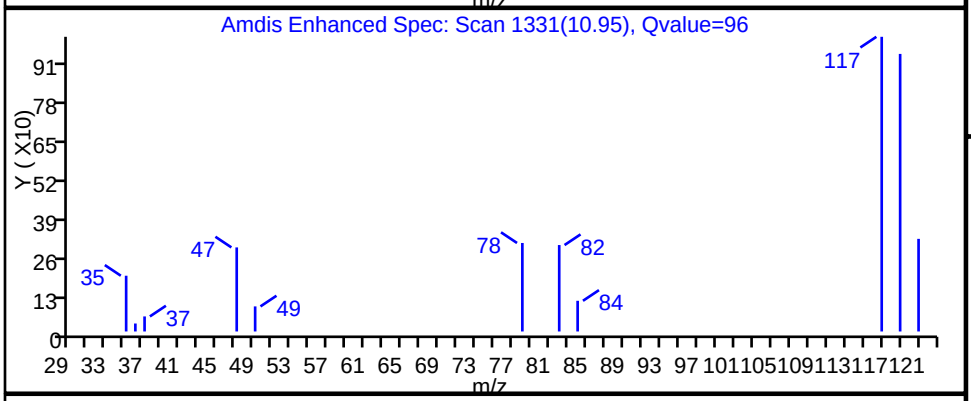


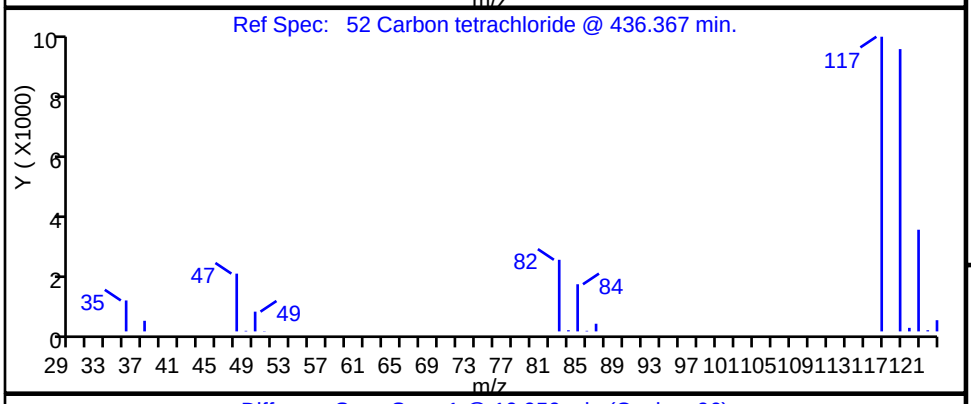
TestAmerica Knoxville

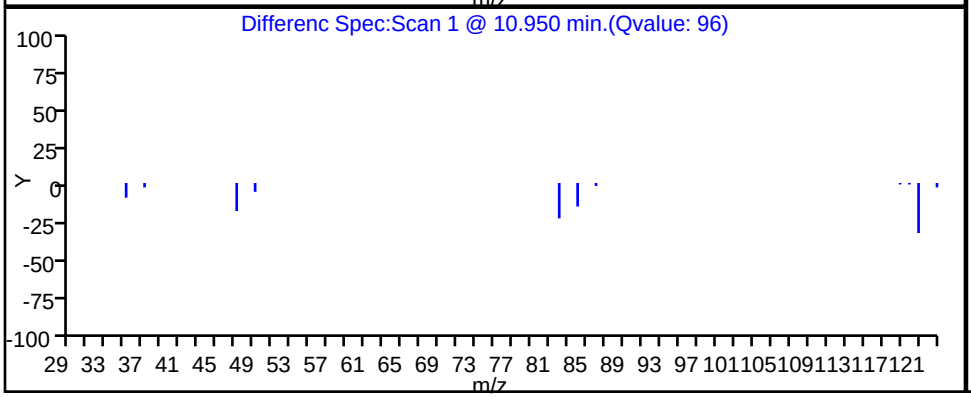
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P110.D				
Injection Date:	08-Nov-2016 00:48:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-5	Lab Sample ID:	140-6285-5		
Client ID:	A-MID-GAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

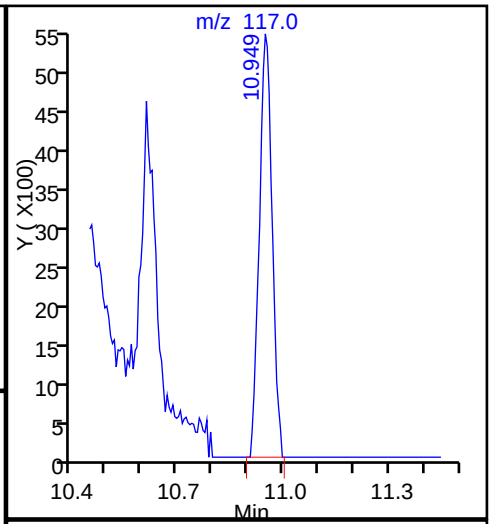
52 Carbon tetrachloride, CAS: 56-23-5

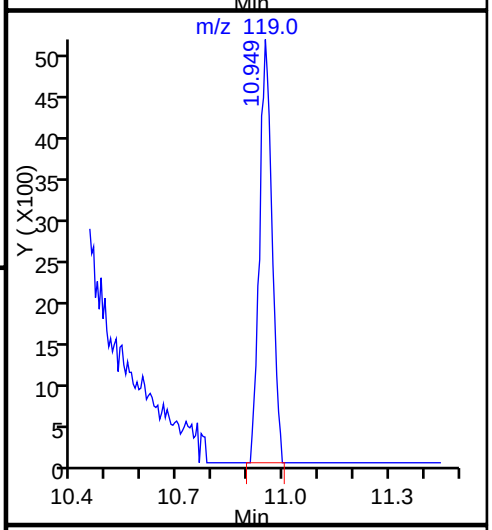


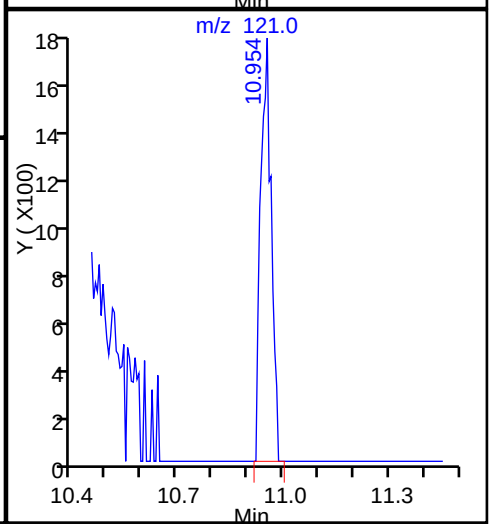








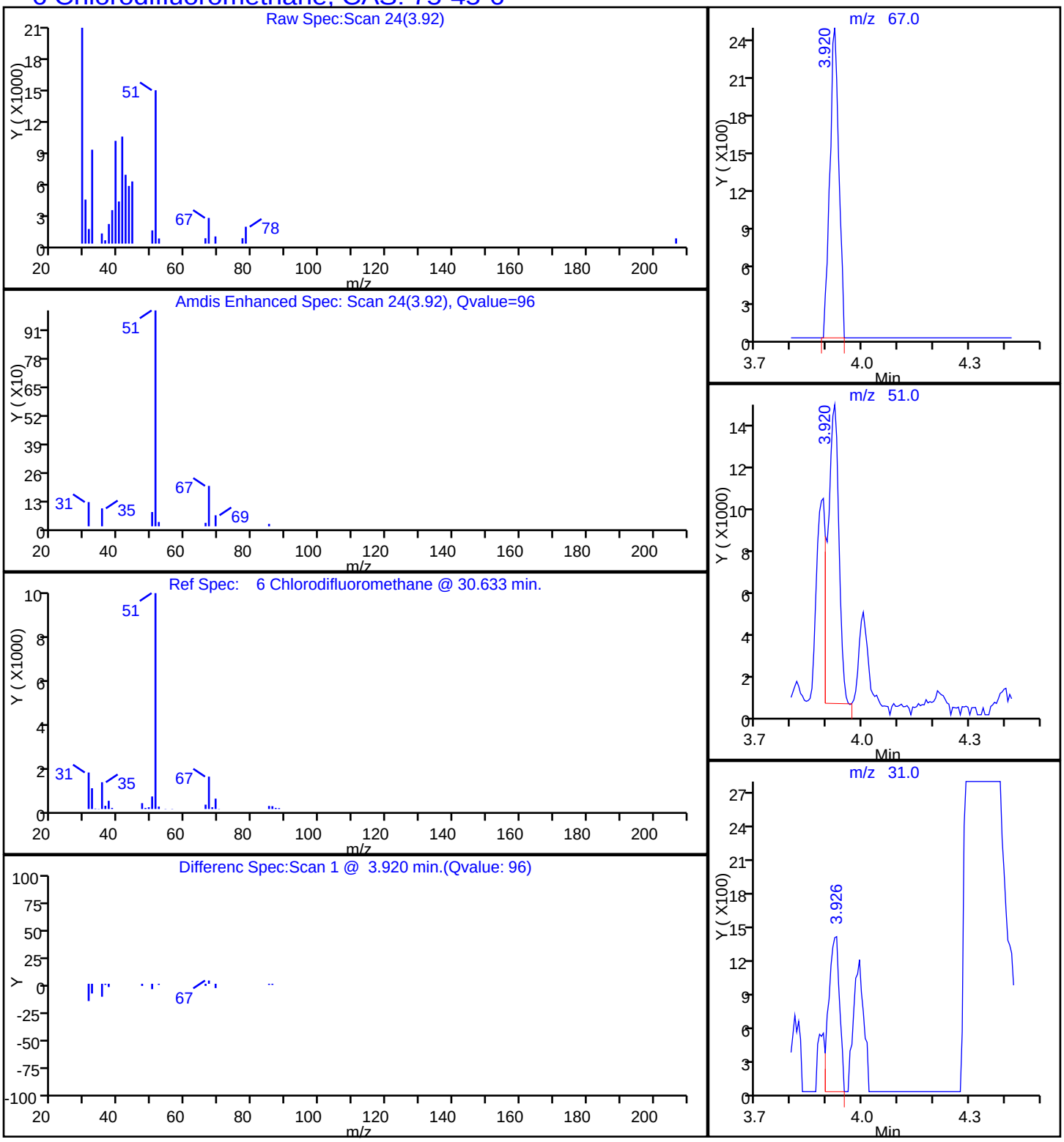




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P110.D				
Injection Date:	08-Nov-2016 00:48:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-5	Lab Sample ID:	140-6285-5		
Client ID:	A-MID-GAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

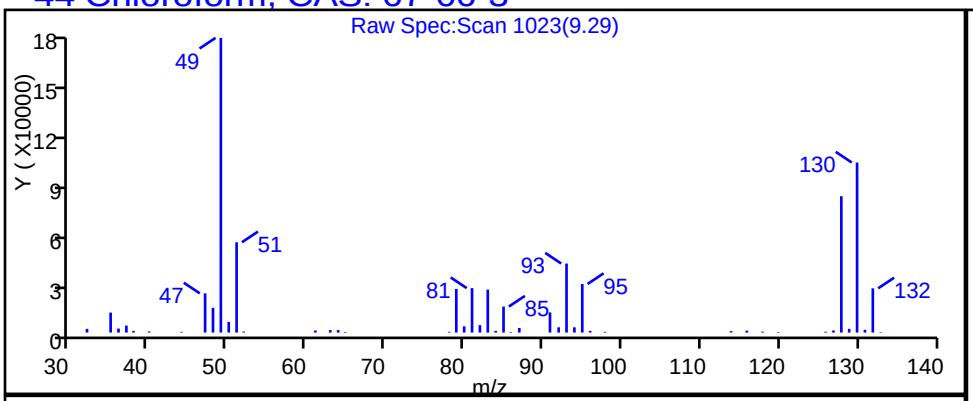
6 Chlorodifluoromethane, CAS: 75-45-6

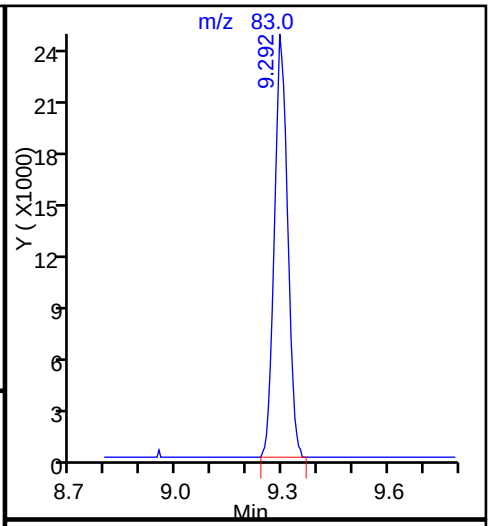


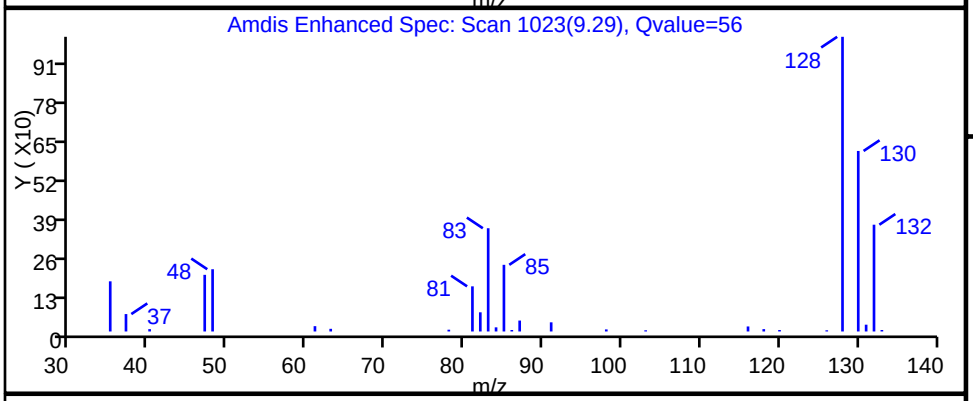
TestAmerica Knoxville

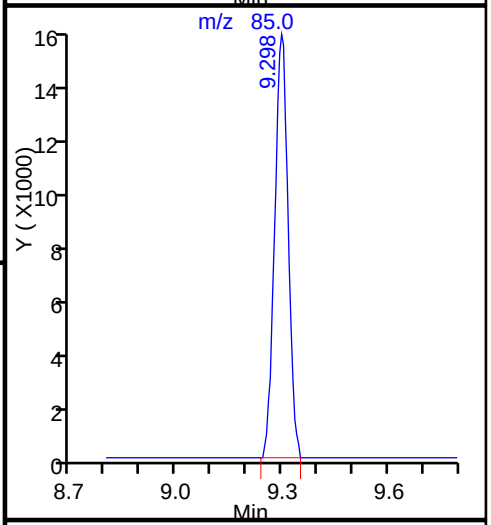
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P110.D		
Injection Date:	08-Nov-2016 00:48:30	Instrument ID:	MJ
Lims ID:	140-6285-A-5	Lab Sample ID:	140-6285-5
Client ID:	A-MID-GAC		
Operator ID:	7126	ALS Bottle#:	10 Worklist Smp#: 19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

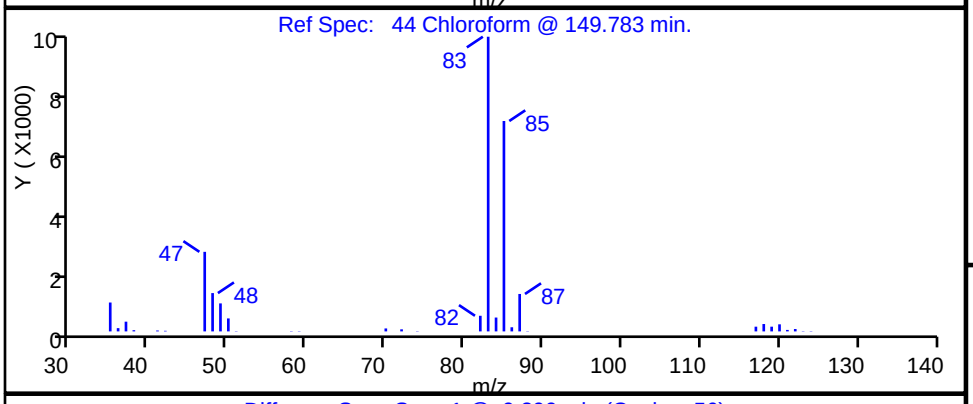
44 Chloroform, CAS: 67-66-3

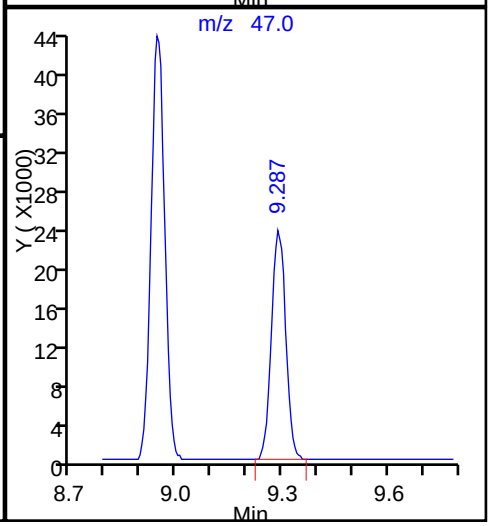


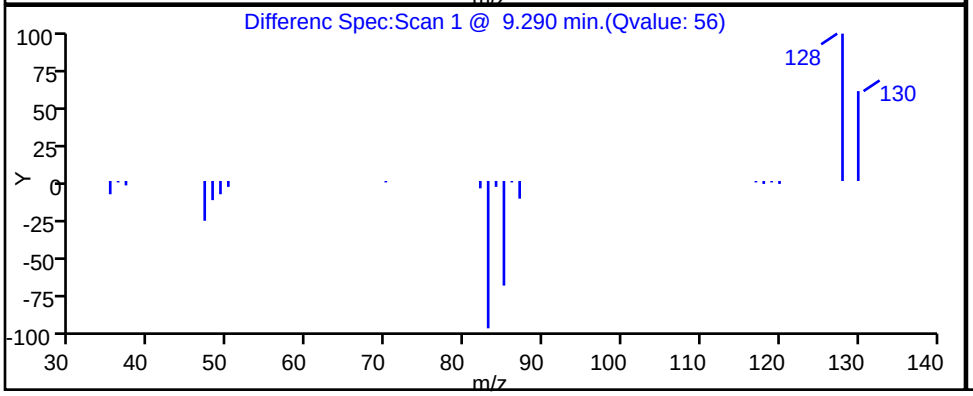








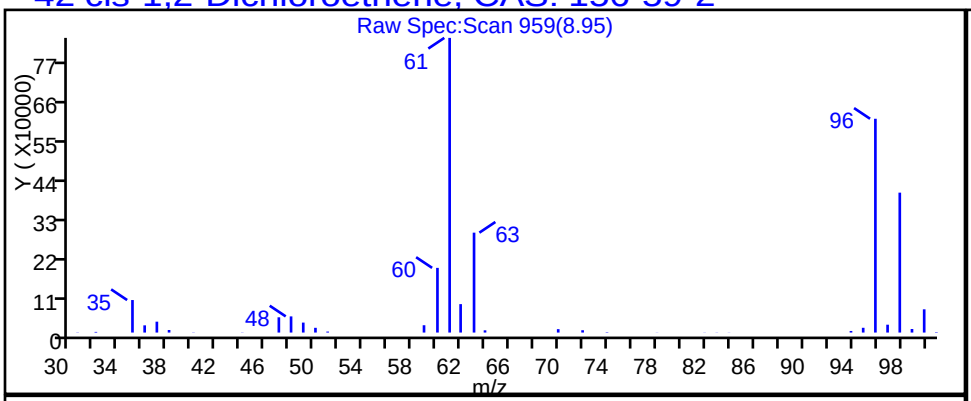


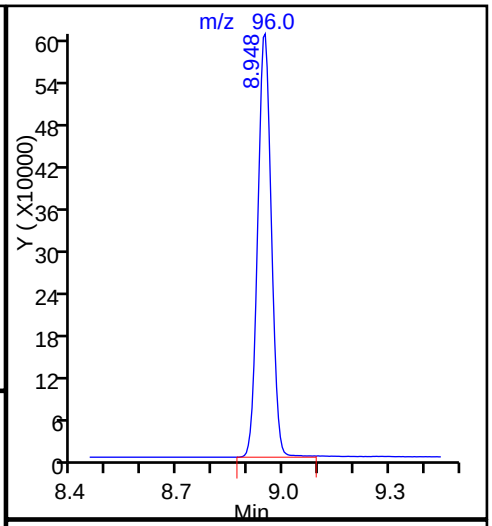


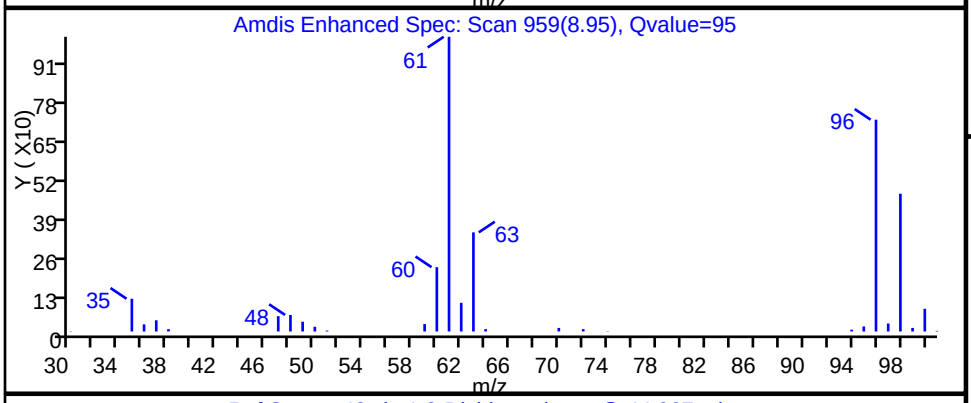
TestAmerica Knoxville

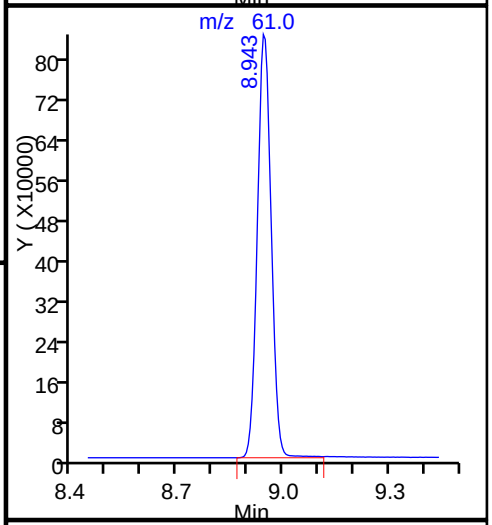
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P110.D		
Injection Date:	08-Nov-2016 00:48:30	Instrument ID:	MJ
Lims ID:	140-6285-A-5	Lab Sample ID:	140-6285-5
Client ID:	A-MID-GAC		
Operator ID:	7126	ALS Bottle#:	10 Worklist Smp#: 19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

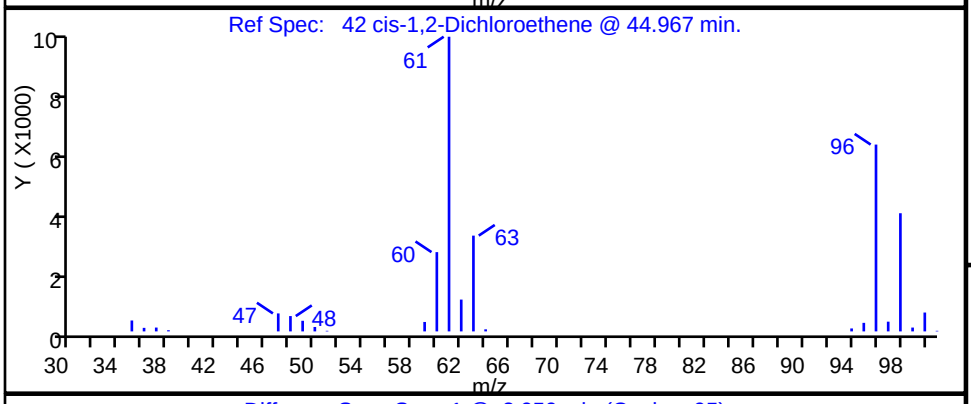
42 cis-1,2-Dichloroethene, CAS: 156-59-2

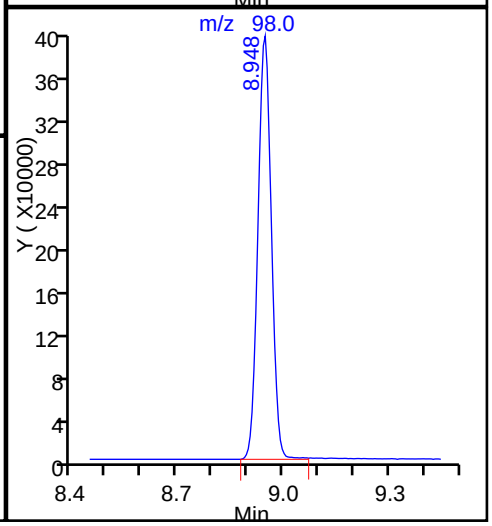


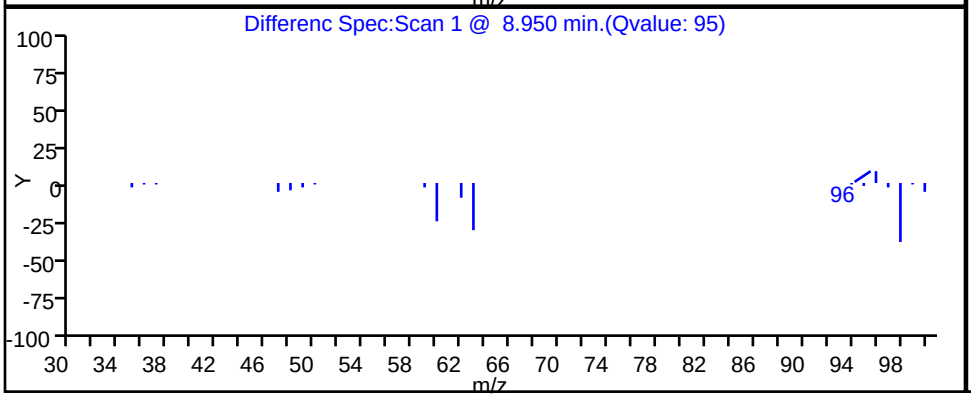








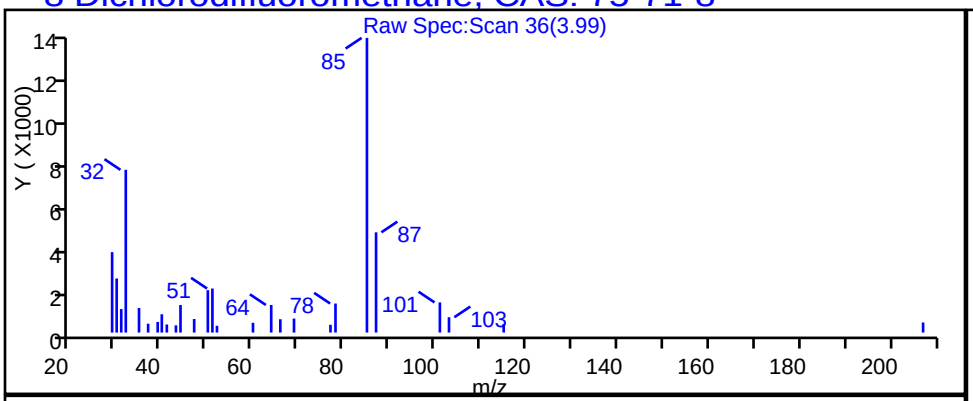


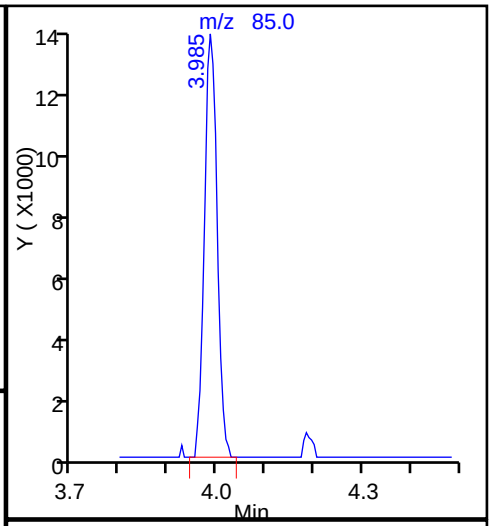


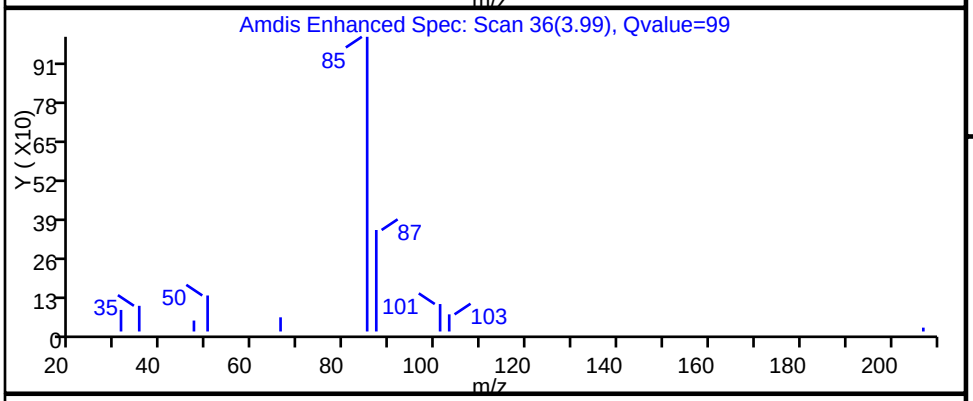
TestAmerica Knoxville

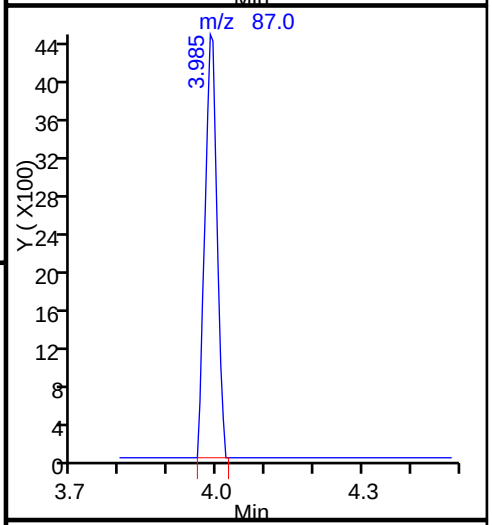
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P110.D				
Injection Date:	08-Nov-2016 00:48:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-5	Lab Sample ID:	140-6285-5		
Client ID:	A-MID-GAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

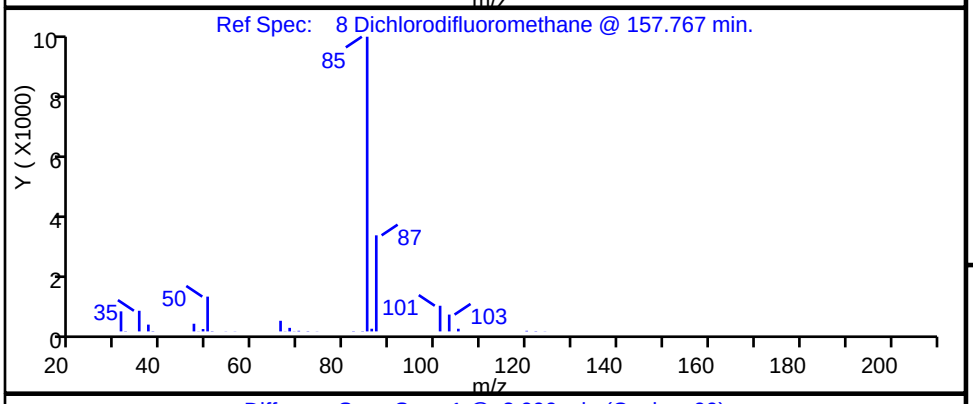
8 Dichlorodifluoromethane, CAS: 75-71-8

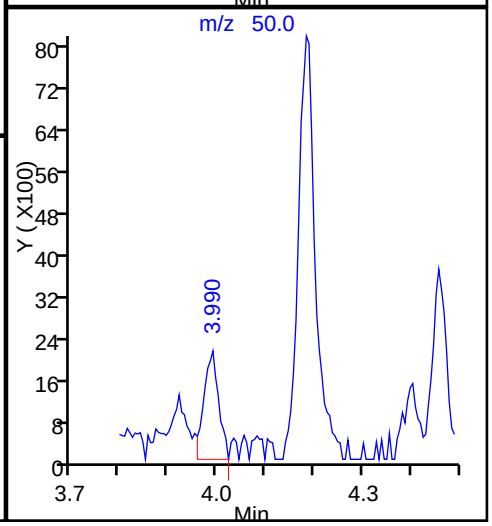


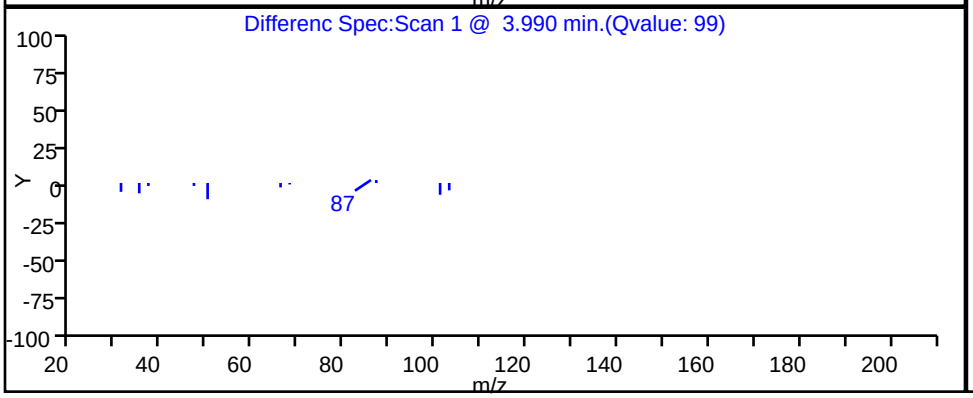








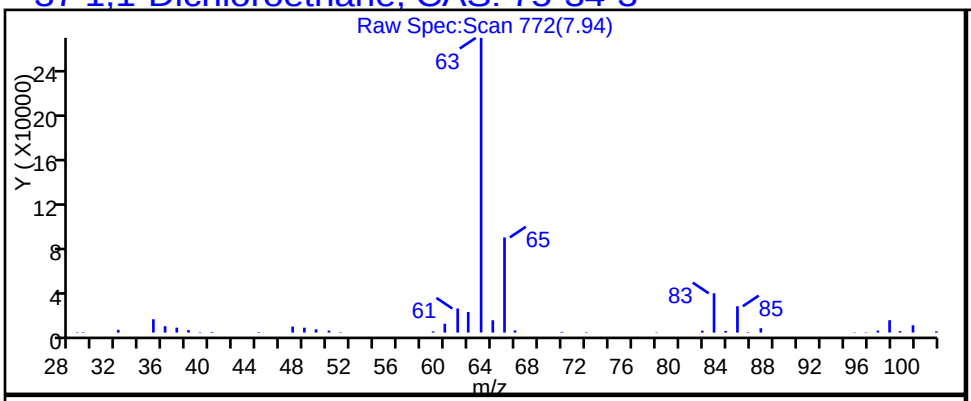


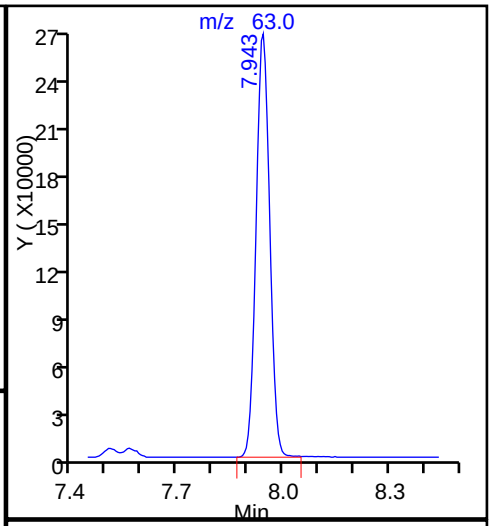


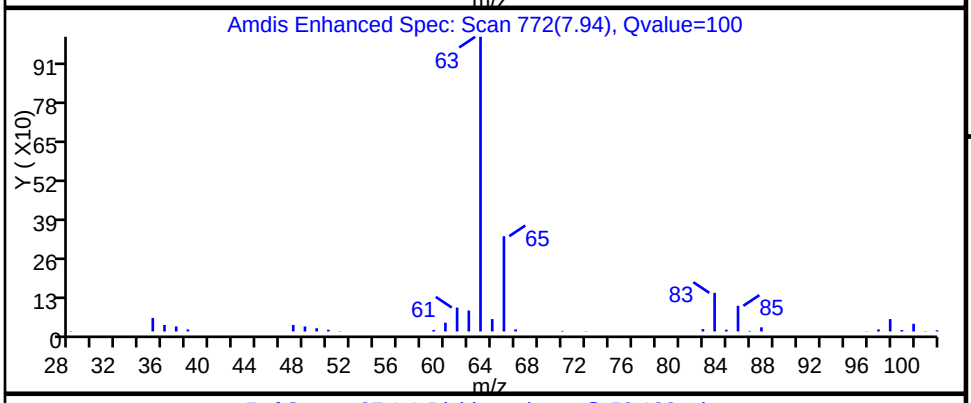
TestAmerica Knoxville

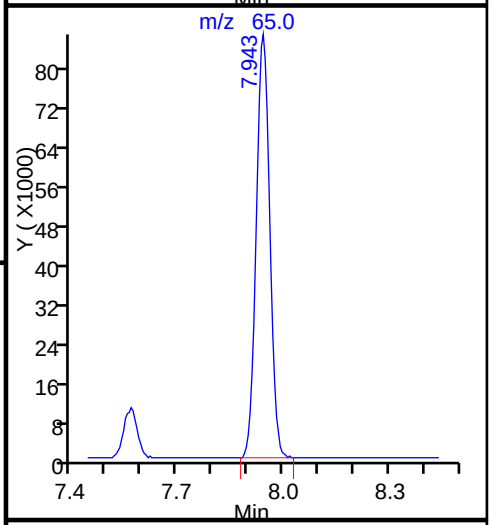
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P110.D				
Injection Date:	08-Nov-2016 00:48:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-5	Lab Sample ID:	140-6285-5		
Client ID:	A-MID-GAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

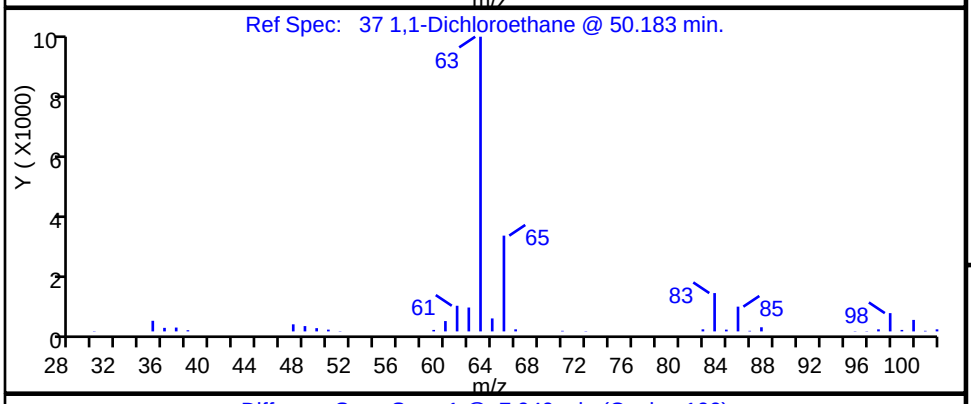
37 1,1-Dichloroethane, CAS: 75-34-3

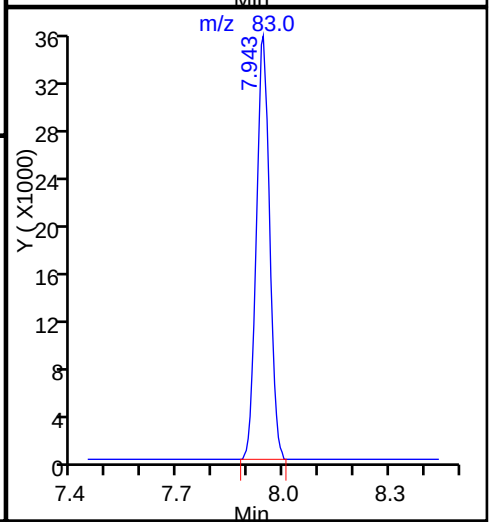


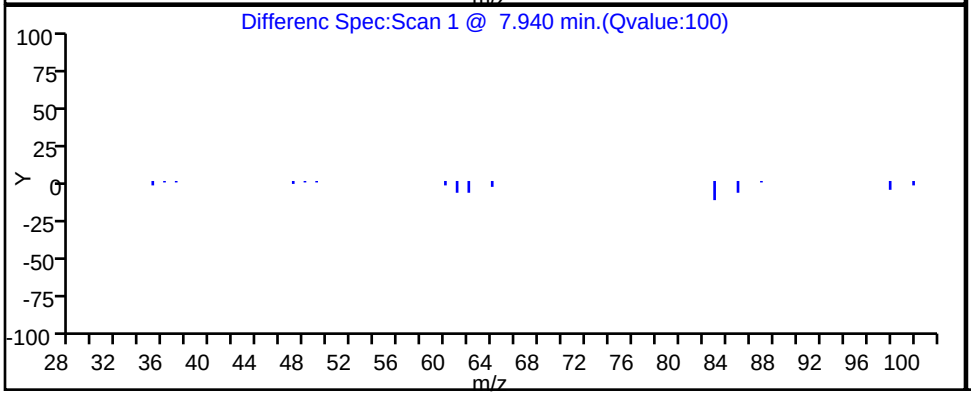








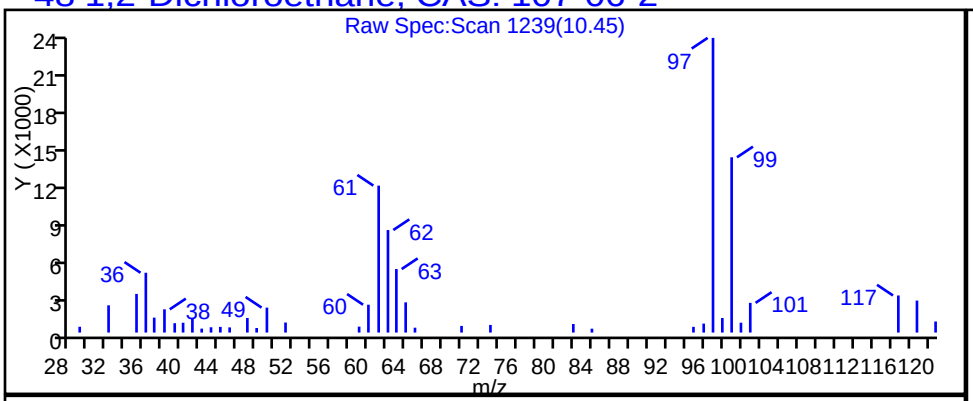


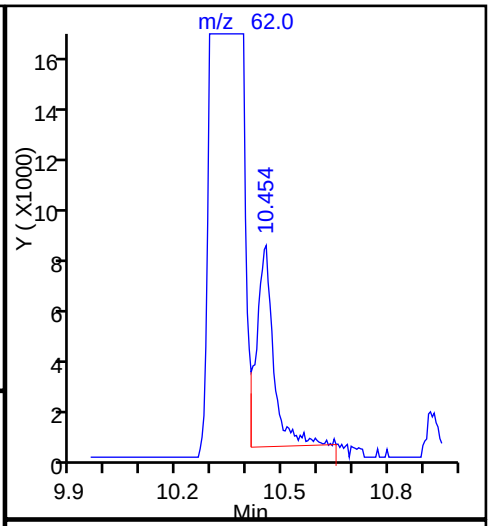


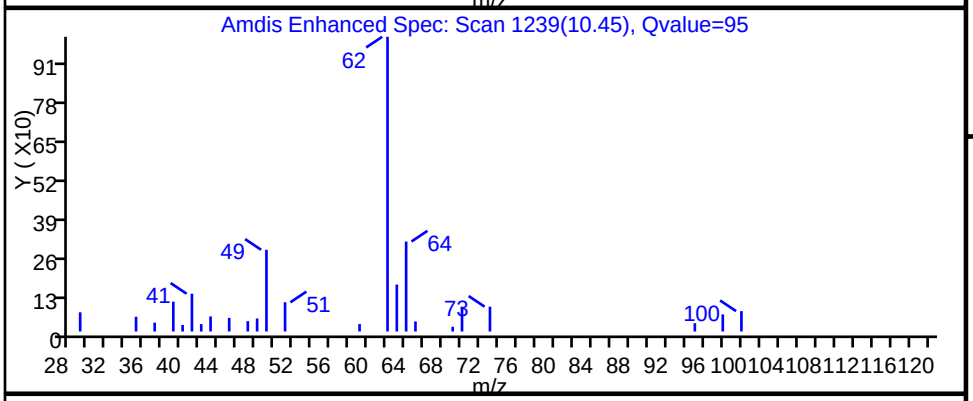
TestAmerica Knoxville

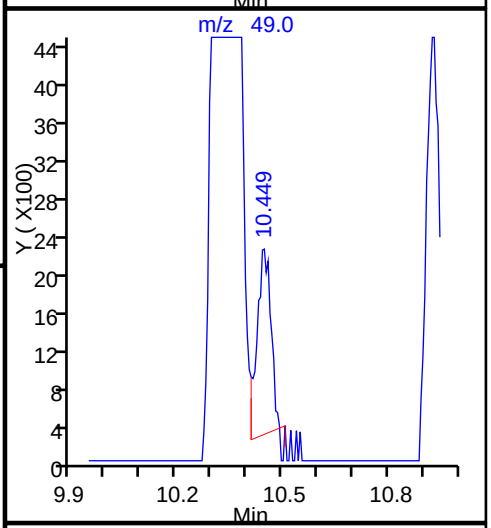
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P110.D		
Injection Date:	08-Nov-2016 00:48:30	Instrument ID:	MJ
Lims ID:	140-6285-A-5	Lab Sample ID:	140-6285-5
Client ID:	A-MID-GAC		
Operator ID:	7126	ALS Bottle#:	10 Worklist Smp#: 19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

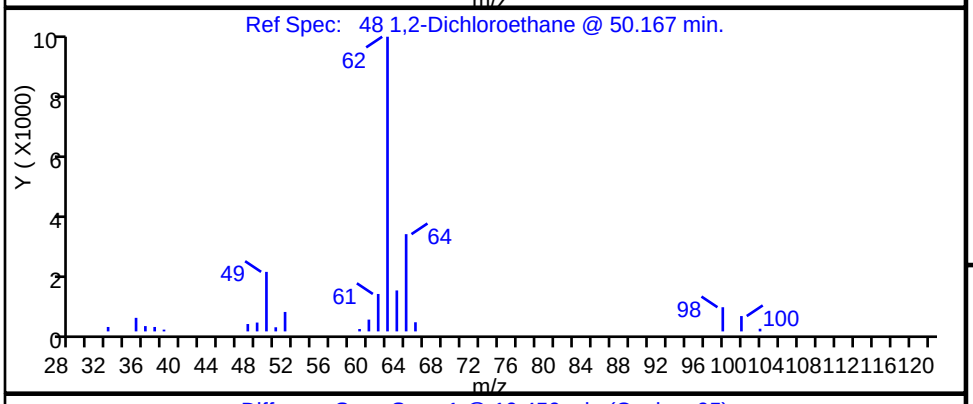
48 1,2-Dichloroethane, CAS: 107-06-2

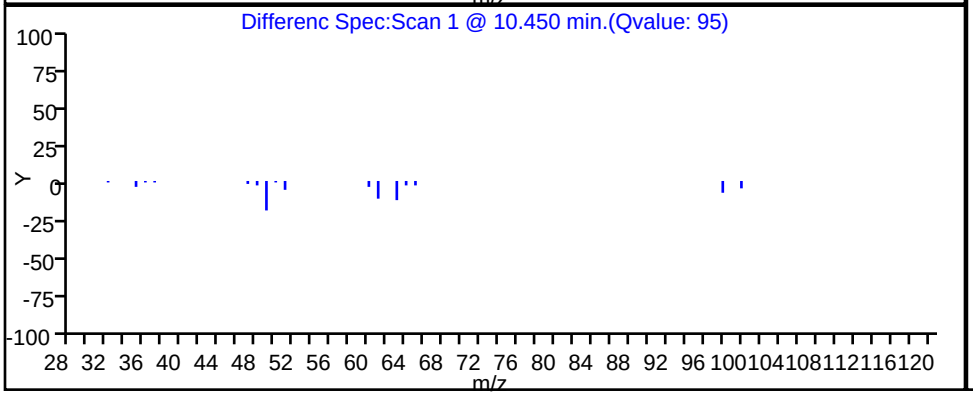


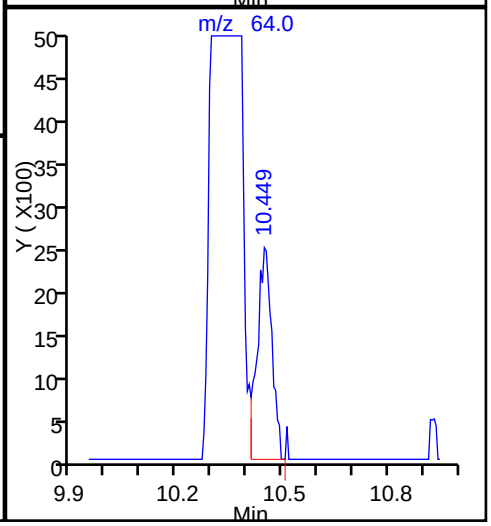








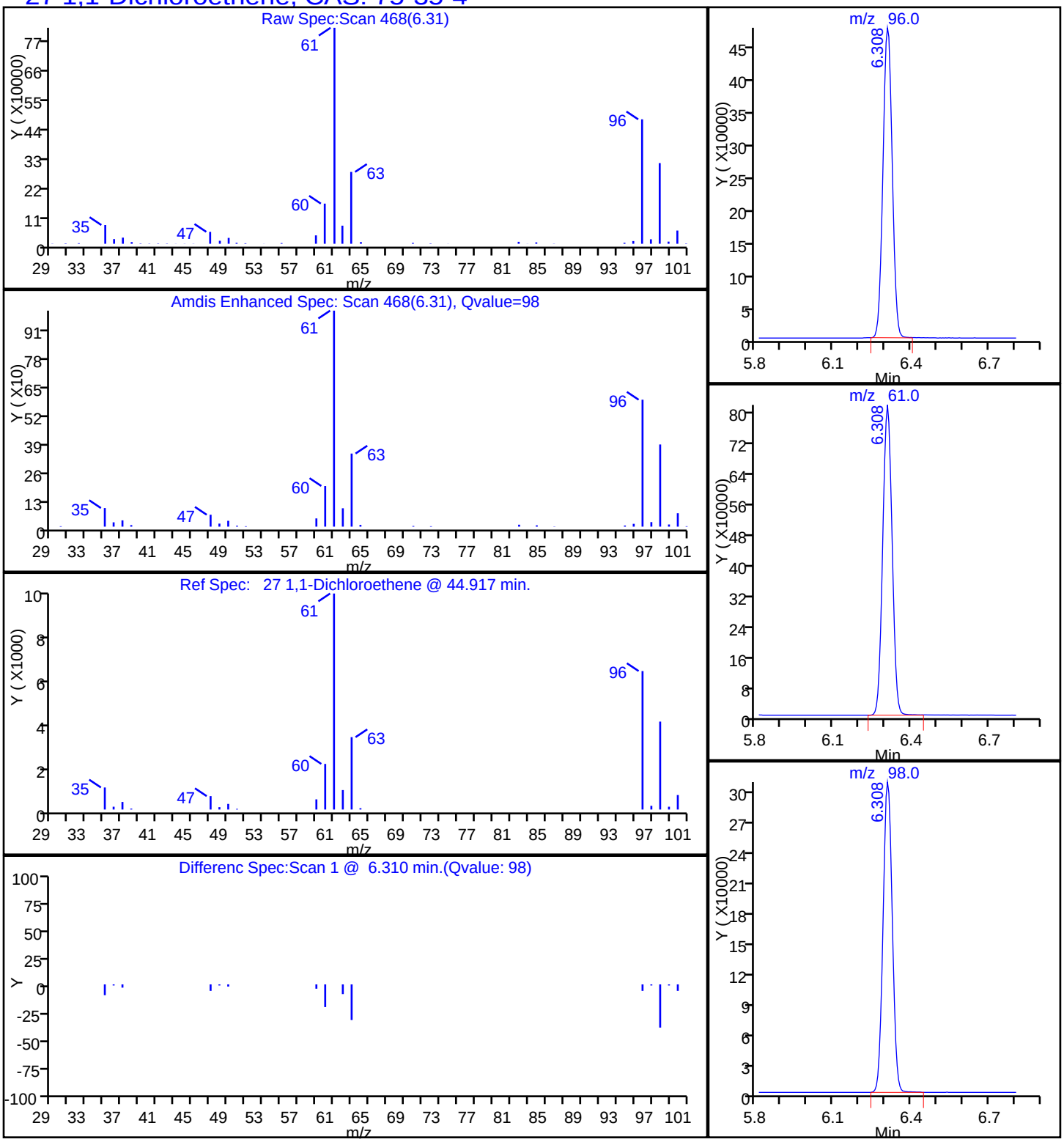




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P110.D		
Injection Date:	08-Nov-2016 00:48:30	Instrument ID:	MJ
Lims ID:	140-6285-A-5	Lab Sample ID:	140-6285-5
Client ID:	A-MID-GAC		
Operator ID:	7126	ALS Bottle#:	10 Worklist Smp#: 19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

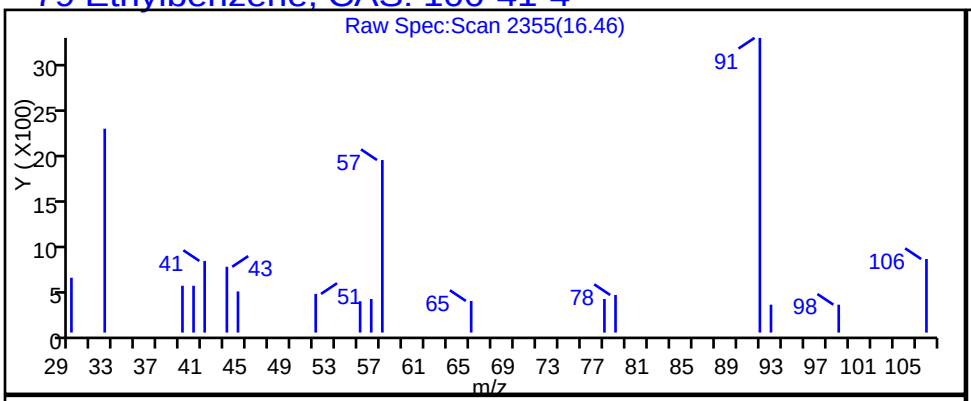
27 1,1-Dichloroethene, CAS: 75-35-4

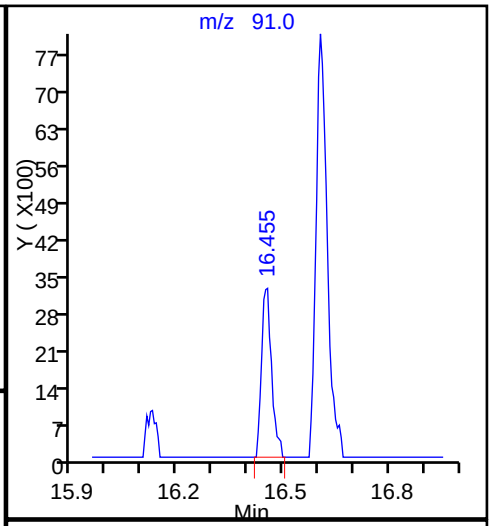


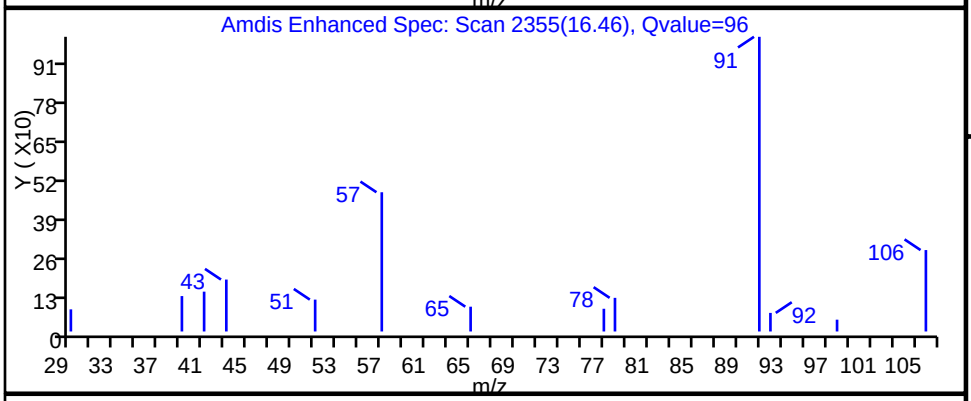
TestAmerica Knoxville

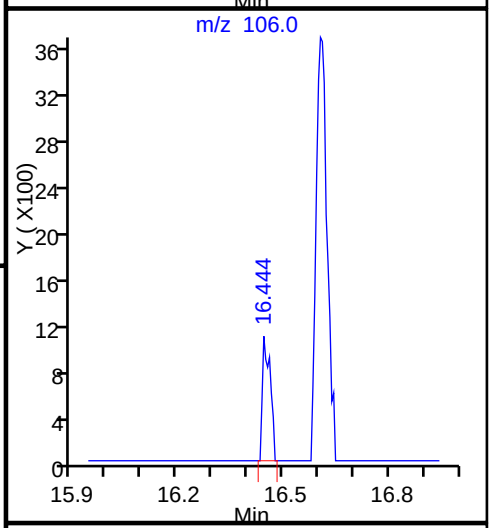
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P110.D				
Injection Date:	08-Nov-2016 00:48:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-5	Lab Sample ID:	140-6285-5		
Client ID:	A-MID-GAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

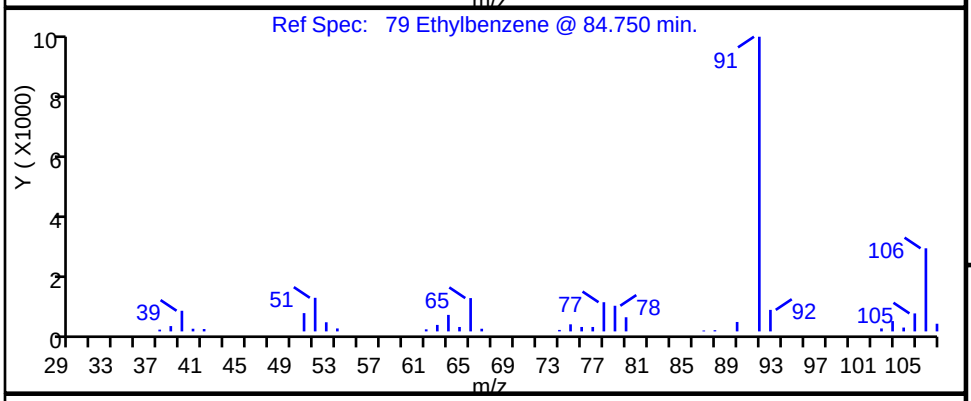
79 Ethylbenzene, CAS: 100-41-4

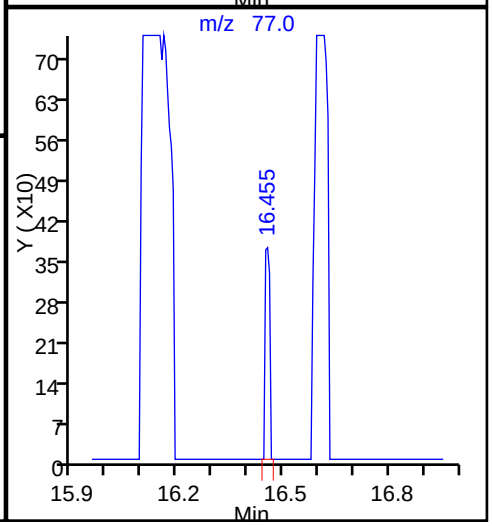


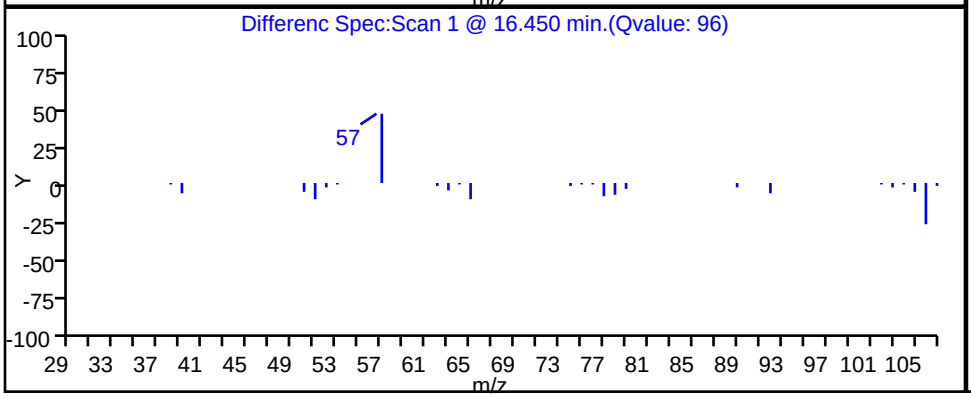








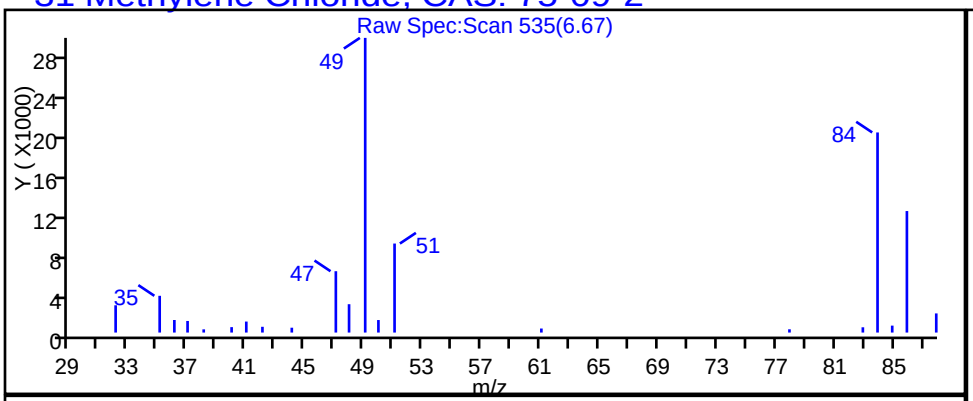


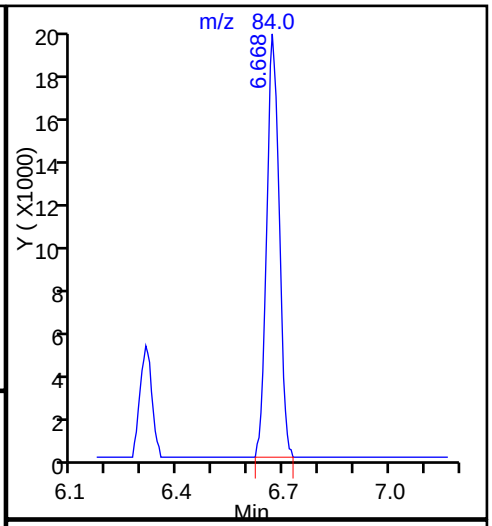


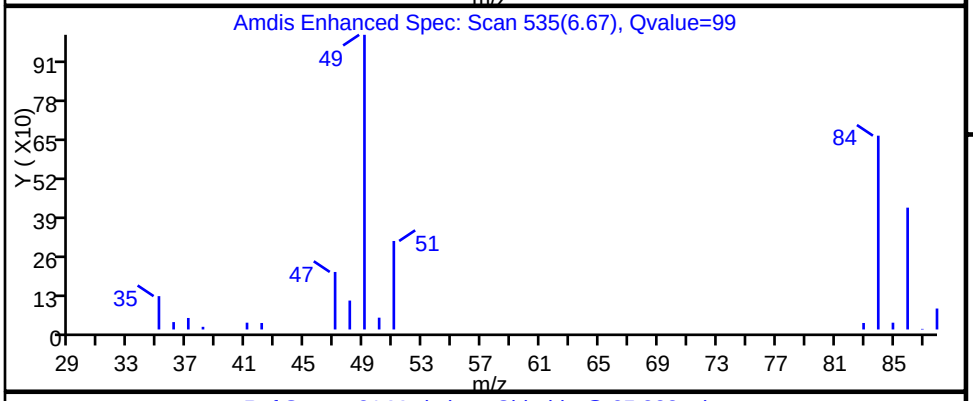
TestAmerica Knoxville

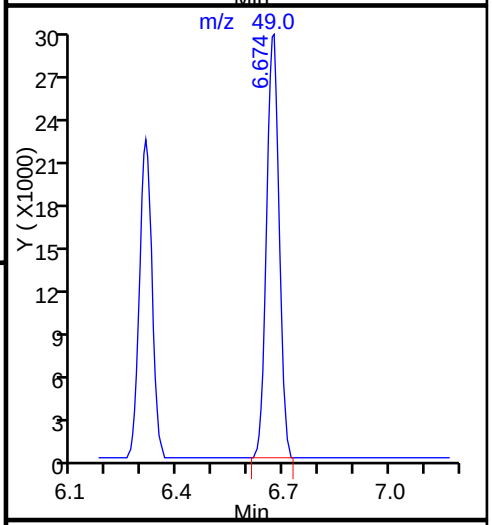
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P110.D				
Injection Date:	08-Nov-2016 00:48:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-5	Lab Sample ID:	140-6285-5		
Client ID:	A-MID-GAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

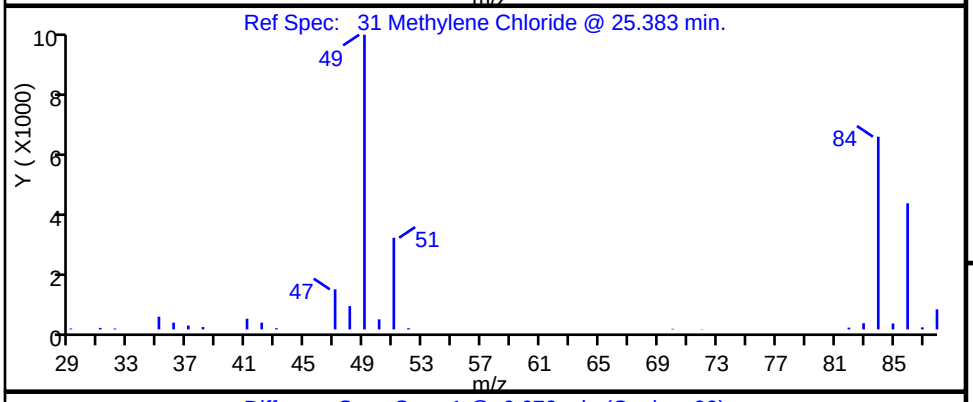
31 Methylene Chloride, CAS: 75-09-2

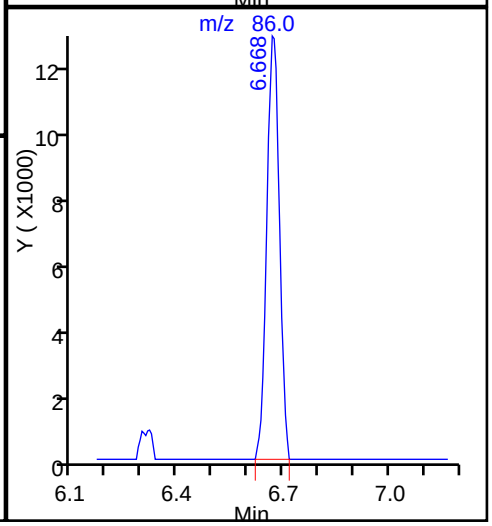


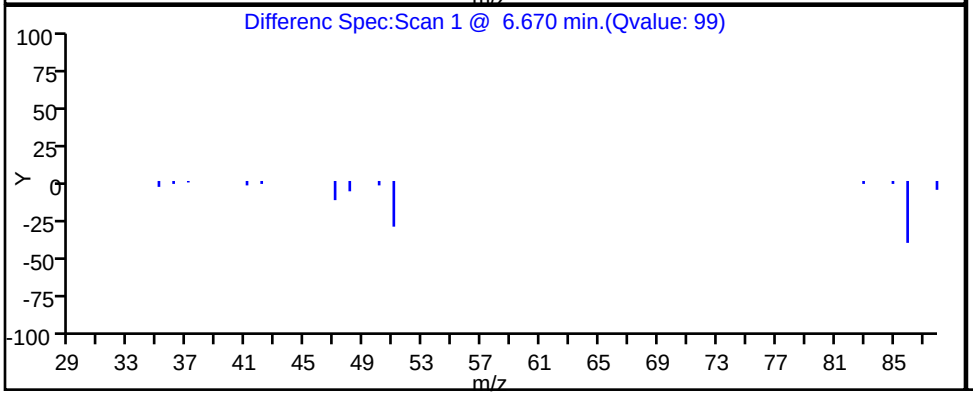








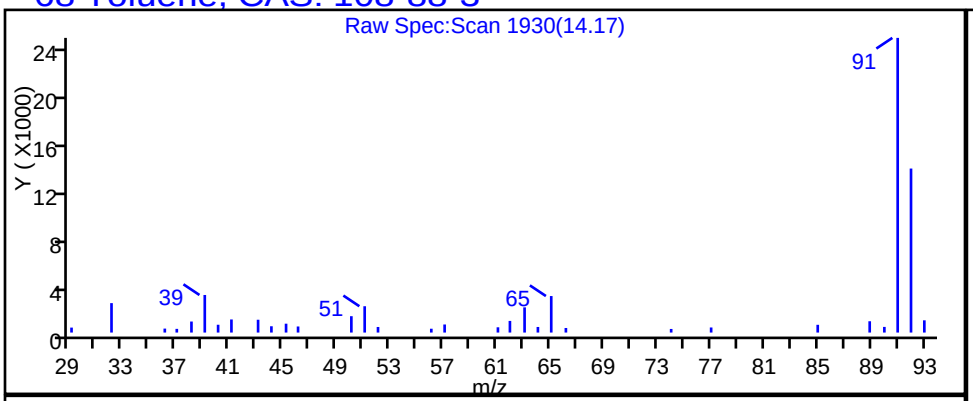


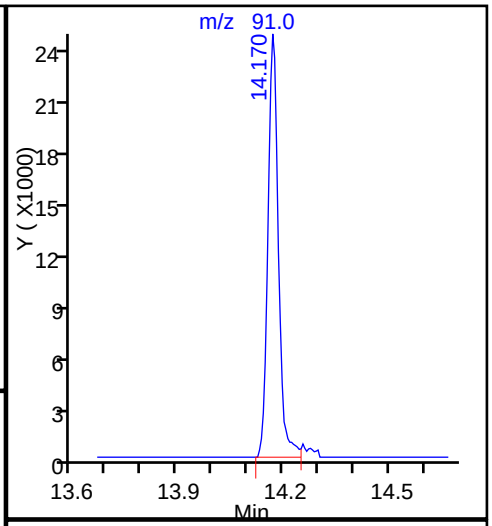


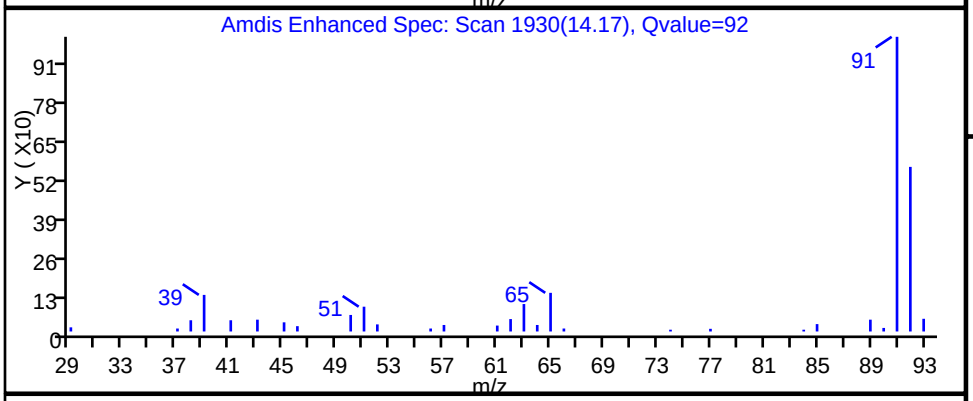
TestAmerica Knoxville

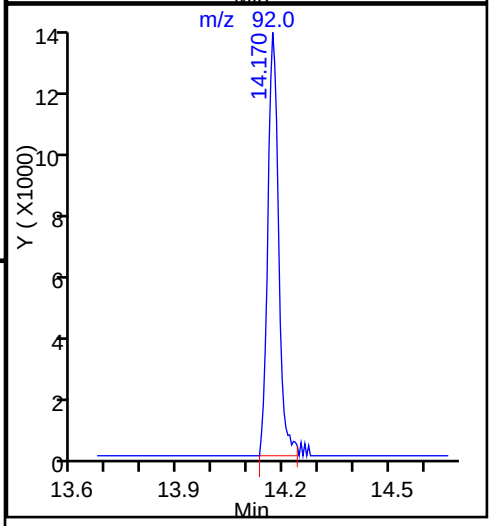
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P110.D				
Injection Date:	08-Nov-2016 00:48:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-5	Lab Sample ID:	140-6285-5		
Client ID:	A-MID-GAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

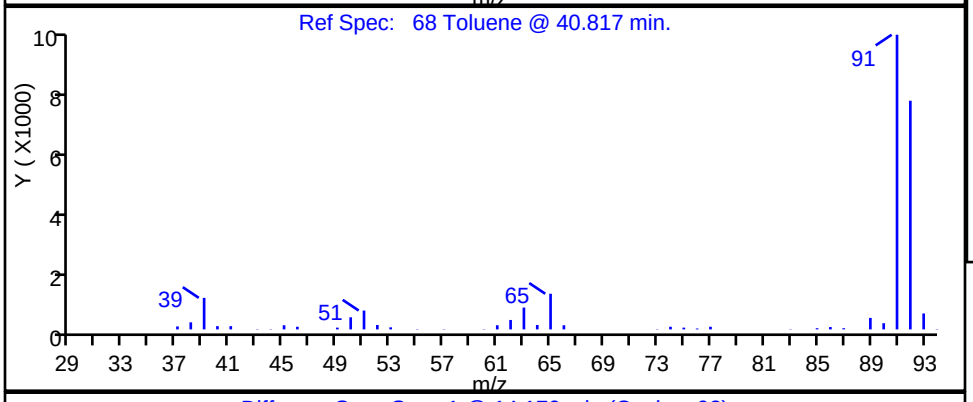
68 Toluene, CAS: 108-88-3

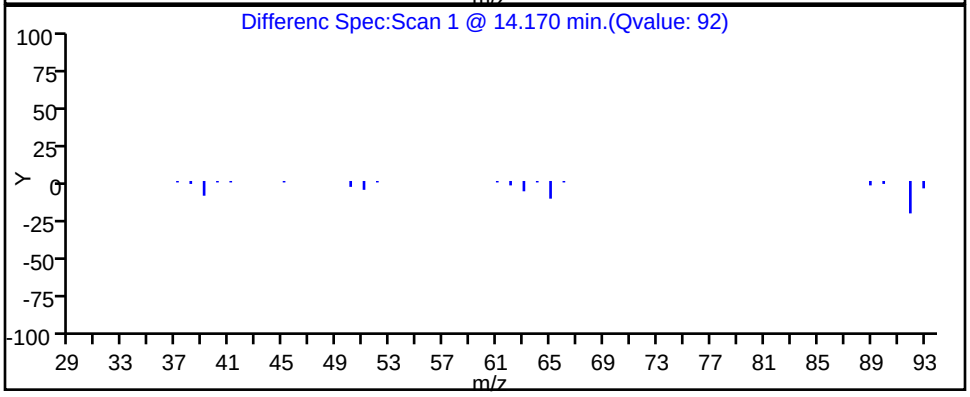








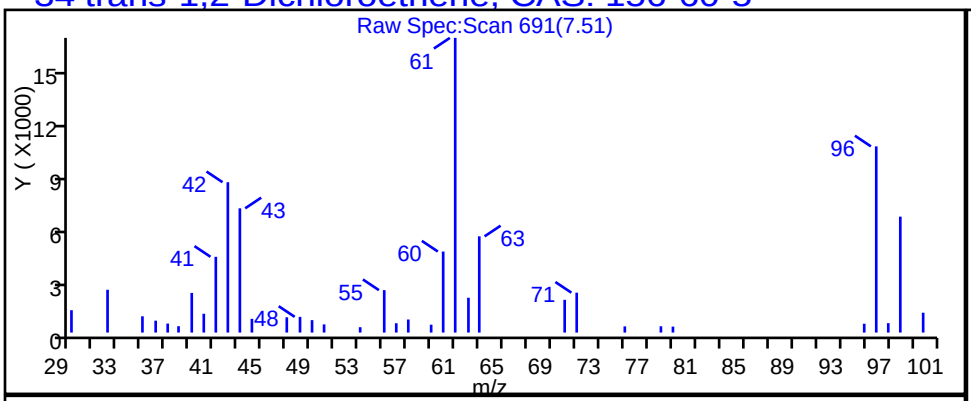


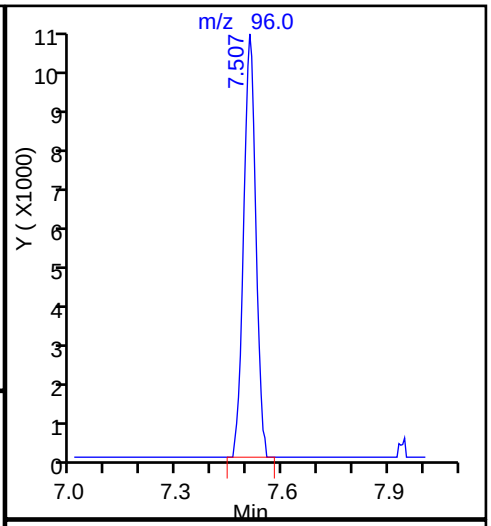


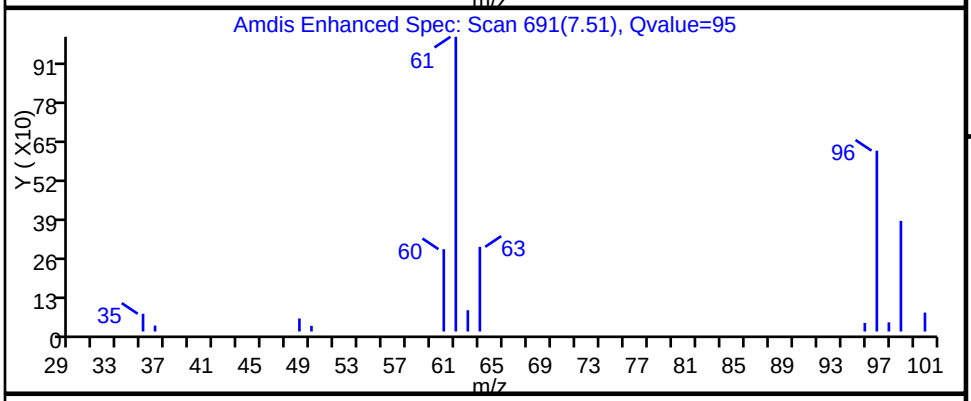
TestAmerica Knoxville

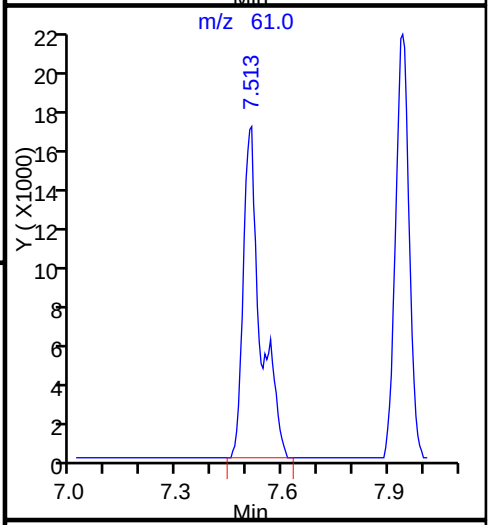
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P110.D				
Injection Date:	08-Nov-2016 00:48:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-5	Lab Sample ID:	140-6285-5		
Client ID:	A-MID-GAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

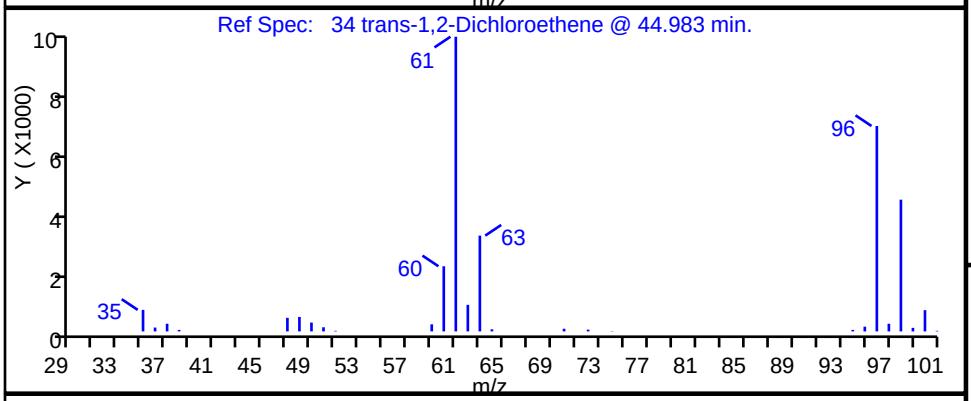
34 trans-1,2-Dichloroethene, CAS: 156-60-5

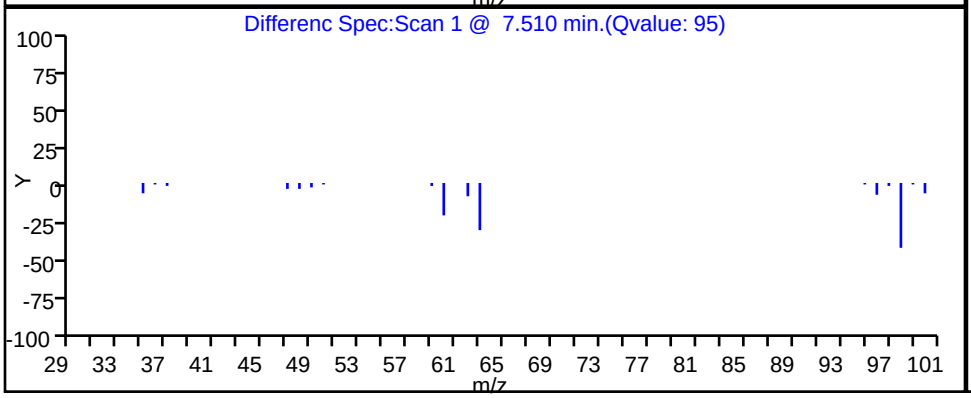


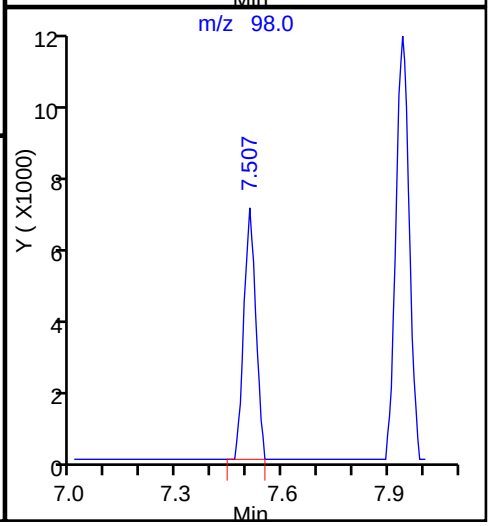








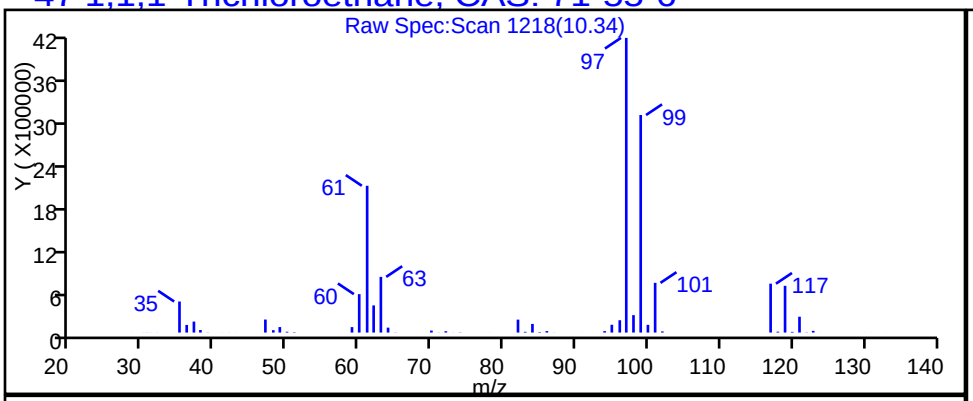


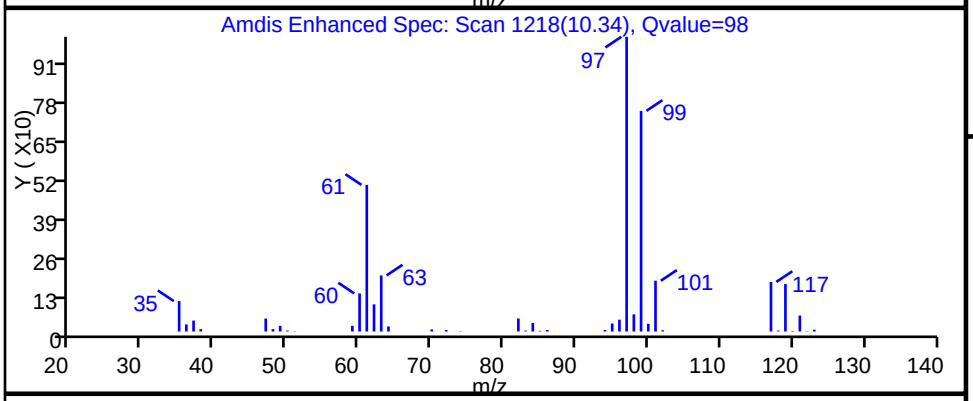


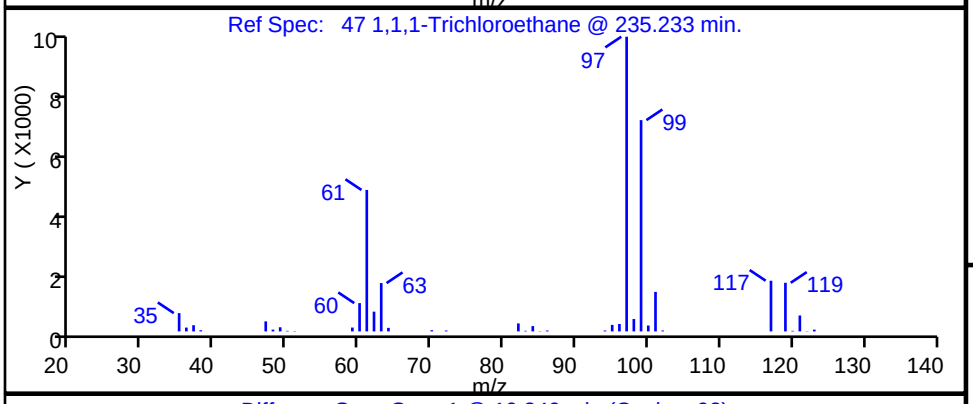
TestAmerica Knoxville

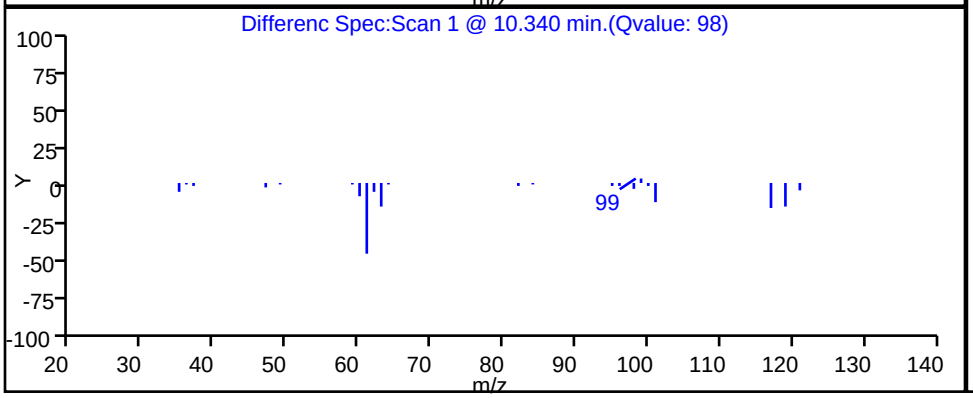
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P110.D				
Injection Date:	08-Nov-2016 00:48:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-5	Lab Sample ID:	140-6285-5		
Client ID:	A-MID-GAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

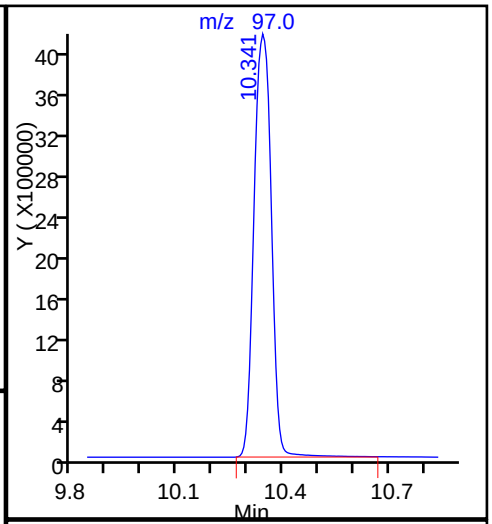
47 1,1,1-Trichloroethane, CAS: 71-55-6

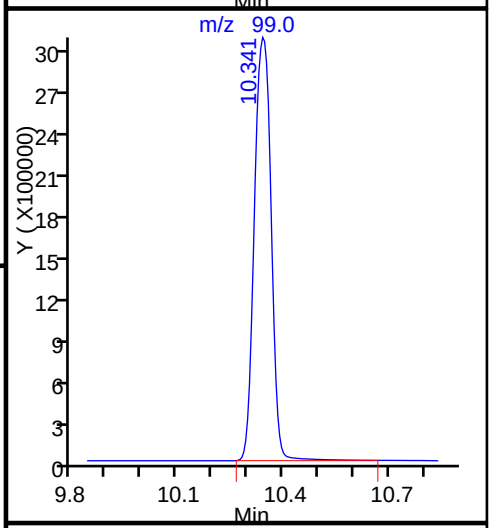


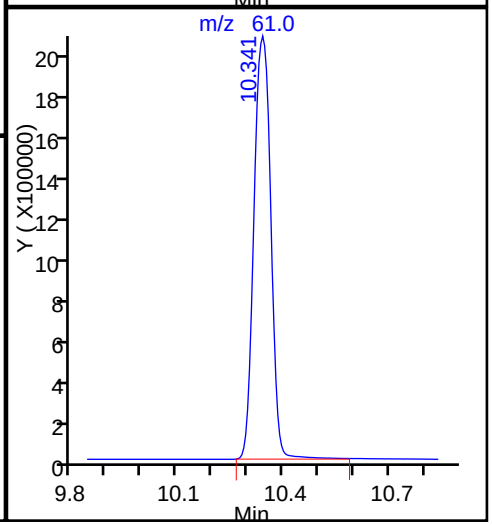








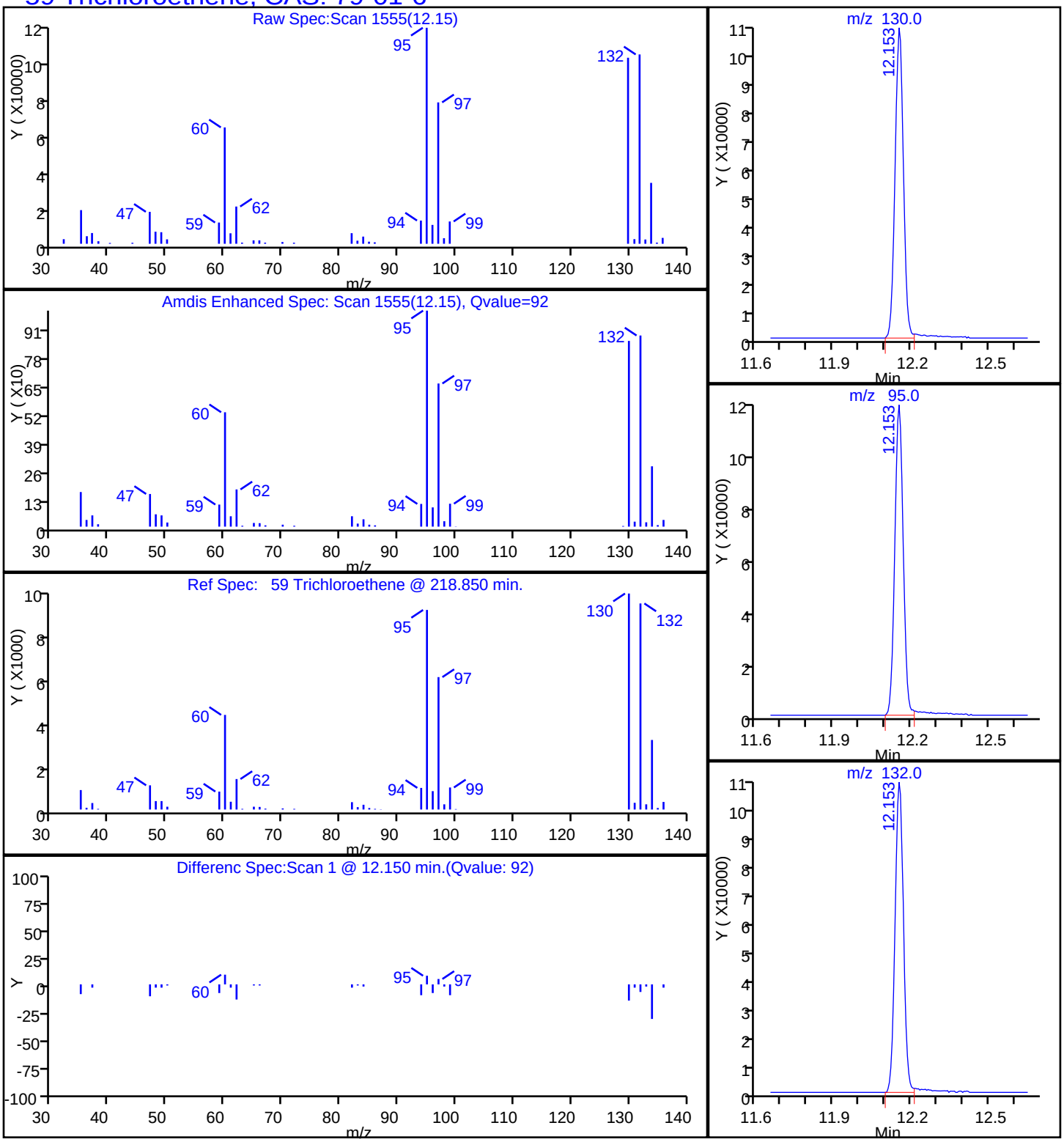




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P110.D		
Injection Date:	08-Nov-2016 00:48:30	Instrument ID:	MJ
Lims ID:	140-6285-A-5	Lab Sample ID:	140-6285-5
Client ID:	A-MID-GAC		
Operator ID:	7126	ALS Bottle#:	10 Worklist Smp#: 19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

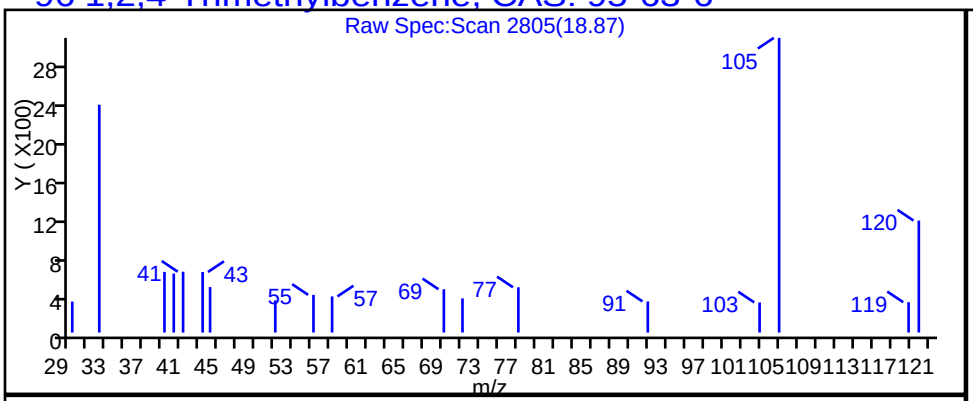
59 Trichloroethene, CAS: 79-01-6

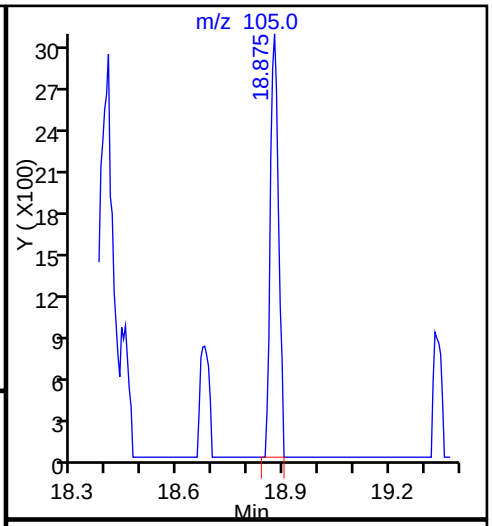


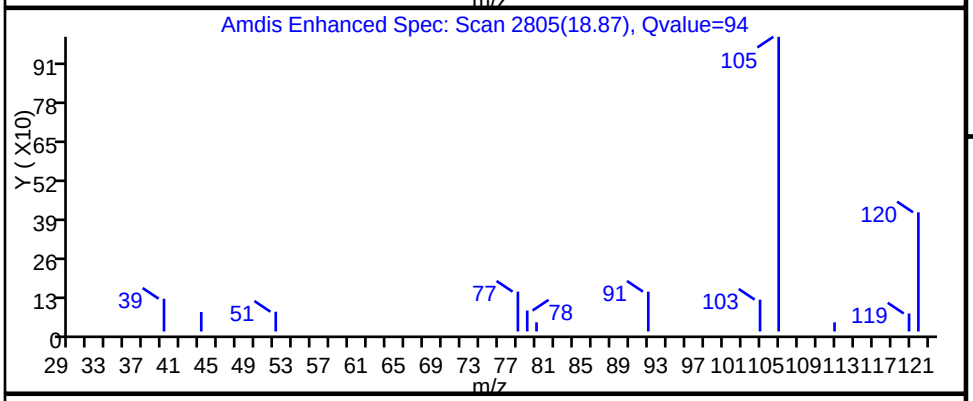
TestAmerica Knoxville

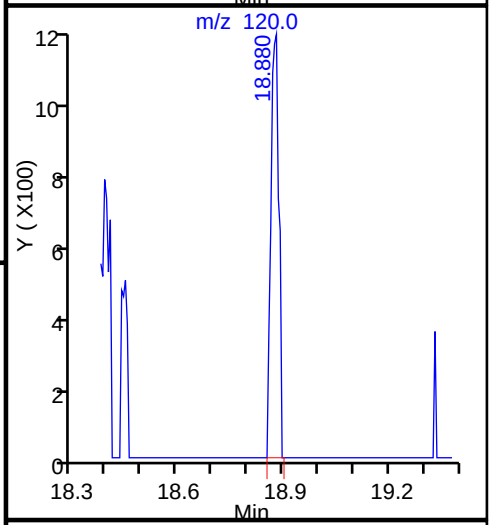
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P110.D				
Injection Date:	08-Nov-2016 00:48:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-5	Lab Sample ID:	140-6285-5		
Client ID:	A-MID-GAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

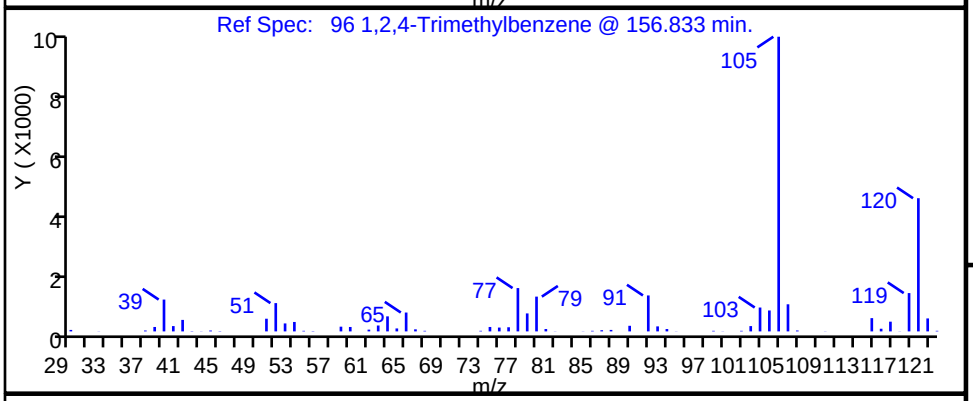
96 1,2,4-Trimethylbenzene, CAS: 95-63-6

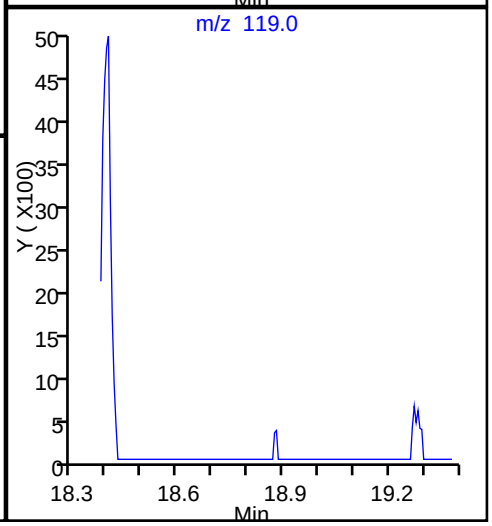


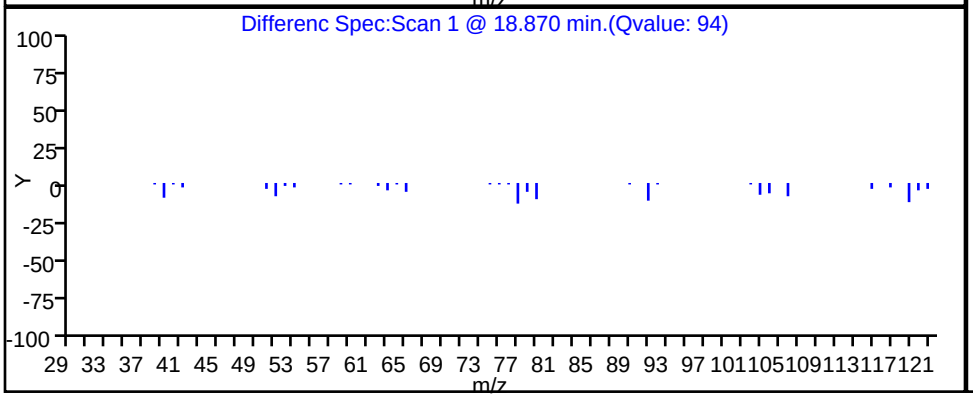








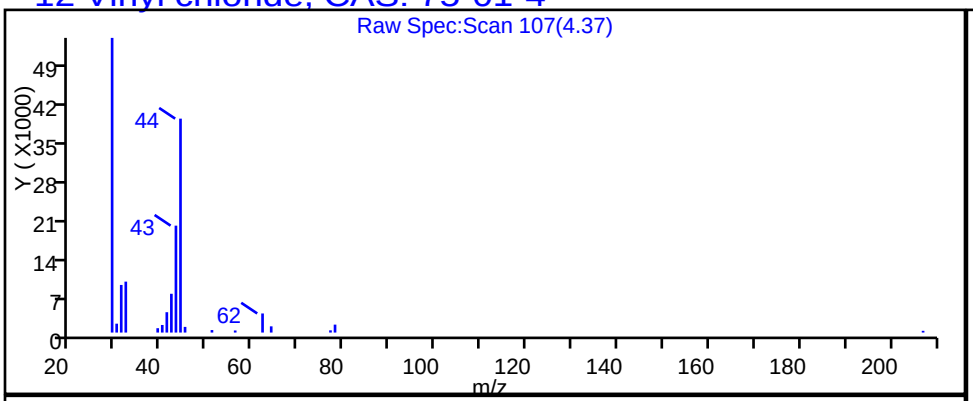


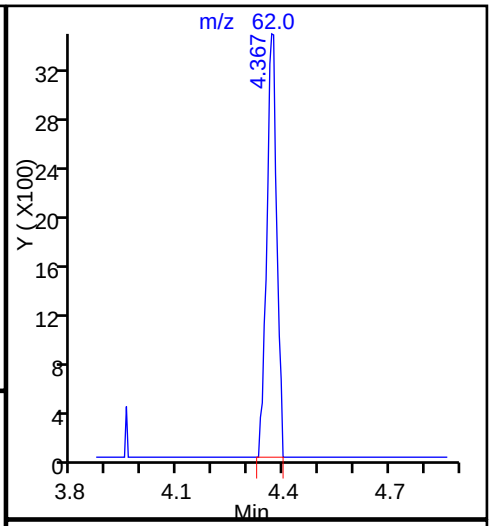


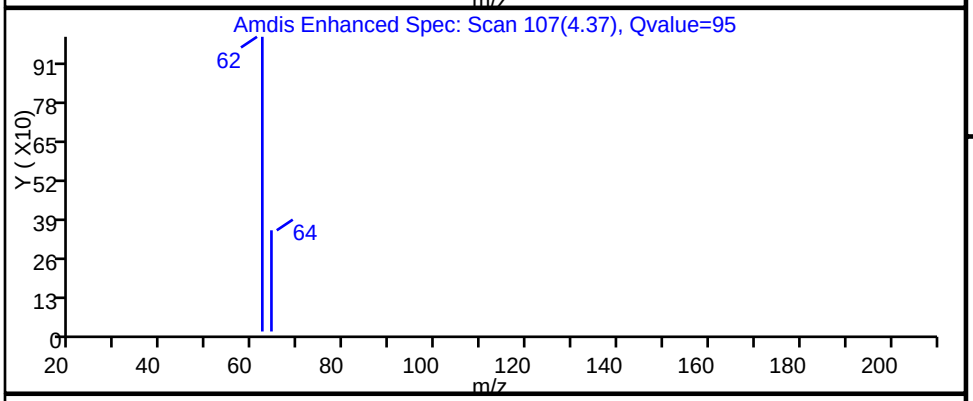
TestAmerica Knoxville

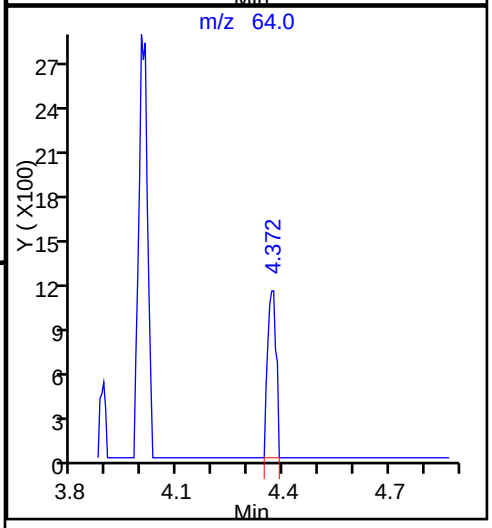
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P110.D				
Injection Date:	08-Nov-2016 00:48:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-5	Lab Sample ID:	140-6285-5		
Client ID:	A-MID-GAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

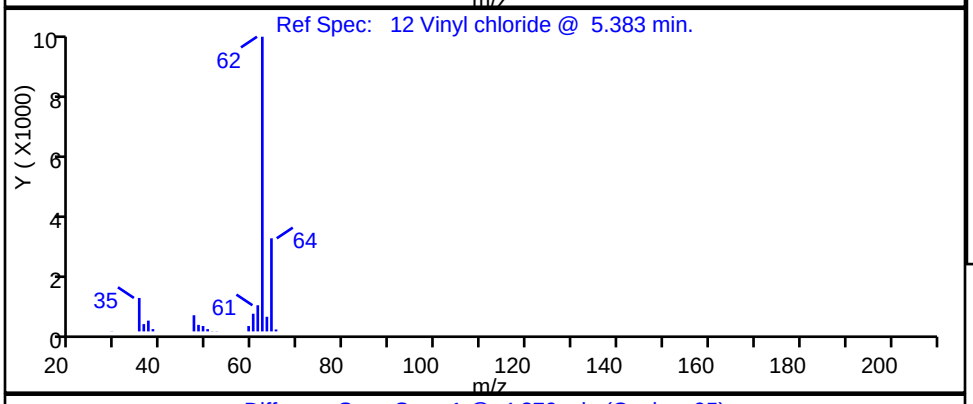
12 Vinyl chloride, CAS: 75-01-4

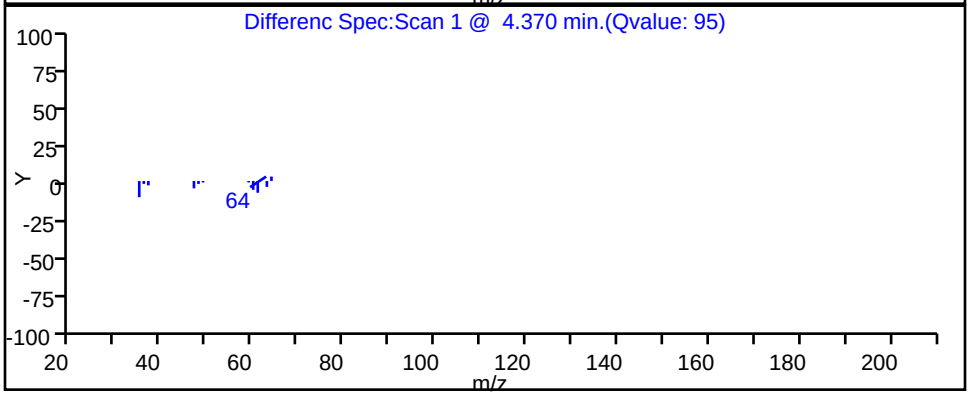








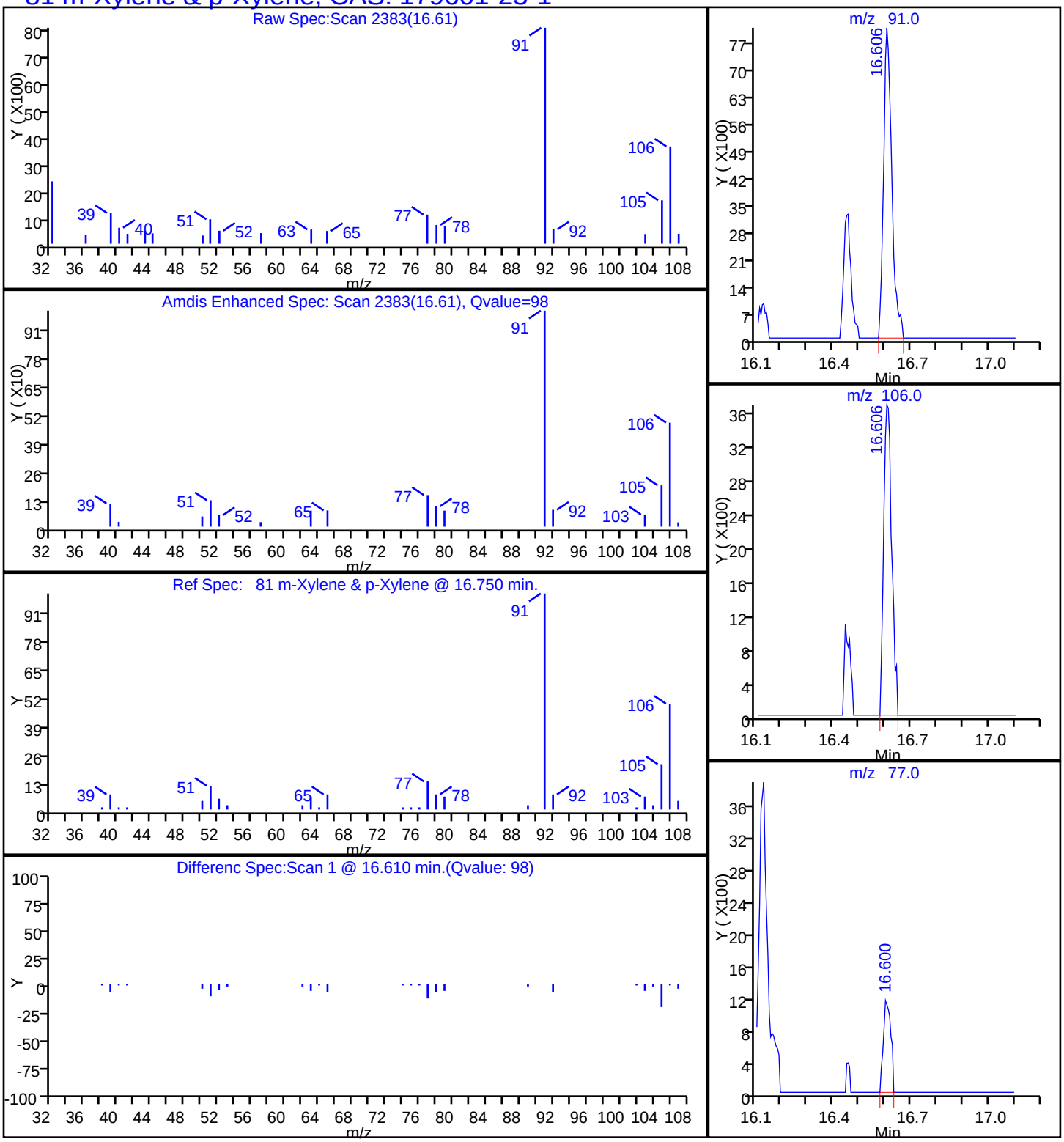




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P110.D				
Injection Date:	08-Nov-2016 00:48:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-5	Lab Sample ID:	140-6285-5		
Client ID:	A-MID-GAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

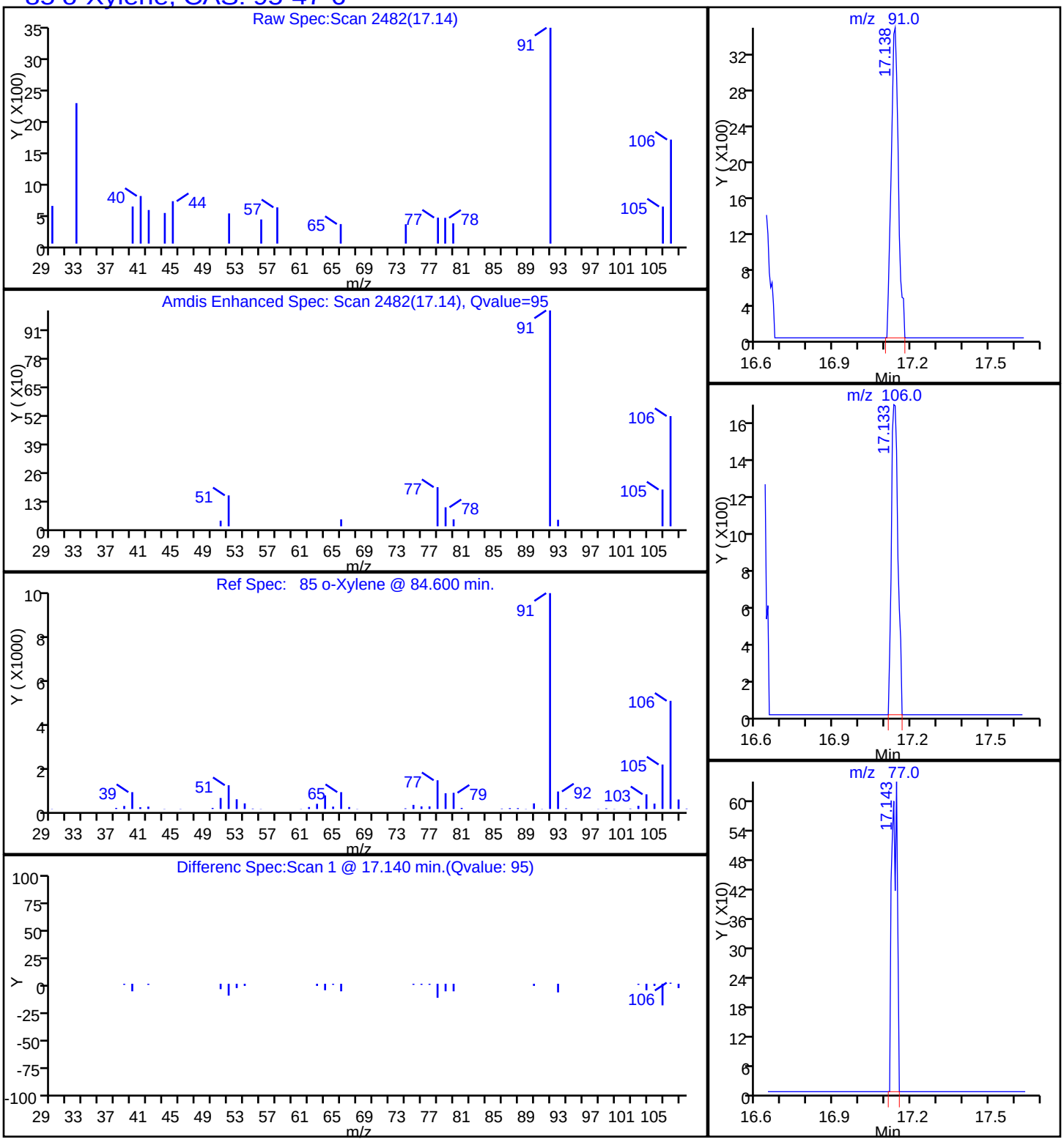
81 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P110.D				
Injection Date:	08-Nov-2016 00:48:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-5	Lab Sample ID:	140-6285-5		
Client ID:	A-MID-GAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

85 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Client Sample ID: A-MID-GAC DL Lab Sample ID: 140-6285-5 DL

Matrix: Air Lab File ID: RK08P104.D

Analysis Method: TO 15 LL Date Collected: 11/03/2016 12:37

Sample wt/vol: 10(mL) Date Analyzed: 11/08/2016 17:13

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7105 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
156-59-2	cis-1,2-Dichloroethene	96.94	130		4.0	1.2
75-35-4	1,1-Dichloroethene	96.94	97		4.0	0.70
71-55-6	1,1,1-Trichloroethane	133.41	790		4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	83		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Client Sample ID: A-MID-GAC DL Lab Sample ID: 140-6285-5 DL

Matrix: Air Lab File ID: RK08P104.D

Analysis Method: TO 15 LL Date Collected: 11/03/2016 12:37

Sample wt/vol: 10(mL) Date Analyzed: 11/08/2016 17:13

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7105 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
156-59-2	cis-1,2-Dichloroethene	96.94	510		16	4.8
75-35-4	1,1-Dichloroethene	96.94	390		16	2.8
71-55-6	1,1,1-Trichloroethane	133.41	4300		22	3.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	83		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\RK08P104.D
Lims ID: 140-6285-A-5
Client ID: A-MID-GAC
Sample Type: Client
Inject. Date: 08-Nov-2016 17:13:30 ALS Bottle#: 4 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003605-009
Misc. Info.: 140-6285-a-5
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 09-Nov-2016 10:05:59 Calib Date: 10-Oct-2016 00:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 08-Nov-2016 18:55:51

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.247	8.247	0.000	95	222896	4.00	
* 2 1,4-Difluorobenzene	114	10.415	10.415	0.000	96	1085050	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.306	15.306	0.000	89	997168	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.994	16.994	0.000	88	616160	3.31	
27 1,1-Dichloroethene	96	5.637	5.637	0.000	95	152907	1.94	
31 Methylene Chloride	84	5.929	5.934	-0.005	94	9644	0.1266	
34 trans-1,2-Dichloroethene	96	6.673	6.673	0.000	92	3182	0.0397	
37 1,1-Dichloroethane	63	7.034	7.039	-0.005	100	86131	0.5643	
42 cis-1,2-Dichloroethene	96	7.945	7.951	-0.006	97	209679	2.58	
44 Chloroform	83	8.269	8.280	-0.011	94	7170	0.0445	
47 1,1,1-Trichloroethane	97	9.261	9.267	-0.005	95	2518195	15.8	
50 Benzene	78	9.849	9.849	0.000	98	58326	0.2386	
59 Trichloroethene	130	11.148	11.148	0.000	94	28769	0.2908	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

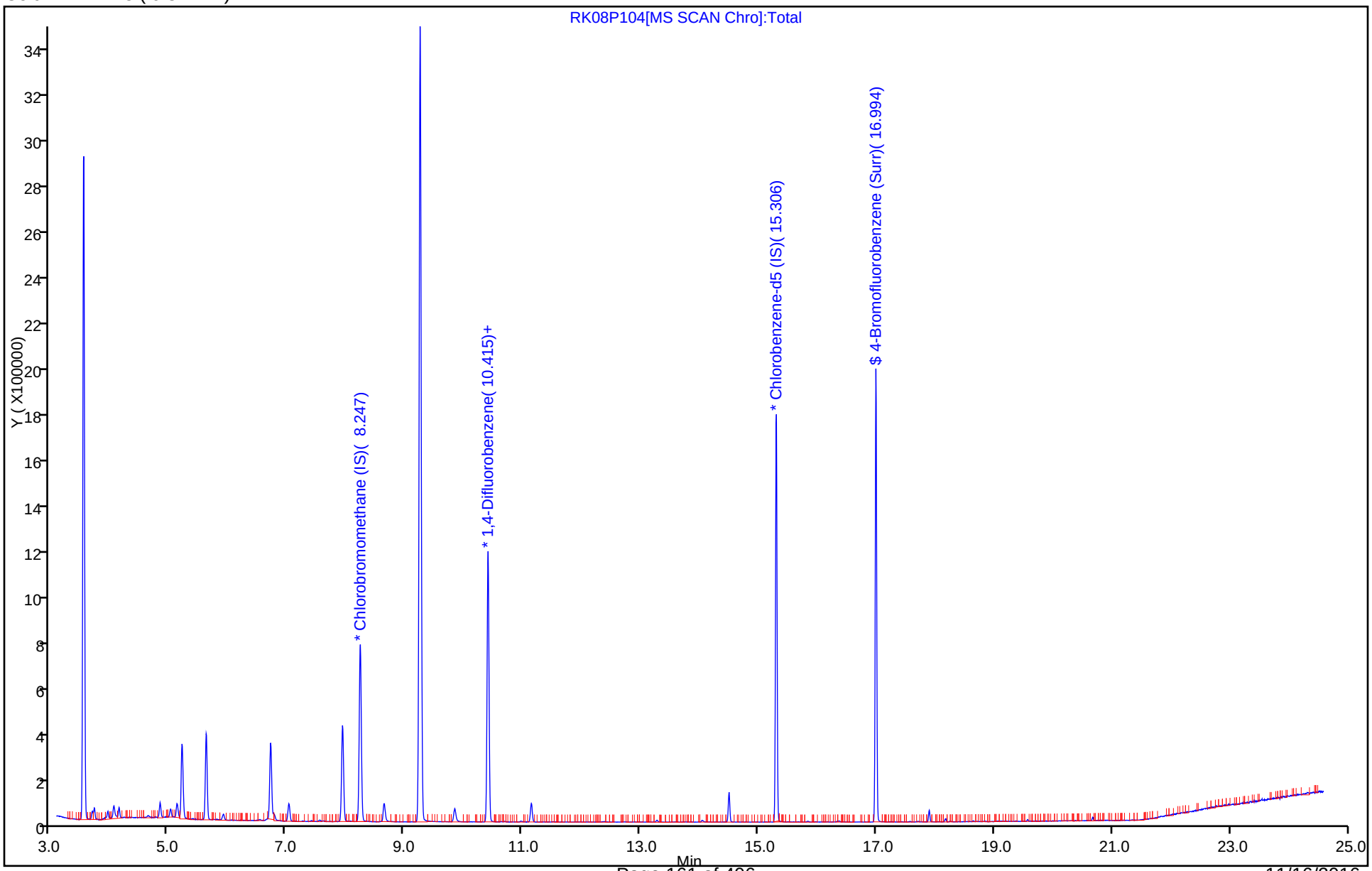
Report Date: 09-Nov-2016 10:06:57 Chrom Revision: 2.2 17-Oct-2016 09:27:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\RK08P104.D

Injection Date:	08-Nov-2016 17:13:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-6285-A-5	Lab Sample ID:	140-6285-5	Worklist Smp#:	9
Client ID:	A-MID-GAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\RK08P104.D				
Lims ID:	140-6285-A-5				
Client ID:	A-MID-GAC				
Sample Type:	Client				
Inject. Date:	08-Nov-2016 17:13:30	ALS Bottle#:	4	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003605-009				
Misc. Info.:	140-6285-a-5				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	09-Nov-2016 10:05:59	Calib Date:	10-Oct-2016 00:36:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				

First Level Reviewer: barlozhetskayaa Date: 08-Nov-2016 18:55:51

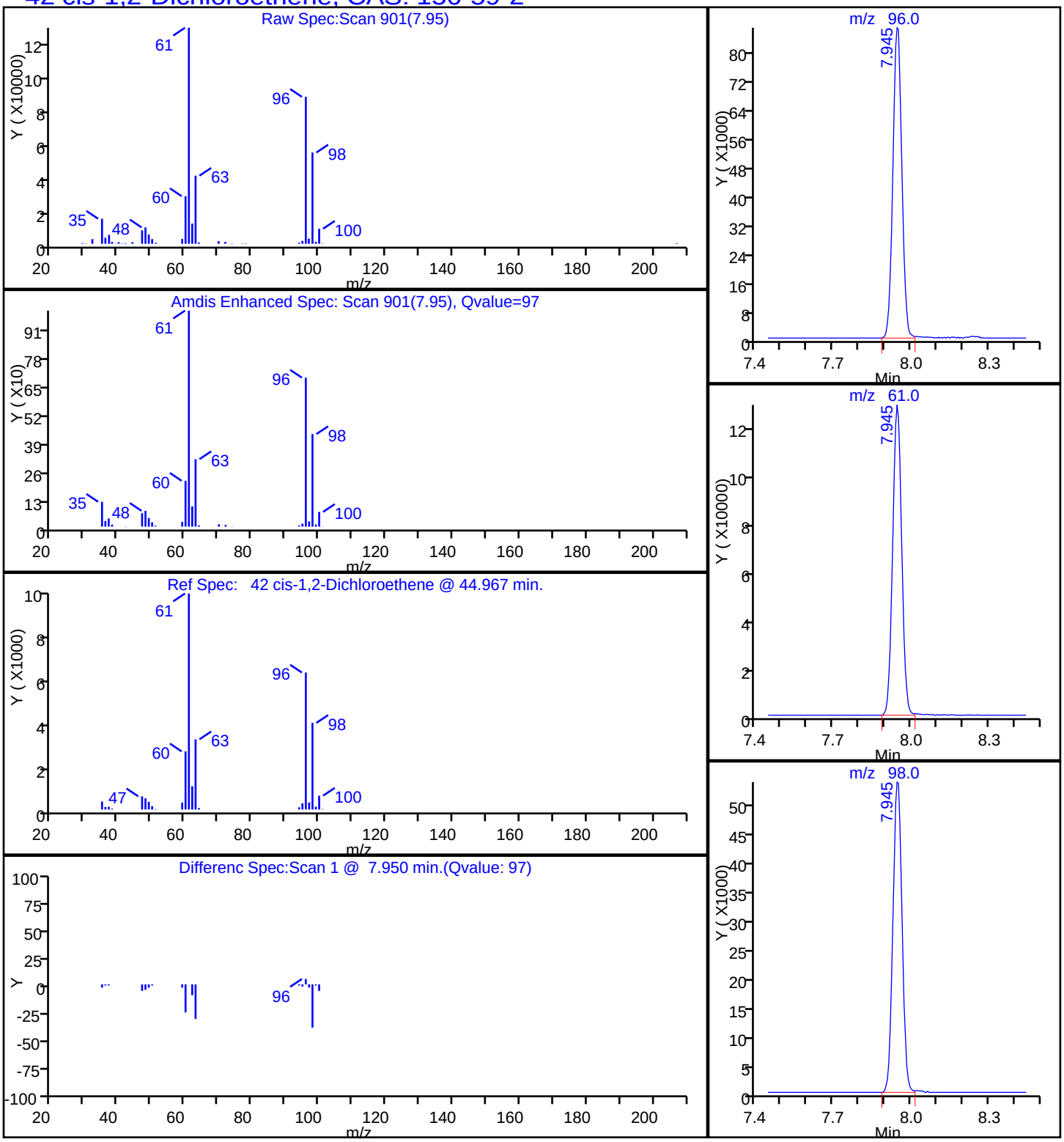
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.31	82.71

Report Date: 09-Nov-2016 10:06:58 Chrom Revision: 2.2 17-Oct-2016 09:27:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\RK08P104.D		
Injection Date:	08-Nov-2016 17:13:30	Instrument ID:	MR
Lims ID:	140-6285-A-5	Lab Sample ID:	140-6285-5
Client ID:	A-MID-GAC		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

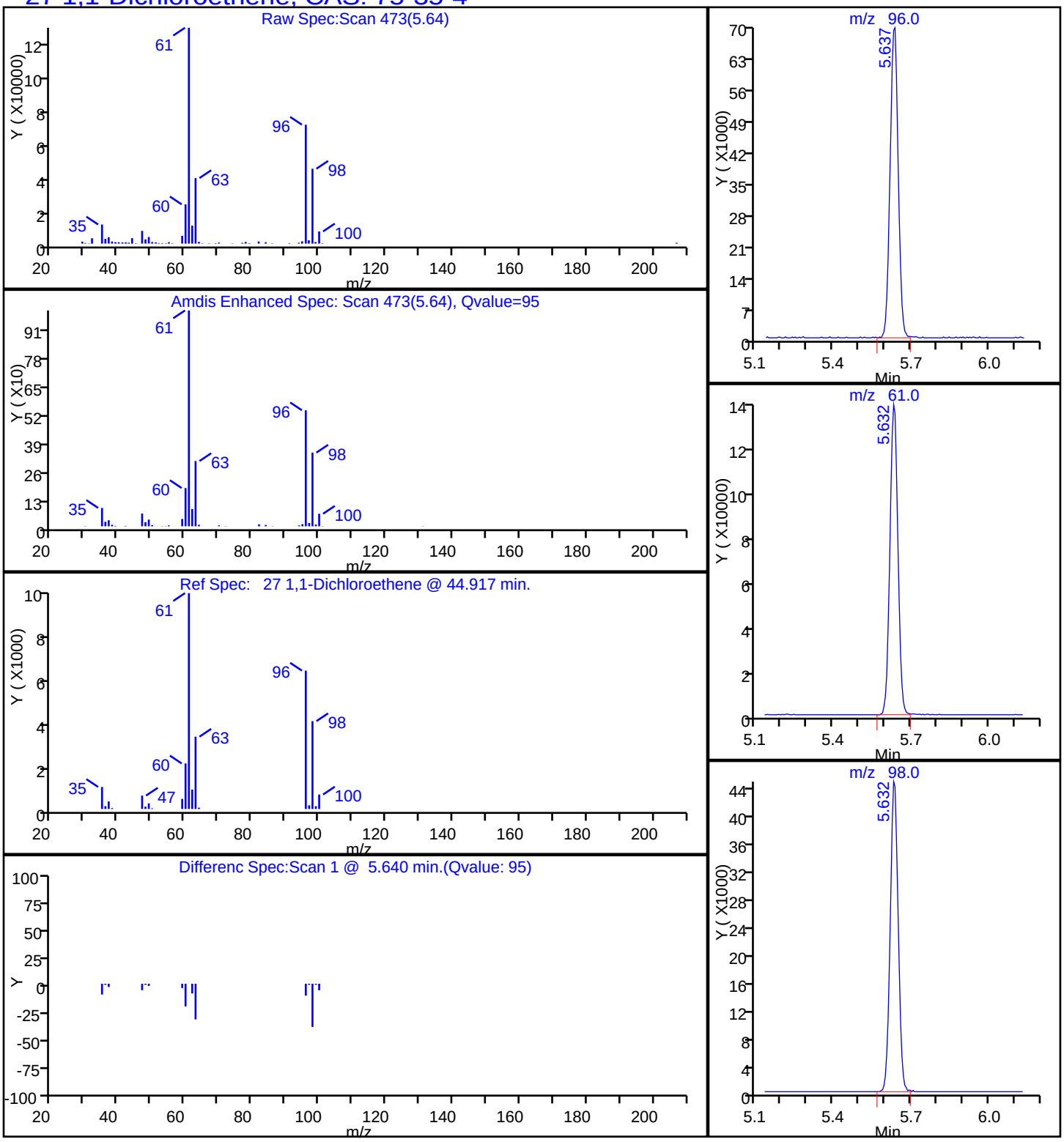
42 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\RK08P104.D		
Injection Date:	08-Nov-2016 17:13:30	Instrument ID:	MR
Lims ID:	140-6285-A-5	Lab Sample ID:	140-6285-5
Client ID:	A-MID-GAC		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4

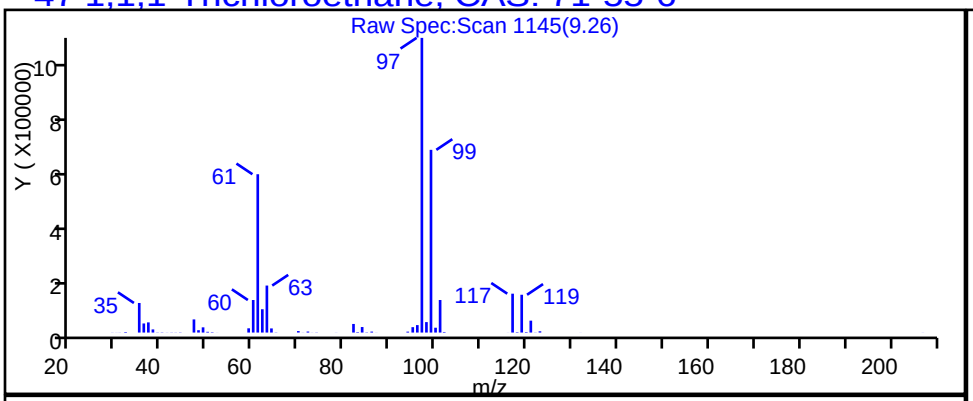


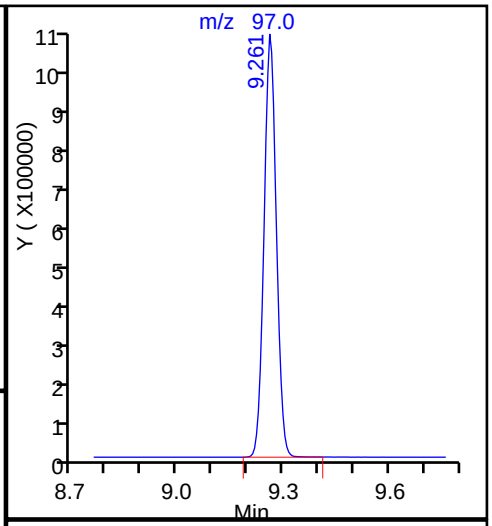
TestAmerica Knoxville

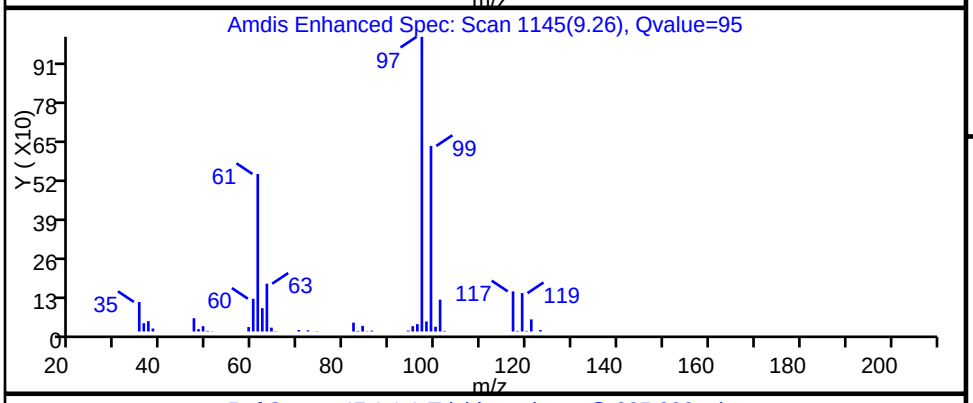
Data File: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\RK08P104.D

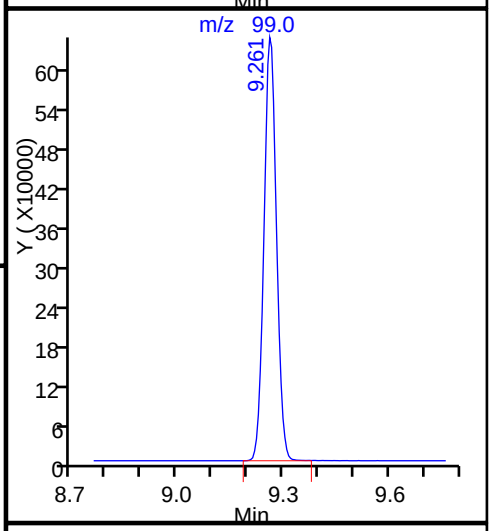
Injection Date:	08-Nov-2016 17:13:30	Instrument ID:	MR		
Lims ID:	140-6285-A-5	Lab Sample ID:	140-6285-5		
Client ID:	A-MID-GAC				
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

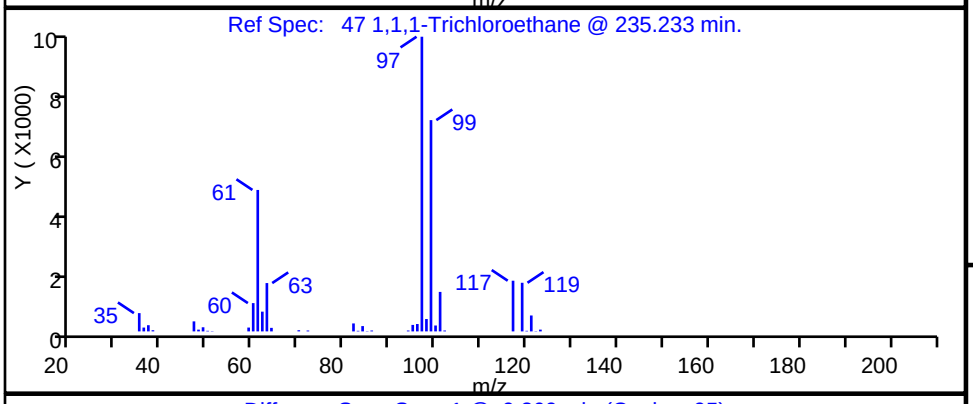
47 1,1,1-Trichloroethane, CAS: 71-55-6

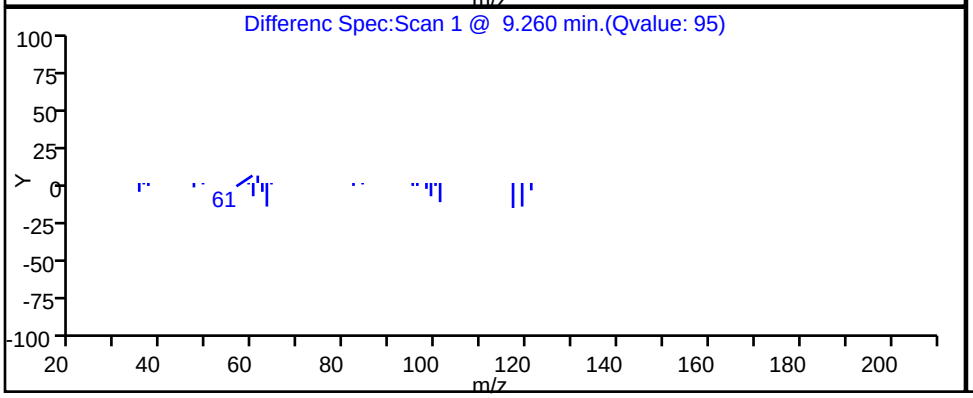


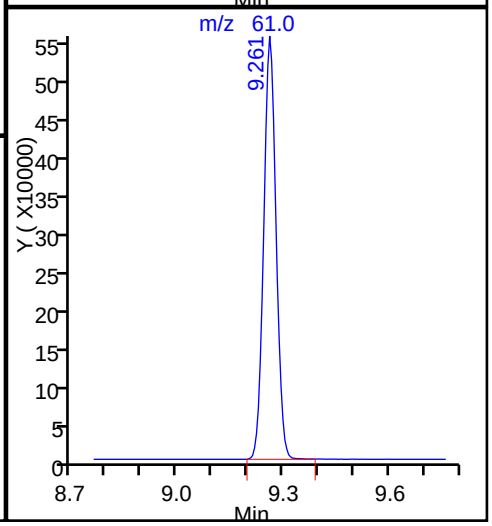












FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6285-1

SDG No.:

Client Sample ID: A-INFLUENT | Lab Sample ID: 140-6285-6

Matrix: Air | Lab File ID: JK07P111R.D

Analysis Method: TO 15 LL | Date Collected: 11/03/2016 12:39

Sample wt/vol: 50(mL) | Date Analyzed: 11/08/2016 09:07

Soil Aliquot Vol: | Dilution Factor: 9.96

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7085 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		8.0	2.3
56-23-5	Carbon tetrachloride	153.81	ND		8.0	1.5
75-45-6	Chlorodifluoromethane	86.47	ND		8.0	1.5
67-66-3	Chloroform	119.38	ND		8.0	1.5
156-59-2	cis-1,2-Dichloroethene	96.94	88		8.0	2.4
75-71-8	Dichlorodifluoromethane	120.91	ND		8.0	2.7
75-34-3	1,1-Dichloroethane	98.96	17		8.0	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.0	1.9
75-35-4	1,1-Dichloroethene	96.94	65		8.0	1.4
100-41-4	Ethylbenzene	106.17	ND		8.0	2.7
75-09-2	Methylene Chloride	84.93	14	J	20	13
1634-04-4	Methyl tert-butyl ether	88.15	ND		40	6.8
91-20-3	Naphthalene	128.17	ND		4.0	4.0
127-18-4	Tetrachloroethene	165.83	ND		8.0	1.6
108-88-3	Toluene	92.14	ND		12	12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		8.0	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		8.0	3.9
71-55-6	1,1,1-Trichloroethane	133.41	360		8.0	1.2
79-00-5	1,1,2-Trichloroethane	133.41	ND		8.0	2.1
79-01-6	Trichloroethene	131.39	510		4.0	1.4
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		8.0	3.4
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		8.0	2.5
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		8.0	2.6
75-01-4	Vinyl chloride	62.50	ND		4.0	2.9
1330-20-7	Xylenes, Total	106.17	ND		16	2.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Client Sample ID: A-INFLUENT Lab Sample ID: 140-6285-6

Matrix: Air Lab File ID: JK07P111R.D

Analysis Method: TO 15 LL Date Collected: 11/03/2016 12:39

Sample wt/vol: 50(mL) Date Analyzed: 11/08/2016 09:07

Soil Aliquot Vol: Dilution Factor: 9.96

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7085 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		25	7.3
56-23-5	Carbon tetrachloride	153.81	ND		50	9.4
75-45-6	Chlorodifluoromethane	86.47	ND		28	5.3
67-66-3	Chloroform	119.38	ND		39	7.3
156-59-2	cis-1,2-Dichloroethene	96.94	350		32	9.5
75-71-8	Dichlorodifluoromethane	120.91	ND		39	13
75-34-3	1,1-Dichloroethane	98.96	68		32	4.0
107-06-2	1,2-Dichloroethane	98.96	ND		32	7.7
75-35-4	1,1-Dichloroethene	96.94	260		32	5.5
100-41-4	Ethylbenzene	106.17	ND		35	12
75-09-2	Methylene Chloride	84.93	49	J	69	45
1634-04-4	Methyl tert-butyl ether	88.15	ND		140	24
91-20-3	Naphthalene	128.17	ND		21	21
127-18-4	Tetrachloroethene	165.83	ND		54	11
108-88-3	Toluene	92.14	ND		45	45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		32	7.9
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		59	29
71-55-6	1,1,1-Trichloroethane	133.41	2000		43	6.5
79-00-5	1,1,2-Trichloroethane	133.41	ND		43	11
79-01-6	Trichloroethene	131.39	2800		21	7.5
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		39	17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		39	12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		39	13
75-01-4	Vinyl chloride	62.50	ND		10	7.4
1330-20-7	Xylenes, Total	106.17	ND		69	10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P111R.D				
Lims ID:	140-6285-A-6				
Client ID:	A-INFLUENT				
Sample Type:	Client				
Inject. Date:	08-Nov-2016 09:07:30	ALS Bottle#:	11	Worklist Smp#:	28
Purge Vol:	500.000 mL	Dil. Factor:	9.9600		
Sample Info:	140-0003595-028				
Misc. Info.:	140-6285-a-6@9.96				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	08-Nov-2016 10:14:16	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				
First Level Reviewer: tajh		Date:	08-Nov-2016 10:34:57		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.271	9.290	-0.019	97	237701	4.00	
* 2 1,4-Difluorobenzene	114	11.438	11.446	-0.008	96	1101859	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.122	16.125	-0.003	90	926530	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.746	17.749	-0.003	85	583594	4.18	
27 1,1-Dichloroethene	96	6.298	6.306	-0.008	96	49067	0.6570	
31 Methylene Chloride	84	6.663	6.671	-0.008	97	10723	0.1420	
37 1,1-Dichloroethane	63	7.932	7.940	-0.008	99	23068	0.1690	
42 cis-1,2-Dichloroethene	96	8.938	8.946	-0.008	97	64044	0.8832	
47 1,1,1-Trichloroethane	97	10.325	10.339	-0.014	97	551512	3.59	
59 Trichloroethene	130	12.143	12.151	-0.008	93	422966	5.17	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

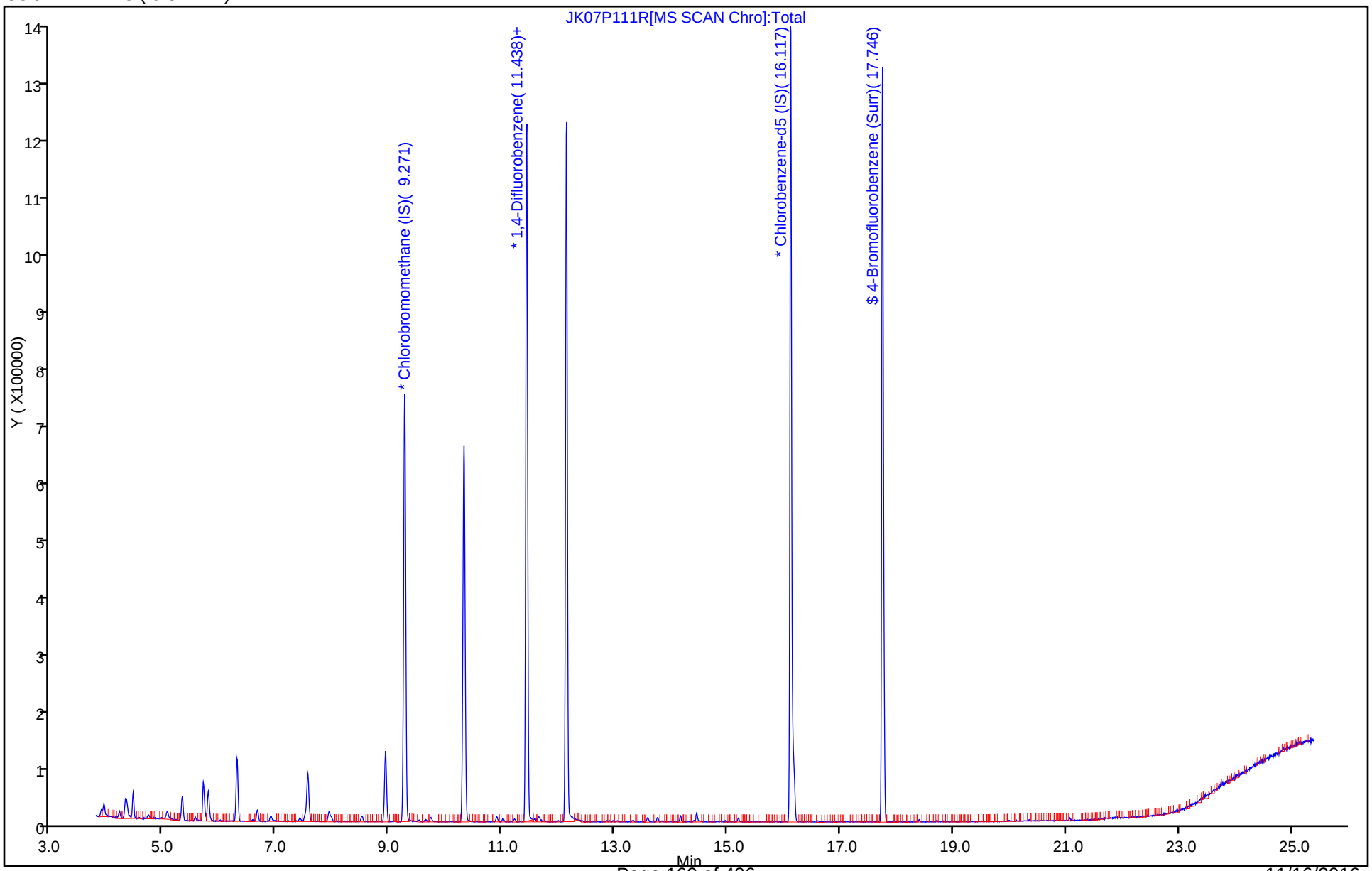
Report Date: 08-Nov-2016 10:35:01 Chrom Revision: 2.2 17-Oct-2016 09:27:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P111R.D

Injection Date:	08-Nov-2016 09:07:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-6285-A-6	Lab Sample ID:	140-6285-6	Worklist Smp#:	28
Client ID:	A-INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	9.9600	ALS Bottle#:	11
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

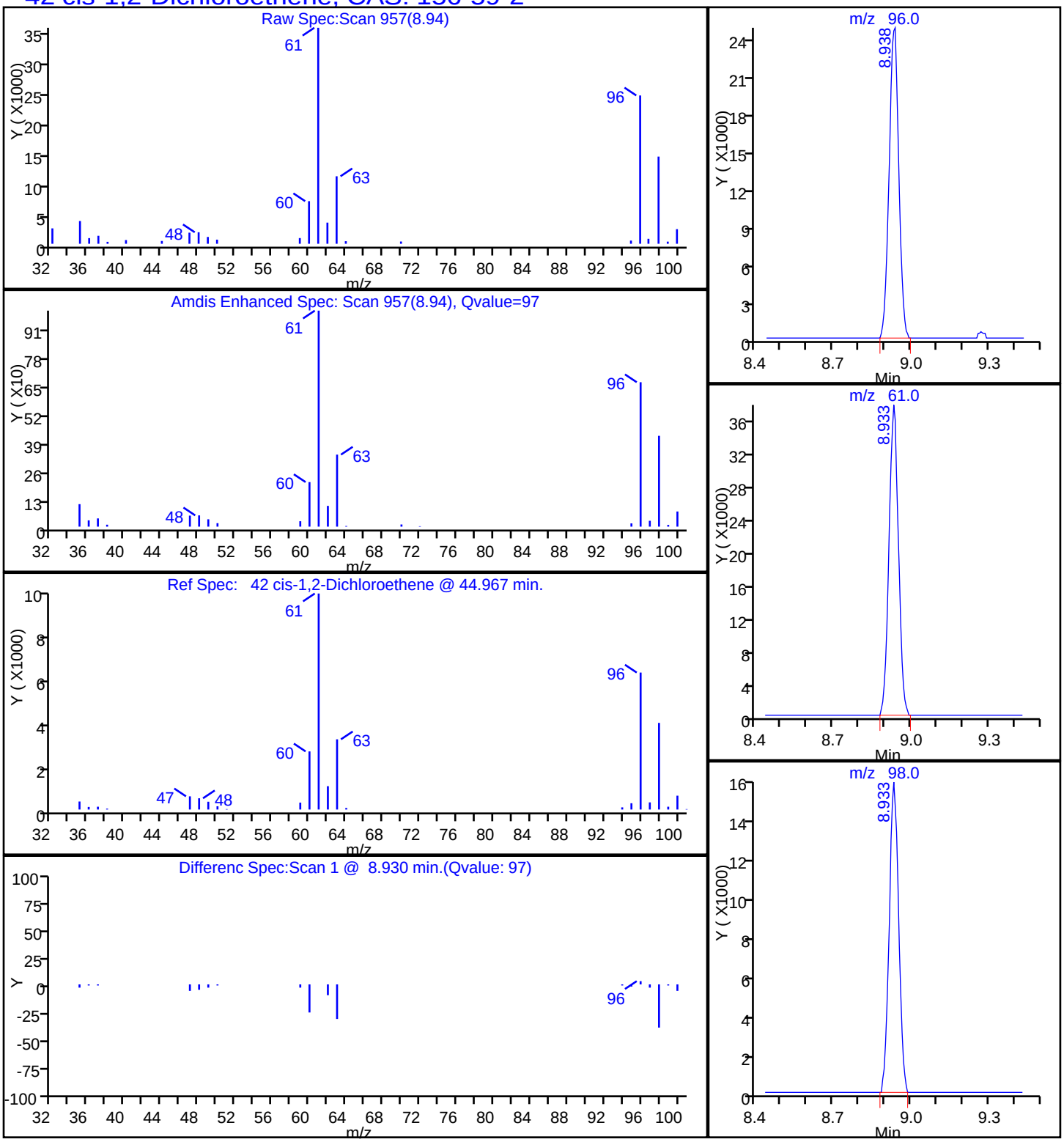
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P111R.D				
Lims ID:	140-6285-A-6				
Client ID:	A-INFLUENT				
Sample Type:	Client				
Inject. Date:	08-Nov-2016 09:07:30	ALS Bottle#:	11	Worklist Smp#:	28
Purge Vol:	500.000 mL	Dil. Factor:	9.9600		
Sample Info:	140-0003595-028				
Misc. Info.:	140-6285-a-6@9.96				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	08-Nov-2016 10:14:16	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				
First Level Reviewer: tajh		Date:	08-Nov-2016 10:34:57		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.18	104.45

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P111R.D				
Injection Date:	08-Nov-2016 09:07:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-6	Lab Sample ID:	140-6285-6		
Client ID:	A-INFLUENT				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	28
Purge Vol:	500.000 mL	Dil. Factor:	9.9600		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

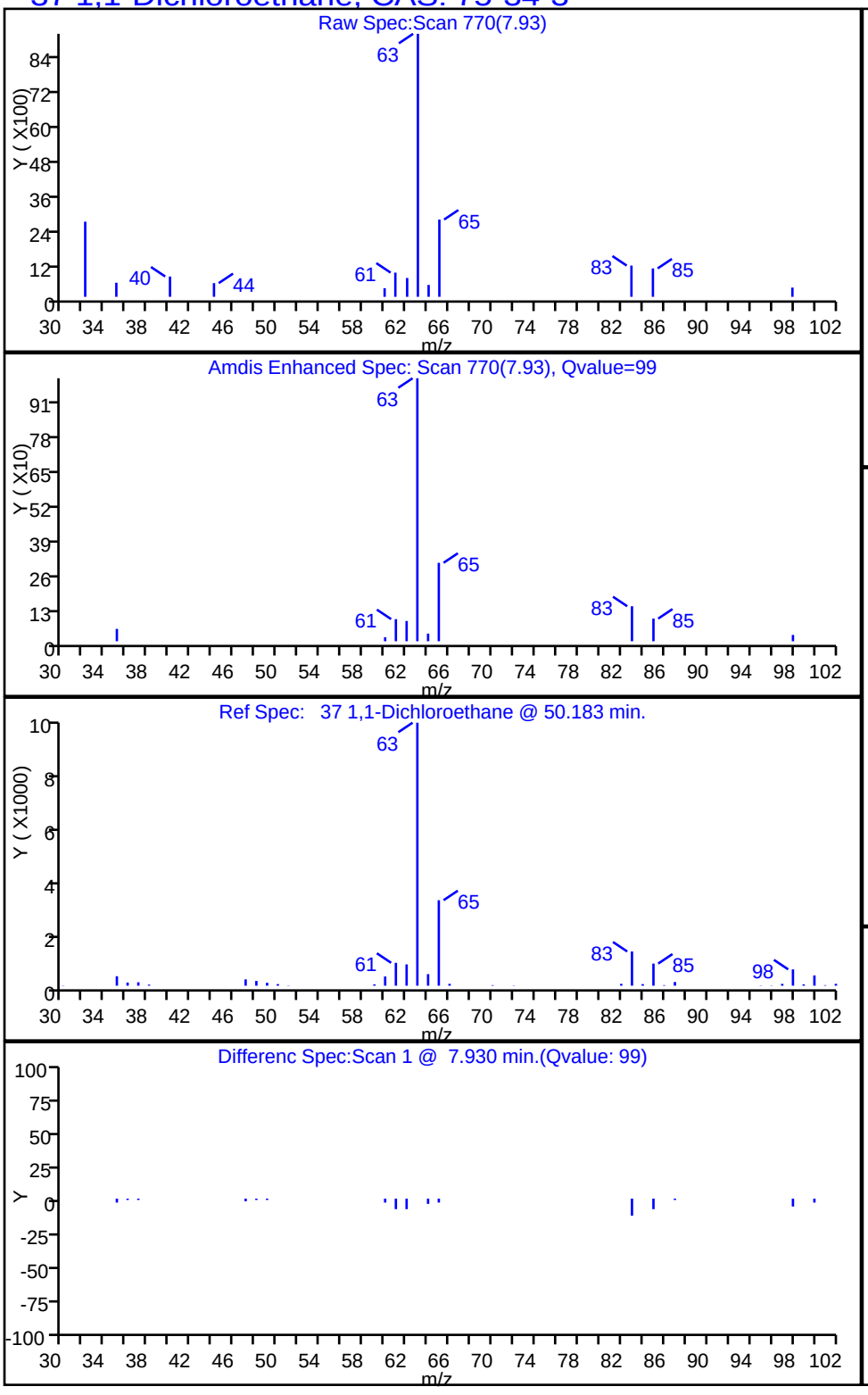
42 cis-1,2-Dichloroethene, CAS: 156-59-2

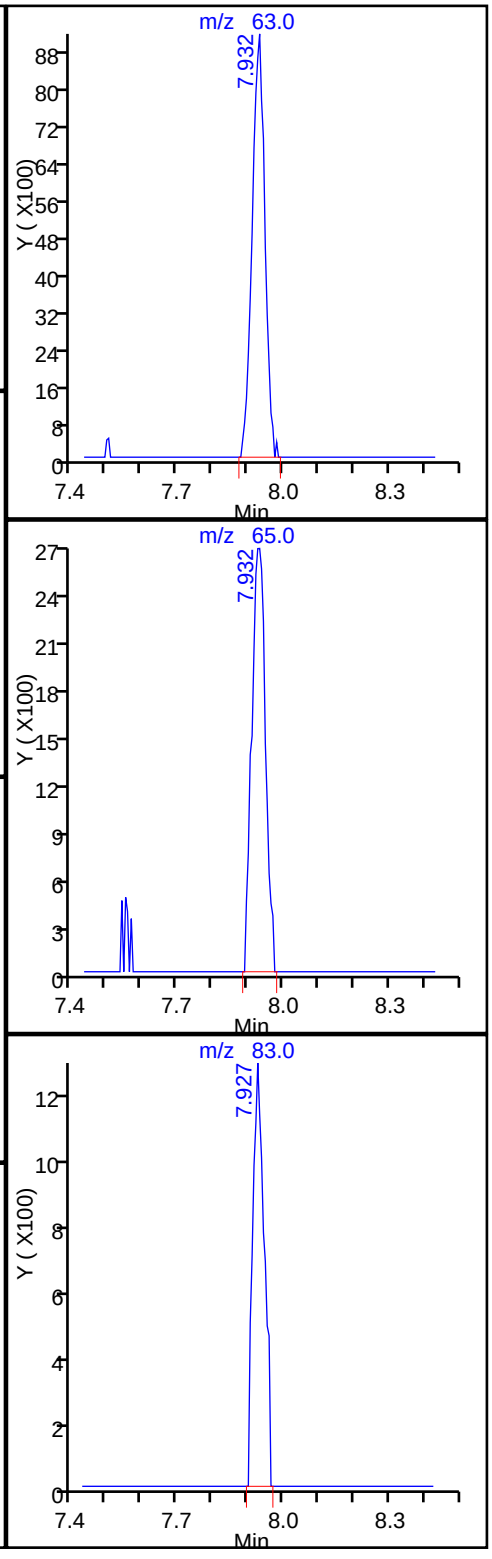


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P111R.D				
Injection Date:	08-Nov-2016 09:07:30	Instrument ID:	MJ		
Lims ID:	140-6285-A-6	Lab Sample ID:	140-6285-6		
Client ID:	A-INFLUENT				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	28
Purge Vol:	500.000 mL	Dil. Factor:	9.9600		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

37 1,1-Dichloroethane, CAS: 75-34-3





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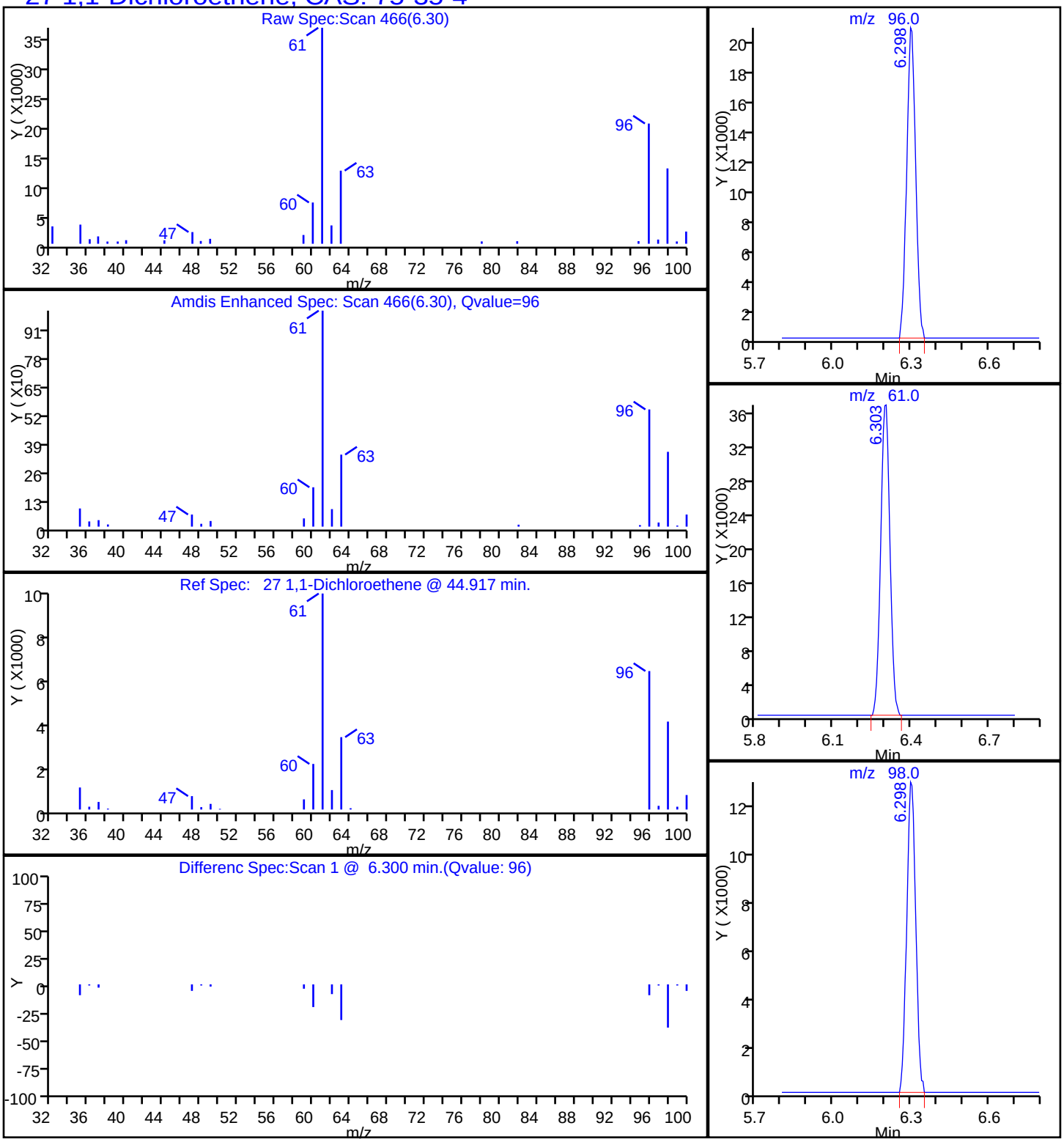
Injection Date: 08-Nov-2016 09:07:30 Instrument ID: MJ
Lims ID: 140-6285-A-6 Lab Sample ID: 140-6285-6
Client ID: A-INFLUENT
Operator ID: 7126 ALS Bottle#: 11 Worklist Smp#: 28
Purge Vol: 500.000 mL Dil. Factor: 9.9600
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

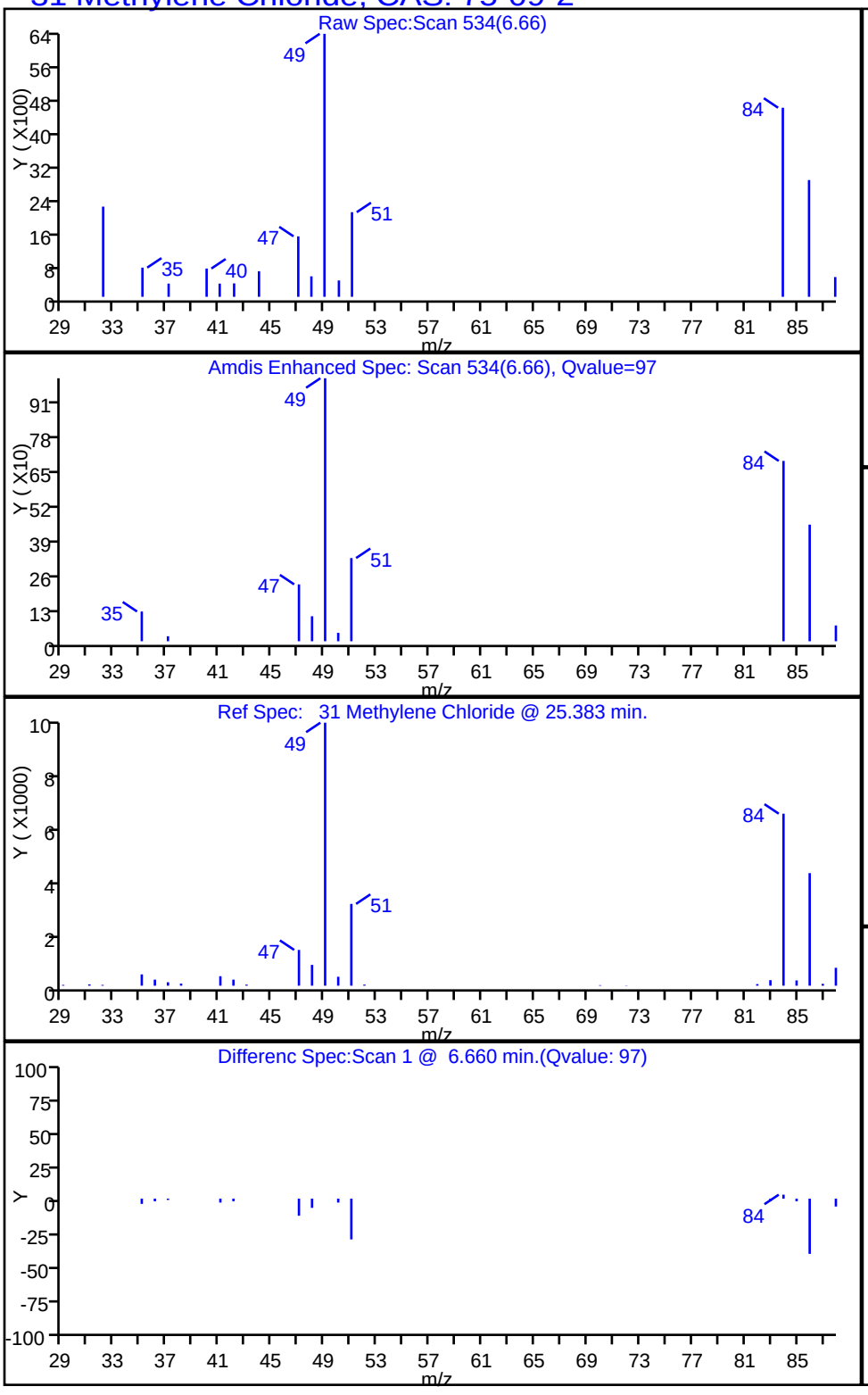
27 1,1-Dichloroethene, CAS: 75-35-4

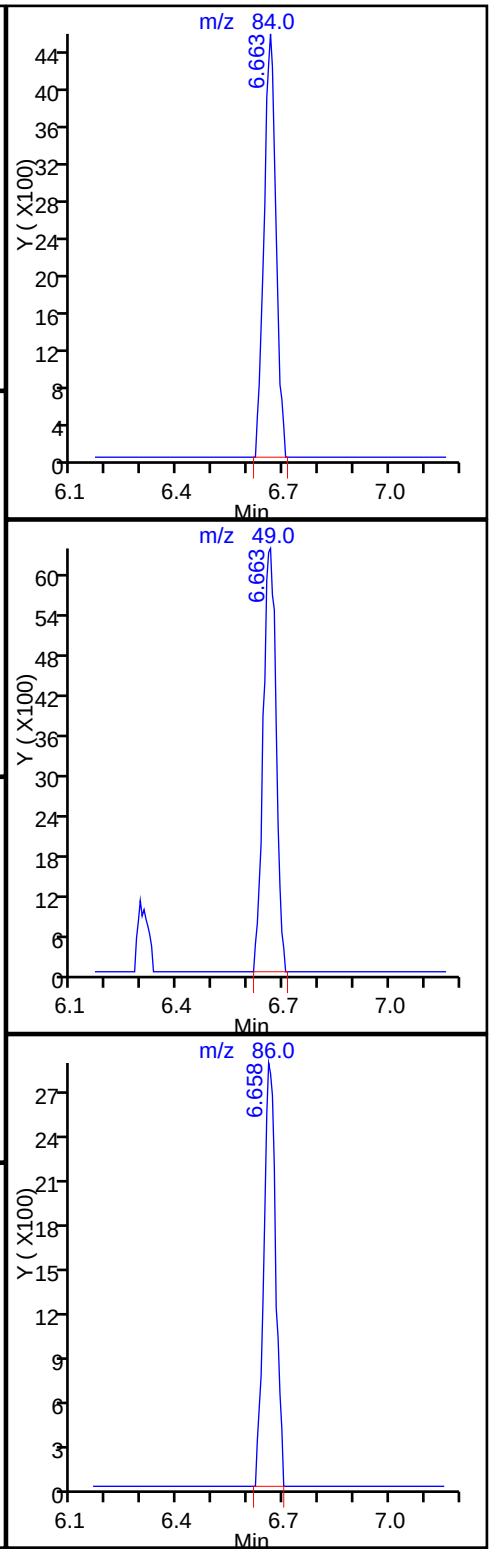


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P111R.D		
Injection Date:	08-Nov-2016 09:07:30	Instrument ID:	MJ
Lims ID:	140-6285-A-6	Lab Sample ID:	140-6285-6
Client ID:	A-INFLUENT		
Operator ID:	7126	ALS Bottle#:	11 Worklist Smp#: 28
Purge Vol:	500.000 mL	Dil. Factor:	9.9600
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

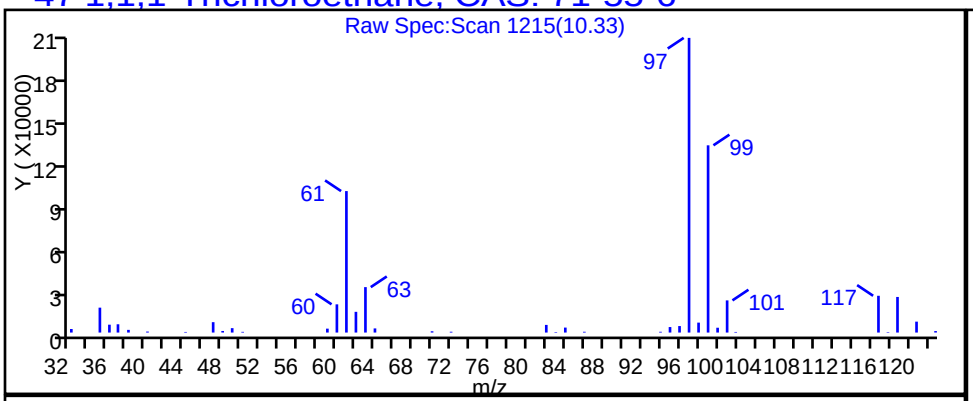
31 Methylene Chloride, CAS: 75-09-2

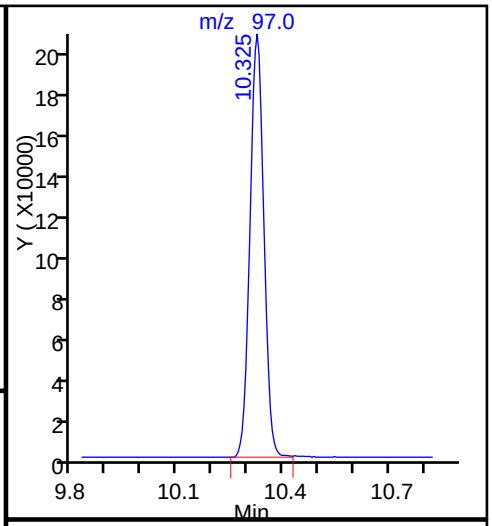


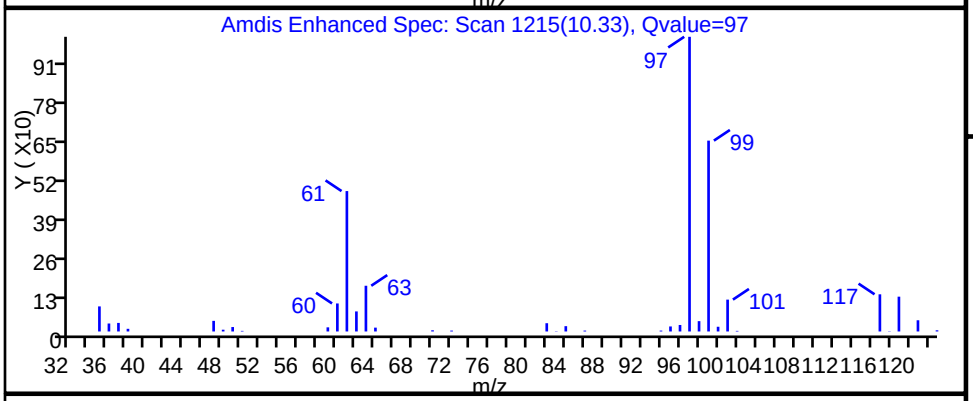


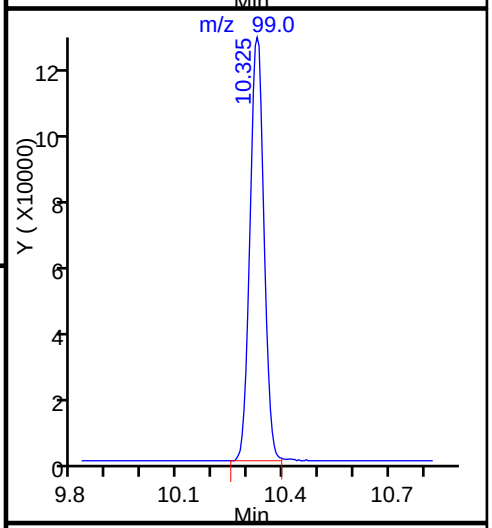
Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P111R.D
Injection Date: 08-Nov-2016 09:07:30 Instrument ID: MJ
Lims ID: 140-6285-A-6 Lab Sample ID: 140-6285-6
Client ID: A-INFLUENT
Operator ID: 7126 ALS Bottle#: 11 Worklist Smp#: 28
Purge Vol: 500.000 mL Dil. Factor: 9.9600
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

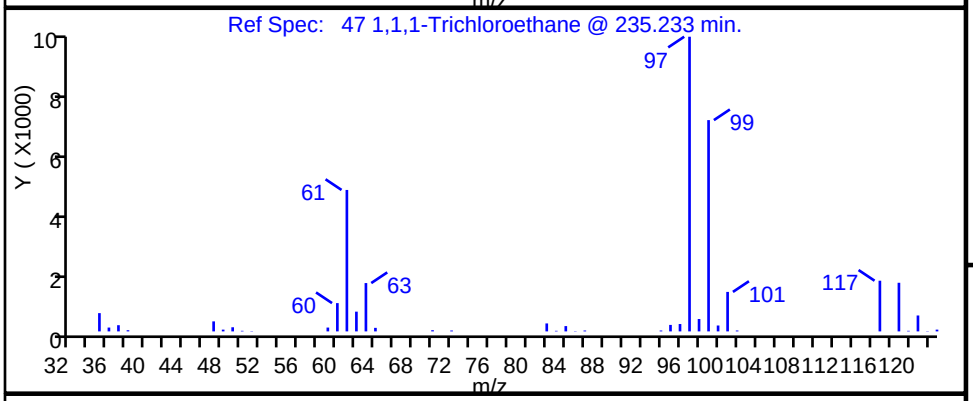
47 1,1,1-Trichloroethane, CAS: 71-55-6

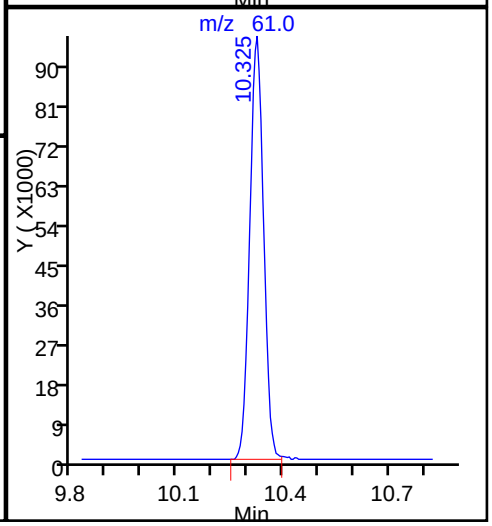


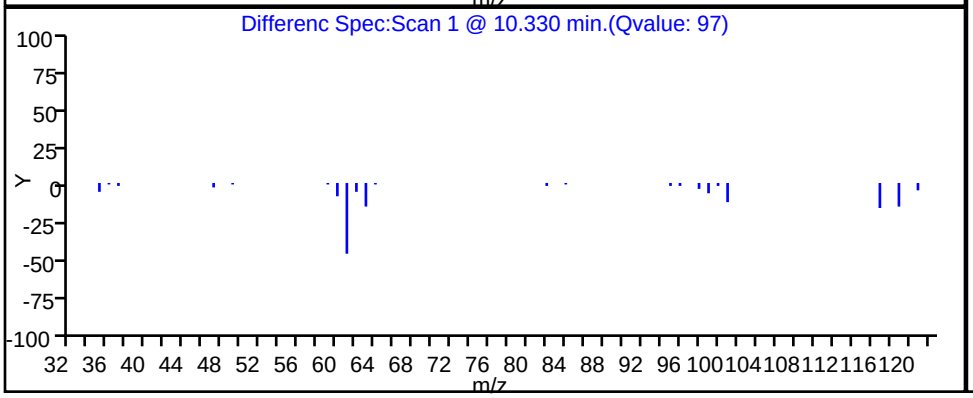






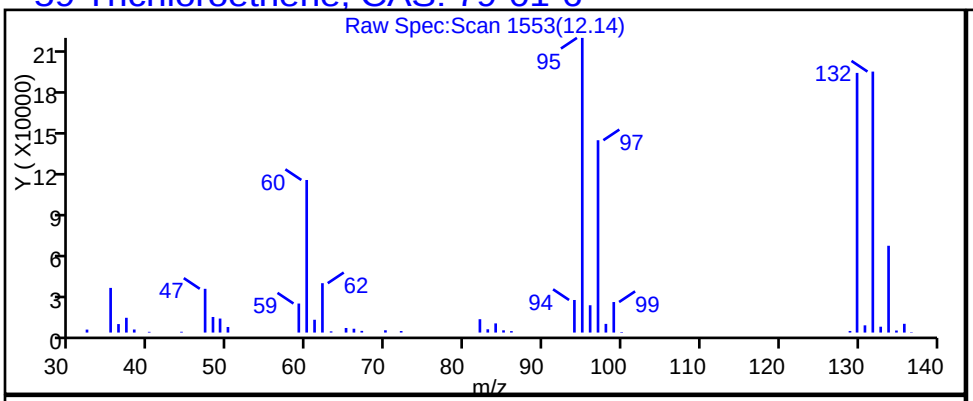


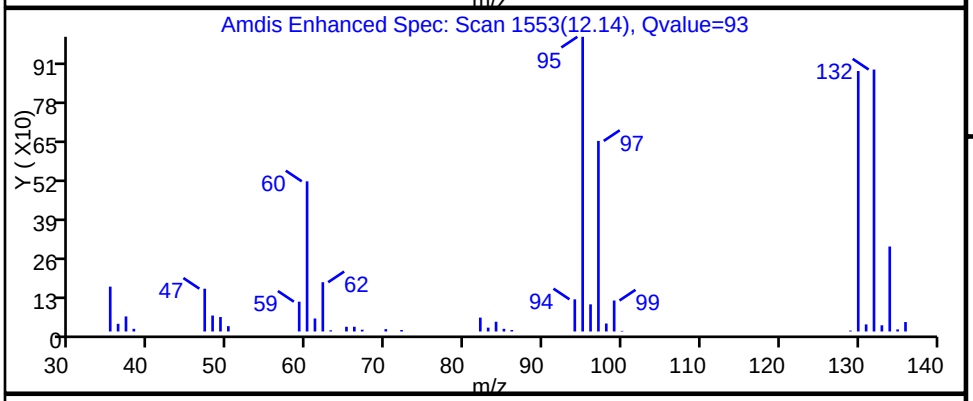


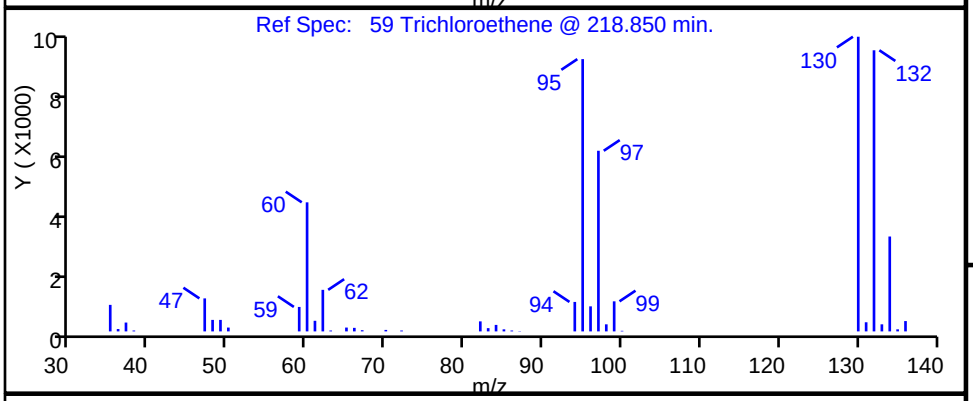


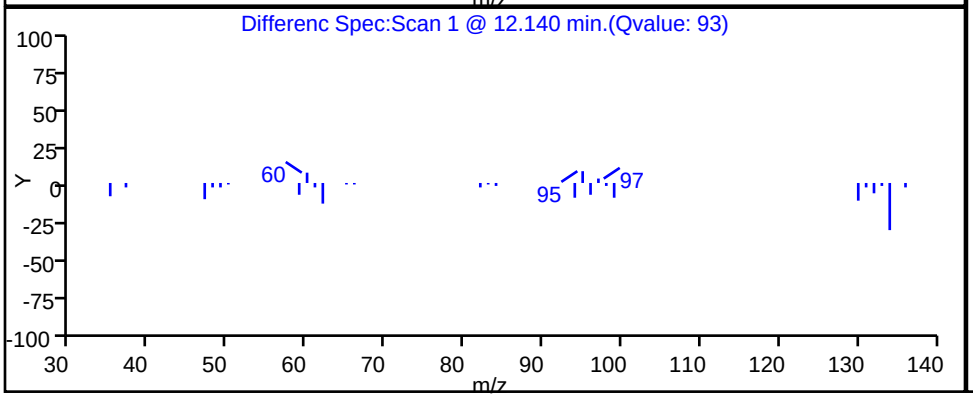
Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JK07P111R.D
Injection Date: 08-Nov-2016 09:07:30 Instrument ID: MJ
Lims ID: 140-6285-A-6 Lab Sample ID: 140-6285-6
Client ID: A-INFLUENT
Operator ID: 7126 ALS Bottle#: 11 Worklist Smp#: 28
Purge Vol: 500.000 mL Dil. Factor: 9.9600
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

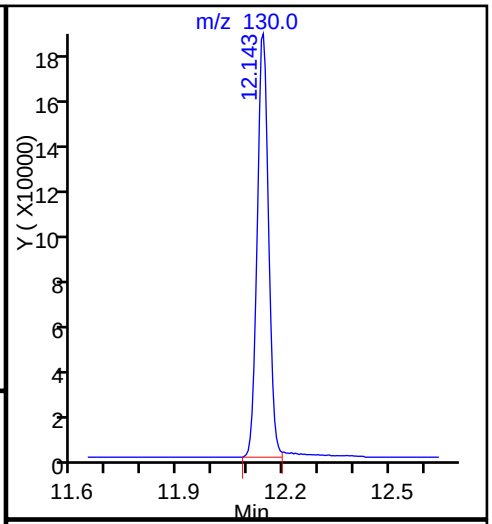
59 Trichloroethene, CAS: 79-01-6

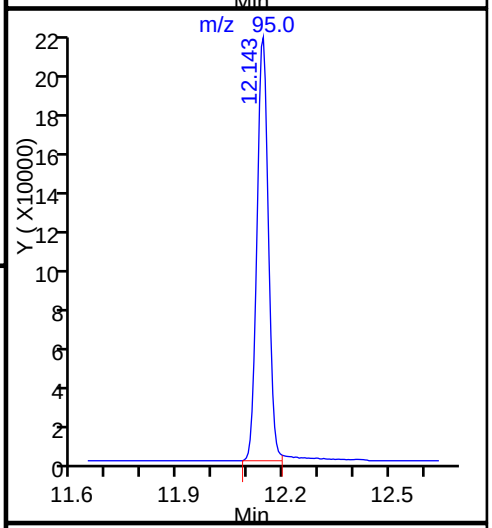


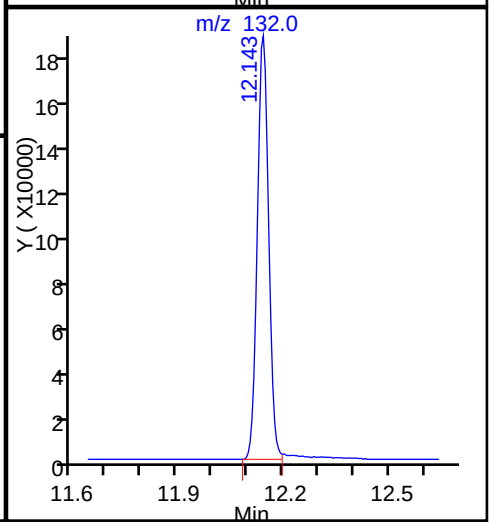












FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-6845/3	JJ08ICAL01.D
Level 2	IC 140-6845/4	JJ08ICAL02.D
Level 3	IC 140-6845/5	JJ08ICAL03.D
Level 4	IC 140-6845/6	JJ08ICAL04.D
Level 5	IC 140-6845/7	JJ08ICAL05.D
Level 6	ICIS 140-6845/8	JJ08ICAL06.D
Level 7	IC 140-6845/9	JJ08ICAL07.D
Level 8	IC 140-6845/10	JJ08ICAL08.D
Level 9	IC 140-6845/11	JJ07ICAL09.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.4186	0.4157 0.4125	0.4022 0.4084	0.3928 0.4079	0.4000	Ave		0.4073				2.1		30.0			
Propene	+++++ 1.3470	1.7441 1.3443	1.5319 1.3038	1.3837 1.1977	1.3404	Ave		1.3991				12.0		30.0			
Dichlorodifluoromethane	4.3867 4.0555	4.0039 3.9541	3.9227 3.7496	3.9004 3.4402	4.0262	Ave		3.9377				6.4		30.0			
Chloromethane	+++++ 0.4472	+++++ 0.4268	0.5613 0.4031	0.4830 0.3656	0.4732	Ave		0.4515				14.0		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.2403 2.2928	2.0622 1.9867	2.1683 1.7832	2.0958 1.9912	2.0349	Ave		2.0728				7.3		30.0			
Acetaldehyde	+++++ 0.4506	+++++ 0.3641	+++++ 0.3895	0.4878 0.3853	0.4261	Ave		0.4172				11.1		30.0			
Vinyl chloride	1.5467 1.3770	1.3347 1.3400	1.3544 1.2722	1.3770 1.2231	1.4068	Ave		1.3591				6.6		30.0			
1,3-Butadiene	+++++ 1.0385	1.0584 1.0045	1.0178 0.9583	1.0175 0.9273	1.0615	Ave		1.0105				4.7		30.0			
Butane	+++++ 1.9704	2.1676 1.8993	2.0666 1.8058	2.0727 1.7180	2.0660	Ave		1.9708				7.8		30.0			
Bromomethane	+++++ 1.2454	1.2520 1.2333	1.2480 1.1935	1.1949 1.2009	1.2700	Ave		1.2298				2.4		30.0			
Chloroethane	+++++ 0.5869	0.5567 0.5785	0.5646 0.5517	0.5564 0.5592	0.5960	Ave		0.5688				2.9		30.0			
Ethanol	+++++ 0.4132	+++++ 0.3546	0.4099 0.3813	0.4155 0.3046	0.3890	Ave		0.3812				10.5		30.0			
Vinyl bromide	+++++ 1.3173	1.2295 1.3057	1.2524 1.2595	1.2344 1.3070	1.3088	Ave		1.2768				2.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	+++++ 1.6787	+++++ 1.6188	1.7660 1.5052	1.6389 1.4899	1.6551	Ave		1.6218				6.0		30.0			
Trichlorofluoromethane	+++++ 3.6044	3.3732 3.4877	3.4768 3.2913	3.4028 3.2746	3.5545	Ave		3.4332				3.5		30.0			
Acrolein	+++++ 0.3422	+++++ 0.3024	0.3857 0.3812	0.3729 0.3583	0.3170	Ave		0.3514				9.2		30.0			
Acetonitrile	+++++ 0.5163	+++++ 0.3937	0.3667 0.4816	0.4178 0.4326	0.4204	Ave		0.4327				11.8		30.0			
Acetone	+++++ 0.4741	+++++ 0.3542	+++++ 0.4443	0.5513 0.3573	0.4148	Ave		0.4327				17.3		30.0			
Isopropyl alcohol	+++++ 1.6271	+++++ 1.4436	1.5685 1.4524	1.6082 1.2370	1.5364	Ave		1.4962				9.0		30.0			
Pentane	+++++ 0.2082	+++++ 0.2022	0.1944 0.1942	0.1976 0.1947	0.2085	Ave		0.2000				3.2		30.0			
Ethyl ether	+++++ 1.3842	+++++ 1.1056	1.2065 1.3336	1.3602 1.2216	1.2100	Ave		1.2602				8.0		30.0			
1,1-Dichloroethene	+++++ 1.3083	1.2437 1.2904	1.2431 1.2390	1.1766 1.2776	1.2750	Ave		1.2567				3.2		30.0			
tert-Butyl alcohol	+++++ 2.0739	1.9778 1.8957	1.9349 1.9623	1.9180 1.8923	1.8857	Ave		1.9426				3.2		30.0			
Acrylonitrile	+++++ 0.8206	+++++ 0.6262	0.6700 0.7884	0.7911 0.6932	0.6619	Ave		0.7216				10.6		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++ 2.8222	2.6127 2.7177	2.6947 2.5337	2.6183 2.4890	2.8021	Ave		2.6613				4.5		30.0			
Methylene Chloride	+++++ 1.2505	+++++ 1.1812	1.6551 1.1049	1.3333 1.0821	1.2891	Ave		1.2709				15.2		30.0			
3-Chloropropene	+++++ 1.2310	1.3666 1.1542	1.2758 1.1214	1.1838 1.0626	1.1910	Ave		1.1983				7.8		30.0			
Carbon disulfide	+++++ 4.1094	3.8928 3.8963	3.9099 3.6597	3.9253 3.7186	3.9321	Ave		3.8805				3.6		30.0			
trans-1,2-Dichloroethene	+++++ 1.3121	1.2366 1.2781	1.2286 1.2045	1.2164 1.1454	1.2894	Ave		1.2389				4.3		30.0			
2-Methylpentane	+++++ 2.8638	2.8718 2.7004	2.8813 2.4925	2.7507 2.3412	2.8676	Ave		2.7212				7.5		30.0			
Methyl tert-butyl ether	+++++ 2.9186	+++++ 2.2934	2.4189 2.8242	2.8315 2.4194	2.4363	Ave		2.5917				9.9		30.0			
1,1-Dichloroethane	+++++ 2.4921	2.4104 2.2051	2.3161 2.2519	2.2784 2.1313	2.2888	Ave		2.2968				4.9		30.0			
Vinyl acetate	+++++ 2.8860	+++++ 2.1312	2.3151 2.8848	2.6963 2.4666	2.2996	Ave		2.5257				11.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.4587	+++++ 0.3792	0.4404 0.4775	0.4574 0.3717	0.3871	Ave		0.4246				10.3		30.0			
Hexane	+++++ 1.0592	1.0744 0.9805	1.0500 0.9642	1.0026 0.9024	1.0397	Ave		1.0091				5.8		30.0			
Isopropyl ether	3.6585 3.8039	4.1325 3.0167	3.2889 3.5892	3.7210 2.9568	3.2520	Ave		3.4911				11.1		30.0			
cis-1,2-Dichloroethene	+++++ 1.3103	1.2673 1.1822	1.2254 1.2263	1.1796 1.1622	1.2083	Ave		1.2202				4.0		30.0			
Ethyl acetate	+++++ 2.1111	+++++ 1.7369	1.8467 2.1266	2.0366 1.7664	1.7678	Ave		1.9131				9.0		30.0			
Chloroform	+++++ 2.7285	2.6649 2.3181	2.5664 2.5048	2.4949 2.3514	2.4902	Ave		2.5149				5.6		30.0			
Tert-butyl ethyl ether	2.9714 3.1339	3.2822 2.5245	2.6210 3.0336	3.0431 2.5249	2.6452	Ave		2.8644				10.0		30.0			
Tetrahydrofuran	+++++ 1.1757	+++++ 0.9192	1.0120 1.1874	1.1292 1.0403	0.9632	Ave		1.0610				9.9		30.0			
1,1,1-Trichloroethane	+++++ 2.8004	2.5440 2.4811	2.6857 2.5817	2.5828 2.3960	2.5988	Ave		2.5838				4.7		30.0			
1,2-Dichloroethane	+++++ 0.3729	0.3517 0.3238	0.3603 0.3452	0.3394 0.3100	0.3382	Ave		0.3427				5.8		30.0			
1-Butanol	+++++ 0.1028	+++++ 0.0974	0.0929 0.1029	0.0801 0.0974	0.0872	Ave		0.0944				8.9		30.0			
Cyclohexane	0.1458 0.1376	0.1245 0.1259	0.1370 0.1165	0.1244 0.0987	0.1365	Ave		0.1274				11.0		30.0			
Benzene	+++++ 0.8021	0.8407 0.6741	0.8260 0.7057	0.7545 0.5845	0.7314	Ave		0.7399				11.6		30.0			
Carbon tetrachloride	0.6556 0.6175	0.5523 0.5488	0.5883 0.5437	0.5376 0.4674	0.5976	Ave		0.5676				9.6		30.0			
2,3-Dimethylpentane	+++++ 0.1834	0.1733 0.1619	0.1797 0.1675	0.1693 0.1496	0.1719	Ave		0.1696				6.2		30.0			
Thiophene	0.4726 0.4434	0.4160 0.3821	0.4232 0.4159	0.3991 0.3675	0.3942	Ave		0.4127				7.7		30.0			
Tert-amyl methyl ether	0.6538 0.7324	0.7284 0.5781	0.6755 0.6850	0.6888 0.5211	0.6147	Ave		0.6531				10.7		30.0			
2,2,4-Trimethylpentane	+++++ 1.3053	1.3743 1.0944	1.3317 1.1189	1.1928 0.9582	1.1802	Ave		1.1945				11.6		30.0			
Heptane	0.3049 0.2761	0.2634 0.2381	0.2681 0.2558	0.2417 0.2313	0.2433	Ave		0.2581				8.9		30.0			
1,2-Dichloropropane	0.3403 0.3068	0.2858 0.2582	0.2870 0.2838	0.2693 0.2480	0.2678	Ave		0.2830				9.8		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.3627 0.3172	0.3027 0.2712	0.3023 0.2920	0.2777 0.2605	0.2872	Ave		0.2971				10.1		30.0			
Dibromomethane	0.3337 0.3141	0.2804 0.2673	0.2956 0.2945	0.2715 0.2625	0.2784	Ave		0.2887				8.1		30.0			
Bromodichloromethane	0.5666 0.5741	0.5086 0.4858	0.5089 0.5400	0.4770 0.4862	0.4945	Ave		0.5158				7.0		30.0			
1,4-Dioxane	+++++ 0.0924	+++++ 0.0873	0.0762 0.0884	0.0778 0.0763	0.0847	Ave		0.0833				7.9		30.0			
Methyl methacrylate	0.2389 0.2514	0.2477 0.2091	0.2751 0.2608	0.2192 0.2109	0.2069	Ave		0.2356				10.6		30.0			
Methylcyclohexane	+++++ 0.6101	0.5548 0.5232	0.6037 0.5301	0.5406 0.4577	0.5619	Ave		0.5478				8.8		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.4940	+++++ 0.4525	0.4771 0.4903	0.4607 0.4131	0.4233	Ave		0.4587				6.9		30.0			
cis-1,3-Dichloropropene	+++++ 0.4251	0.3760 0.3505	0.3545 0.4070	0.3512 0.3703	0.3450	Ave		0.3725				7.9		30.0			
trans-1,3-Dichloropropene	+++++ 0.4044	0.3180 0.3365	0.3166 0.4085	0.3254 0.3668	0.3361	Ave		0.3515				10.6		30.0			
Toluene	+++++ 0.9935	0.9647 0.7890	0.9176 0.8879	0.8461 0.7618	0.8548	Ave		0.8769				9.2		30.0			
Toluene Range	+++++ 2.2197	+++++ 1.7946	2.0093 2.1871	1.9431 1.8111	1.9108	Ave		1.9822				8.5		30.0			
1,1,2-Trichloroethane	0.2932 0.3078	0.2834 0.2448	0.2714 0.2802	0.2705 0.2446	0.2638	Ave		0.2733				7.6		30.0			
2-Methylthiophene	0.8146 0.8152	0.6557 0.6571	0.6731 0.7234	0.6973 0.6213	0.7059	Ave		0.7071				9.7		30.0			
3-Methylthiophene	0.7286 0.7701	0.6979 0.6205	0.6971 0.6981	0.6011 0.6098	0.6600	Ave		0.6759				8.5		30.0			
2-Hexanone	+++++ 0.2764	+++++ 0.2408	0.2181 0.2631	0.2057 0.2248	0.2348	Ave		0.2377				10.5		30.0			
C8 Range	+++++ 3.0891	+++++ 2.4712	+++++ 2.6546	2.7258 2.2296	2.7558	Ave		2.6543				10.9		30.0			
Octane	0.3344 0.3234	0.2947 0.2623	0.3166 0.2883	0.2833 0.2473	0.2837	Ave		0.2927				9.7		30.0			
Dibromochloromethane	0.4978 0.5925	0.4561 0.4839	0.5118 0.5535	0.4577 0.4840	0.4926	Ave		0.5033				8.8		30.0			
1,2-Dibromoethane (EDB)	0.3923 0.5003	0.4178 0.4094	0.4494 0.4807	0.4177 0.4265	0.4242	Ave		0.4354				8.0		30.0			
Tetrachloroethene	0.3873 0.3598	0.3396 0.2842	0.3682 0.3107	0.3167 0.2667	0.3225	Ave		0.3284				12.0		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2,3-Dimethylheptane	+++++ 0.9545	1.0278 0.7543	1.0752 0.7481	0.9073 0.5735	0.8691	Ave		0.8637				19.1		30.0			
Chlorobenzene	0.6540 0.6898	0.6488 0.5569	0.6679 0.6251	0.5842 0.5256	0.5874	Ave		0.6155				8.9		30.0			
Ethylbenzene	1.0369 1.1165	1.0061 0.8450	0.9685 1.0340	0.9593 0.8469	0.9044	Ave		0.9686				9.4		30.0			
2-Ethylthiophene	0.7221 0.7933	0.6809 0.6225	0.6893 0.7581	0.6594 0.6422	0.6545	Ave		0.6914				8.2		30.0			
m-Xylene & p-Xylene	0.7975 0.8326	0.7783 0.6224	0.7480 0.7322	0.7454 0.5750	0.6919	Ave		0.7248				11.4		30.0			
Nonane	0.5955 0.6515	0.5791 0.5307	0.5909 0.5706	0.5741 0.4727	0.5858	Ave		0.5723				8.5		30.0			
Bromoform	0.3161 0.4607	0.2848 0.4032	0.3239 0.4967	0.3091 0.4509	0.3629	Ave		0.3787				20.3		30.0			
Styrene	0.3749 0.5815	0.3610 0.4561	0.4078 0.5845	0.4200 0.4811	0.4530	Ave		0.4578				17.6		30.0			
o-Xylene	0.8722 0.8939	0.8716 0.6618	0.8252 0.8094	0.8165 0.6533	0.7476	Ave		0.7946				11.2		30.0			
1,1,2,2-Tetrachloroethane	0.5544 0.6657	0.5575 0.5314	0.5721 0.6447	0.5681 0.5326	0.5561	Ave		0.5758				8.2		30.0			
1,2,3-Trichloropropane	0.1139 0.1517	0.1284 0.1217	0.1317 0.1553	0.1289 0.1327	0.1277	Ave		0.1324				10.0		30.0			
Isopropylbenzene	+++++ 1.1771	+++++ 0.8812	1.0596 1.0647	1.0626 0.8458	0.9717	Ave		1.0089				11.5		30.0			
Propylbenzene	+++++ 0.2895	+++++ 0.2252	0.2304 0.2936	0.2354 0.2455	0.2248	Ave		0.2492				12.0		30.0			
2-Chlorotoluene	0.2255 0.2807	0.2426 0.2222	0.2362 0.2744	0.2286 0.2384	0.2384	Ave		0.2430				8.5		30.0			
4-Ethyltoluene	+++++ 1.0203	+++++ 0.7867	0.7969 0.9812	0.8226 0.7942	0.8068	Ave		0.8584				11.5		30.0			
1,3,5-Trimethylbenzene	0.4012 0.4982	0.4570 0.3776	0.4234 0.4677	0.4452 0.3864	0.4090	Ave		0.4295				9.4		30.0			
Alpha Methyl Styrene	+++++ 0.3705	+++++ 0.3087	0.2123 0.4203	0.2250 0.3623	0.2694	Ave		0.3098				25.3		30.0			
Decane	+++++ 0.7019	+++++ 0.5485	0.5700 0.6164	0.6005 0.4900	0.5836	Ave		0.5873				11.1		30.0			
tert-Butylbenzene	+++++ 0.9675	+++++ 0.7326	0.8703 0.8661	0.8931 0.6883	0.8080	Ave		0.8323				11.6		30.0			
1,2,4-Trimethylbenzene	0.6720 0.8683	0.7359 0.6694	0.7226 0.7970	0.7494 0.6317	0.7140	Ave		0.7289				9.8		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	1.0812 1.3235	1.2299 1.0158	1.1697 1.1914	1.2077 0.9224	1.1219	Ave		1.1404				10.6		30.0			
1,3-Dichlorobenzene	0.3042 0.3988	0.2488 0.3396	0.3111 0.4504	0.2778 0.4007	0.3178	Ave		0.3388				19.3		30.0			
Benzyl chloride	+++++ 0.4137	+++++ 0.3879	0.2767 0.5417	0.2353 0.4910	0.3060	Ave		0.3789				29.8		30.0			
1,4-Dichlorobenzene	0.2369 0.3351	0.2227 0.2924	0.2556 0.4086	0.2246 0.3737	0.2617	Ave		0.2901				23.3		30.0			
4-Isopropyltoluene	0.7601 0.9782	0.8524 0.7688	0.8171 0.8965	0.8275 0.7200	0.8265	Ave		0.8275				9.3		30.0			
1,2,3-Trimethylbenzene	0.5253 0.6467	0.5863 0.5050	0.5730 0.6154	0.5714 0.5047	0.5391	Ave		0.5630				8.7		30.0			
Butylcyclohexane	+++++ 0.8395	0.8197 0.6568	0.7836 0.7208	0.7644 0.5891	0.7454	Ave		0.7399				11.3		30.0			
Indane	0.5863 0.7062	0.5662 0.5539	0.6014 0.6799	0.5659 0.5488	0.5774	Ave		0.5985				9.4		30.0			
1,2-Dichlorobenzene	0.2967 0.4151	0.2907 0.3436	0.3383 0.4379	0.3135 0.3755	0.3383	Ave		0.3500				14.5		30.0			
Butylbenzene	0.5990 0.8374	0.5748 0.6931	0.6820 0.8102	0.6323 0.6592	0.6837	Ave		0.6858				12.8		30.0			
Indene	+++++ 0.4221	+++++ 0.3594	0.2909 0.4649	0.2818 0.3932	0.3289	Ave		0.3630				18.7		30.0			
Undecane	+++++ 0.6214	+++++ 0.5053	0.5591 0.6002	0.4661 0.4838	0.5178	Ave		0.5362				11.0		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 0.6250	0.4772 0.5259	0.5086 0.6148	0.4656 0.5289	0.5163	Ave		0.5328				10.9		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.1294	0.0646 0.1212	0.0845 +++++	0.0747 +++++	0.0973	Ave		0.0953				27.1		30.0			
1,2,4,5-Tetramethylbenzene	0.5376 0.7346	0.5764 0.6284	0.6177 0.7200	0.5605 0.6193	0.6246	Ave		0.6244				10.6		30.0			
1,2,3,5-Tetramethylbenzene	0.3759 0.4705	0.3845 0.3885	0.3856 0.4452	0.3482 0.3903	0.3986	Ave		0.3986				9.3		30.0			
1,2,3,4-Tetramethylbenzene	0.4543 0.5872	0.4507 0.4875	0.5159 0.5678	0.4265 0.5028	0.4911	Ave		0.4982				10.7		30.0			
Dodecane	+++++ 0.5426	+++++ 0.4614	0.5226 0.4842	0.3050 0.4318	0.4752	Ave		0.4604				16.9		30.0			
1,2,4-Trichlorobenzene	0.0661 0.1102	0.0530 0.1122	0.0745 +++++	0.0560 +++++	0.0873	Ave		0.0799				30.4	*	30.0			
Naphthalene	0.1965 0.3183	0.1595 0.3046	0.2368 +++++	0.1613 +++++	0.2567	Ave		0.2334				27.6		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	+++++ 0.1112	+++++ 0.1141	0.0940 +++++	0.0575 +++++	0.0947	Ave		0.0943				23.9		30.0			
Hexachlorobutadiene	0.3283 0.4113	0.3541 0.3265	0.4058 0.4016	0.3257 0.3566	0.3583	Ave		0.3631				9.6		30.0			
1,2,3-Trichlorobenzene	0.0822 0.1233	0.0609 0.1155	0.1040 +++++	0.0671 +++++	0.1060	Ave		0.0941				25.8		30.0			
2-Methylnaphthalene	+++++ 0.0121	+++++ 0.0136	0.0127 0.0155	0.0054 +++++	0.0128	Ave		0.0120				28.8		50.0			
1-Methylnaphthalene	+++++ 0.0176	+++++ 0.0181	0.0191 0.0192	0.0058 +++++	0.0169	Ave		0.0161				31.9		50.0			
4-Bromofluorobenzene (Surr)	0.5601 0.6012	0.5859 0.6226	0.5756 0.6286	0.6091 0.6240	0.6203	Ave		0.6030				4.0		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-6845/3	JJ08ICAL01.D
Level 2	IC 140-6845/4	JJ08ICAL02.D
Level 3	IC 140-6845/5	JJ08ICAL03.D
Level 4	IC 140-6845/6	JJ08ICAL04.D
Level 5	IC 140-6845/7	JJ08ICAL05.D
Level 6	ICIS 140-6845/8	JJ08ICAL06.D
Level 7	IC 140-6845/9	JJ08ICAL07.D
Level 8	IC 140-6845/10	JJ08ICAL08.D
Level 9	IC 140-6845/11	JJ07ICAL09.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 61051	2638 118016	5039 232629	12104 435440	29990	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propene	CBM	Ave	+++++ 196459	11069 384576	19193 742703	42644 1278552	100490	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	13591 591503	25411 1131161	49148 2135941	120201 3672524	301850	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	+++++ 65224	+++++ 122109	7032 229632	14884 390327	35473	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	6941 334403	13088 568337	27167 1015771	64587 2125671	152559	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 328610	+++++ 520734	+++++ 1109442	75172 2056351	159716	+++++ 9.99	+++++ 20.0	+++++ 40.0	2.00 80.0	5.01
Vinyl chloride	CBM	Ave	4792 200832	8471 383339	16970 724665	42435 1305672	105472	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	+++++ 151466	6717 287374	12752 545901	31358 989900	79582	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butane	CBM	Ave	+++++ 287380	13757 543330	25893 1028652	63876 1833996	154888	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	+++++ 181639	7946 352830	15636 679891	36824 1281974	95216	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	+++++ 85607	3533 165501	7074 314274	17148 596998	44680	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	+++++ 301353	+++++ 507219	25681 1085964	64022 1625717	145811	+++++ 9.99	+++++ 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl bromide	CBM	Ave	+++++ 192126	7803 373522	15692 717438	38043 1395283	98119	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	+++++ 244836	+++++ 463108	22126 857434	50507 1590512	124087	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Trichlorofluoromethane	CBM	Ave	+++++ 525714	21408 997746	43561 1874869	104867 3495723	266484	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrolein	CBM	Ave	+++++ 49912	+++++ 86518	4832 217138	11492 382502	23762	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 75306	+++++ 112623	4594 274355	12877 461794	31521	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 207471	+++++ 304007	+++++ 759323	50972 1144445	93302	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.01
Isopropyl alcohol	CBM	Ave	+++++ 712005	+++++ 1238996	58959 2482177	148690 3961946	345581	+++++ 5.99	+++++ 12.0	0.476 24.0	1.20 48.0	3.01
Pentane	CBM	Ave	+++++ 30363	+++++ 57831	2436 110628	6090 207814	15634	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl ether	CBM	Ave	+++++ 201882	+++++ 316288	15116 759662	41918 1304099	90717	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	+++++ 190825	7893 369158	15575 705786	36261 1363879	95585	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butyl alcohol	CBM	Ave	+++++ 302486	12552 542301	24242 1117829	59107 2020125	141369	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	+++++ 119684	+++++ 179147	8395 449131	24380 739993	49621	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroetha ne	CBM	Ave	+++++ 411617	16582 777472	33762 1443316	80689 2657038	210076	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 182390	+++++ 337926	20737 629410	41089 1155194	96642	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	+++++ 179546	8673 330186	15985 638806	36483 1134376	89293	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	+++++ 599369	24706 1114641	48987 2084710	120970 3969758	294789	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	+++++ 191375	7848 365640	15393 686121	37486 1222745	96669	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylpentane	CBM	Ave	+++++ 417695	18226 772529	36100 1419823	84772 2499321	214982	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	+++++ 425689	+++++ 656085	30306 1608749	87262 2582783	182647	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	+++++ 363477	15298 630813	29019 1282760	70214 2275244	171595	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	+++++ 420925	+++++ 609691	29006 1643291	83094 2633160	172403	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
2-Butanone (MEK)	CBM	Ave	+++++ 66905	+++++ 108487	5518 272011	14095 396756	29020	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Hexane	CBM	Ave	+++++ 154493	6819 280492	13156 549243	30899 963328	77947	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isopropyl ether	CBM	Ave	11335 554804	26227 862998	41207 2044544	114673 3156431	243807	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	+++++ 191110	8043 338207	15353 698544	36353 1240681	90586	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	+++++ 307905	+++++ 496876	23137 1211378	62762 1885712	132536	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Chloroform	CBM	Ave	+++++ 397963	16913 663152	32155 1426851	76886 2510211	186688	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	9206 457083	20831 722189	32839 1728031	93782 2695405	198310	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	+++++ 171477	+++++ 262975	12679 676405	34798 1110580	72211	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	+++++ 408450	16146 709770	33649 1470609	79596 2557765	194833	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFBZ	Ave	+++++ 249655	10433 422239	20012 914302	49288 1621122	116411	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1-Butanol	DFBZ	Ave	+++++ 68834	+++++ 127066	5158 272506	11630 509145	30007	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Cyclohexane	DFBZ	Ave	2042 92091	3694 164249	7611 308561	18070 516001	46974	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzene	DFBZ	Ave	+++++ 536994	24939 879174	45872 1869237	109572 3056544	251778	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFBZ	Ave	9181 413385	16383 715806	32675 1440199	78074 2444049	205702	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylpentane	DFBZ	Ave	+++++ 122807	5141 211129	9980 443680	24581 782517	59164	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Thiophene	DFBZ	Ave	6618 296880	12339 498367	23502 1101723	57959 1921978	135687	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-amyl methyl ether	CBZd5	Ave	7379 417595	18197 661965	29936 1626808	84309 2536568	177159	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 873863	40767 1427378	73960 2963724	173210 5010864	406239	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Heptane	DFBZ	Ave	4270 184827	7814 310519	14892 677602	35102 1209602	83748	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFBZ	Ave	4766 205421	8477 336735	15940 751794	39101 1297014	92168	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Trichloroethene	DFBZ	Ave	5079 212389	8979 353658	16787 773499	40331 1362381	98859	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromomethane	DFBZ	Ave	4674 210316	8317 348638	16419 780137	39421 1372684	95834	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromodichloromethane	DFBZ	Ave	7935 384377	15087 633628	28262 1430339	69273 2542594	170211	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DFBZ	Ave	+++++ 61859	+++++ 113820	4230 234207	11296 399104	29141	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Methyl methacrylate	DFBZ	Ave	3346 168295	7348 272756	15280 690931	31834 1102637	71233	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylcyclohexane	DFBZ	Ave	+++++ 408489	16458 682362	33529 1404210	78499 2393729	193416	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	+++++ 330708	+++++ 590218	26499 1298660	66898 2160191	145694	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFBZ	Ave	+++++ 284607	11154 457130	19690 1078107	50995 1936451	118765	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZd 5	Ave	+++++ 230569	7945 385334	14032 970039	39823 1785545	96862	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene	CBZd 5	Ave	+++++ 566445	24101 903425	40667 2108567	103555 3708453	246370	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene Range	CBZd 5	Ave	+++++ 1265569	+++++ 2054791	89052 5193956	237815 8816266	550707	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZd 5	Ave	3309 175475	7080 280309	12026 665355	33101 1190782	76042	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylthiophene	CBZd 5	Ave	9194 464807	16381 752389	29831 1718039	85346 3024608	203436	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
3-Methylthiophene	CBZd 5	Ave	8224 439094	17436 710507	30896 1657917	73571 2968551	190205	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Hexanone	CBZd 5	Ave	+++++ 157568	+++++ 275764	9665 624917	25177 1094375	67673	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
C8 Range	CBZd 5	Ave	+++++ 1761285	+++++ 2829479	+++++ 6304355	333608 10853398	794228	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Octane	CBZd 5	Ave	3774 184411	7363 300317	14033 684728	34674 1203931	81751	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZd 5	Ave	5619 337791	11396 554019	22682 1314407	56014 2356036	141975	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	4428 285225	10438 468707	19919 1141646	51123 2076091	122262	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZd 5	Ave	4371 205117	8484 325398	16317 737763	38757 1298341	92953	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylheptane	CBZd 5	Ave	+++++ 544214	25678 863711	47652 1776582	111048 2791997	250479	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chlorobenzene	CBZd 5	Ave	7382 393318	16210 637698	29601 1484475	71495 2558548	169300	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethylbenzene	CBZd 5	Ave	11703 636564	25136 967485	42924 2455584	117415 4122632	260654	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Ethylthiophene	CBZd 5	Ave	8150 452306	17012 712797	30549 1800351	80706 3126145	188635	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m-Xylene & p-Xylene	CBZd 5	Ave	18003 949395	38891 1425239	66297 3477596	182466 5598414	398815	0.0784 3.99	0.157 8.00	0.317 16.0	0.800 32.0	2.00
Nonane	CBZd 5	Ave	6721 371467	14468 607688	26189 1354981	70266 2301308	168829	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromoform	CBZd 5	Ave	3568 262668	7115 461674	14356 1179650	37833 2195036	104598	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Styrene	CBZd 5	Ave	4232 331575	9020 522211	18072 1388066	51409 2341796	130563	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
o-Xylene	CBZd 5	Ave	9845 509651	21775 757783	36573 1922232	99937 3180197	215453	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	6258 379555	13928 608436	25353 1531082	69531 2592834	160274	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZd 5	Ave	1286 86518	3208 139309	5836 368725	15771 646183	36811	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Isopropylbenzene	CBZd 5	Ave	+++++ 671114	+++++ 1008946	46960 2528390	130051 4117496	280044	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Propylbenzene	CBZd 5	Ave	+++++ 165071	+++++ 257802	10213 697239	28816 1195062	64778	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZd 5	Ave	2545 160028	6062 254370	10469 651542	27973 1160412	68698	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZd 5	Ave	+++++ 581752	+++++ 900723	35318 2330147	100681 3866352	232530	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZd 5	Ave	4528 284025	11417 432339	18765 1110666	54490 1880990	117867	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZd 5	Ave	+++++ 211230	+++++ 353509	9408 998190	27543 1763503	77630	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Decane	CBZd 5	Ave	+++++ 400184	+++++ 627966	25264 1463837	73499 2385192	168207	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butylbenzene	CBZd 5	Ave	+++++ 551609	+++++ 838868	38571 2056871	109302 3350611	232863	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZd 5	Ave	7585 495080	18385 766460	32026 1892775	91716 3075224	205772	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZd 5	Ave	12204 754625	30727 1163047	51842 2829320	147815 4490227	323335	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Dichlorobenzene	CBZd 5	Ave	3434 227357	6217 388834	13786 1069569	33997 1950364	91599	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzyl chloride	CBZd 5	Ave	+++++ 235854	+++++ 444170	12262 1286505	28804 2389971	88177	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,4-Dichlorobenzene	CBZd 5	Ave	2674 191069	5564 334767	11326 970323	27489 1819109	75433	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Isopropyltoluene	CBZd 5	Ave	8579 557746	21296 880317	36212 2129135	101281 3504694	238195	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZd5	Ave	5929 368722	14647 578208	25395 1461513	69930 2457067	155360	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylcyclohexane	CBZd5	Ave	+++++ 478656	20480 752044	34728 1711828	93553 2867784	214826	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indane	CBZd5	Ave	6618 402661	14146 634195	26653 1614772	69259 2671703	166405	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorobenzene	CBZd5	Ave	3349 236698	7263 393466	14992 1039844	38368 1828104	97487	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylbenzene	CBZd5	Ave	6761 477429	14360 793620	30226 1924163	77391 3209166	197055	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indene	CBZd5	Ave	+++++ 240660	+++++ 411536	12894 1104068	34494 1914125	94798	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Undecane	CBZd5	Ave	+++++ 354292	+++++ 578505	24778 1425412	57043 2355117	149237	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZd5	Ave	+++++ 356341	11922 602152	22541 1459951	56986 2574855	148792	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZd5	Ave	+++++ 73775	1615 138821	3744 +++++	9138 +++++	28029	+++++ 2.00	0.0784 4.00	0.159 +++++	0.400 +++++	1.00
1,2,4,5-Tetramethylbenzene	CBZd5	Ave	6068 418851	14401 719532	27377 1709923	68600 3014619	180026	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,5-Tetramethylbenzene	CBZd5	Ave	4243 268243	9607 444831	17088 1057205	42619 1900079	114877	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZd5	Ave	5128 334774	11261 558141	22862 1348346	52196 2447419	141541	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dodecane	CBZd5	Ave	+++++ 309370	+++++ 528290	23162 1149872	37327 2101742	136966	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZd5	Ave	746 62804	1324 128473	3301 +++++	6853 +++++	25163	0.0392 2.00	0.0784 4.00	0.159 +++++	0.400 +++++	1.00
Naphthalene	CBZd5	Ave	2218 181491	3986 348810	10494 +++++	19745 +++++	73981	0.0392 2.00	0.0784 4.00	0.159 +++++	0.400 +++++	1.00
Benzo(b)thiophene	CBZd5	Ave	+++++ 63388	+++++ 130640	4165 +++++	7041 +++++	27289	+++++ 2.00	+++++ 4.00	0.159 +++++	0.400 +++++	1.00
Hexachlorobutadiene	CBZd5	Ave	3706 234515	8846 373791	17985 953838	39860 1735997	103265	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZd5	Ave	928 70305	1521 132264	4611 +++++	8210 +++++	30545	0.0392 2.00	0.0784 4.00	0.159 +++++	0.400 +++++	1.00
2-Methylnaphthalene	CBZd5	Ave	+++++ 21556	+++++ 48712	1760 114956	2050 +++++	11518	+++++ 6.24	+++++ 12.5	0.496 25.0	1.25 +++++	3.13
1-Methylnaphthalene	CBZd5	Ave	+++++ 31380	+++++ 64798	2651 142356	2215 +++++	15193	+++++ 6.24	+++++ 12.5	0.496 25.0	1.25 +++++	3.13
4-Bromofluorobenzene (Surr)	CBZd5	Ave	645028 686528	746842 712827	643066 746473	745431 759449	713913	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6845

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/08/2016 19:01 Calibration End Date: 10/09/2016 02:10 Calibration ID: 771

Curve Type Legend:
Ave = Average ISTD

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL01.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 08-Oct-2016 19:01:30 ALS Bottle#: 1 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003509-003
Misc. Info.: 059244
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 11:30:28 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2016 19:42:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.299	9.302	-0.003	95	316146	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.456	11.461	-0.005	95	1429056	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.128	16.131	-0.003	89	1151730	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.752	17.753	-0.001	96	645028	4.00	3.71	
6 Chlorodifluoromethane	67	3.917	3.918	-0.001	96	1445	0.0392	0.0449	
7 Propene	41	3.933	3.933	0.000	98	5658	0.0392	0.0512	
8 Dichlorodifluoromethane	85	3.986	3.987	-0.001	100	13591	0.0392	0.0437	
9 Chloromethane	52	4.185	4.183	0.002	61	2222	0.0392	0.0623	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.185	4.188	-0.003	93	6941	0.0392	0.0424	
11 Acetaldehyde	44	4.352	4.349	0.003	99	11285	0.1960	0.3422	
12 Vinyl chloride	62	4.368	4.369	-0.001	93	4792	0.0392	0.0446	
14 Butadiene	54	4.465	4.463	0.002	67	3828	0.0392	0.0479	
13 Butane	43	4.465	4.465	0.000	84	9524	0.0392	0.0611	
15 Bromomethane	94	4.815	4.815	0.000	94	4835	0.0392	0.0497	
16 Chloroethane	64	4.965	4.964	0.001	92	1962	0.0392	0.0436	
17 Ethanol	31	5.062	5.063	-0.001	97	9618	0.1960	0.3193	
18 Vinyl bromide	106	5.282	5.290	-0.008	94	4683	0.0392	0.0464	
19 2-Methylbutane	43	5.342	5.341	0.001	92	6850	0.0392	0.0534	
20 Trichlorofluoromethane	101	5.578	5.576	0.002	98	12527	0.0392	0.0462	
21 Acrolein	56	5.583	5.586	-0.003	58	2380	0.0392	0.0857	
22 Acetonitrile	40	5.653	5.657	-0.004	97	1404	0.0392	0.0411	
23 Acetone	58	5.718	5.712	0.006	98	6999	0.1176	0.2047	
24 Isopropyl alcohol	45	5.799	5.793	0.006	75	16075	0.1176	0.1359	
26 Ethyl ether	31	6.003	5.987	0.016	95	4338	0.0392	0.0436	
27 1,1-Dichloroethene	96	6.320	6.319	0.001	96	4590	0.0392	0.0462	
28 2-Methyl-2-propanol	59	6.433	6.419	0.014	92	6291	0.0392	0.0410	
29 Acrylonitrile	53	6.422	6.429	-0.007	87	2499	0.0392	0.0438	
30 1,1,2-Trichloro-1,2,2-trif	101	6.498	6.499	-0.001	94	9768	0.0392	0.0464	
31 Methylene Chloride	84	6.680	6.682	-0.002	96	10424	0.0392	0.1038	
32 3-Chloro-1-propene	39	6.697	6.698	-0.001	93	5003	0.0392	0.0528	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.858	6.857	0.001	98	15422	0.0392	0.0503	
34 trans-1,2-Dichloroethene	96	7.519	7.521	-0.002	96	4504	0.0392	0.0460	
35 2-Methylpentane	43	7.530	7.532	-0.002	94	10566	0.0392	0.0491	
36 Methyl tert-butyl ether	73	7.670	7.653	0.017	95	8946	0.0392	0.0437	
37 1,1-Dichloroethane	63	7.950	7.955	-0.005	95	8526	0.0392	0.0470	
38 Vinyl acetate	43	8.057	8.055	0.002	99	8589	0.0392	0.0430	
39 2-Butanone (MEK)	72	8.536	8.524	0.012	81	1154	0.0392	0.0344	
40 Hexane	56	8.536	8.537	-0.001	79	3796	0.0392	0.0476	
41 Isopropyl ether	45	8.718	8.702	0.016	96	11335	0.0392	0.0411	
42 cis-1,2-Dichloroethene	96	8.960	8.961	-0.001	91	4341	0.0392	0.0450	
43 Ethyl acetate	43	9.154	9.146	0.008	93	6219	0.0392	0.0411	
44 Chloroform	83	9.310	9.310	0.000	28	9722	0.0392	0.0489	
45 Tert-butyl ethyl ether	59	9.407	9.392	0.015	94	9206	0.0392	0.0407	
46 Tetrahydrofuran	42	9.756	9.738	0.018	89	3994	0.0392	0.0476	
47 1,1,1-Trichloroethane	97	10.353	10.352	0.001	95	9570	0.0392	0.0469	
48 1,2-Dichloroethane	62	10.461	10.461	0.000	94	5789	0.0392	0.0473	
49 n-Butanol	31	10.907	10.884	0.023	32	987	0.0392	0.0293	
50 Cyclohexane	69	10.945	10.937	0.008	70	2042	0.0392	0.0449	
51 Benzene	78	10.934	10.939	-0.005	96	14269	0.0392	0.0540	
52 Carbon tetrachloride	117	10.961	10.963	-0.002	94	9181	0.0392	0.0453	
53 2,3-Dimethylpentane	71	11.047	11.044	0.003	90	3123	0.0392	0.0515	
54 Thiophene	84	11.208	11.210	-0.002	93	6618	0.0392	0.0449	
55 Tert-amyl methyl ether	73	11.407	11.396	0.011	90	7379	0.0392	0.0392	
56 Isooctane	57	11.671	11.670	0.001	97	24401	0.0392	0.0572	
57 n-Heptane	71	12.031	12.033	-0.002	92	4270	0.0392	0.0463	
58 1,2-Dichloropropane	63	12.128	12.130	-0.002	89	4766	0.0392	0.0471	
59 Trichloroethene	130	12.165	12.163	0.002	91	5079	0.0392	0.0479	
60 Dibromomethane	93	12.246	12.252	-0.006	92	4674	0.0392	0.0453	
62 Dichlorobromomethane	83	12.380	12.388	-0.008	97	7935	0.0392	0.0431	
63 Methyl methacrylate	41	12.472	12.470	0.002	85	3346	0.0392	0.0398	
64 Methylcyclohexane	83	12.924	12.919	0.005	96	9976	0.0392	0.0510	
65 4-Methyl-2-pentanone (MIBK	43	13.316	13.310	0.006	94	6775	0.0392	0.0413	
66 cis-1,3-Dichloropropene	75	13.364	13.369	-0.005	92	5710	0.0392	0.0429	
67 trans-1,3-Dichloropropene	75	14.047	14.051	-0.004	89	3206	0.0392	0.0317	
68 Toluene	91	14.176	14.180	-0.004	94	11915	0.0392	0.0472	
69 1,1,2-Trichloroethane	83	14.246	14.253	-0.007	90	3309	0.0392	0.0421	
70 2-Methylthiophene	97	14.332	14.332	0.000	96	9194	0.0392	0.0452	
71 3-Methylthiophene	97	14.526	14.530	-0.004	97	8224	0.0392	0.0423	
72 2-Hexanone	58	14.634	14.624	0.010	88	1850	0.0392	0.0270	
73 n-Octane	85	14.838	14.841	-0.003	93	3774	0.0392	0.0448	
74 Chlorodibromomethane	129	14.951	14.954	-0.003	95	5619	0.0392	0.0388	
75 Ethylene Dibromide	107	15.247	15.245	0.002	95	4428	0.0392	0.0353	
76 Tetrachloroethene	129	15.311	15.312	-0.001	94	4371	0.0392	0.0462	
77 2,3-Dimethylheptane	43	16.177	16.176	0.001	92	13751	0.0392	0.0553	
78 Chlorobenzene	112	16.182	16.180	0.002	58	7382	0.0392	0.0417	
79 Ethylbenzene	91	16.456	16.458	-0.002	95	11703	0.0392	0.0420	
80 2-Ethylthiophene	97	16.559	16.563	-0.004	96	8150	0.0392	0.0409	
81 m-Xylene & p-Xylene	91	16.612	16.616	-0.004	97	18003	0.0784	0.0863	
82 n-Nonane	57	17.016	17.015	0.001	92	6721	0.0392	0.0408	
83 Bromoform	173	17.080	17.077	0.003	85	3568	0.0392	0.0327	
84 Styrene	104	17.080	17.082	-0.002	91	4232	0.0392	0.0321	
85 o-Xylene	91	17.145	17.142	0.003	98	9845	0.0392	0.0430	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 1,1,2,2-Tetrachloroethane	83	17.462	17.462	0.000	94	6258	0.0392	0.0377	
87 1,2,3-Trichloropropane	110	17.618	17.623	-0.005	94	1286	0.0392	0.0337	
88 Isopropylbenzene	105	17.715	17.719	-0.004	88	13574	0.0392	0.0467	
89 N-Propylbenzene	120	18.242	18.237	0.005	98	2446	0.0392	0.0341	
90 2-Chlorotoluene	126	18.285	18.287	-0.002	96	2545	0.0392	0.0364	
91 4-Ethyltoluene	105	18.387	18.382	0.005	96	8596	0.0392	0.0348	
92 1,3,5-Trimethylbenzene	120	18.457	18.452	0.005	91	4528	0.0392	0.0366	
93 Alpha Methyl Styrene	118	18.677	18.678	-0.001	89	2239	0.0392	0.0251	
94 n-Decane	57	18.715	18.716	-0.001	90	5972	0.0392	0.0353	
95 tert-Butylbenzene	119	18.866	18.865	0.001	87	9542	0.0392	0.0398	
96 1,2,4-Trimethylbenzene	105	18.876	18.879	-0.003	93	7585	0.0392	0.0361	
97 sec-Butylbenzene	105	19.124	19.127	-0.003	97	12204	0.0392	0.0372	
98 1,3-Dichlorobenzene	146	19.156	19.151	0.005	57	3434	0.0392	0.0352	
99 Benzyl chloride	91	19.226	19.222	0.004	92	2566	0.0392	0.0235	
100 1,4-Dichlorobenzene	146	19.237	19.236	0.001	83	2674	0.0392	0.0320	
101 4-Isopropyltoluene	119	19.280	19.283	-0.003	96	8579	0.0392	0.0360	
102 1,2,3-Trimethylbenzene	105	19.339	19.340	-0.001	95	5929	0.0392	0.0366	
103 Butylcyclohexane	83	19.387	19.387	0.000	90	9090	0.0392	0.0427	
104 2,3-Dihydroindene	117	19.586	19.585	0.001	90	6618	0.0392	0.0384	
105 1,2-Dichlorobenzene	146	19.591	19.588	0.003	71	3349	0.0392	0.0332	
106 n-Butylbenzene	91	19.704	19.706	-0.002	95	6761	0.0392	0.0342	
107 Indene	116	19.710	19.711	-0.001	60	2594	0.0392	0.0248	
108 Undecane	57	20.000	19.997	0.003	91	5785	0.0392	0.0375	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.070	20.071	-0.001	95	4942	0.0392	0.0322	
110 1,2-Dibromo-3-Chloropropan	157	20.178	20.176	0.002	76	616	0.0392	0.0225	
111 1,2,4,5-Tetramethylbenzene	119	20.457	20.454	0.003	93	6068	0.0392	0.0338	
112 1,2,3,5-Tetramethylbenzene	119	20.506	20.509	-0.003	92	4243	0.0392	0.0370	
113 1,2,3,4-Tetramethylbenzene	119	20.925	20.922	0.003	93	5128	0.0392	0.0357	
114 Dodecane	57	21.065	21.067	-0.002	89	4792	0.0392	0.0361	
115 1,2,4-Trichlorobenzene	180	21.296	21.300	-0.004	66	746	0.0392	0.0324	
116 Naphthalene	128	21.447	21.446	0.001	93	2218	0.0392	0.0330	
117 Benzo(b)thiophene	134	21.549	21.545	0.004	94	1009	0.0392	0.0372	
118 Hexachlorobutadiene	225	21.629	21.631	-0.002	91	3706	0.0392	0.0354	
119 1,2,3-Trichlorobenzene	180	21.699	21.697	0.002	74	928	0.0392	0.0342	
121 1-Methylnaphthalene	142	22.377	22.359	0.018	1	384	0.1225	0.0827	
A 124 Toluene Range	1	14.176	(14.146-14.206)		0	27423	0.0392	0.0480	
S 126 Xylenes, Total	100				0		0.1176	0.1293	
S 127 1,2-Dichloroethene, Total	1				0		0.0784	0.0910	

Reagents:

40L12DNP_00007	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

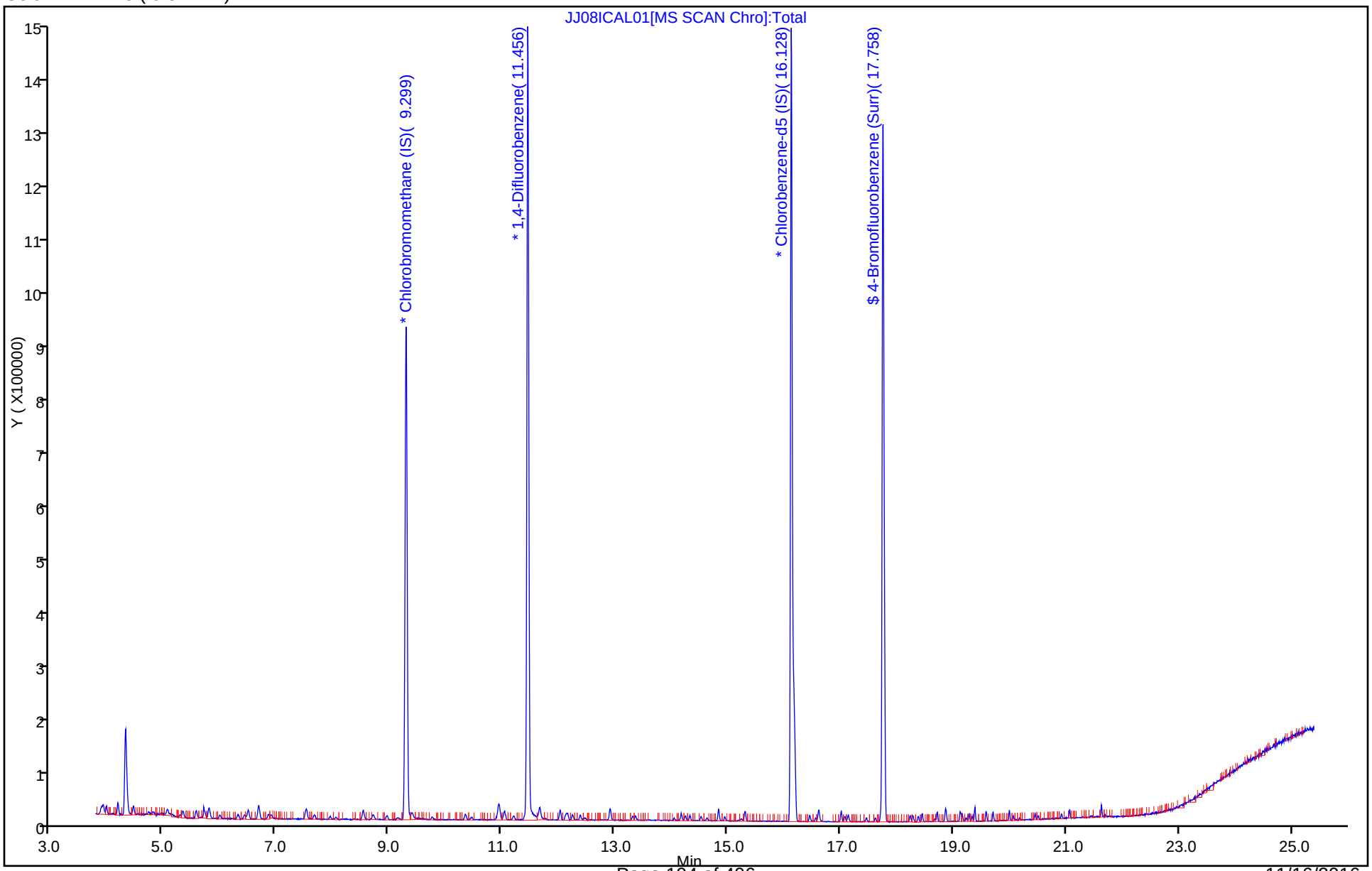
Report Date: 11-Oct-2016 11:30:30 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL01.D

Injection Date:	08-Oct-2016 19:01:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	IC L1			Worklist Smp#:	3
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

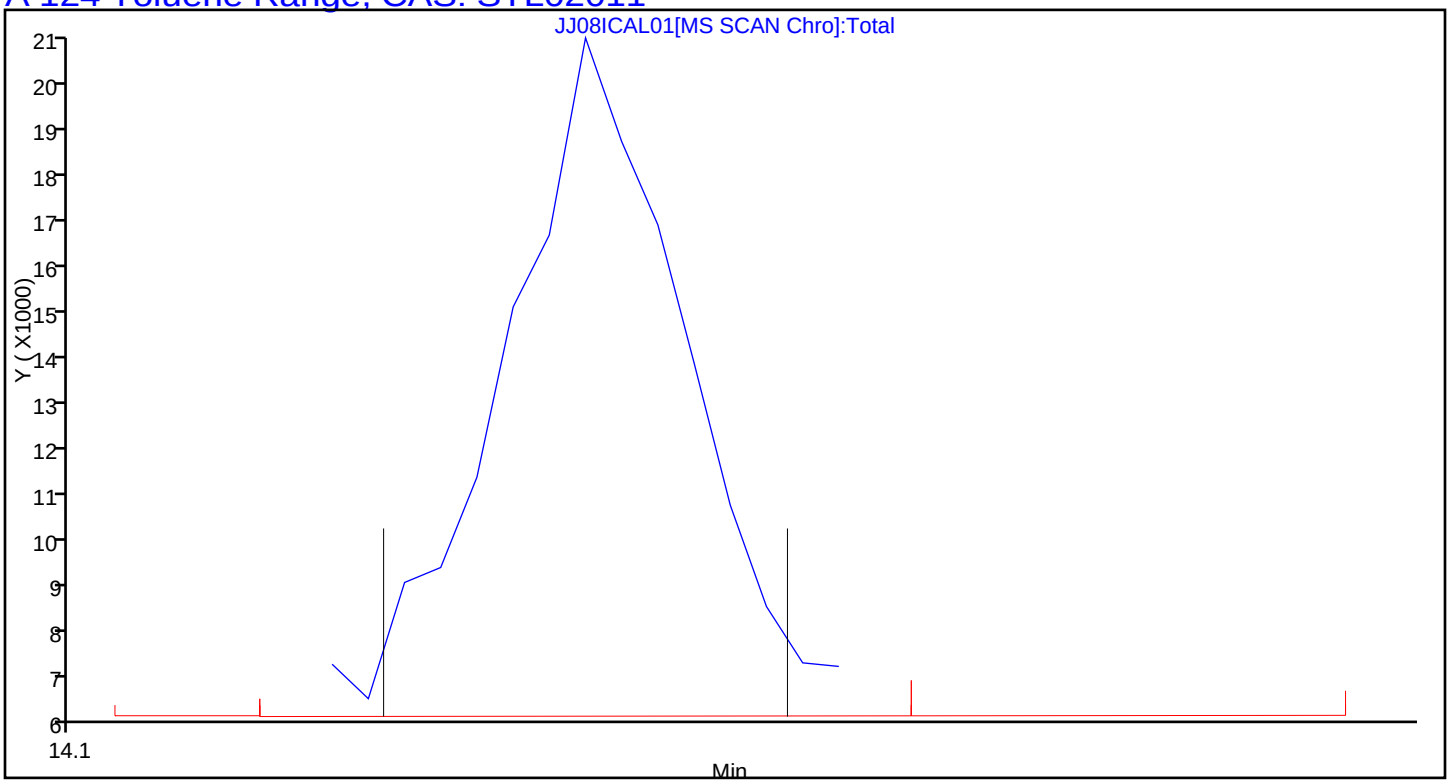
Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL01.D				
Injection Date:	08-Oct-2016 19:01:30	Instrument ID:	MJ		
Lims ID:	IC L1				
Client ID:					
Operator ID:	403648	ALS Bottle#:	1	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL02.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Oct-2016 19:54:30 ALS Bottle#: 1 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003509-004
Misc. Info.: 059244
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 11:30:35 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2016 19:44:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.302	9.302	0.000	96	323805	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.458	11.461	-0.003	95	1513431	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.131	16.131	0.000	89	1274678	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.755	17.753	0.002	90	746842	4.00	3.89	
6 Chlorodifluoromethane	67	3.913	3.918	-0.005	97	2638	0.0784	0.0800	
7 Propene	41	3.935	3.933	0.002	98	11069	0.0784	0.0977	
8 Dichlorodifluoromethane	85	3.983	3.987	-0.004	99	25411	0.0784	0.0797	
9 Chloromethane	52	4.182	4.183	-0.001	55	2966	0.0784	0.0812	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.193	4.188	0.005	93	13088	0.0784	0.0780	
11 Acetaldehyde	44	4.349	4.349	0.000	88	26535	0.3920	0.7856	
12 Vinyl chloride	62	4.371	4.369	0.002	96	8471	0.0784	0.0770	
14 Butadiene	54	4.462	4.463	-0.001	69	6717	0.0784	0.0821	
13 Butane	43	4.467	4.465	0.002	86	13757	0.0784	0.0862	
15 Bromomethane	94	4.817	4.815	0.002	98	7946	0.0784	0.0798	
16 Chloroethane	64	4.962	4.964	-0.002	95	3533	0.0784	0.0767	
17 Ethanol	31	5.064	5.063	0.001	97	20532	0.3920	0.6654	
18 Vinyl bromide	106	5.295	5.290	0.005	97	7803	0.0784	0.0755	
19 2-Methylbutane	43	5.344	5.341	0.003	91	11468	0.0784	0.0874	
20 Trichlorofluoromethane	101	5.575	5.576	-0.001	99	21408	0.0784	0.0770	
21 Acrolein	56	5.586	5.586	0.000	32	4693	0.0784	0.1650	
22 Acetonitrile	40	5.661	5.657	0.004	92	1163	0.0784	0.0332	
23 Acetone	58	5.715	5.712	0.003	98	15730	0.2352	0.4491	
24 Isopropyl alcohol	45	5.796	5.793	0.003	91	33754	0.2352	0.2787	
25 Pentane	72	5.806	5.805	0.001	94	1097	0.0784	0.0678	
26 Ethyl ether	31	5.995	5.987	0.007	90	9682	0.0784	0.0949	
27 1,1-Dichloroethene	96	6.317	6.319	-0.002	96	7893	0.0784	0.0776	
28 2-Methyl-2-propanol	59	6.430	6.419	0.011	94	12552	0.0784	0.0798	
29 Acrylonitrile	53	6.425	6.429	-0.004	67	5589	0.0784	0.0957	
30 1,1,2-Trichloro-1,2,2-trif	101	6.500	6.499	0.001	93	16582	0.0784	0.0770	
31 Methylene Chloride	84	6.677	6.682	-0.005	98	14030	0.0784	0.1364	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.699	6.698	0.001	96	8673	0.0784	0.0894	
33 Carbon disulfide	76	6.855	6.857	-0.002	100	24706	0.0784	0.0786	
34 trans-1,2-Dichloroethene	96	7.516	7.521	-0.005	98	7848	0.0784	0.0783	
35 2-Methylpentane	43	7.532	7.532	0.000	94	18226	0.0784	0.0827	
36 Methyl tert-butyl ether	73	7.667	7.653	0.014	96	19624	0.0784	0.0935	
37 1,1-Dichloroethane	63	7.957	7.955	0.002	98	15298	0.0784	0.0823	
38 Vinyl acetate	43	8.054	8.055	-0.001	100	18449	0.0784	0.0902	
39 2-Butanone (MEK)	72	8.527	8.524	0.003	84	3425	0.0784	0.0997	
40 Hexane	56	8.533	8.537	-0.004	72	6819	0.0784	0.0835	
41 Isopropyl ether	45	8.705	8.702	0.003	96	26227	0.0784	0.0928	
42 cis-1,2-Dichloroethene	96	8.952	8.961	-0.009	94	8043	0.0784	0.0814	
43 Ethyl acetate	43	9.151	9.146	0.005	97	14896	0.0784	0.0962	
44 Chloroform	83	9.307	9.310	-0.003	29	16913	0.0784	0.0831	
45 Tert-butyl ethyl ether	59	9.398	9.392	0.006	97	20831	0.0784	0.0898	
46 Tetrahydrofuran	42	9.759	9.738	0.021	94	8380	0.0784	0.0976	
47 1,1,1-Trichloroethane	97	10.350	10.352	-0.002	96	16146	0.0784	0.0772	
48 1,2-Dichloroethane	62	10.452	10.461	-0.009	95	10433	0.0784	0.0805	
49 n-Butanol	31	10.888	10.884	0.004	37	1798	0.0784	0.0504	
50 Cyclohexane	69	10.936	10.937	-0.001	69	3694	0.0784	0.0766	
51 Benzene	78	10.942	10.939	0.003	97	24939	0.0784	0.0891	
52 Carbon tetrachloride	117	10.963	10.963	0.000	95	16383	0.0784	0.0763	
53 2,3-Dimethylpentane	71	11.044	11.044	0.000	92	5141	0.0784	0.0801	
54 Thiophene	84	11.211	11.210	0.001	94	12339	0.0784	0.0790	
55 Tert-amyl methyl ether	73	11.399	11.396	0.003	95	18197	0.0784	0.0874	
56 Isooctane	57	11.668	11.670	-0.002	98	40767	0.0784	0.0902	
57 n-Heptane	71	12.028	12.033	-0.005	93	7814	0.0784	0.0800	
58 1,2-Dichloropropane	63	12.125	12.130	-0.005	89	8477	0.0784	0.0792	
59 Trichloroethene	130	12.162	12.163	-0.001	94	8979	0.0784	0.0799	
60 Dibromomethane	93	12.248	12.252	-0.004	95	8317	0.0784	0.0761	
62 Dichlorobromomethane	83	12.383	12.388	-0.005	98	15087	0.0784	0.0773	
61 1,4-Dioxane	88	12.420	12.413	0.007	78	2096	0.0784	0.0665	
63 Methyl methacrylate	41	12.474	12.470	0.004	93	7348	0.0784	0.0824	
64 Methylcyclohexane	83	12.921	12.919	0.001	95	16458	0.0784	0.0794	
65 4-Methyl-2-pentanone (MIBK	43	13.313	13.310	0.003	98	15115	0.0784	0.0871	
66 cis-1,3-Dichloropropene	75	13.367	13.369	-0.002	94	11154	0.0784	0.0791	
67 trans-1,3-Dichloropropene	75	14.044	14.051	-0.007	97	7945	0.0784	0.0709	
68 Toluene	91	14.179	14.180	-0.001	92	24101	0.0784	0.0862	
69 1,1,2-Trichloroethane	83	14.249	14.253	-0.004	90	7080	0.0784	0.0813	
70 2-Methylthiophene	97	14.329	14.332	-0.003	97	16381	0.0784	0.0727	
71 3-Methylthiophene	97	14.534	14.530	0.004	98	17436	0.0784	0.0809	
72 2-Hexanone	58	14.625	14.624	0.001	91	5121	0.0784	0.0676	
73 n-Octane	85	14.840	14.841	-0.001	95	7363	0.0784	0.0789	
74 Chlorodibromomethane	129	14.953	14.954	-0.001	96	11396	0.0784	0.0711	
75 Ethylene Dibromide	107	15.244	15.245	-0.001	99	10438	0.0784	0.0752	
76 Tetrachloroethene	129	15.313	15.312	0.001	94	8484	0.0784	0.0811	
77 2,3-Dimethylheptane	43	16.174	16.176	-0.002	94	25678	0.0784	0.0933	
78 Chlorobenzene	112	16.179	16.180	-0.001	66	16210	0.0784	0.0826	
79 Ethylbenzene	91	16.459	16.458	0.001	98	25136	0.0784	0.0814	
80 2-Ethylthiophene	97	16.561	16.563	-0.002	97	17012	0.0784	0.0772	
81 m-Xylene & p-Xylene	91	16.615	16.616	-0.001	99	38891	0.1568	0.1684	
82 n-Nonane	57	17.013	17.015	-0.002	94	14468	0.0784	0.0793	
83 Bromoform	173	17.077	17.077	0.000	78	7115	0.0784	0.0590	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.088	17.082	0.006	95	9020	0.0784	0.0618	
85 o-Xylene	91	17.136	17.142	-0.006	98	21775	0.0784	0.0860	
86 1,1,2,2-Tetrachloroethane	83	17.459	17.462	-0.003	97	13928	0.0784	0.0759	
87 1,2,3-Trichloropropane	110	17.626	17.623	0.003	96	3208	0.0784	0.0760	
88 Isopropylbenzene	105	17.717	17.719	-0.002	90	28786	0.0784	0.0895	
89 N-Propylbenzene	120	18.233	18.237	-0.004	99	5652	0.0784	0.0712	
90 2-Chlorotoluene	126	18.287	18.287	0.000	97	6062	0.0784	0.0783	
91 4-Ethyltoluene	105	18.379	18.382	-0.004	98	19960	0.0784	0.0730	
92 1,3,5-Trimethylbenzene	120	18.448	18.452	-0.004	91	11417	0.0784	0.0834	
93 Alpha Methyl Styrene	118	18.680	18.678	0.002	86	5067	0.0784	0.0513	
94 n-Decane	57	18.717	18.716	0.001	90	14185	0.0784	0.0758	
95 tert-Butylbenzene	119	18.862	18.865	-0.003	90	23590	0.0784	0.0889	
96 1,2,4-Trimethylbenzene	105	18.879	18.879	0.000	96	18385	0.0784	0.0791	
97 sec-Butylbenzene	105	19.126	19.127	-0.001	98	30727	0.0784	0.0846	
98 1,3-Dichlorobenzene	146	19.147	19.151	-0.004	95	6217	0.0784	0.0576	
99 Benzyl chloride	91	19.223	19.222	0.001	75	5373	0.0784	0.0445	
100 1,4-Dichlorobenzene	146	19.234	19.236	-0.002	90	5564	0.0784	0.0602	
101 4-Isopropyltoluene	119	19.282	19.283	-0.001	96	21296	0.0784	0.0808	
102 1,2,3-Trimethylbenzene	105	19.341	19.340	0.001	99	14647	0.0784	0.0816	
103 Butylcyclohexane	83	19.384	19.387	-0.003	91	20480	0.0784	0.0869	
104 2,3-Dihydroindene	117	19.583	19.585	-0.002	93	14146	0.0784	0.0742	
105 1,2-Dichlorobenzene	146	19.588	19.588	0.000	93	7263	0.0784	0.0651	
106 n-Butylbenzene	91	19.707	19.706	0.001	96	14360	0.0784	0.0657	
107 Indene	116	19.712	19.711	0.001	60	6325	0.0784	0.0547	
108 Undecane	57	19.997	19.997	0.000	93	11008	0.0784	0.0644	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.072	20.071	0.001	97	11922	0.0784	0.0702	
110 1,2-Dibromo-3-Chloropropan	157	20.175	20.176	-0.001	80	1615	0.0784	0.0532	
111 1,2,4,5-Tetramethylbenzene	119	20.454	20.454	0.000	97	14401	0.0784	0.0724	
112 1,2,3,5-Tetramethylbenzene	119	20.508	20.509	-0.001	94	9607	0.0784	0.0756	
113 1,2,3,4-Tetramethylbenzene	119	20.922	20.922	0.000	96	11261	0.0784	0.0709	
114 Dodecane	57	21.067	21.067	0.000	93	8328	0.0784	0.0568	
115 1,2,4-Trichlorobenzene	180	21.304	21.300	0.004	85	1324	0.0784	0.0520	
116 Naphthalene	128	21.444	21.446	-0.002	96	3986	0.0784	0.0536	
117 Benzo(b)thiophene	134	21.540	21.545	-0.005	94	1503	0.0784	0.0500	
118 Hexachlorobutadiene	225	21.632	21.631	0.001	94	8846	0.0784	0.0764	
119 1,2,3-Trichlorobenzene	180	21.696	21.697	-0.001	89	1521	0.0784	0.0507	
120 2-Methylnaphthalene	142	22.250	22.263	-0.013	92	678	0.2450	0.1771	
A 124 Toluene Range	1	14.179	(14.149-14.209)		0	52597	0.0784	0.0833	
S 126 Xylenes, Total	100				0		0.2352	0.2544	
S 127 1,2-Dichloroethene, Total	1				0		0.1568	0.1597	

Reagents:

40L12DNP_00007	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

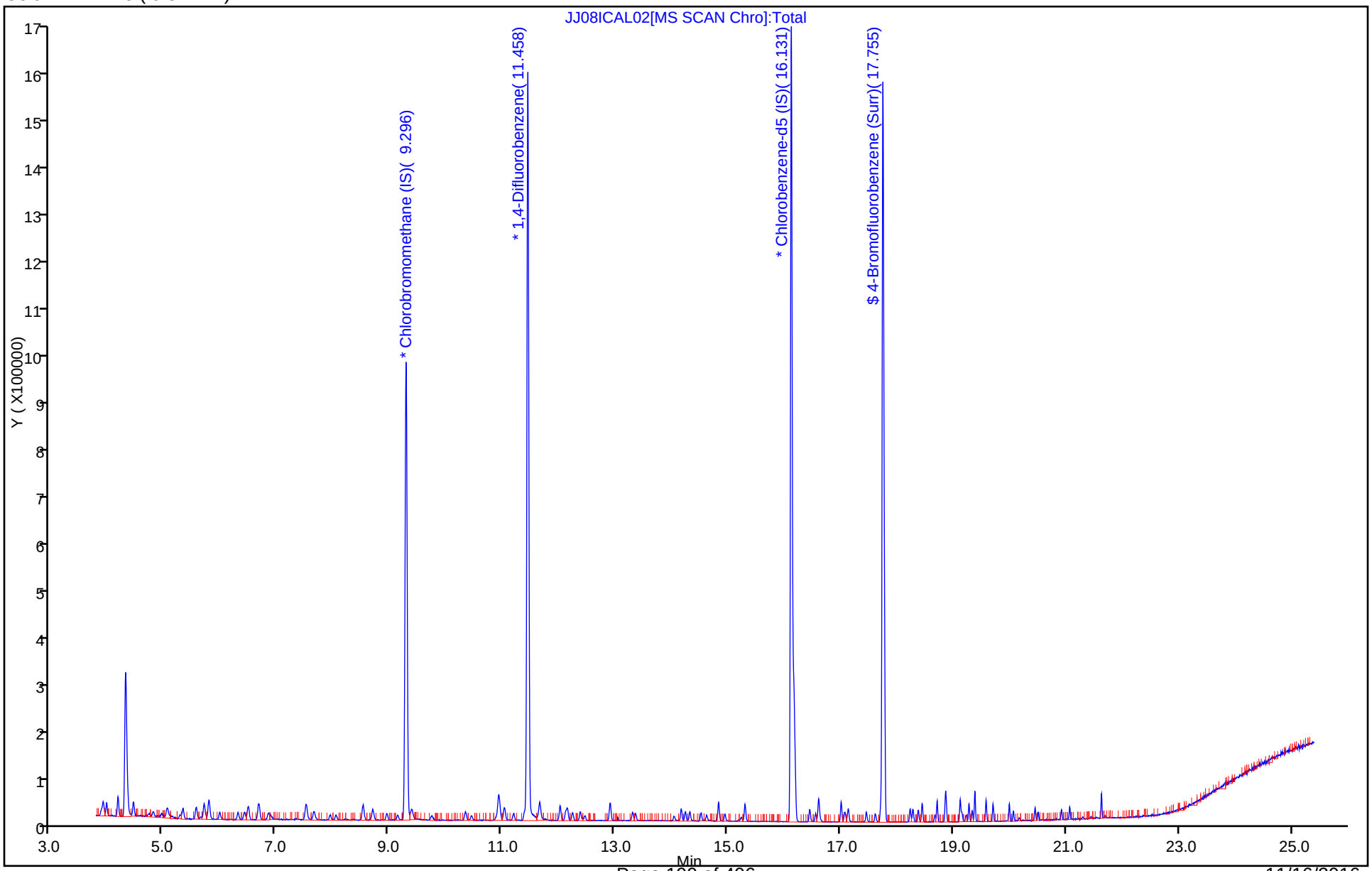
Report Date: 11-Oct-2016 11:30:36 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL02.D

Injection Date:	08-Oct-2016 19:54:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	IC L2			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

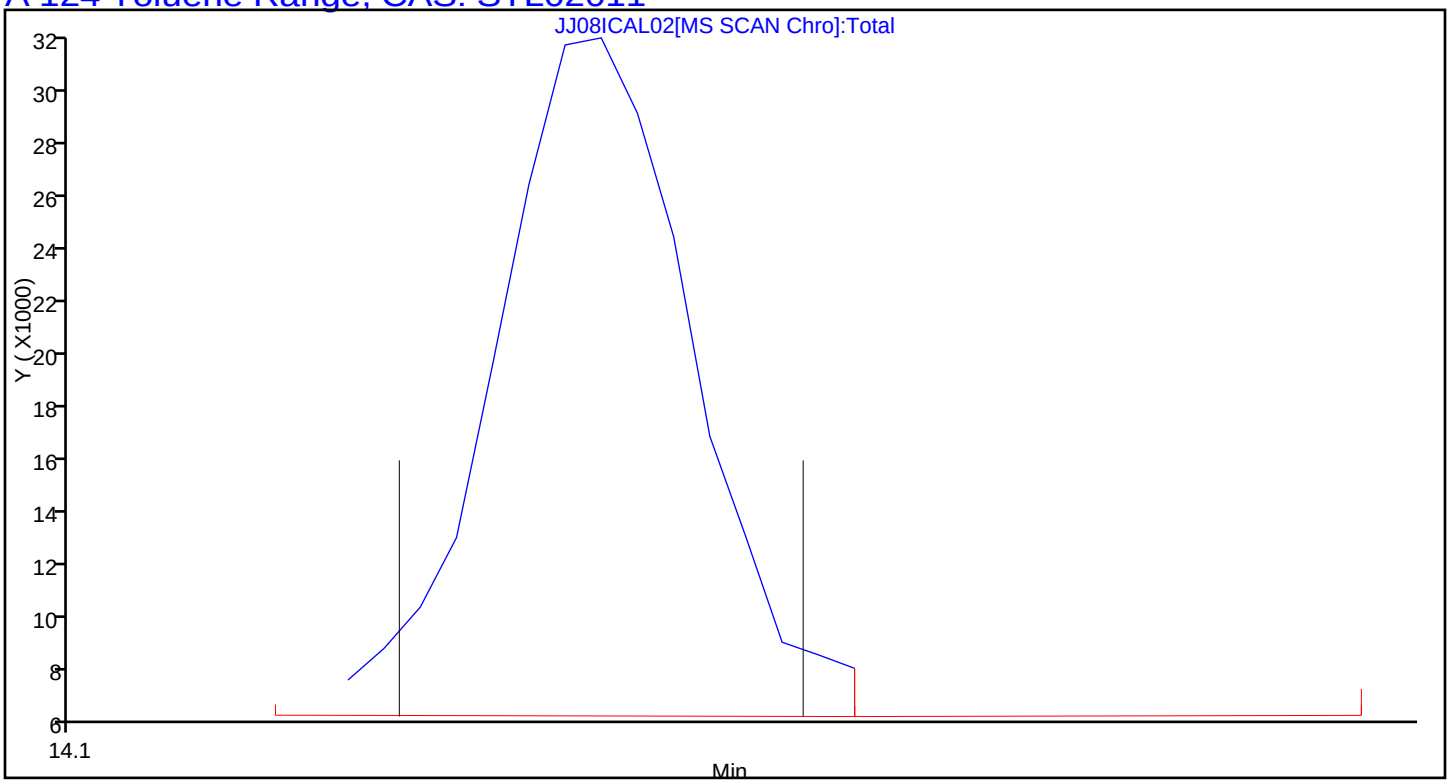


Report Date: 11-Oct-2016 11:30:37 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL02.D				
Injection Date:	08-Oct-2016 19:54:30	Instrument ID:	MJ		
Lims ID:	IC L2				
Client ID:					
Operator ID:	403648	ALS Bottle#:	1	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL03.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Oct-2016 20:47:30 ALS Bottle#: 2 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003509-005
Misc. Info.: 059243
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 11:30:44 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2016 11:09:21

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.294	9.302	-0.008	97	315859	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.456	11.461	-0.005	95	1400120	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.129	16.131	-0.002	89	1117287	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.753	17.753	0.000	88	643066	4.00	3.82	
6 Chlorodifluoromethane	67	3.922	3.918	0.004	97	5039	0.1587	0.1567	
7 Propene	41	3.933	3.933	0.000	98	19193	0.1587	0.1737	
8 Dichlorodifluoromethane	85	3.987	3.987	0.000	99	49148	0.1587	0.1581	
9 Chloromethane	52	4.186	4.183	0.003	55	7032	0.1587	0.1973	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.186	4.188	-0.002	92	27167	0.1587	0.1660	
11 Acetaldehyde	44	4.347	4.349	-0.002	95	40112	0.7933	1.22	
12 Vinyl chloride	62	4.369	4.369	0.000	98	16970	0.1587	0.1581	
14 Butadiene	54	4.460	4.463	-0.003	66	12752	0.1587	0.1598	
13 Butane	43	4.466	4.465	0.001	87	25893	0.1587	0.1664	
15 Bromomethane	94	4.815	4.815	0.000	97	15636	0.1587	0.1610	
16 Chloroethane	64	4.960	4.964	-0.004	95	7074	0.1587	0.1575	
17 Ethanol	31	5.057	5.063	-0.006	97	25681	0.7933	0.8532	
18 Vinyl bromide	106	5.283	5.290	-0.007	98	15692	0.1587	0.1556	
19 2-Methylbutane	43	5.337	5.341	-0.004	91	22126	0.1587	0.1728	
20 Trichlorofluoromethane	101	5.573	5.576	-0.003	99	43561	0.1587	0.1607	
21 Acrolein	56	5.584	5.586	-0.002	30	4832	0.1587	0.1741	
22 Acetonitrile	40	5.654	5.657	-0.003	99	4594	0.1587	0.1344	
23 Acetone	58	5.718	5.712	0.006	99	23253	0.4760	0.6806	
24 Isopropyl alcohol	45	5.788	5.793	-0.005	93	58959	0.4760	0.4990	
25 Pentane	72	5.799	5.805	-0.006	97	2436	0.1587	0.1543	
26 Ethyl ether	31	5.993	5.987	0.006	92	15116	0.1587	0.1519	
27 1,1-Dichloroethene	96	6.315	6.319	-0.004	97	15575	0.1587	0.1569	
28 2-Methyl-2-propanol	59	6.428	6.419	0.009	93	24242	0.1587	0.1580	
29 Acrylonitrile	53	6.428	6.429	-0.001	54	8395	0.1587	0.1473	
30 1,1,2-Trichloro-1,2,2-trif	101	6.493	6.499	-0.006	94	33762	0.1587	0.1607	
31 Methylene Chloride	84	6.681	6.682	-0.001	98	20737	0.1587	0.2066	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.692	6.698	-0.006	96	15985	0.1587	0.1689	
33 Carbon disulfide	76	6.853	6.857	-0.004	99	48987	0.1587	0.1599	
34 trans-1,2-Dichloroethene	96	7.520	7.521	-0.001	98	15393	0.1587	0.1573	
35 2-Methylpentane	43	7.531	7.532	-0.001	94	36100	0.1587	0.1680	
36 Methyl tert-butyl ether	73	7.654	7.653	0.001	96	30306	0.1587	0.1481	
37 1,1-Dichloroethane	63	7.950	7.955	-0.005	99	29019	0.1587	0.1600	
38 Vinyl acetate	43	8.052	8.055	-0.003	100	29006	0.1587	0.1454	
39 2-Butanone (MEK)	72	8.525	8.524	0.001	82	5518	0.1587	0.1646	
40 Hexane	56	8.536	8.537	-0.001	77	13156	0.1587	0.1651	
41 Isopropyl ether	45	8.703	8.702	0.001	98	41207	0.1587	0.1495	
42 cis-1,2-Dichloroethene	96	8.956	8.961	-0.005	96	15353	0.1587	0.1593	
43 Ethyl acetate	43	9.144	9.146	-0.002	98	23137	0.1587	0.1532	
44 Chloroform	83	9.305	9.310	-0.005	30	32155	0.1587	0.1619	
45 Tert-butyl ethyl ether	59	9.391	9.392	-0.001	97	32839	0.1587	0.1452	
46 Tetrahydrofuran	42	9.751	9.738	0.013	92	12679	0.1587	0.1513	
47 1,1,1-Trichloroethane	97	10.348	10.352	-0.004	96	33649	0.1587	0.1649	
48 1,2-Dichloroethane	62	10.456	10.461	-0.005	97	20012	0.1587	0.1668	
49 n-Butanol	31	10.891	10.884	0.007	48	5158	0.1587	0.1561	
50 Cyclohexane	69	10.934	10.937	-0.003	71	7611	0.1587	0.1706	
51 Benzene	78	10.934	10.939	-0.005	96	45872	0.1587	0.1771	
52 Carbon tetrachloride	117	10.961	10.963	-0.002	96	32675	0.1587	0.1645	
53 2,3-Dimethylpentane	71	11.037	11.044	-0.007	92	9980	0.1587	0.1681	
54 Thiophene	84	11.209	11.210	-0.001	96	23502	0.1587	0.1627	
55 Tert-amyl methyl ether	73	11.402	11.396	0.006	95	29936	0.1587	0.1641	
56 Isooctane	57	11.666	11.670	-0.004	98	73960	0.1587	0.1769	
57 n-Heptane	71	12.031	12.033	-0.002	93	14892	0.1587	0.1648	
58 1,2-Dichloropropane	63	12.128	12.130	-0.002	90	15940	0.1587	0.1609	
59 Trichloroethene	130	12.161	12.163	-0.003	92	16787	0.1587	0.1614	
60 Dibromomethane	93	12.252	12.252	0.000	92	16419	0.1587	0.1625	
62 Dichlorobromomethane	83	12.386	12.388	-0.002	97	28262	0.1587	0.1566	
61 1,4-Dioxane	88	12.419	12.413	0.006	93	4230	0.1587	0.1451	
63 Methyl methacrylate	41	12.467	12.470	-0.003	92	15280	0.1587	0.1853	
64 Methylcyclohexane	83	12.919	12.919	0.000	95	33529	0.1587	0.1749	
65 4-Methyl-2-pentanone (MIBK	43	13.311	13.310	0.001	98	26499	0.1587	0.1650	
66 cis-1,3-Dichloropropene	75	13.370	13.369	0.001	96	19690	0.1587	0.1510	
67 trans-1,3-Dichloropropene	75	14.053	14.051	0.002	97	14032	0.1587	0.1429	
68 Toluene	91	14.177	14.180	-0.003	93	40667	0.1587	0.1660	
69 1,1,2-Trichloroethane	83	14.252	14.253	-0.001	96	12026	0.1587	0.1575	
70 2-Methylthiophene	97	14.333	14.332	0.001	97	29831	0.1587	0.1510	
71 3-Methylthiophene	97	14.527	14.530	-0.003	99	30896	0.1587	0.1636	
72 2-Hexanone	58	14.623	14.624	-0.001	92	9665	0.1587	0.1456	
73 n-Octane	85	14.838	14.841	-0.003	95	14033	0.1587	0.1717	
74 Chlorodibromomethane	129	14.951	14.954	-0.003	96	22682	0.1587	0.1613	
75 Ethylene Dibromide	107	15.242	15.245	-0.003	95	19919	0.1587	0.1638	
76 Tetrachloroethene	129	15.312	15.312	0.000	93	16317	0.1587	0.1779	
77 2,3-Dimethylheptane	43	16.177	16.176	0.001	95	47652	0.1587	0.1975	
78 Chlorobenzene	112	16.177	16.180	-0.003	68	29601	0.1587	0.1722	
79 Ethylbenzene	91	16.457	16.458	-0.001	98	42924	0.1587	0.1587	
80 2-Ethylthiophene	97	16.565	16.563	0.002	97	30549	0.1587	0.1582	
81 m-Xylene & p-Xylene	91	16.613	16.616	-0.003	99	66297	0.3173	0.3275	
82 n-Nonane	57	17.016	17.015	0.001	92	26189	0.1587	0.1638	
83 Bromoform	173	17.075	17.077	-0.002	87	14356	0.1587	0.1357	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.081	17.082	-0.001	98	18072	0.1587	0.1413	
85 o-Xylene	91	17.140	17.142	-0.002	98	36573	0.1587	0.1648	
86 1,1,2,2-Tetrachloroethane	83	17.463	17.462	0.001	97	25353	0.1587	0.1576	
87 1,2,3-Trichloropropane	110	17.624	17.623	0.001	97	5836	0.1587	0.1577	
88 Isopropylbenzene	105	17.721	17.719	0.002	95	46960	0.1587	0.1666	
89 N-Propylbenzene	120	18.237	18.237	0.000	98	10213	0.1587	0.1467	
90 2-Chlorotoluene	126	18.285	18.287	-0.002	97	10469	0.1587	0.1543	
91 4-Ethyltoluene	105	18.382	18.382	0.000	98	35318	0.1587	0.1473	
92 1,3,5-Trimethylbenzene	120	18.452	18.452	0.000	92	18765	0.1587	0.1564	
93 Alpha Methyl Styrene	118	18.678	18.678	0.000	85	9408	0.1587	0.1087	
94 n-Decane	57	18.715	18.716	-0.001	91	25264	0.1587	0.1540	
95 tert-Butylbenzene	119	18.866	18.865	0.001	92	38571	0.1587	0.1659	
96 1,2,4-Trimethylbenzene	105	18.877	18.879	-0.002	95	32026	0.1587	0.1573	
97 sec-Butylbenzene	105	19.130	19.127	0.003	98	51842	0.1587	0.1627	
98 1,3-Dichlorobenzene	146	19.151	19.151	0.000	97	13786	0.1587	0.1457	
99 Benzyl chloride	91	19.226	19.222	0.004	95	12262	0.1587	0.1159	
100 1,4-Dichlorobenzene	146	19.237	19.236	0.001	91	11326	0.1587	0.1398	
101 4-Isopropyltoluene	119	19.280	19.283	-0.003	96	36212	0.1587	0.1567	
102 1,2,3-Trimethylbenzene	105	19.339	19.340	-0.001	99	25395	0.1587	0.1615	
103 Butylcyclohexane	83	19.388	19.387	0.001	92	34728	0.1587	0.1680	
104 2,3-Dihydroindene	117	19.587	19.585	0.002	92	26653	0.1587	0.1594	
105 1,2-Dichlorobenzene	146	19.592	19.588	0.004	74	14992	0.1587	0.1534	
106 n-Butylbenzene	91	19.705	19.706	-0.001	97	30226	0.1587	0.1578	
107 Indene	116	19.710	19.711	-0.001	87	12894	0.1587	0.1272	
108 Undecane	57	19.995	19.997	-0.002	97	24778	0.1587	0.1654	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.071	20.071	0.000	97	22541	0.1587	0.1515	
110 1,2-Dibromo-3-Chloropropan	157	20.178	20.176	0.002	86	3744	0.1587	0.1407	
111 1,2,4,5-Tetramethylbenzene	119	20.452	20.454	-0.002	96	27377	0.1587	0.1570	
112 1,2,3,5-Tetramethylbenzene	119	20.512	20.509	0.003	94	17088	0.1587	0.1535	
113 1,2,3,4-Tetramethylbenzene	119	20.920	20.922	-0.002	97	22862	0.1587	0.1643	
114 Dodecane	57	21.065	21.067	-0.002	94	23162	0.1587	0.1801	
115 1,2,4-Trichlorobenzene	180	21.302	21.300	0.002	87	3301	0.1587	0.1479	
116 Naphthalene	128	21.447	21.446	0.001	98	10494	0.1587	0.1610	
117 Benzo(b)thiophene	134	21.544	21.545	-0.001	97	4165	0.1587	0.1581	
118 Hexachlorobutadiene	225	21.630	21.631	-0.001	95	17985	0.1587	0.1773	
119 1,2,3-Trichlorobenzene	180	21.700	21.697	0.003	92	4611	0.1587	0.1753	
120 2-Methylnaphthalene	142	22.248	22.263	-0.015	93	1760	0.4958	0.5246	
121 1-Methylnaphthalene	142	22.372	22.359	0.013	96	2651	0.4958	0.5888	
A 124 Toluene Range	1	14.177	(14.147-14.207)		0	89052	0.1587	0.1608	
A 125 C8 Range	1	14.829	(14.811-14.847)		0	141889	0.1587	0.1914	
S 126 Xylenes, Total	100				0		0.4760	0.4922	
S 127 1,2-Dichloroethene, Total	1				0		0.3173	0.3167	

Reagents:

40L3DNP_00008	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

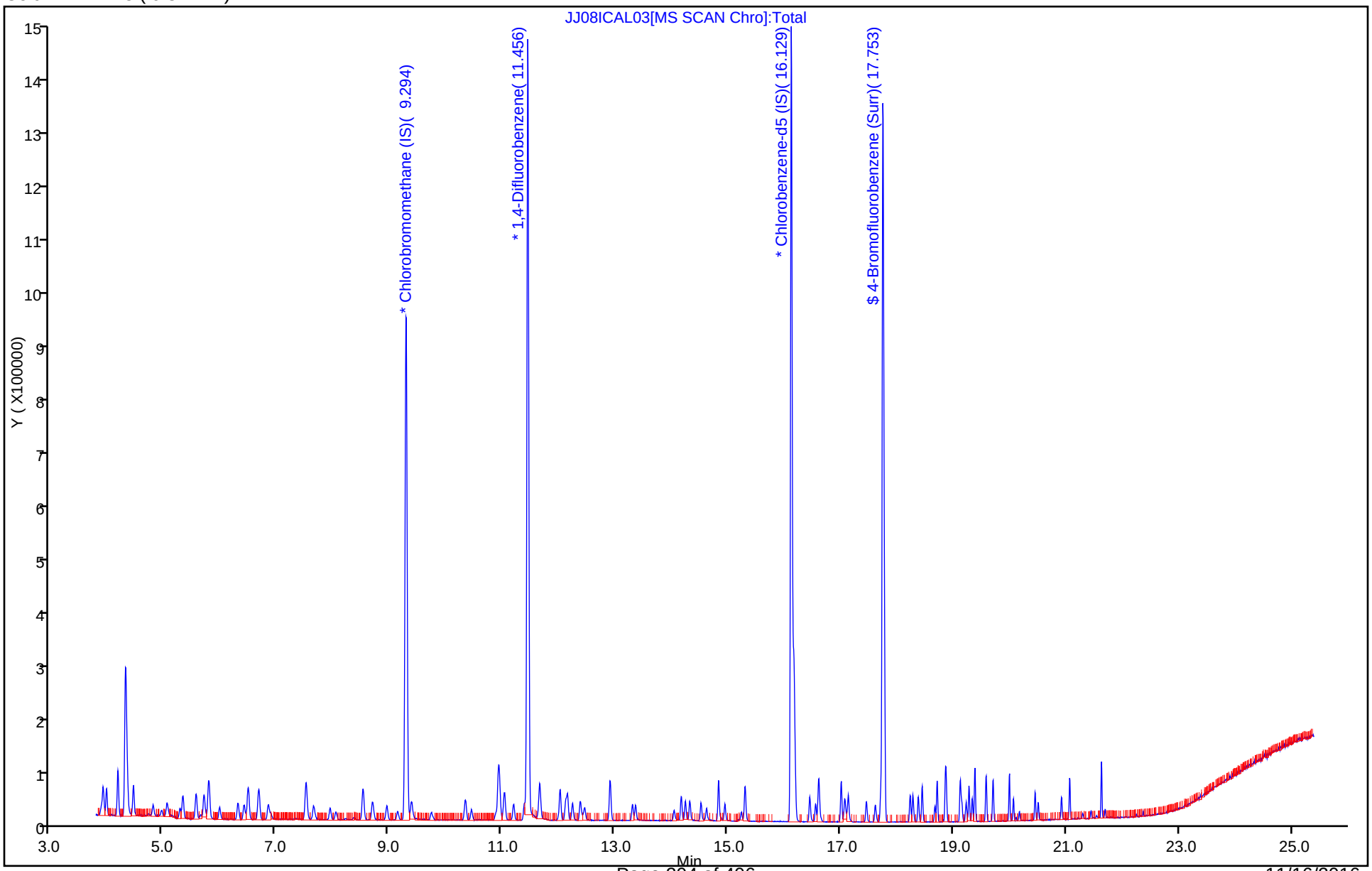
Report Date: 11-Oct-2016 11:30:45 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL03.D

Injection Date:	08-Oct-2016 20:47:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	IC L3			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

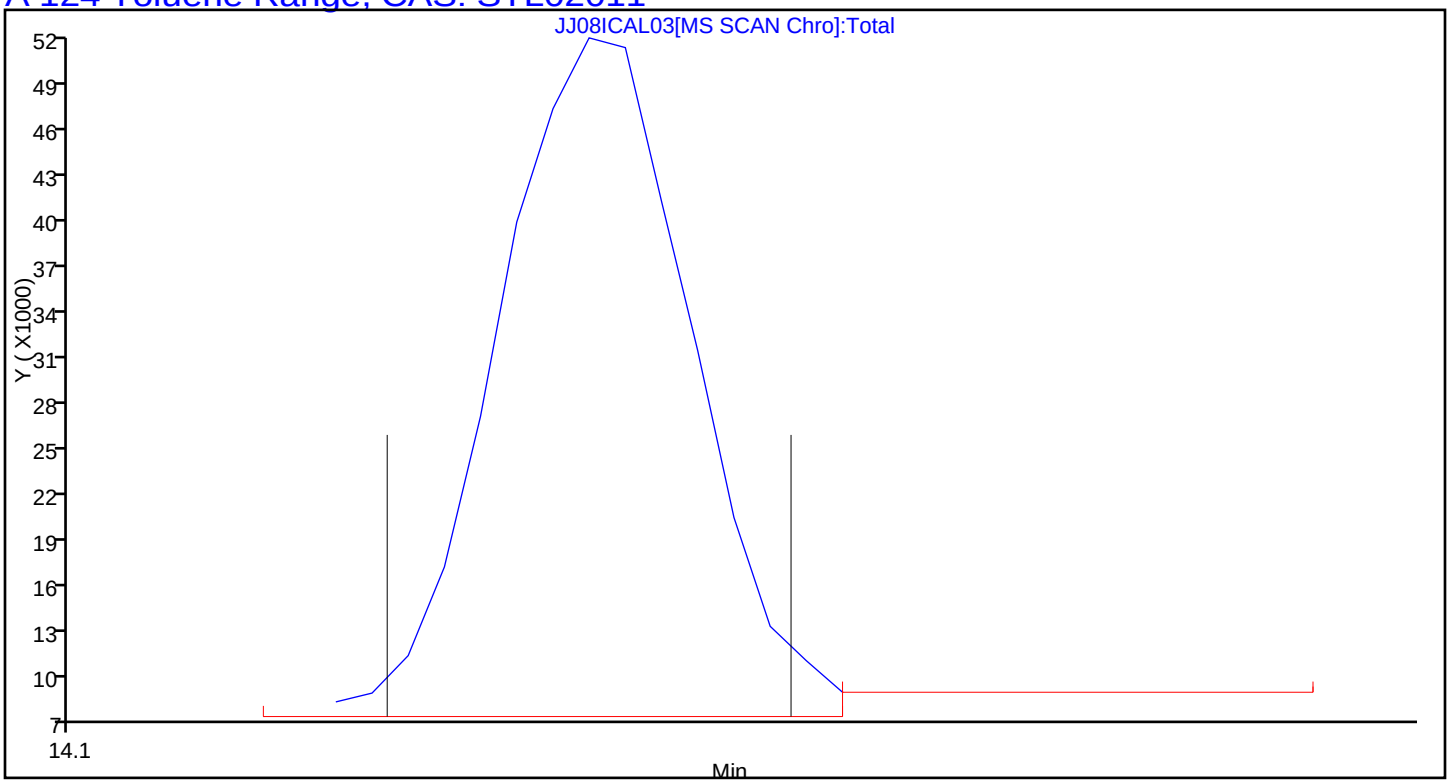


Report Date: 11-Oct-2016 11:30:45 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL03.D				
Injection Date:	08-Oct-2016 20:47:30	Instrument ID:	MJ		
Lims ID:	IC L3				
Client ID:					
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

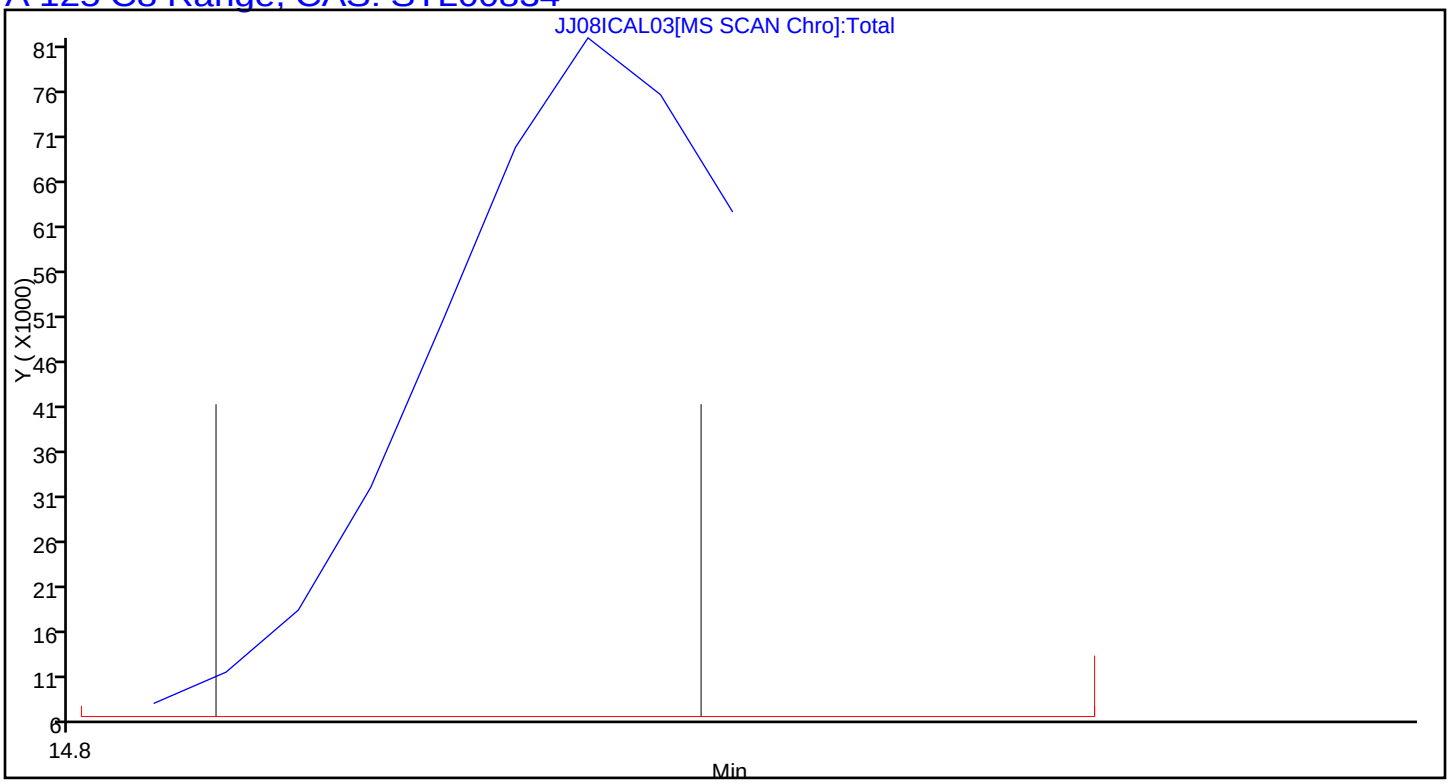


Report Date: 11-Oct-2016 11:30:45 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL03.D				
Injection Date:	08-Oct-2016 20:47:30	Instrument ID:	MJ		
Lims ID:	IC L3				
Client ID:					
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL04.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 08-Oct-2016 21:41:30 ALS Bottle#: 3 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003509-006
Misc. Info.: 059242
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 11:30:51 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2016 11:09:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.301	9.302	-0.001	96	308178	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.457	11.461	-0.004	95	1452182	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.130	16.131	-0.001	89	1223912	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.754	17.753	0.001	88	745431	4.00	4.04	
6 Chlorodifluoromethane	67	3.918	3.918	0.000	97	12104	0.4000	0.3858	
7 Propene	41	3.934	3.933	0.001	99	42644	0.4000	0.3956	
8 Dichlorodifluoromethane	85	3.988	3.987	0.001	100	120201	0.4000	0.3962	
9 Chloromethane	52	4.181	4.183	-0.002	65	14884	0.4000	0.4279	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.187	4.188	-0.001	92	64587	0.4000	0.4044	
11 Acetaldehyde	44	4.348	4.349	-0.001	97	75172	2.00	2.34	
12 Vinyl chloride	62	4.370	4.369	0.001	99	42435	0.4000	0.4053	
14 Butadiene	54	4.461	4.463	-0.002	66	31358	0.4000	0.4028	
13 Butane	43	4.466	4.465	0.001	86	63876	0.4000	0.4207	
15 Bromomethane	94	4.816	4.815	0.001	98	36824	0.4000	0.3887	
16 Chloroethane	64	4.967	4.964	0.003	94	17148	0.4000	0.3913	
17 Ethanol	31	5.058	5.063	-0.005	97	64022	2.00	2.18	
18 Vinyl bromide	106	5.289	5.290	-0.001	97	38043	0.4000	0.3867	
19 2-Methylbutane	43	5.338	5.341	-0.003	92	50507	0.4000	0.4042	
20 Trichlorofluoromethane	101	5.574	5.576	-0.002	100	104867	0.4000	0.3965	
21 Acrolein	56	5.590	5.586	0.004	96	11492	0.4000	0.4245	
22 Acetonitrile	40	5.655	5.657	-0.002	97	12877	0.4000	0.3862	
23 Acetone	58	5.709	5.712	-0.003	98	50972	1.20	1.53	
24 Isopropyl alcohol	45	5.789	5.793	-0.004	94	148690	1.20	1.29	
25 Pentane	72	5.800	5.805	-0.005	96	6090	0.4000	0.3953	
26 Ethyl ether	31	5.988	5.987	0.001	92	41918	0.4000	0.4317	
27 1,1-Dichloroethene	96	6.322	6.319	0.003	97	36261	0.4000	0.3745	
28 2-Methyl-2-propanol	59	6.413	6.419	-0.006	95	59107	0.4000	0.3949	
29 Acrylonitrile	53	6.429	6.429	0.000	95	24380	0.4000	0.4385	
30 1,1,2-Trichloro-1,2,2-trif	101	6.499	6.499	0.000	94	80689	0.4000	0.3935	
31 Methylene Chloride	84	6.682	6.682	0.000	97	41089	0.4000	0.4196	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.698	6.698	0.000	93	36483	0.4000	0.3952	
33 Carbon disulfide	76	6.859	6.857	0.002	99	120970	0.4000	0.4046	
34 trans-1,2-Dichloroethene	96	7.521	7.521	0.000	98	37486	0.4000	0.3927	
35 2-Methylpentane	43	7.532	7.532	0.000	95	84772	0.4000	0.4043	
36 Methyl tert-butyl ether	73	7.655	7.653	0.002	97	87262	0.4000	0.4370	
37 1,1-Dichloroethane	63	7.951	7.955	-0.004	100	70214	0.4000	0.3968	
38 Vinyl acetate	43	8.053	8.055	-0.002	100	83094	0.4000	0.4270	
39 2-Butanone (MEK)	72	8.526	8.524	0.002	96	14095	0.4000	0.4309	
40 Hexane	56	8.532	8.537	-0.005	80	30899	0.4000	0.3974	
41 Isopropyl ether	45	8.698	8.702	-0.004	97	114673	0.4000	0.4263	
42 cis-1,2-Dichloroethene	96	8.962	8.961	0.001	97	36353	0.4000	0.3867	
43 Ethyl acetate	43	9.145	9.146	-0.001	99	62762	0.4000	0.4258	
44 Chloroform	83	9.306	9.310	-0.004	34	76886	0.4000	0.3968	
45 Tert-butyl ethyl ether	59	9.387	9.392	-0.005	96	93782	0.4000	0.4250	
46 Tetrahydrofuran	42	9.736	9.738	-0.002	93	34798	0.4000	0.4257	
47 1,1,1-Trichloroethane	97	10.355	10.352	0.003	95	79596	0.4000	0.3998	
48 1,2-Dichloroethane	62	10.457	10.461	-0.004	97	49288	0.4000	0.3962	
49 n-Butanol	31	10.887	10.884	0.003	82	11630	0.4000	0.3394	
50 Cyclohexane	69	10.930	10.937	-0.007	83	18070	0.4000	0.3906	
51 Benzene	78	10.935	10.939	-0.004	96	109572	0.4000	0.4079	
52 Carbon tetrachloride	117	10.962	10.963	-0.001	96	78074	0.4000	0.3789	
53 2,3-Dimethylpentane	71	11.043	11.044	-0.001	91	24581	0.4000	0.3993	
54 Thiophene	84	11.204	11.210	-0.006	97	57959	0.4000	0.3869	
55 Tert-amyl methyl ether	73	11.398	11.396	0.002	97	84309	0.4000	0.4219	
56 Isooctane	57	11.672	11.670	0.002	98	173210	0.4000	0.3994	
57 n-Heptane	71	12.032	12.033	-0.001	93	35102	0.4000	0.3746	
58 1,2-Dichloropropane	63	12.129	12.130	-0.001	90	39101	0.4000	0.3806	
59 Trichloroethene	130	12.161	12.163	-0.002	93	40331	0.4000	0.3740	
60 Dibromomethane	93	12.253	12.252	0.001	93	39421	0.4000	0.3761	
62 Dichlorobromomethane	83	12.387	12.388	-0.001	98	69273	0.4000	0.3700	
61 1,4-Dioxane	88	12.414	12.413	0.001	94	11296	0.4000	0.3736	
63 Methyl methacrylate	41	12.468	12.470	-0.002	92	31834	0.4000	0.3722	
64 Methylcyclohexane	83	12.914	12.919	-0.005	95	78499	0.4000	0.3947	
65 4-Methyl-2-pentanone (MIBK	43	13.312	13.310	0.002	98	66898	0.4000	0.4017	
66 cis-1,3-Dichloropropene	75	13.366	13.369	-0.003	95	50995	0.4000	0.3771	
67 trans-1,3-Dichloropropene	75	14.054	14.051	0.003	98	39823	0.4000	0.3702	
68 Toluene	91	14.178	14.180	-0.002	93	103555	0.4000	0.3859	
69 1,1,2-Trichloroethane	83	14.253	14.253	0.000	97	33101	0.4000	0.3959	
70 2-Methylthiophene	97	14.328	14.332	-0.004	97	85346	0.4000	0.3945	
71 3-Methylthiophene	97	14.527	14.530	-0.003	99	73571	0.4000	0.3557	
72 2-Hexanone	58	14.624	14.624	0.000	92	25177	0.4000	0.3462	
73 n-Octane	85	14.839	14.841	-0.002	95	34674	0.4000	0.3872	
74 Chlorodibromomethane	129	14.952	14.954	-0.002	97	56014	0.4000	0.3637	
75 Ethylene Dibromide	107	15.243	15.245	-0.002	98	51123	0.4000	0.3838	
76 Tetrachloroethene	129	15.313	15.312	0.001	95	38757	0.4000	0.3857	
77 2,3-Dimethylheptane	43	16.173	16.176	-0.003	95	111048	0.4000	0.4202	
78 Chlorobenzene	112	16.178	16.180	-0.002	72	71495	0.4000	0.3796	
79 Ethylbenzene	91	16.458	16.458	0.000	99	117415	0.4000	0.3962	
80 2-Ethylthiophene	97	16.560	16.563	-0.003	98	80706	0.4000	0.3815	
81 m-Xylene & p-Xylene	91	16.614	16.616	-0.002	100	182466	0.8000	0.8228	
82 n-Nonane	57	17.012	17.015	-0.003	94	70266	0.4000	0.4012	
83 Bromoform	173	17.076	17.077	-0.001	92	37833	0.4000	0.3265	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.082	17.082	0.000	99	51409	0.4000	0.3670	
85 o-Xylene	91	17.141	17.142	-0.001	98	99937	0.4000	0.4110	
86 1,1,2,2-Tetrachloroethane	83	17.463	17.462	0.001	99	69531	0.4000	0.3946	
87 1,2,3-Trichloropropane	110	17.619	17.623	-0.004	98	15771	0.4000	0.3892	
88 Isopropylbenzene	105	17.716	17.719	-0.003	93	130051	0.4000	0.4213	
89 N-Propylbenzene	120	18.238	18.237	0.001	98	28816	0.4000	0.3779	
90 2-Chlorotoluene	126	18.286	18.287	-0.001	97	27973	0.4000	0.3763	
91 4-Ethyltoluene	105	18.383	18.382	0.001	98	100681	0.4000	0.3833	
92 1,3,5-Trimethylbenzene	120	18.453	18.452	0.001	92	54490	0.4000	0.4146	
93 Alpha Methyl Styrene	118	18.679	18.678	0.001	85	27543	0.4000	0.2906	
94 n-Decane	57	18.716	18.716	0.000	90	73499	0.4000	0.4090	
95 tert-Butylbenzene	119	18.862	18.865	-0.003	91	109302	0.4000	0.4292	
96 1,2,4-Trimethylbenzene	105	18.878	18.879	-0.001	96	91716	0.4000	0.4112	
97 sec-Butylbenzene	105	19.125	19.127	-0.002	98	147815	0.4000	0.4236	
98 1,3-Dichlorobenzene	146	19.152	19.151	0.001	98	33997	0.4000	0.3280	
99 Benzyl chloride	91	19.222	19.222	0.000	97	28804	0.4000	0.2485	
100 1,4-Dichlorobenzene	146	19.238	19.236	0.002	91	27489	0.4000	0.3096	
101 4-Isopropyltoluene	119	19.281	19.283	-0.002	96	101281	0.4000	0.4000	
102 1,2,3-Trimethylbenzene	105	19.340	19.340	0.000	99	69930	0.4000	0.4060	
103 Butylcyclohexane	83	19.389	19.387	0.002	91	93553	0.4000	0.4132	
104 2,3-Dihydroindene	117	19.582	19.585	-0.003	93	69259	0.4000	0.3782	
105 1,2-Dichlorobenzene	146	19.588	19.588	0.000	95	38368	0.4000	0.3583	
106 n-Butylbenzene	91	19.706	19.706	0.000	98	77391	0.4000	0.3688	
107 Indene	116	19.711	19.711	0.000	90	34494	0.4000	0.3105	
108 Undecane	57	19.996	19.997	-0.001	96	57043	0.4000	0.3477	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.071	20.071	0.000	98	56986	0.4000	0.3496	
110 1,2-Dibromo-3-Chloropropan	157	20.174	20.176	-0.002	88	9138	0.4000	0.3134	
111 1,2,4,5-Tetramethylbenzene	119	20.453	20.454	-0.001	96	68600	0.4000	0.3591	
112 1,2,3,5-Tetramethylbenzene	119	20.507	20.509	-0.002	95	42619	0.4000	0.3495	
113 1,2,3,4-Tetramethylbenzene	119	20.921	20.922	-0.001	97	52196	0.4000	0.3424	
114 Dodecane	57	21.066	21.067	-0.001	95	37327	0.4000	0.2650	
115 1,2,4-Trichlorobenzene	180	21.298	21.300	-0.002	92	6853	0.4000	0.2803	
116 Naphthalene	128	21.448	21.446	0.002	99	19745	0.4000	0.2765	
117 Benzo(b)thiophene	134	21.545	21.545	0.000	99	7041	0.4000	0.2440	
118 Hexachlorobutadiene	225	21.631	21.631	0.000	95	39860	0.4000	0.3587	
119 1,2,3-Trichlorobenzene	180	21.695	21.697	-0.002	93	8210	0.4000	0.2850	
120 2-Methylnaphthalene	142	22.249	22.263	-0.014	93	2050	1.25	0.5578	
121 1-Methylnaphthalene	142	22.373	22.359	0.014	92	2215	1.25	0.4491	
A 124 Toluene Range	1	14.178	(14.148-14.208)		0	237815	0.4000	0.3921	
A 125 C8 Range	1	14.830	(14.812-14.848)		0	333608	0.4000	0.4108	
S 126 Xylenes, Total	100				0		1.20	1.23	
S 127 1,2-Dichloroethene, Total	1				0		0.8000	0.7794	

Reagents:

40L4DNP_00007	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

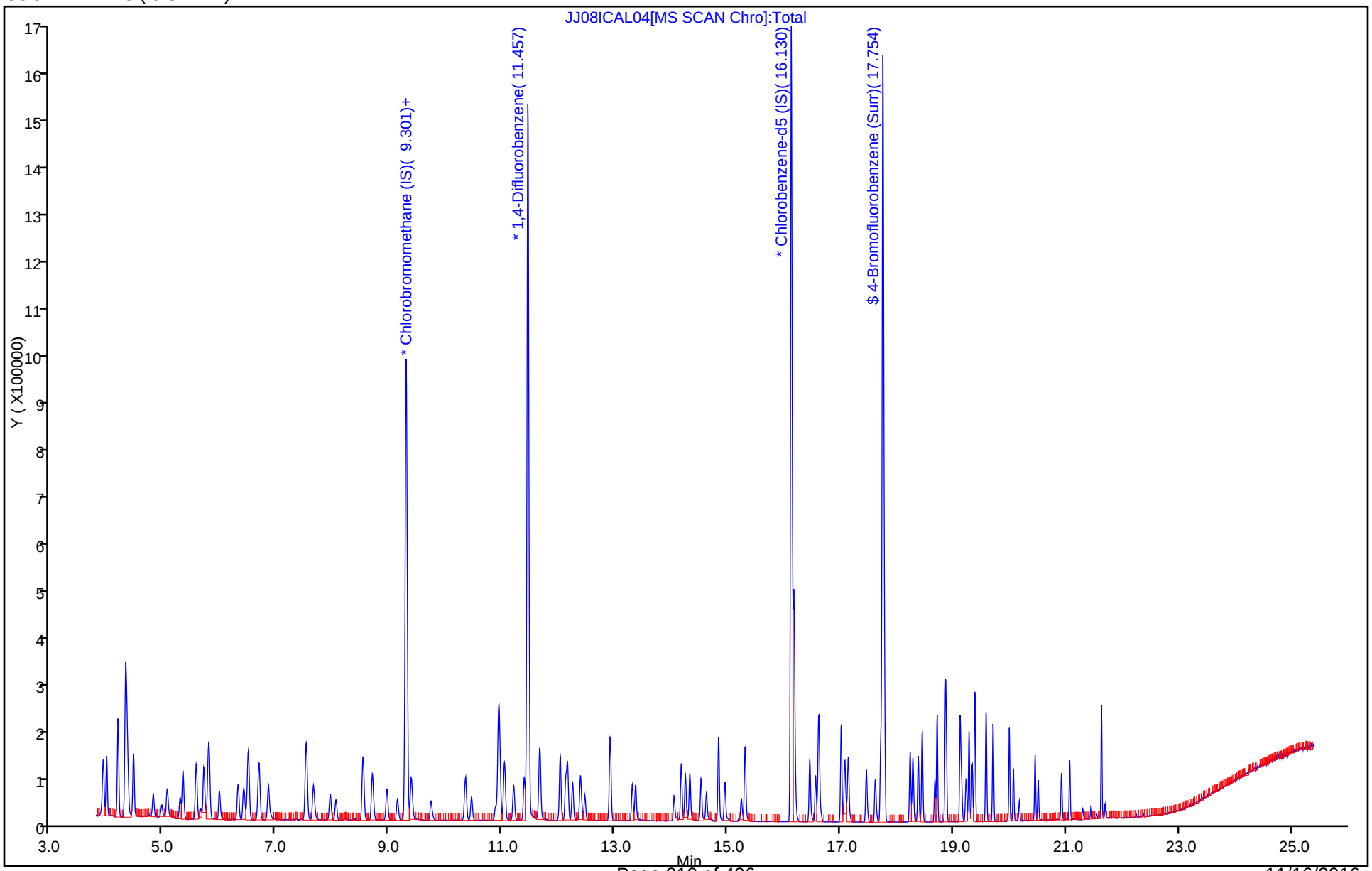
Report Date: 11-Oct-2016 11:30:53 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL04.D

Injection Date:	08-Oct-2016 21:41:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	IC L4			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

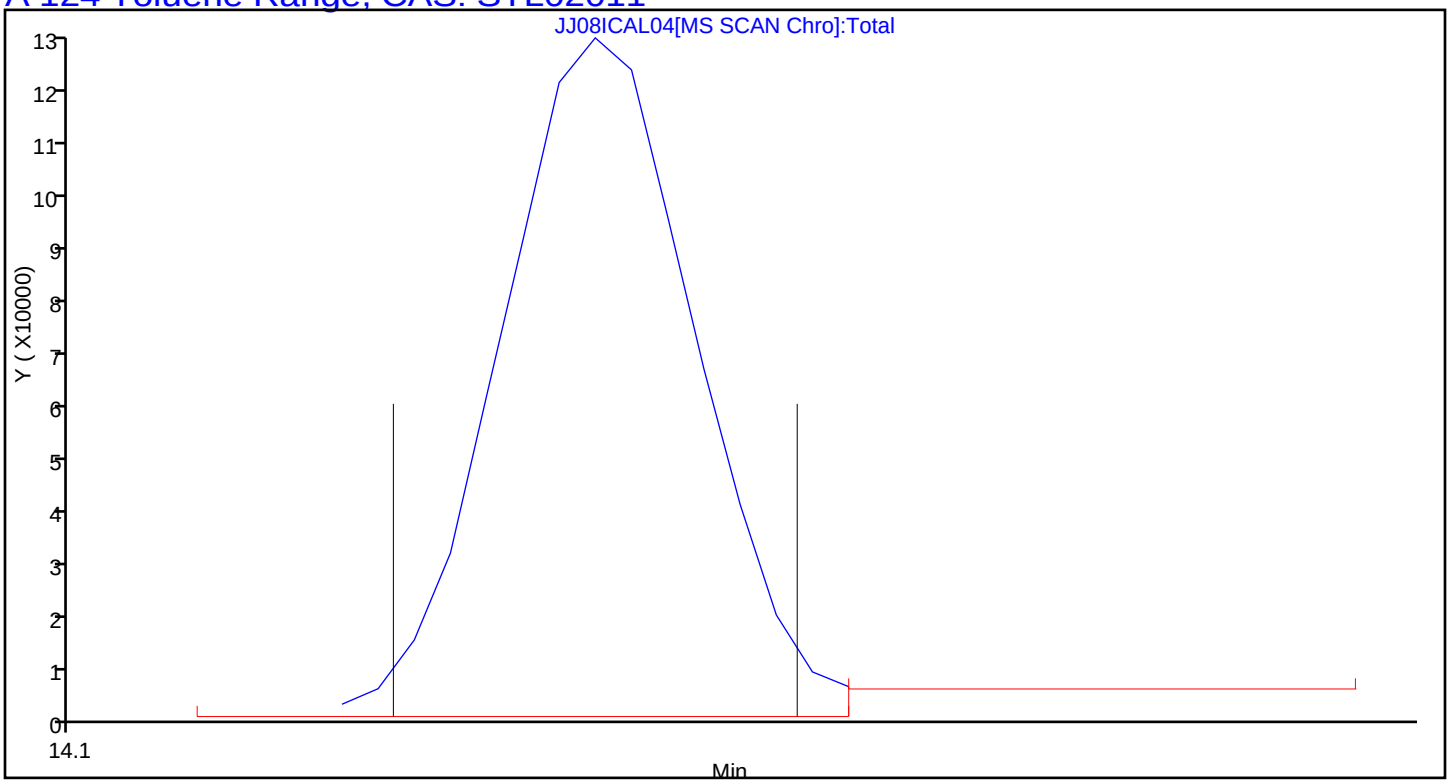


Report Date: 11-Oct-2016 11:30:53 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL04.D				
Injection Date:	08-Oct-2016 21:41:30	Instrument ID:	MJ		
Lims ID:	IC L4				
Client ID:					
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

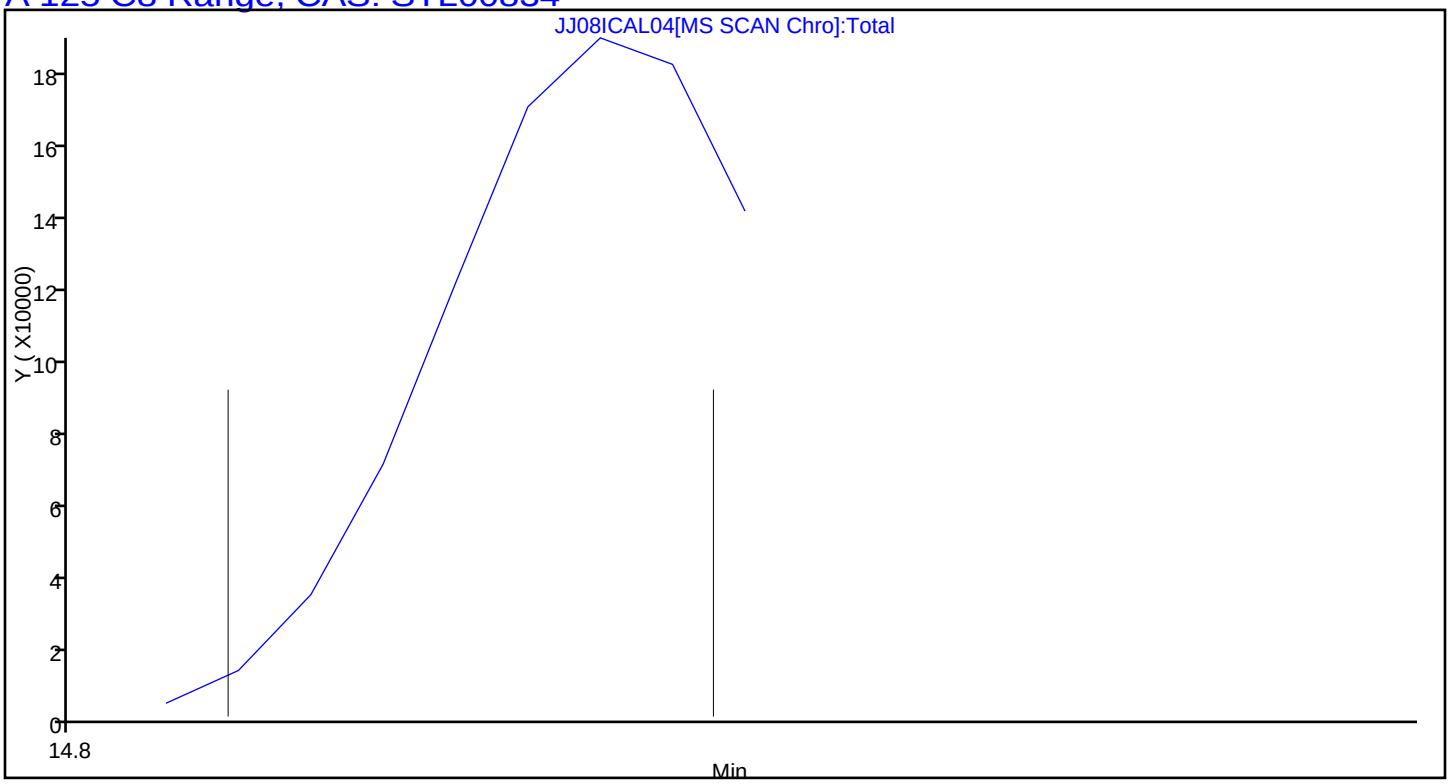


Report Date: 11-Oct-2016 11:30:53 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL04.D				
Injection Date:	08-Oct-2016 21:41:30	Instrument ID:	MJ		
Lims ID:	IC L4				
Client ID:					
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL05.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Oct-2016 22:36:30 ALS Bottle#: 4 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003509-007
Misc. Info.: 059241
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 11:30:59 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2016 11:09:05

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.303	9.302	0.001	97	299403	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.459	11.461	-0.002	95	1374704	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.132	16.131	0.001	88	1150982	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.751	17.753	-0.002	89	713913	4.00	4.11	
6 Chlorodifluoromethane	67	3.920	3.918	0.002	97	29990	1.00	0.9838	
7 Propene	41	3.931	3.933	-0.002	99	100490	1.00	0.9596	
8 Dichlorodifluoromethane	85	3.985	3.987	-0.002	100	301850	1.00	1.02	
9 Chloromethane	52	4.178	4.183	-0.005	98	35473	1.00	1.05	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.189	4.188	0.001	93	152559	1.00	0.9833	
11 Acetaldehyde	44	4.350	4.349	0.001	99	159716	5.01	5.11	
12 Vinyl chloride	62	4.366	4.369	-0.003	99	105472	1.00	1.04	
14 Butadiene	54	4.463	4.463	0.000	90	79582	1.00	1.05	
13 Butane	43	4.463	4.465	-0.002	90	154888	1.00	1.05	
15 Bromomethane	94	4.813	4.815	-0.002	98	95216	1.00	1.03	
16 Chloroethane	64	4.963	4.964	-0.001	95	44680	1.00	1.05	
17 Ethanol	31	5.060	5.063	-0.003	98	145811	5.01	5.11	
18 Vinyl bromide	106	5.291	5.290	0.001	99	98119	1.00	1.03	
19 2-Methylbutane	43	5.340	5.341	-0.001	91	124087	1.00	1.02	
20 Trichlorofluoromethane	101	5.576	5.576	0.000	99	266484	1.00	1.04	
21 Acrolein	56	5.582	5.586	-0.004	30	23762	1.00	0.9035	
22 Acetonitrile	40	5.652	5.657	-0.005	97	31521	1.00	0.9731	
23 Acetone	58	5.711	5.712	-0.001	98	93302	3.01	2.88	
24 Isopropyl alcohol	45	5.786	5.793	-0.007	94	345581	3.01	3.09	
25 Pentane	72	5.802	5.805	-0.003	96	15634	1.00	1.04	
26 Ethyl ether	31	5.980	5.987	-0.007	92	90717	1.00	0.9617	
27 1,1-Dichloroethene	96	6.318	6.319	-0.001	97	95585	1.00	1.02	
28 2-Methyl-2-propanol	59	6.410	6.419	-0.009	96	141369	1.00	0.9723	
29 Acrylonitrile	53	6.426	6.429	-0.003	94	49621	1.00	0.9187	
30 1,1,2-Trichloro-1,2,2-trif	101	6.501	6.499	0.002	94	210076	1.00	1.05	
31 Methylene Chloride	84	6.679	6.682	-0.003	97	96642	1.00	1.02	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.695	6.698	-0.003	95	89293	1.00	1.00	
33 Carbon disulfide	76	6.856	6.857	-0.001	99	294789	1.00	1.01	
34 trans-1,2-Dichloroethene	96	7.518	7.521	-0.003	97	96669	1.00	1.04	
35 2-Methylpentane	43	7.528	7.532	-0.004	95	214982	1.00	1.06	
36 Methyl tert-butyl ether	73	7.652	7.653	-0.001	97	182647	1.00	0.9415	
37 1,1-Dichloroethane	63	7.953	7.955	-0.002	100	171595	1.00	1.00	
38 Vinyl acetate	43	8.050	8.055	-0.005	100	172403	1.00	0.9120	
39 2-Butanone (MEK)	72	8.523	8.524	-0.001	96	29020	1.00	0.9132	
40 Hexane	56	8.534	8.537	-0.003	87	77947	1.00	1.03	
41 Isopropyl ether	45	8.695	8.702	-0.007	98	243807	1.00	0.9330	
42 cis-1,2-Dichloroethene	96	8.959	8.961	-0.002	95	90586	1.00	0.99	
43 Ethyl acetate	43	9.147	9.146	0.001	98	132536	1.00	0.9255	
44 Chloroform	83	9.308	9.310	-0.002	95	186688	1.00	0.99	
45 Tert-butyl ethyl ether	59	9.389	9.392	-0.003	96	198310	1.00	0.9249	
46 Tetrahydrofuran	42	9.733	9.738	-0.005	93	72211	1.00	0.9093	
47 1,1,1-Trichloroethane	97	10.351	10.352	-0.001	97	194833	1.00	1.01	
48 1,2-Dichloroethane	62	10.459	10.461	-0.002	97	116411	1.00	0.9884	
49 n-Butanol	31	10.878	10.884	-0.006	94	30007	1.00	0.9252	
50 Cyclohexane	69	10.932	10.937	-0.005	73	46974	1.00	1.07	
51 Benzene	78	10.938	10.939	-0.001	97	251778	1.00	0.99	
52 Carbon tetrachloride	117	10.959	10.963	-0.004	96	205702	1.00	1.05	
53 2,3-Dimethylpentane	71	11.040	11.044	-0.004	92	59164	1.00	1.02	
54 Thiophene	84	11.206	11.210	-0.004	97	135687	1.00	0.9567	
55 Tert-amyl methyl ether	73	11.389	11.396	-0.007	97	177159	1.00	0.9427	
56 Isooctane	57	11.669	11.670	-0.001	98	406239	1.00	0.9896	
57 n-Heptane	71	12.029	12.033	-0.004	93	83748	1.00	0.9442	
58 1,2-Dichloropropane	63	12.126	12.130	-0.004	90	92168	1.00	0.9477	
59 Trichloroethene	130	12.158	12.163	-0.005	94	98859	1.00	0.9683	
60 Dibromomethane	93	12.250	12.252	-0.002	93	95834	1.00	0.9660	
62 Dichlorobromomethane	83	12.389	12.388	0.001	99	170211	1.00	0.9603	
61 1,4-Dioxane	88	12.411	12.413	-0.002	92	29141	1.00	1.02	
63 Methyl methacrylate	41	12.465	12.470	-0.005	92	71233	1.00	0.8799	
64 Methylcyclohexane	83	12.916	12.919	-0.003	95	193416	1.00	1.03	
65 4-Methyl-2-pentanone (MIBK	43	13.304	13.310	-0.006	98	145694	1.00	0.9242	
66 cis-1,3-Dichloropropene	75	13.368	13.369	-0.001	96	118765	1.00	0.9278	
67 trans-1,3-Dichloropropene	75	14.051	14.051	0.000	99	96862	1.00	0.9576	
68 Toluene	91	14.180	14.180	0.000	94	246370	1.00	0.9764	
69 1,1,2-Trichloroethane	83	14.250	14.253	-0.003	97	76042	1.00	0.9670	
70 2-Methylthiophene	97	14.331	14.332	-0.001	98	203436	1.00	1.00	
71 3-Methylthiophene	97	14.530	14.530	0.000	99	190205	1.00	0.9779	
72 2-Hexanone	58	14.621	14.624	-0.003	92	67673	1.00	0.9895	
73 n-Octane	85	14.841	14.841	0.000	95	81751	1.00	0.9707	
74 Chlorodibromomethane	129	14.954	14.954	0.000	98	141975	1.00	0.9803	
75 Ethylene Dibromide	107	15.239	15.245	-0.006	98	122262	1.00	0.9760	
76 Tetrachloroethene	129	15.309	15.312	-0.003	95	92953	1.00	0.9837	
77 2,3-Dimethylheptane	43	16.175	16.176	-0.001	96	250479	1.00	1.01	
78 Chlorobenzene	112	16.180	16.180	0.000	94	169300	1.00	0.9559	
79 Ethylbenzene	91	16.460	16.458	0.002	99	260654	1.00	0.9352	
80 2-Ethylthiophene	97	16.562	16.563	-0.001	97	188635	1.00	0.9482	
81 m-Xylene & p-Xylene	91	16.616	16.616	0.000	100	398815	2.00	1.91	
82 n-Nonane	57	17.014	17.015	-0.001	93	168829	1.00	1.03	
83 Bromoform	173	17.078	17.077	0.001	93	104598	1.00	0.9599	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.078	17.082	-0.004	99	130563	1.00	0.99	
85 o-Xylene	91	17.138	17.142	-0.004	98	215453	1.00	0.9423	
86 1,1,2,2-Tetrachloroethane	83	17.460	17.462	-0.002	99	160274	1.00	0.9673	
87 1,2,3-Trichloropropane	110	17.622	17.623	-0.001	99	36811	1.00	0.9659	
88 Isopropylbenzene	105	17.718	17.719	-0.001	96	280044	1.00	0.9646	
89 N-Propylbenzene	120	18.235	18.237	-0.002	98	64778	1.00	0.9034	
90 2-Chlorotoluene	126	18.288	18.287	0.001	98	68698	1.00	0.9826	
91 4-Ethyltoluene	105	18.380	18.382	-0.002	97	232530	1.00	0.9414	
92 1,3,5-Trimethylbenzene	120	18.450	18.452	-0.002	94	117867	1.00	0.9537	
93 Alpha Methyl Styrene	118	18.676	18.678	-0.002	87	77630	1.00	0.8709	
94 n-Decane	57	18.713	18.716	-0.003	90	168207	1.00	1.00	
95 tert-Butylbenzene	119	18.864	18.865	-0.001	91	232863	1.00	0.9724	
96 1,2,4-Trimethylbenzene	105	18.880	18.879	0.001	96	205772	1.00	0.9811	
97 sec-Butylbenzene	105	19.127	19.127	0.000	98	323335	1.00	0.9853	
98 1,3-Dichlorobenzene	146	19.149	19.151	-0.002	98	91599	1.00	0.9396	
99 Benzyl chloride	91	19.219	19.222	-0.003	97	88177	1.00	0.8088	
100 1,4-Dichlorobenzene	146	19.235	19.236	-0.001	93	75433	1.00	0.9035	
101 4-Isopropyltoluene	119	19.283	19.283	0.000	97	238195	1.00	1.00	
102 1,2,3-Trimethylbenzene	105	19.337	19.340	-0.003	99	155360	1.00	0.9590	
103 Butylcyclohexane	83	19.385	19.387	-0.002	92	214826	1.00	1.01	
104 2,3-Dihydroindene	117	19.584	19.585	-0.001	93	166405	1.00	0.9663	
105 1,2-Dichlorobenzene	146	19.584	19.588	-0.004	98	97487	1.00	0.9681	
106 n-Butylbenzene	91	19.708	19.706	0.002	98	197055	1.00	1.00	
107 Indene	116	19.713	19.711	0.002	89	94798	1.00	0.9075	
108 Undecane	57	19.998	19.997	0.001	96	149237	1.00	0.9672	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.068	20.071	-0.003	98	148792	1.00	0.9706	
110 1,2-Dibromo-3-Chloropropan	157	20.176	20.176	0.000	90	28029	1.00	1.02	
111 1,2,4,5-Tetramethylbenzene	119	20.455	20.454	0.001	97	180026	1.00	1.00	
112 1,2,3,5-Tetramethylbenzene	119	20.509	20.509	0.000	94	114877	1.00	1.00	
113 1,2,3,4-Tetramethylbenzene	119	20.923	20.922	0.001	97	141541	1.00	0.9874	
114 Dodecane	57	21.068	21.067	0.001	95	136966	1.00	1.03	
115 1,2,4-Trichlorobenzene	180	21.300	21.300	0.000	93	25163	1.00	1.09	
116 Naphthalene	128	21.445	21.446	-0.001	99	73981	1.00	1.10	
117 Benzo(b)thiophene	134	21.547	21.545	0.002	99	27289	1.00	1.01	
118 Hexachlorobutadiene	225	21.633	21.631	0.002	95	103265	1.00	0.9883	
119 1,2,3-Trichlorobenzene	180	21.698	21.697	0.001	95	30545	1.00	1.13	
120 2-Methylnaphthalene	142	22.246	22.263	-0.017	99	11518	3.13	3.33	
121 1-Methylnaphthalene	142	22.370	22.359	0.011	100	15193	3.13	3.28	
A 124 Toluene Range	1	14.180	(14.150-14.210)		0	550707	1.00	0.9655	
A 125 C8 Range	1	14.837	(14.808-14.866)		0	794228	1.00	1.04	
S 126 Xylenes, Total	100				0		3.00	2.85	
S 127 1,2-Dichloroethene, Total	1				0		2.00	2.03	

Reagents:

40L5DNP_00007	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

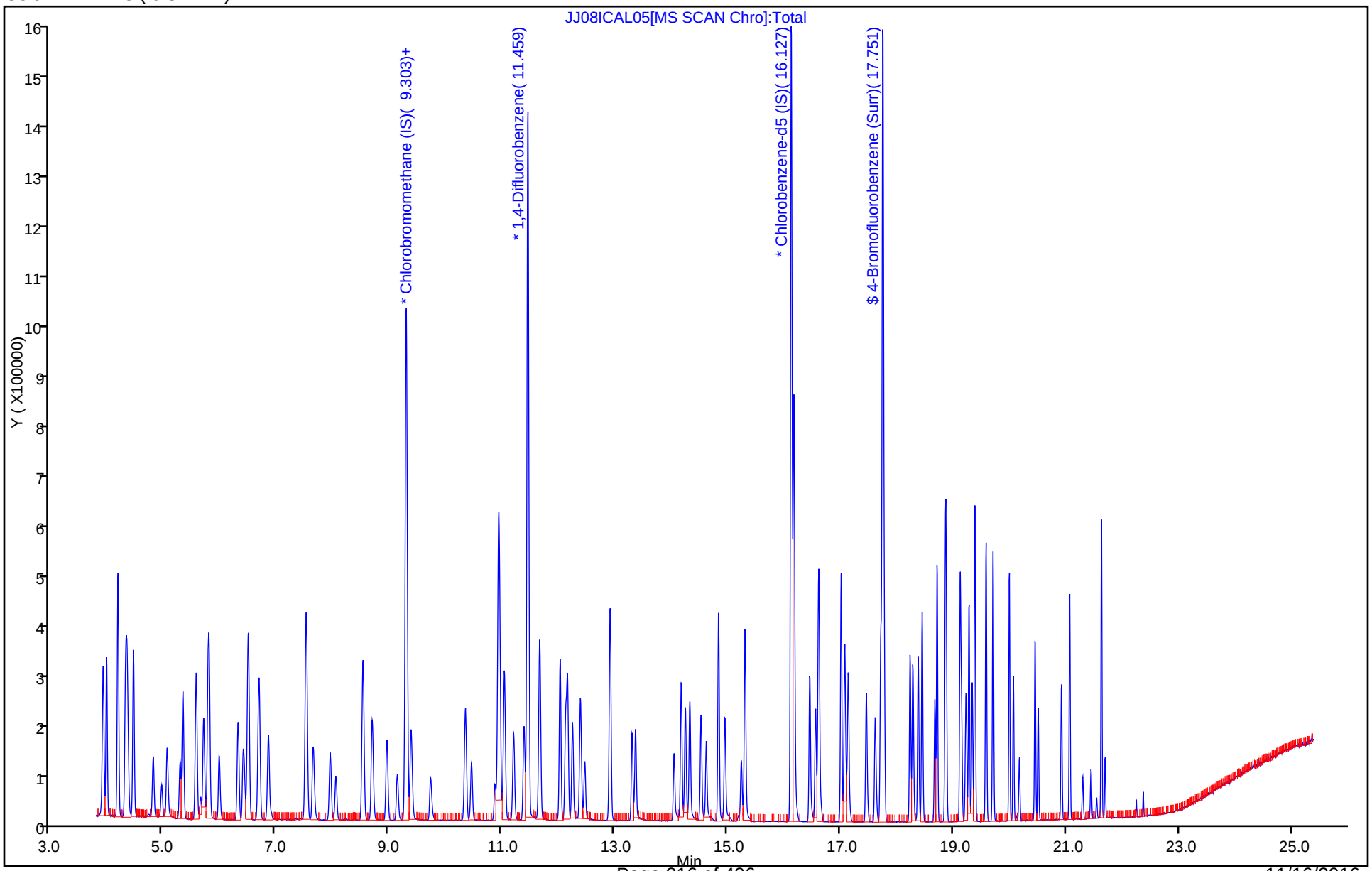
Report Date: 11-Oct-2016 11:31:00 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL05.D

Injection Date:	08-Oct-2016 22:36:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	IC L5			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

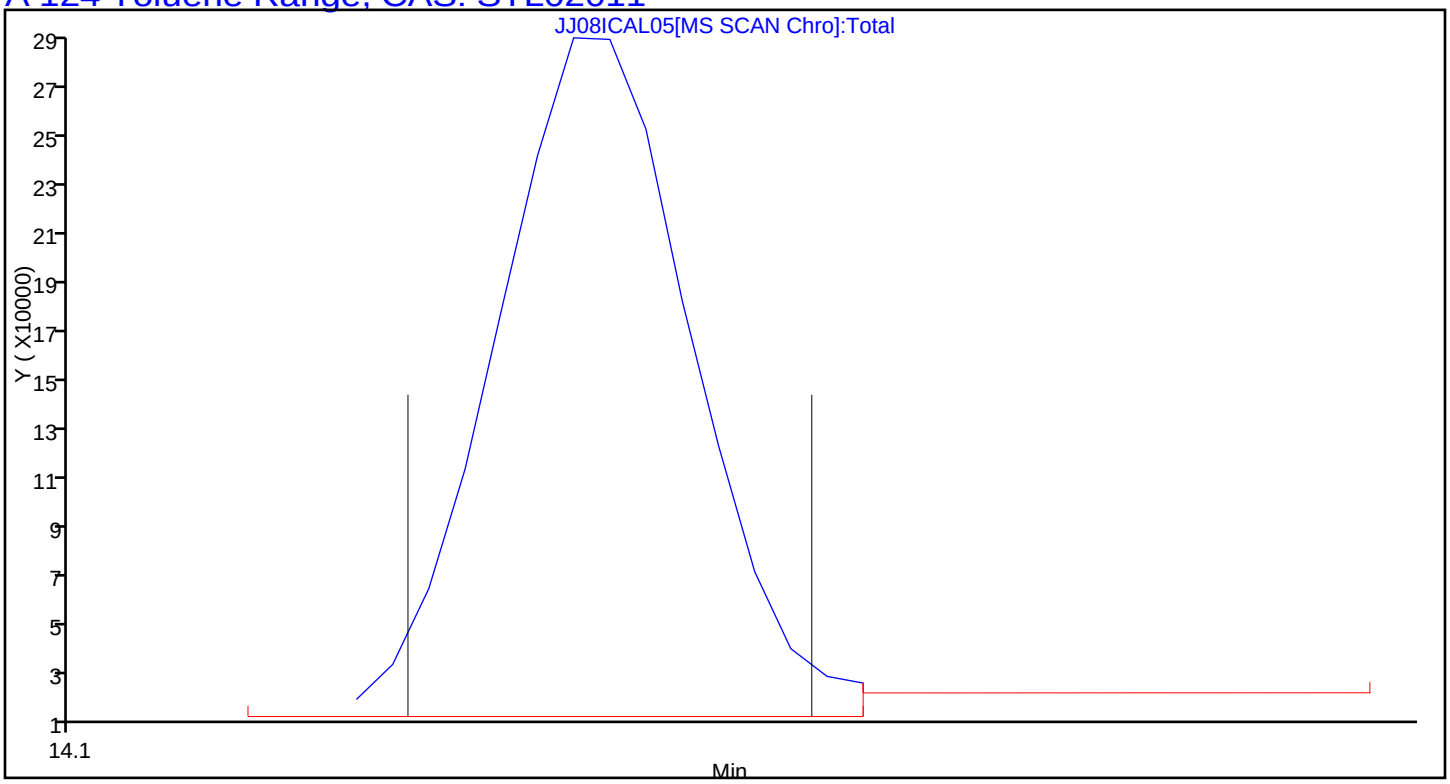


Report Date: 11-Oct-2016 11:31:00 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL05.D				
Injection Date:	08-Oct-2016 22:36:30	Instrument ID:	MJ		
Lims ID:	IC L5				
Client ID:					
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

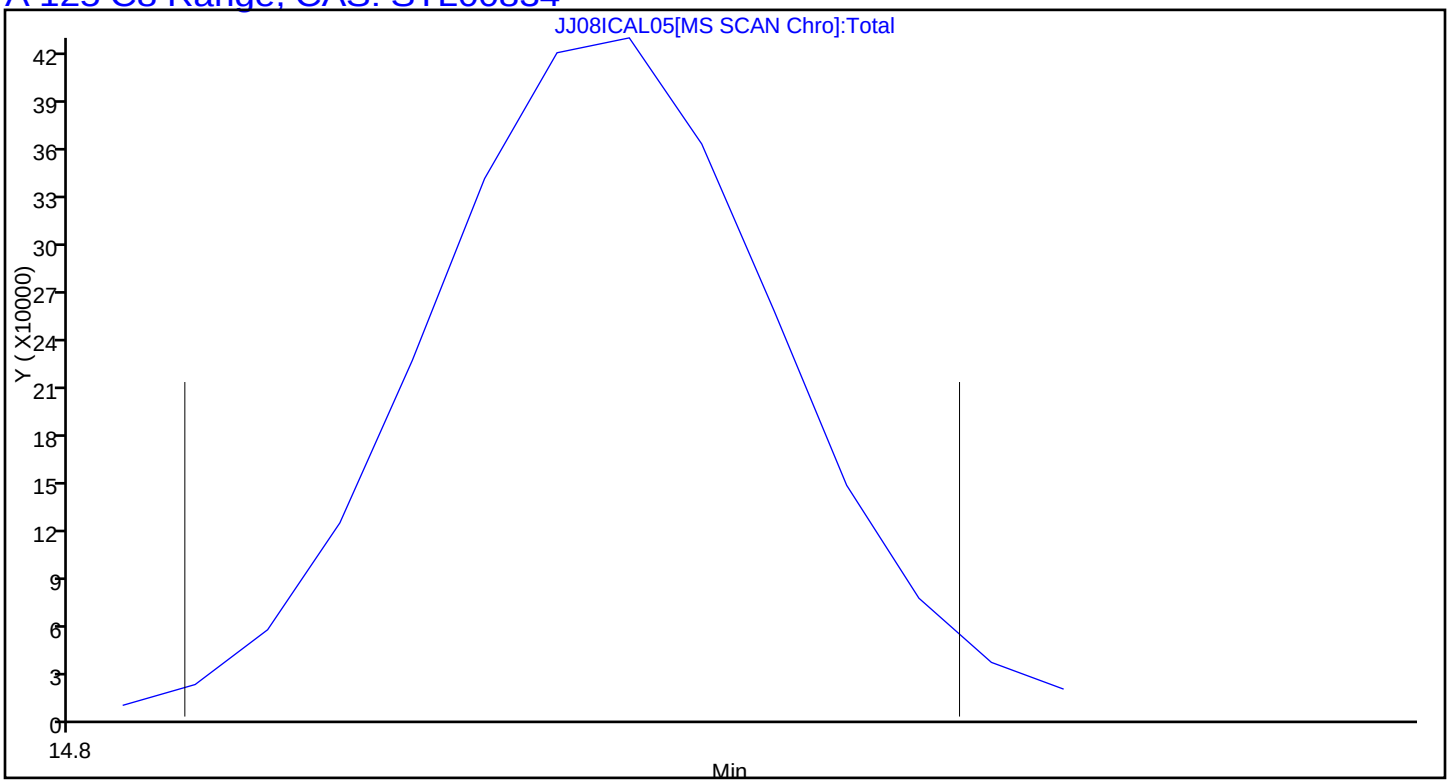


Report Date: 11-Oct-2016 11:31:00 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL05.D				
Injection Date:	08-Oct-2016 22:36:30	Instrument ID:	MJ		
Lims ID:	IC L5				
Client ID:					
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL06.D
Lims ID: ICIS L6
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 08-Oct-2016 23:29:30 ALS Bottle#: 5 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003509-008
Misc. Info.: 059240
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 11:31:09 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2016 10:47:33

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.302	9.302	0.000	97	292093	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.464	11.461	0.003	95	1340770	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.131	16.131	0.000	88	1141838	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.755	17.753	0.002	89	686528	4.00	3.99	
6 Chlorodifluoromethane	67	3.919	3.918	0.001	97	61051	2.00	2.05	
7 Propene	41	3.930	3.933	-0.003	99	196459	2.00	1.92	
8 Dichlorodifluoromethane	85	3.989	3.987	0.002	100	591503	2.00	2.06	
9 Chloromethane	52	4.183	4.183	0.000	98	65224	2.00	1.98	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.188	4.188	0.000	92	334403	2.00	2.21	
11 Acetaldehyde	44	4.350	4.349	0.001	99	328610	9.99	10.8	
12 Vinyl chloride	62	4.371	4.369	0.002	99	200832	2.00	2.02	
14 Butadiene	54	4.462	4.463	-0.001	69	151466	2.00	2.05	
13 Butane	43	4.462	4.465	-0.003	85	287380	2.00	2.00	
15 Bromomethane	94	4.812	4.815	-0.003	98	181639	2.00	2.02	
16 Chloroethane	64	4.963	4.964	-0.001	94	85607	2.00	2.06	
17 Ethanol	31	5.059	5.063	-0.004	97	301353	9.99	10.8	
18 Vinyl bromide	106	5.291	5.290	0.001	99	192126	2.00	2.06	
19 2-Methylbutane	43	5.339	5.341	-0.002	93	244836	2.00	2.07	
20 Trichlorofluoromethane	101	5.576	5.576	0.000	100	525714	2.00	2.10	
21 Acrolein	56	5.586	5.586	0.000	95	49912	2.00	1.95	
22 Acetonitrile	40	5.656	5.657	-0.001	97	75306	2.00	2.38	
23 Acetone	58	5.710	5.712	-0.002	98	207471	5.99	6.57	
24 Isopropyl alcohol	45	5.785	5.793	-0.008	96	712005	5.99	6.52	
25 Pentane	72	5.807	5.805	0.002	97	30363	2.00	2.08	
26 Ethyl ether	31	5.979	5.987	-0.008	93	201882	2.00	2.19	
27 1,1-Dichloroethene	96	6.318	6.319	-0.001	97	190825	2.00	2.08	
28 2-Methyl-2-propanol	59	6.409	6.419	-0.010	96	302486	2.00	2.13	
29 Acrylonitrile	53	6.431	6.429	0.002	94	119684	2.00	2.27	
30 1,1,2-Trichloro-1,2,2-trif	101	6.500	6.499	0.001	95	411617	2.00	2.12	
31 Methylene Chloride	84	6.683	6.682	0.001	97	182390	2.00	1.97	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.699	6.698	0.001	95	179546	2.00	2.05	
33 Carbon disulfide	76	6.855	6.857	-0.002	99	599369	2.00	2.12	
34 trans-1,2-Dichloroethene	96	7.522	7.521	0.001	98	191375	2.00	2.12	
35 2-Methylpentane	43	7.533	7.532	0.001	95	417695	2.00	2.10	
36 Methyl tert-butyl ether	73	7.646	7.653	-0.007	97	425689	2.00	2.25	
37 1,1-Dichloroethane	63	7.958	7.955	0.003	100	363477	2.00	2.17	
38 Vinyl acetate	43	8.055	8.055	0.000	100	420925	2.00	2.28	
39 2-Butanone (MEK)	72	8.517	8.524	-0.007	96	66905	2.00	2.16	
40 Hexane	56	8.538	8.537	0.001	90	154493	2.00	2.10	
41 Isopropyl ether	45	8.700	8.702	-0.002	98	554804	2.00	2.18	
42 cis-1,2-Dichloroethene	96	8.963	8.961	0.002	95	191110	2.00	2.14	
43 Ethyl acetate	43	9.141	9.146	-0.005	99	307905	2.00	2.20	
44 Chloroform	83	9.313	9.310	0.003	96	397963	2.00	2.17	
45 Tert-butyl ethyl ether	59	9.388	9.392	-0.004	96	457083	2.00	2.19	
46 Tetrahydrofuran	42	9.727	9.738	-0.011	93	171477	2.00	2.21	
47 1,1,1-Trichloroethane	97	10.351	10.352	-0.001	96	408450	2.00	2.16	
48 1,2-Dichloroethane	62	10.464	10.461	0.003	97	249655	2.00	2.17	
49 n-Butanol	31	10.867	10.884	-0.017	93	68834	2.00	2.18	
50 Cyclohexane	69	10.937	10.937	0.000	69	92091	2.00	2.16	
51 Benzene	78	10.937	10.939	-0.002	97	536994	2.00	2.17	
52 Carbon tetrachloride	117	10.964	10.963	0.001	96	413385	2.00	2.17	
53 2,3-Dimethylpentane	71	11.044	11.044	0.000	92	122807	2.00	2.16	
54 Thiophene	84	11.211	11.210	0.001	97	296880	2.00	2.15	
55 Tert-amyl methyl ether	73	11.388	11.396	-0.008	98	417595	2.00	2.24	
56 Isooctane	57	11.668	11.670	-0.002	98	873863	2.00	2.18	
57 n-Heptane	71	12.034	12.033	0.001	93	184827	2.00	2.14	
58 1,2-Dichloropropane	63	12.131	12.130	0.001	91	205421	2.00	2.17	
59 Trichloroethene	130	12.163	12.163	0.000	95	212389	2.00	2.13	
60 Dibromomethane	93	12.254	12.252	0.002	93	210316	2.00	2.17	
62 Dichlorobromomethane	83	12.389	12.388	0.001	99	384377	2.00	2.22	
61 1,4-Dioxane	88	12.405	12.413	-0.008	90	61859	2.00	2.22	
63 Methyl methacrylate	41	12.469	12.470	-0.001	92	168295	2.00	2.13	
64 Methylcyclohexane	83	12.916	12.919	-0.003	95	408489	2.00	2.22	
65 4-Methyl-2-pentanone (MIBK	43	13.303	13.310	-0.007	98	330708	2.00	2.15	
66 cis-1,3-Dichloropropene	75	13.367	13.369	-0.002	95	284607	2.00	2.28	
67 trans-1,3-Dichloropropene	75	14.050	14.051	-0.001	99	230569	2.00	2.30	
68 Toluene	91	14.179	14.180	-0.001	94	566445	2.00	2.26	
69 1,1,2-Trichloroethane	83	14.255	14.253	0.002	97	175475	2.00	2.25	
70 2-Methylthiophene	97	14.330	14.332	-0.002	97	464807	2.00	2.30	
71 3-Methylthiophene	97	14.529	14.530	-0.001	99	439094	2.00	2.28	
72 2-Hexanone	58	14.620	14.624	-0.004	92	157568	2.00	2.32	
73 n-Octane	85	14.841	14.841	0.000	95	184411	2.00	2.21	
74 Chlorodibromomethane	129	14.954	14.954	0.000	98	337791	2.00	2.35	
75 Ethylene Dibromide	107	15.244	15.245	-0.001	98	285225	2.00	2.30	
76 Tetrachloroethene	129	15.309	15.312	-0.003	95	205117	2.00	2.19	
77 2,3-Dimethylheptane	43	16.174	16.176	-0.002	96	544214	2.00	2.21	
78 Chlorobenzene	112	16.180	16.180	0.000	91	393318	2.00	2.24	
79 Ethylbenzene	91	16.459	16.458	0.001	99	636564	2.00	2.30	
80 2-Ethylthiophene	97	16.561	16.563	-0.002	98	452306	2.00	2.29	
81 m-Xylene & p-Xylene	91	16.615	16.616	-0.001	99	949395	3.99	4.59	
82 n-Nonane	57	17.013	17.015	-0.002	93	371467	2.00	2.27	
83 Bromoform	173	17.078	17.077	0.001	93	262668	2.00	2.43	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.083	17.082	0.001	99	331575	2.00	2.54	
85 o-Xylene	91	17.142	17.142	0.000	98	509651	2.00	2.25	
86 1,1,2,2-Tetrachloroethane	83	17.459	17.462	-0.003	98	379555	2.00	2.31	
87 1,2,3-Trichloropropane	110	17.621	17.623	-0.002	99	86518	2.00	2.29	
88 Isopropylbenzene	105	17.718	17.719	-0.001	97	671114	2.00	2.33	
89 N-Propylbenzene	120	18.239	18.237	0.002	99	165071	2.00	2.32	
90 2-Chlorotoluene	126	18.288	18.287	0.001	98	160028	2.00	2.31	
91 4-Ethyltoluene	105	18.379	18.382	-0.003	98	581752	2.00	2.37	
92 1,3,5-Trimethylbenzene	120	18.449	18.452	-0.003	92	284025	2.00	2.32	
93 Alpha Methyl Styrene	118	18.675	18.678	-0.003	86	211230	2.00	2.39	
94 n-Decane	57	18.718	18.716	0.002	90	400184	2.00	2.39	
95 tert-Butylbenzene	119	18.863	18.865	-0.002	91	551609	2.00	2.32	
96 1,2,4-Trimethylbenzene	105	18.879	18.879	0.000	96	495080	2.00	2.38	
97 sec-Butylbenzene	105	19.126	19.127	-0.001	98	754625	2.00	2.32	
98 1,3-Dichlorobenzene	146	19.148	19.151	-0.003	99	227357	2.00	2.35	
99 Benzyl chloride	91	19.218	19.222	-0.004	97	235854	2.00	2.18	
100 1,4-Dichlorobenzene	146	19.234	19.236	-0.002	94	191069	2.00	2.31	
101 4-Isopropyltoluene	119	19.282	19.283	-0.001	96	557746	2.00	2.36	
102 1,2,3-Trimethylbenzene	105	19.342	19.340	0.002	99	368722	2.00	2.29	
103 Butylcyclohexane	83	19.385	19.387	-0.002	92	478656	2.00	2.27	
104 2,3-Dihydroindene	117	19.584	19.585	-0.001	94	402661	2.00	2.36	
105 1,2-Dichlorobenzene	146	19.589	19.588	0.001	96	236698	2.00	2.37	
106 n-Butylbenzene	91	19.707	19.706	0.001	98	477429	2.00	2.44	
107 Indene	116	19.713	19.711	0.002	93	240660	2.00	2.32	
108 Undecane	57	19.998	19.997	0.001	96	354292	2.00	2.31	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.067	20.071	-0.004	98	356341	2.00	2.34	
110 1,2-Dibromo-3-Chloropropan	157	20.175	20.176	-0.001	92	73775	2.00	2.71	
111 1,2,4,5-Tetramethylbenzene	119	20.455	20.454	0.001	97	418851	2.00	2.35	
112 1,2,3,5-Tetramethylbenzene	119	20.508	20.509	-0.001	95	268243	2.00	2.36	
113 1,2,3,4-Tetramethylbenzene	119	20.922	20.922	0.000	97	334774	2.00	2.35	
114 Dodecane	57	21.068	21.067	0.001	95	309370	2.00	2.35	
115 1,2,4-Trichlorobenzene	180	21.299	21.300	-0.001	94	62804	2.00	2.75	
116 Naphthalene	128	21.444	21.446	-0.002	99	181491	2.00	2.72	
117 Benzo(b)thiophene	134	21.546	21.545	0.001	99	63388	2.00	2.35	
118 Hexachlorobutadiene	225	21.632	21.631	0.001	96	234515	2.00	2.26	
119 1,2,3-Trichlorobenzene	180	21.697	21.697	0.000	95	70305	2.00	2.62	
120 2-Methylnaphthalene	142	22.251	22.263	-0.012	98	21556	6.24	6.29	
121 1-Methylnaphthalene	142	22.374	22.359	0.015	98	31380	6.24	6.82	
A 124 Toluene Range	1	14.179	(14.149-14.209)		0	1265569	2.00	2.24	
A 125 C8 Range	1	14.836	(14.808-14.865)		0	1761285	2.00	2.32	
S 126 Xylenes, Total	100				0		5.99	6.84	
S 127 1,2-Dichloroethene, Total	1				0		3.99	4.26	

Reagents:

40L6DNP_00008	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

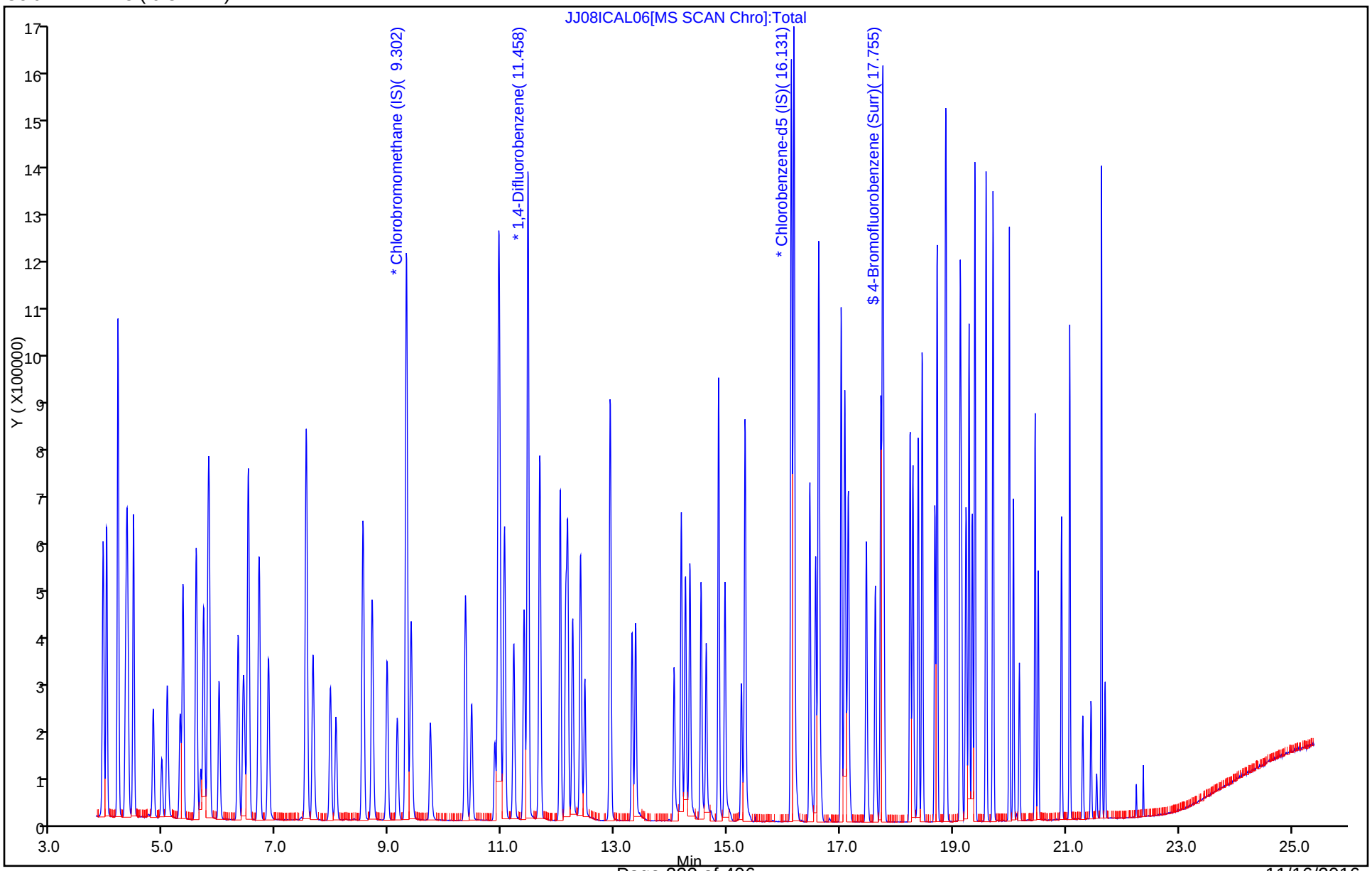
Report Date: 11-Oct-2016 11:31:10 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL06.D

Injection Date:	08-Oct-2016 23:29:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	ICIS L6			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

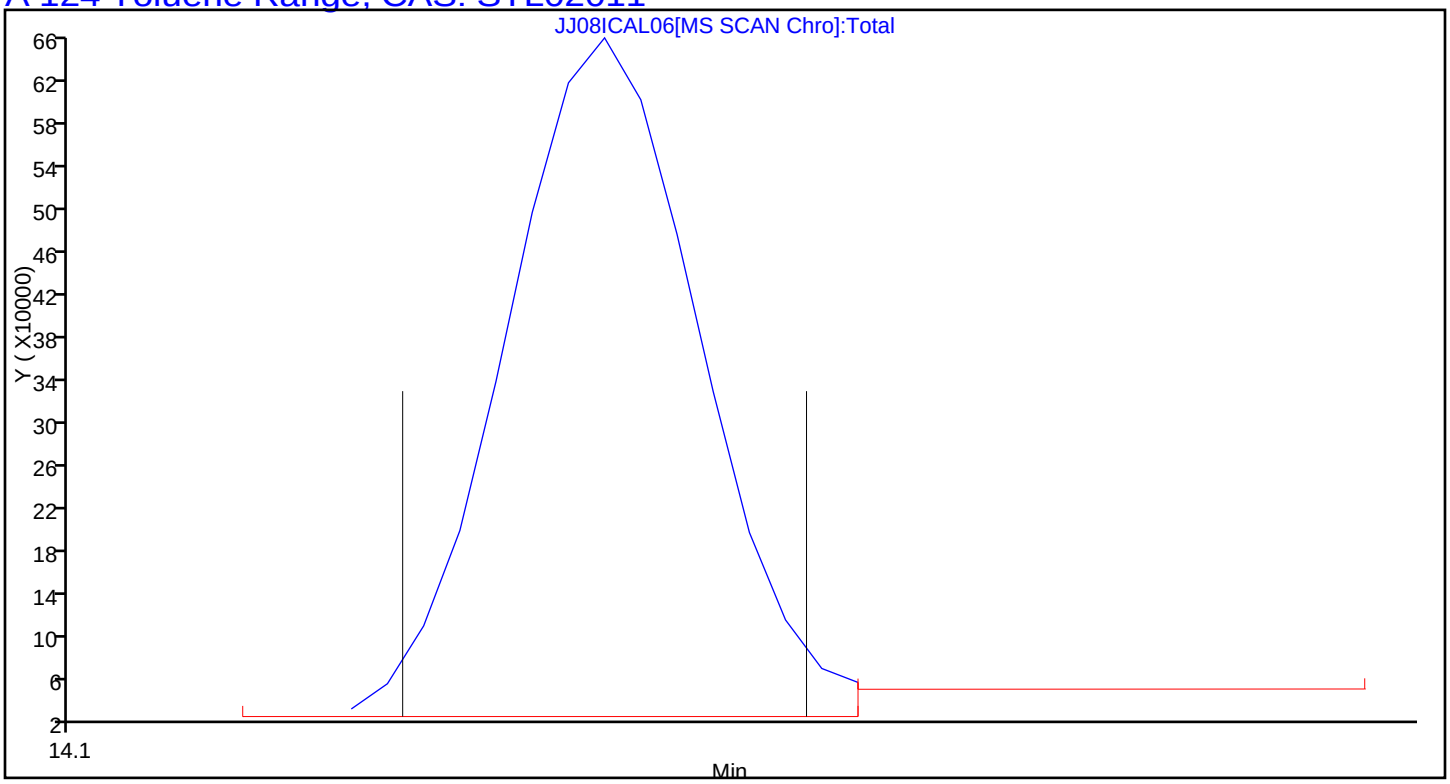


Report Date: 11-Oct-2016 11:31:10 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL06.D				
Injection Date:	08-Oct-2016 23:29:30	Instrument ID:	MJ		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

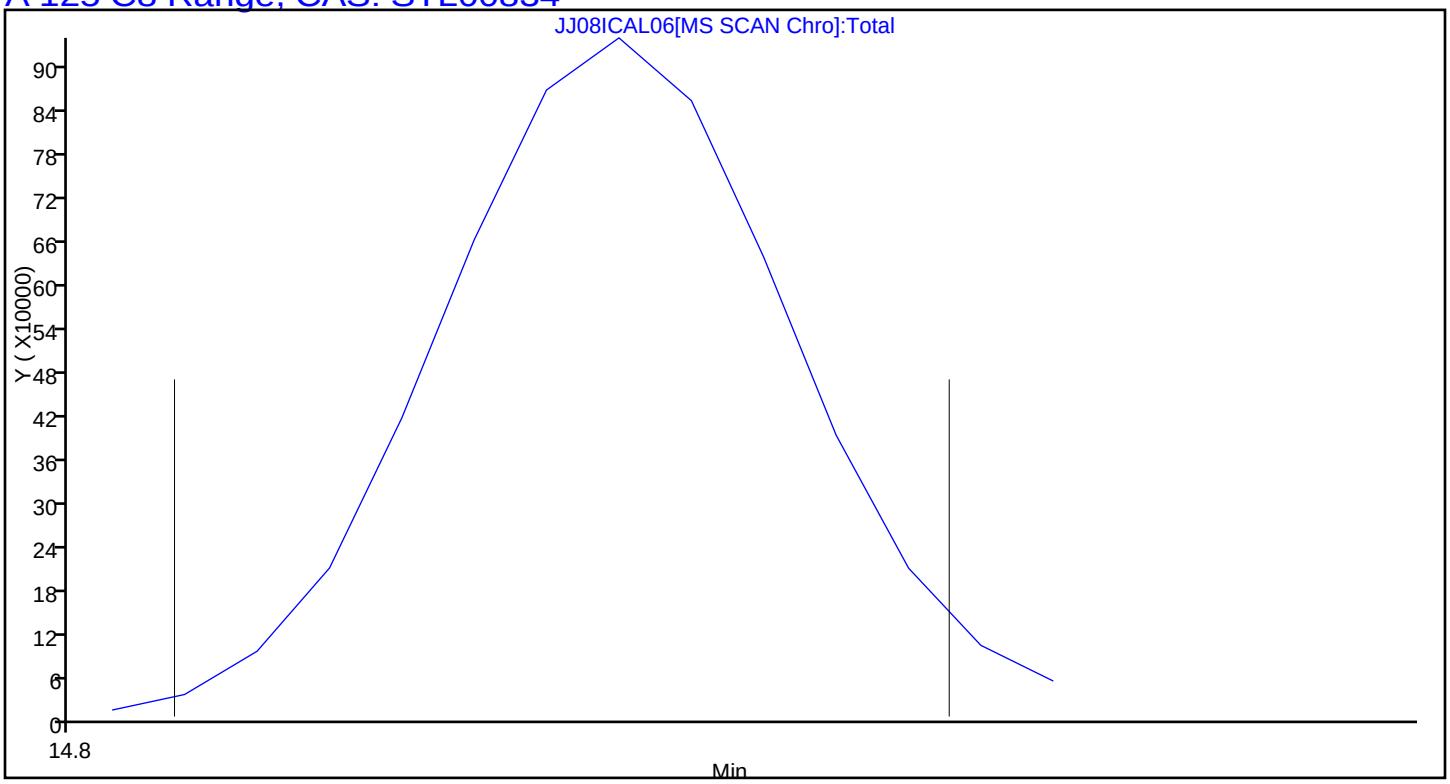


Report Date: 11-Oct-2016 11:31:10 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL06.D				
Injection Date:	08-Oct-2016 23:29:30	Instrument ID:	MJ		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL07.D
Lims ID: IC L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 09-Oct-2016 00:23:30 ALS Bottle#: 6 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003509-009
Misc. Info.: 059239
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 11:31:15 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2016 11:09:44

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.305	9.302	0.003	97	286076	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.461	11.461	0.000	95	1304213	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.134	16.131	0.003	88	1144983	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.753	17.753	0.000	89	712827	4.00	4.13	
6 Chlorodifluoromethane	67	3.917	3.918	-0.001	97	118016	4.00	4.05	
7 Propene	41	3.927	3.933	-0.006	99	384576	4.00	3.84	
8 Dichlorodifluoromethane	85	3.987	3.987	0.000	100	1131161	4.00	4.02	
9 Chloromethane	52	4.186	4.183	0.003	99	122109	4.00	3.78	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.186	4.188	-0.002	97	568337	4.00	3.83	
11 Acetaldehyde	44	4.347	4.349	-0.002	98	520734	20.0	17.5	
12 Vinyl chloride	62	4.368	4.369	-0.001	99	383339	4.00	3.94	
14 Butadiene	54	4.465	4.463	0.002	69	287374	4.00	3.98	
13 Butane	43	4.465	4.465	0.000	85	543330	4.00	3.85	
15 Bromomethane	94	4.815	4.815	0.000	99	352830	4.00	4.01	
16 Chloroethane	64	4.965	4.964	0.001	96	165501	4.00	4.07	
17 Ethanol	31	5.062	5.063	-0.001	97	507219	20.0	18.6	
18 Vinyl bromide	106	5.288	5.290	-0.002	98	373522	4.00	4.09	
19 2-Methylbutane	43	5.342	5.341	0.001	92	463108	4.00	3.99	
20 Trichlorofluoromethane	101	5.573	5.576	-0.003	100	997746	4.00	4.06	
21 Acrolein	56	5.584	5.586	-0.002	94	86518	4.00	3.44	
22 Acetonitrile	40	5.659	5.657	0.002	98	112623	4.00	3.64	
23 Acetone	58	5.707	5.712	-0.005	98	304007	12.0	9.82	
24 Isopropyl alcohol	45	5.788	5.793	-0.005	97	1238996	12.0	11.6	
25 Pentane	72	5.804	5.805	-0.001	98	57831	4.00	4.04	
26 Ethyl ether	31	5.982	5.987	-0.005	93	316288	4.00	3.51	
27 1,1-Dichloroethene	96	6.320	6.319	0.001	97	369158	4.00	4.11	
28 2-Methyl-2-propanol	59	6.406	6.419	-0.013	96	542301	4.00	3.90	
29 Acrylonitrile	53	6.428	6.429	-0.001	95	179147	4.00	3.47	
30 1,1,2-Trichloro-1,2,2-trif	101	6.498	6.499	-0.001	95	777472	4.00	4.08	
31 Methylene Chloride	84	6.681	6.682	-0.001	97	337926	4.00	3.72	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.697	6.698	-0.001	96	330186	4.00	3.85	
33 Carbon disulfide	76	6.858	6.857	0.001	99	1114641	4.00	4.02	
34 trans-1,2-Dichloroethene	96	7.520	7.521	-0.001	98	365640	4.00	4.13	
35 2-Methylpentane	43	7.530	7.532	-0.002	95	772529	4.00	3.97	
36 Methyl tert-butyl ether	73	7.643	7.653	-0.010	97	656085	4.00	3.54	
37 1,1-Dichloroethane	63	7.955	7.955	0.000	100	630813	4.00	3.84	
38 Vinyl acetate	43	8.052	8.055	-0.003	100	609691	4.00	3.38	
39 2-Butanone (MEK)	72	8.520	8.524	-0.004	97	108487	4.00	3.57	
40 Hexane	56	8.536	8.537	-0.001	91	280492	4.00	3.89	
41 Isopropyl ether	45	8.697	8.702	-0.005	97	862998	4.00	3.46	
42 cis-1,2-Dichloroethene	96	8.961	8.961	0.000	95	338207	4.00	3.88	
43 Ethyl acetate	43	9.143	9.146	-0.003	99	496876	4.00	3.63	
44 Chloroform	83	9.310	9.310	0.000	96	663152	4.00	3.69	
45 Tert-butyl ethyl ether	59	9.385	9.392	-0.007	96	722189	4.00	3.53	
46 Tetrahydrofuran	42	9.724	9.738	-0.014	93	262975	4.00	3.47	
47 1,1,1-Trichloroethane	97	10.353	10.352	0.001	96	709770	4.00	3.84	
48 1,2-Dichloroethane	62	10.461	10.461	0.000	97	422239	4.00	3.78	
49 n-Butanol	31	10.875	10.884	-0.009	92	127066	4.00	4.13	
50 Cyclohexane	69	10.940	10.937	0.003	73	164249	4.00	3.95	
51 Benzene	78	10.940	10.939	0.001	97	879174	4.00	3.64	
52 Carbon tetrachloride	117	10.961	10.963	-0.002	96	715806	4.00	3.87	
53 2,3-Dimethylpentane	71	11.047	11.044	0.003	92	211129	4.00	3.82	
54 Thiophene	84	11.208	11.210	-0.002	97	498367	4.00	3.70	
55 Tert-amyl methyl ether	73	11.391	11.396	-0.005	98	661965	4.00	3.54	
56 Isooctane	57	11.671	11.670	0.001	98	1427378	4.00	3.67	
57 n-Heptane	71	12.031	12.033	-0.002	93	310519	4.00	3.69	
58 1,2-Dichloropropane	63	12.133	12.130	0.003	91	336735	4.00	3.65	
59 Trichloroethene	130	12.166	12.163	0.003	94	353658	4.00	3.65	
60 Dibromomethane	93	12.252	12.252	0.000	94	348638	4.00	3.70	
62 Dichlorobromomethane	83	12.391	12.388	0.003	99	633628	4.00	3.77	
61 1,4-Dioxane	88	12.402	12.413	-0.011	90	113820	4.00	4.19	
63 Methyl methacrylate	41	12.467	12.470	-0.003	92	272756	4.00	3.55	
64 Methylcyclohexane	83	12.918	12.919	-0.001	96	682362	4.00	3.82	
65 4-Methyl-2-pentanone (MIBK	43	13.306	13.310	-0.004	98	590218	4.00	3.95	
66 cis-1,3-Dichloropropene	75	13.370	13.369	0.001	95	457130	4.00	3.76	
67 trans-1,3-Dichloropropene	75	14.053	14.051	0.002	98	385334	4.00	3.83	
68 Toluene	91	14.182	14.180	0.002	94	903425	4.00	3.60	
69 1,1,2-Trichloroethane	83	14.252	14.253	-0.001	97	280309	4.00	3.58	
70 2-Methylthiophene	97	14.333	14.332	0.001	97	752389	4.00	3.72	
71 3-Methylthiophene	97	14.532	14.530	0.002	99	710507	4.00	3.67	
72 2-Hexanone	58	14.623	14.624	-0.001	92	275764	4.00	4.05	
73 n-Octane	85	14.843	14.841	0.002	94	300317	4.00	3.58	
74 Chlorodibromomethane	129	14.956	14.954	0.002	98	554019	4.00	3.85	
75 Ethylene Dibromide	107	15.247	15.245	0.002	98	468707	4.00	3.76	
76 Tetrachloroethene	129	15.311	15.312	-0.001	95	325398	4.00	3.46	
77 2,3-Dimethylheptane	43	16.177	16.176	0.001	96	863711	4.00	3.49	
78 Chlorobenzene	112	16.177	16.180	-0.003	94	637698	4.00	3.62	
79 Ethylbenzene	91	16.457	16.458	-0.001	98	967485	4.00	3.49	
80 2-Ethylthiophene	97	16.564	16.563	0.001	98	712797	4.00	3.60	
81 m-Xylene & p-Xylene	91	16.618	16.616	0.002	99	1425239	8.00	6.87	
82 n-Nonane	57	17.016	17.015	0.001	92	607688	4.00	3.71	
83 Bromoform	173	17.075	17.077	-0.002	93	461674	4.00	4.26	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.080	17.082	-0.002	99	522211	4.00	3.99	
85 o-Xylene	91	17.145	17.142	0.003	98	757783	4.00	3.33	
86 1,1,2,2-Tetrachloroethane	83	17.462	17.462	0.000	99	608436	4.00	3.69	
87 1,2,3-Trichloropropane	110	17.624	17.623	0.001	99	139309	4.00	3.67	
88 Isopropylbenzene	105	17.720	17.719	0.001	97	1008946	4.00	3.49	
89 N-Propylbenzene	120	18.237	18.237	0.000	99	257802	4.00	3.61	
90 2-Chlorotoluene	126	18.285	18.287	-0.002	98	254370	4.00	3.66	
91 4-Ethyltoluene	105	18.382	18.382	0.000	98	900723	4.00	3.67	
92 1,3,5-Trimethylbenzene	120	18.452	18.452	0.000	92	432339	4.00	3.52	
93 Alpha Methyl Styrene	118	18.678	18.678	0.000	87	353509	4.00	3.99	
94 n-Decane	57	18.715	18.716	-0.001	90	627966	4.00	3.74	
95 tert-Butylbenzene	119	18.866	18.865	0.001	91	838868	4.00	3.52	
96 1,2,4-Trimethylbenzene	105	18.876	18.879	-0.003	96	766460	4.00	3.67	
97 sec-Butylbenzene	105	19.129	19.127	0.002	98	1163047	4.00	3.56	
98 1,3-Dichlorobenzene	146	19.151	19.151	0.000	99	388834	4.00	4.01	
99 Benzyl chloride	91	19.221	19.222	-0.001	98	444170	4.00	4.10	
100 1,4-Dichlorobenzene	146	19.237	19.236	0.001	95	334767	4.00	4.03	
101 4-Isopropyltoluene	119	19.285	19.283	0.002	96	880317	4.00	3.72	
102 1,2,3-Trimethylbenzene	105	19.339	19.340	-0.001	99	578208	4.00	3.59	
103 Butylcyclohexane	83	19.387	19.387	0.000	92	752044	4.00	3.55	
104 2,3-Dihydroindene	117	19.586	19.585	0.001	94	634195	4.00	3.70	
105 1,2-Dichlorobenzene	146	19.586	19.588	-0.002	95	393466	4.00	3.93	
106 n-Butylbenzene	91	19.705	19.706	-0.001	98	793620	4.00	4.04	
107 Indene	116	19.710	19.711	-0.001	90	411536	4.00	3.96	
108 Undecane	57	19.995	19.997	-0.002	96	578505	4.00	3.77	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.070	20.071	-0.001	98	602152	4.00	3.95	
110 1,2-Dibromo-3-Chloropropan	157	20.178	20.176	0.002	94	138821	4.00	5.09	
111 1,2,4,5-Tetramethylbenzene	119	20.452	20.454	-0.002	97	719532	4.00	4.03	
112 1,2,3,5-Tetramethylbenzene	119	20.511	20.509	0.002	95	444831	4.00	3.90	
113 1,2,3,4-Tetramethylbenzene	119	20.920	20.922	-0.002	97	558141	4.00	3.91	
114 Dodecane	57	21.065	21.067	-0.002	95	528290	4.00	4.01	
115 1,2,4-Trichlorobenzene	180	21.302	21.300	0.002	94	128473	4.00	5.62	
116 Naphthalene	128	21.447	21.446	0.001	99	348810	4.00	5.22	
117 Benzo(b)thiophene	134	21.544	21.545	-0.001	99	130640	4.00	4.84	
118 Hexachlorobutadiene	225	21.630	21.631	-0.001	96	373791	4.00	3.60	
119 1,2,3-Trichlorobenzene	180	21.694	21.697	-0.003	95	132264	4.00	4.91	
120 2-Methylnaphthalene	142	22.248	22.263	-0.015	98	48712	12.5	14.2	
121 1-Methylnaphthalene	142	22.372	22.359	0.013	99	64798	12.5	14.0	
A 124 Toluene Range	1	14.182	(14.152-14.212)		0	2054791	4.00	3.62	
A 125 C8 Range	1	14.834	(14.800-14.900)		0	2829479	4.00	3.72	
S 126 Xylenes, Total	100				0		12.0	10.2	
S 127 1,2-Dichloroethene, Total	1				0		8.00	8.00	

Reagents:

40L7DNP_00007	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

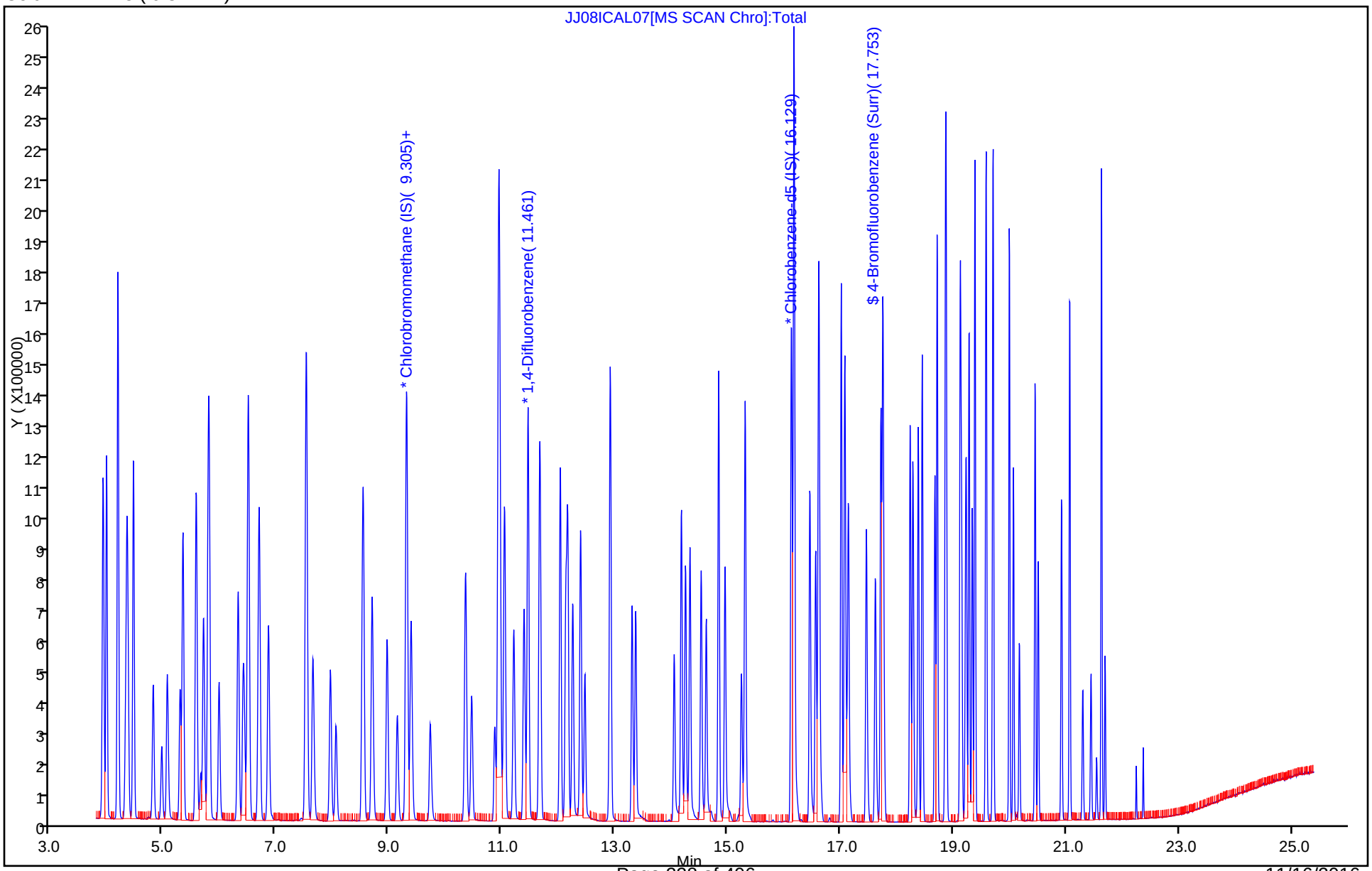
Report Date: 11-Oct-2016 11:31:17 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL07.D

Injection Date:	09-Oct-2016 00:23:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	IC L7			Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

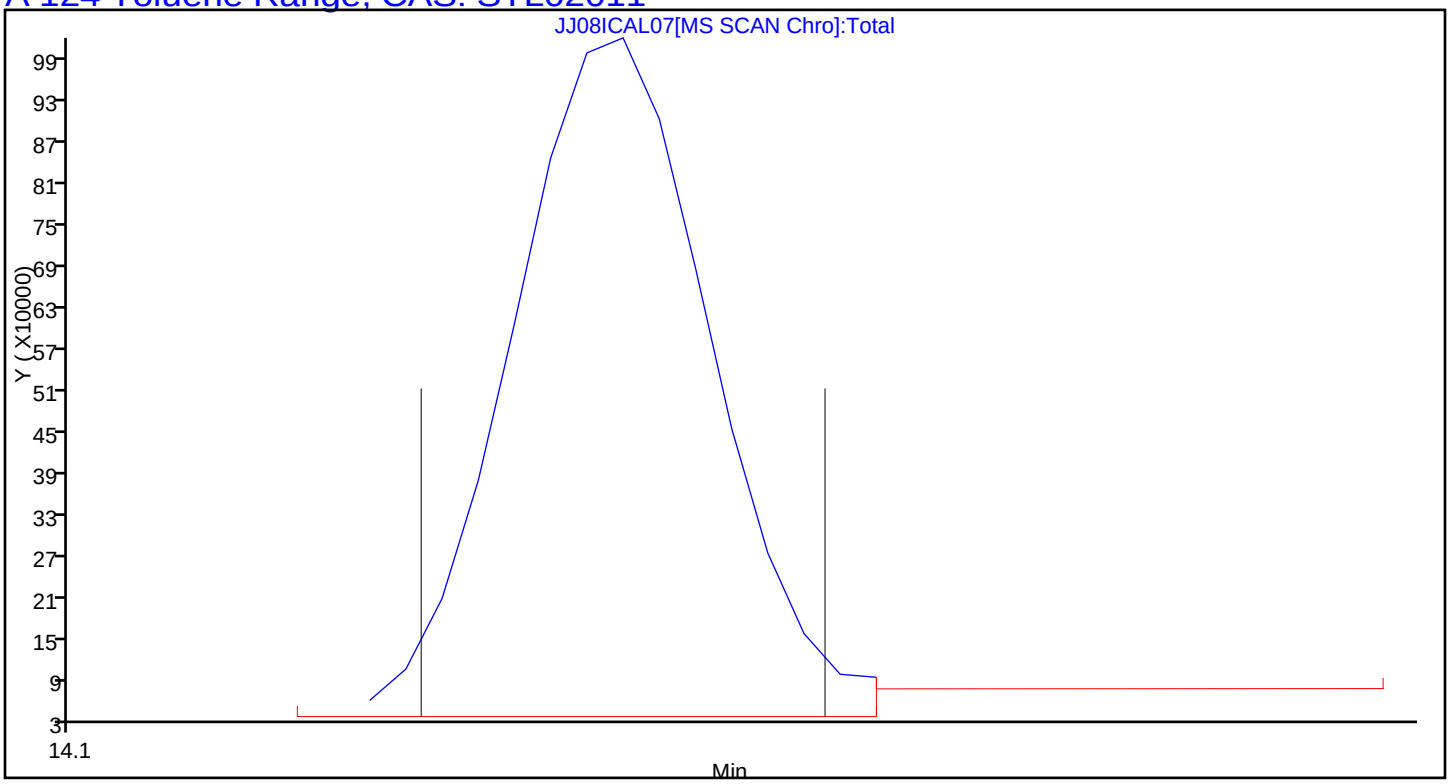


Report Date: 11-Oct-2016 11:31:17 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL07.D				
Injection Date:	09-Oct-2016 00:23:30	Instrument ID:	MJ		
Lims ID:	IC L7				
Client ID:					
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

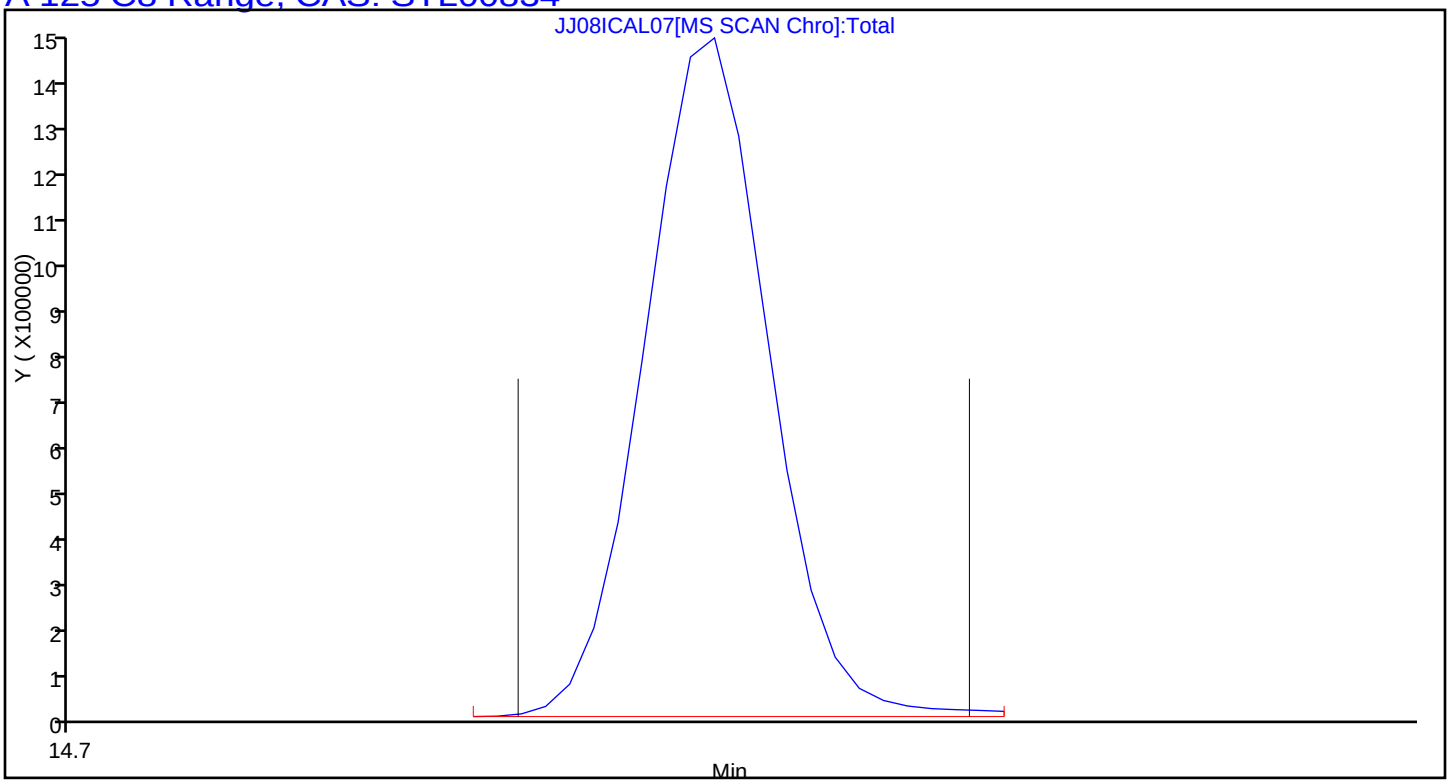


Report Date: 11-Oct-2016 11:31:17 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL07.D				
Injection Date:	09-Oct-2016 00:23:30	Instrument ID:	MJ		
Lims ID:	IC L7				
Client ID:					
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL08.D
Lims ID: IC l8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 09-Oct-2016 01:17:30 ALS Bottle#: 7 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003509-010
Misc. Info.: 059238
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 11:31:25 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2016 11:09:53

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.306	9.302	0.004	98	284819	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.467	11.461	0.006	95	1324409	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.135	16.131	0.004	88	1187427	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.753	17.753	0.000	90	746473	4.00	4.17	
6 Chlorodifluoromethane	67	3.917	3.918	-0.001	97	232629	8.00	8.02	
7 Propene	41	3.934	3.933	0.001	99	742703	8.00	7.46	
8 Dichlorodifluoromethane	85	3.987	3.987	0.000	100	2135941	8.00	7.62	
9 Chloromethane	52	4.186	4.183	0.003	99	229632	8.00	7.14	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.192	4.188	0.004	91	1015771	8.00	6.88	
11 Acetaldehyde	44	4.348	4.349	-0.001	98	1109442	40.0	37.3	
12 Vinyl chloride	62	4.369	4.369	0.000	99	724665	8.00	7.49	
14 Butadiene	54	4.466	4.463	0.003	70	545901	8.00	7.59	
13 Butane	43	4.466	4.465	0.001	85	1028652	8.00	7.33	
15 Bromomethane	94	4.815	4.815	0.000	99	679891	8.00	7.76	
16 Chloroethane	64	4.966	4.964	0.002	96	314274	8.00	7.76	
17 Ethanol	31	5.068	5.063	0.005	97	1085964	40.0	40.0	
18 Vinyl bromide	106	5.294	5.290	0.004	99	717438	8.00	7.89	
19 2-Methylbutane	43	5.342	5.341	0.001	92	857434	8.00	7.42	
20 Trichlorofluoromethane	101	5.574	5.576	-0.002	100	1874869	8.00	7.67	
21 Acrolein	56	5.590	5.586	0.004	94	217138	8.00	8.68	
22 Acetonitrile	40	5.660	5.657	0.003	99	274355	8.00	8.90	
23 Acetone	58	5.708	5.712	-0.004	97	759323	24.0	24.6	
24 Isopropyl alcohol	45	5.794	5.793	0.001	95	2482177	24.0	23.3	
25 Pentane	72	5.810	5.805	0.005	98	110628	8.00	7.77	
26 Ethyl ether	31	5.982	5.987	-0.005	94	759662	8.00	8.47	
27 1,1-Dichloroethene	96	6.321	6.319	0.002	98	705786	8.00	7.89	
28 2-Methyl-2-propanol	59	6.418	6.419	-0.001	96	1117829	8.00	8.08	
29 Acrylonitrile	53	6.434	6.429	0.005	93	449131	8.00	8.74	
30 1,1,2-Trichloro-1,2,2-trif	101	6.499	6.499	0.000	95	1443316	8.00	7.62	
31 Methylene Chloride	84	6.687	6.682	0.005	96	629410	8.00	6.96	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.703	6.698	0.005	96	638806	8.00	7.49	
33 Carbon disulfide	76	6.859	6.857	0.002	99	2084710	8.00	7.54	
34 trans-1,2-Dichloroethene	96	7.526	7.521	0.005	98	686121	8.00	7.78	
35 2-Methylpentane	43	7.536	7.532	0.004	94	1419823	8.00	7.33	
36 Methyl tert-butyl ether	73	7.644	7.653	-0.009	97	1608749	8.00	8.72	
37 1,1-Dichloroethane	63	7.961	7.955	0.006	100	1282760	8.00	7.84	
38 Vinyl acetate	43	8.058	8.055	0.003	100	1643291	8.00	9.14	
39 2-Butanone (MEK)	72	8.520	8.524	-0.004	98	272011	8.00	9.00	
40 Hexane	56	8.542	8.537	0.005	90	549243	8.00	7.64	
41 Isopropyl ether	45	8.698	8.702	-0.004	97	2044544	8.00	8.22	
42 cis-1,2-Dichloroethene	96	8.967	8.961	0.006	95	698544	8.00	8.04	
43 Ethyl acetate	43	9.144	9.146	-0.002	99	1211378	8.00	8.89	
44 Chloroform	83	9.316	9.310	0.006	97	1426851	8.00	7.97	
45 Tert-butyl ethyl ether	59	9.392	9.392	0.000	96	1728031	8.00	8.47	
46 Tetrahydrofuran	42	9.725	9.738	-0.013	93	676405	8.00	8.95	
47 1,1,1-Trichloroethane	97	10.354	10.352	0.002	97	1470609	8.00	7.99	
48 1,2-Dichloroethane	62	10.467	10.461	0.006	97	914302	8.00	8.06	
49 n-Butanol	31	10.876	10.884	-0.008	91	272506	8.00	8.72	
50 Cyclohexane	69	10.940	10.937	0.003	94	308561	8.00	7.31	
51 Benzene	78	10.946	10.939	0.007	97	1869237	8.00	7.63	
52 Carbon tetrachloride	117	10.967	10.963	0.004	98	1440199	8.00	7.66	
53 2,3-Dimethylpentane	71	11.048	11.044	0.004	91	443680	8.00	7.90	
54 Thiophene	84	11.215	11.210	0.004	96	1101723	8.00	8.06	
55 Tert-amyl methyl ether	73	11.392	11.396	-0.004	98	1626808	8.00	8.39	
56 Isooctane	57	11.672	11.670	0.002	97	2963724	8.00	7.49	
57 n-Heptane	71	12.037	12.033	0.004	92	677602	8.00	7.93	
58 1,2-Dichloropropane	63	12.134	12.130	0.004	90	751794	8.00	8.02	
59 Trichloroethene	130	12.166	12.163	0.003	95	773499	8.00	7.86	
60 Dibromomethane	93	12.258	12.252	0.006	95	780137	8.00	8.16	
62 Dichlorobromomethane	83	12.392	12.388	0.004	99	1430339	8.00	8.38	
61 1,4-Dioxane	88	12.408	12.413	-0.005	90	234207	8.00	8.49	
63 Methyl methacrylate	41	12.473	12.470	0.003	91	690931	8.00	8.86	
64 Methylcyclohexane	83	12.919	12.919	0.000	95	1404210	8.00	7.74	
65 4-Methyl-2-pentanone (MIBK	43	13.312	13.310	0.002	98	1298660	8.00	8.55	
66 cis-1,3-Dichloropropene	75	13.371	13.369	0.002	95	1078107	8.00	8.74	
67 trans-1,3-Dichloropropene	75	14.054	14.051	0.003	99	970039	8.00	9.30	
68 Toluene	91	14.183	14.180	0.003	94	2108567	8.00	8.10	
69 1,1,2-Trichloroethane	83	14.258	14.253	0.005	97	665355	8.00	8.20	
70 2-Methylthiophene	97	14.333	14.332	0.001	97	1718039	8.00	8.19	
71 3-Methylthiophene	97	14.532	14.530	0.002	99	1657917	8.00	8.26	
72 2-Hexanone	58	14.624	14.624	0.000	93	624917	8.00	8.86	
73 n-Octane	85	14.844	14.841	0.003	93	684728	8.00	7.88	
74 Chlorodibromomethane	129	14.957	14.954	0.003	97	1314407	8.00	8.80	
75 Ethylene Dibromide	107	15.248	15.245	0.003	98	1141646	8.00	8.83	
76 Tetrachloroethene	129	15.312	15.312	0.000	95	737763	8.00	7.57	
77 2,3-Dimethylheptane	43	16.178	16.176	0.002	93	1776582	8.00	6.93	
78 Chlorobenzene	112	16.183	16.180	0.003	85	1484475	8.00	8.12	
79 Ethylbenzene	91	16.457	16.458	-0.001	98	2455584	8.00	8.54	
80 2-Ethylthiophene	97	16.565	16.563	0.002	97	1800351	8.00	8.77	
81 m-Xylene & p-Xylene	91	16.619	16.616	0.003	98	3477596	16.0	16.2	
82 n-Nonane	57	17.017	17.015	0.002	90	1354981	8.00	7.98	
83 Bromoform	173	17.076	17.077	-0.001	93	1179650	8.00	10.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.081	17.082	-0.001	100	1388066	8.00	10.2	
85 o-Xylene	91	17.146	17.142	0.004	100	1922232	8.00	8.15	
86 1,1,2,2-Tetrachloroethane	83	17.463	17.462	0.001	99	1531082	8.00	8.96	
87 1,2,3-Trichloropropane	110	17.624	17.623	0.001	98	368725	8.00	9.38	
88 Isopropylbenzene	105	17.721	17.719	0.002	97	2528390	8.00	8.44	
89 N-Propylbenzene	120	18.237	18.237	0.000	99	697239	8.00	9.43	
90 2-Chlorotoluene	126	18.291	18.287	0.004	97	651542	8.00	9.03	
91 4-Ethyltoluene	105	18.382	18.382	0.000	97	2330147	8.00	9.14	
92 1,3,5-Trimethylbenzene	120	18.452	18.452	0.000	92	1110666	8.00	8.71	
93 Alpha Methyl Styrene	118	18.678	18.678	0.000	87	998190	8.00	10.9	
94 n-Decane	57	18.716	18.716	0.000	92	1463837	8.00	8.40	
95 tert-Butylbenzene	119	18.866	18.865	0.001	90	2056871	8.00	8.33	
96 1,2,4-Trimethylbenzene	105	18.883	18.879	0.004	96	1892775	8.00	8.75	
97 sec-Butylbenzene	105	19.130	19.127	0.003	97	2829320	8.00	8.36	
98 1,3-Dichlorobenzene	146	19.151	19.151	0.000	98	1069569	8.00	10.6	
99 Benzyl chloride	91	19.221	19.222	-0.001	98	1286505	8.00	11.4	
100 1,4-Dichlorobenzene	146	19.237	19.236	0.001	94	970323	8.00	11.3	
101 4-Isopropyltoluene	119	19.286	19.283	0.003	95	2129135	8.00	8.67	
102 1,2,3-Trimethylbenzene	105	19.340	19.340	0.000	98	1461513	8.00	8.75	
103 Butylcyclohexane	83	19.388	19.387	0.001	93	1711828	8.00	7.79	
104 2,3-Dihydroindene	117	19.587	19.585	0.002	94	1614772	8.00	9.09	
105 1,2-Dichlorobenzene	146	19.587	19.588	-0.001	95	1039844	8.00	10.0	
106 n-Butylbenzene	91	19.705	19.706	-0.001	99	1924163	8.00	9.45	
107 Indene	116	19.711	19.711	0.000	90	1104068	8.00	10.2	
108 Undecane	57	19.996	19.997	-0.001	95	1425412	8.00	8.95	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.071	20.071	0.000	98	1459951	8.00	9.23	
110 1,2-Dibromo-3-Chloropropan	157	20.179	20.176	0.003	97	392578	8.00	13.9	
111 1,2,4,5-Tetramethylbenzene	119	20.453	20.454	-0.001	97	1709923	8.00	9.23	
112 1,2,3,5-Tetramethylbenzene	119	20.512	20.509	0.003	96	1057205	8.00	8.93	
113 1,2,3,4-Tetramethylbenzene	119	20.921	20.922	-0.001	97	1348346	8.00	9.12	
114 Dodecane	57	21.066	21.067	-0.001	95	1149872	8.00	8.41	
115 1,2,4-Trichlorobenzene	180	21.297	21.300	-0.003	94	408232	8.00	17.2	
116 Naphthalene	128	21.448	21.446	0.002	99	1018535	8.00	14.7	
117 Benzo(b)thiophene	134	21.544	21.545	-0.001	99	405817	8.00	14.5	
118 Hexachlorobutadiene	225	21.630	21.631	-0.001	96	953838	8.00	8.85	
119 1,2,3-Trichlorobenzene	180	21.695	21.697	-0.002	94	371167	8.00	13.3	
120 2-Methylnaphthalene	142	22.249	22.263	-0.014	99	114956	25.0	32.2	
121 1-Methylnaphthalene	142	22.372	22.359	0.013	99	142356	25.0	29.8	
A 124 Toluene Range	1	14.183	(14.153-14.213)		0	5193956	8.00	8.83	
A 125 C8 Range	1	14.850	(14.800-14.944)		0	6304355	8.00	8.00	
S 126 Xylenes, Total	100				0		24.0	24.3	
S 127 1,2-Dichloroethene, Total	1				0		16.0	15.8	

Reagents:

40L8DNP_00007	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

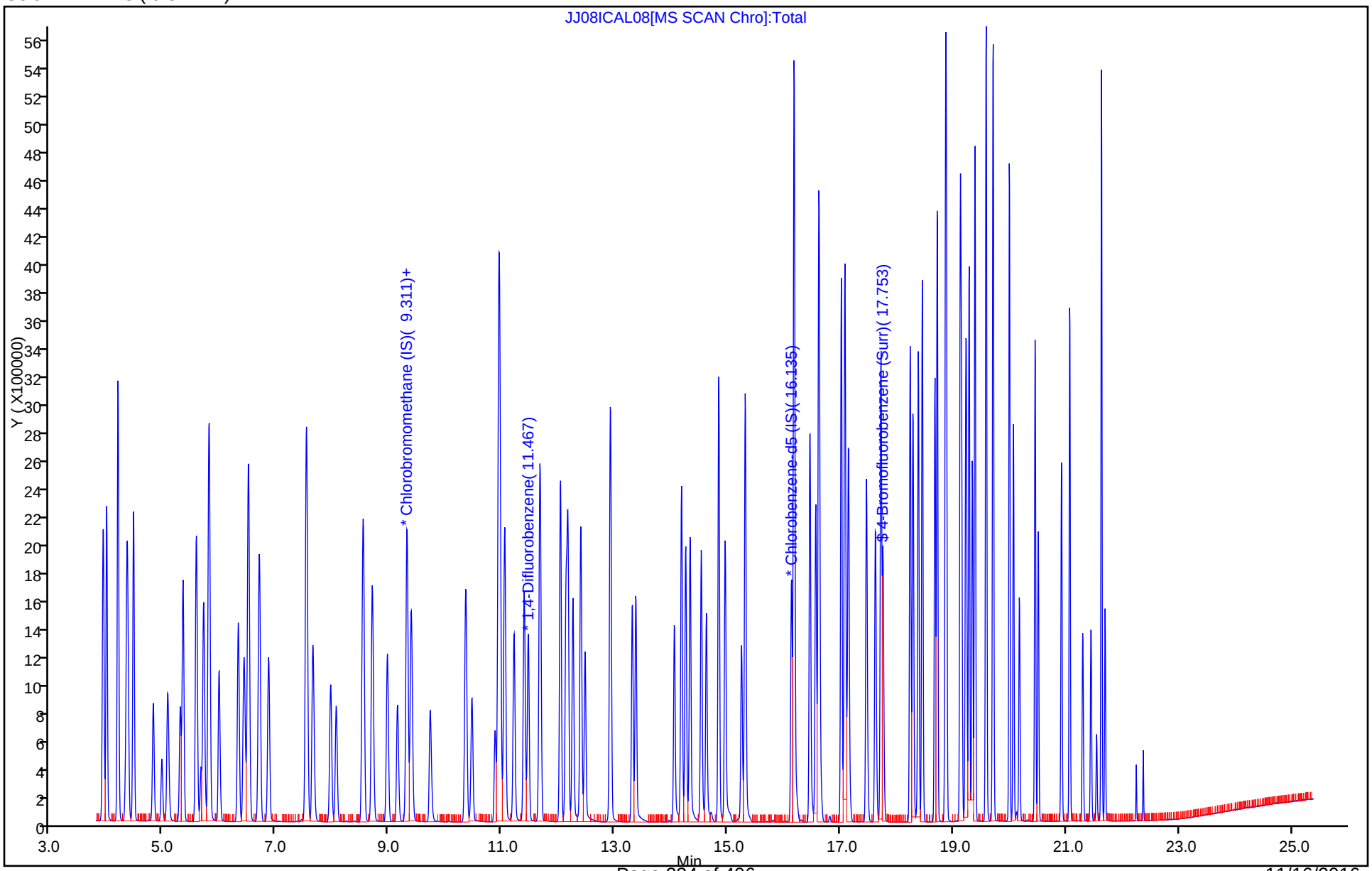
Report Date: 11-Oct-2016 11:31:27 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL08.D

Injection Date:	09-Oct-2016 01:17:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	IC l8			Worklist Smp#:	10
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

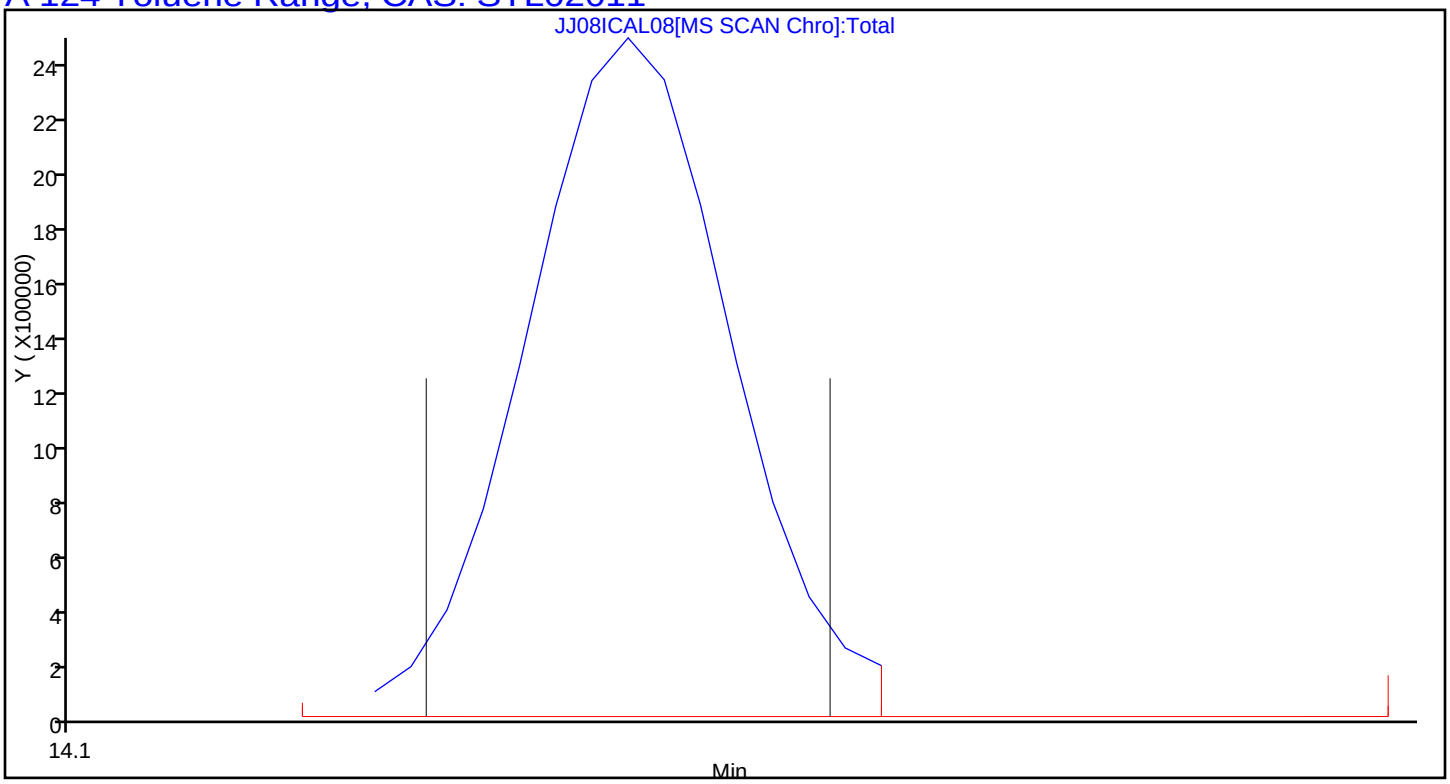


Report Date: 11-Oct-2016 11:31:27 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL08.D				
Injection Date:	09-Oct-2016 01:17:30	Instrument ID:	MJ		
Lims ID:	IC I8				
Client ID:					
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

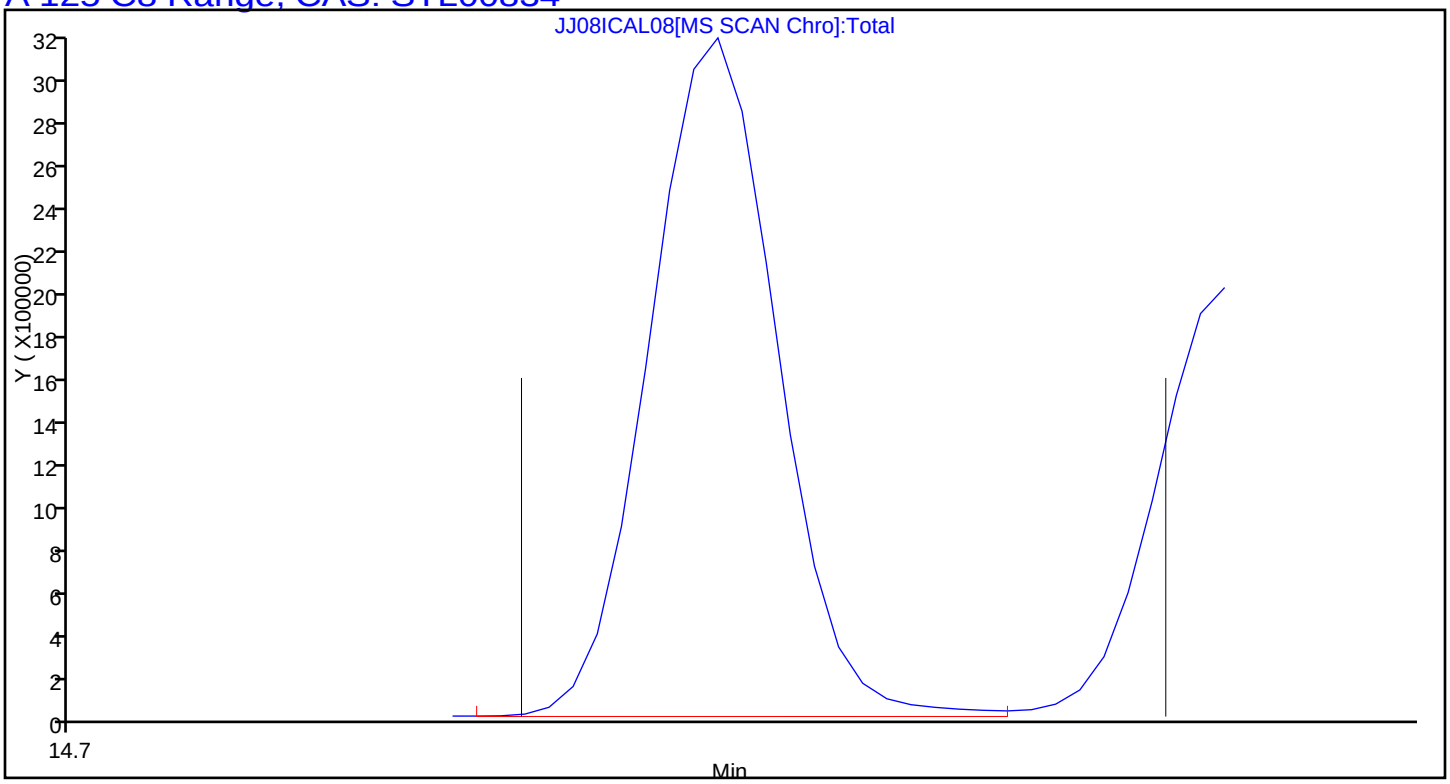


Report Date: 11-Oct-2016 11:31:27 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08ICAL08.D				
Injection Date:	09-Oct-2016 01:17:30	Instrument ID:	MJ		
Lims ID:	IC I8				
Client ID:					
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 09-Oct-2016 02:10:30 ALS Bottle#: 8 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003509-011
Misc. Info.: 059233
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 11:31:36 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2016 11:10:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.308	9.302	0.006	96	266883	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.470	11.461	0.009	95	1307339	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.132	16.131	0.001	88	1216984	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.756	17.753	0.003	90	759449	4.00	4.14	
6 Chlorodifluoromethane	67	3.920	3.918	0.002	97	435440	16.0	16.0	
7 Propene	41	3.936	3.933	0.003	99	1278552	16.0	13.7	
8 Dichlorodifluoromethane	85	3.990	3.987	0.003	99	3672524	16.0	14.0	
9 Chloromethane	52	4.183	4.183	0.000	98	390327	16.0	13.0	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.189	4.188	0.001	93	2125671	16.0	15.4	
11 Acetaldehyde	44	4.350	4.349	0.001	98	2056351	80.0	73.9	
12 Vinyl chloride	62	4.372	4.369	0.003	99	1305672	16.0	14.4	
14 Butadiene	54	4.463	4.463	0.000	71	989900	16.0	14.7	
13 Butane	43	4.463	4.465	-0.002	84	1833996	16.0	13.9	
15 Bromomethane	94	4.818	4.815	0.003	99	1281974	16.0	15.6	
16 Chloroethane	64	4.968	4.964	0.004	97	596998	16.0	15.7	
17 Ethanol	31	5.076	5.063	0.013	97	1625717	80.0	63.9	
18 Vinyl bromide	106	5.296	5.290	0.006	99	1395283	16.0	16.4	
19 2-Methylbutane	43	5.345	5.341	0.004	91	1590512	16.0	14.7	
20 Trichlorofluoromethane	101	5.581	5.576	0.005	100	3495723	16.0	15.3	
21 Acrolein	56	5.592	5.586	0.006	95	382502	16.0	16.3	
22 Acetonitrile	40	5.667	5.657	0.010	99	461794	16.0	16.0	
23 Acetone	58	5.711	5.712	-0.002	97	1144445	48.0	39.6	
24 Isopropyl alcohol	45	5.807	5.793	0.014	93	3961946	48.0	39.7	
25 Pentane	72	5.813	5.805	0.008	98	207814	16.0	15.6	
26 Ethyl ether	31	5.985	5.987	-0.002	94	1304099	16.0	15.5	
27 1,1-Dichloroethene	96	6.324	6.319	0.005	99	1363879	16.0	16.3	
28 2-Methyl-2-propanol	59	6.426	6.419	0.007	96	2020125	16.0	15.6	
29 Acrylonitrile	53	6.436	6.429	0.007	94	739993	16.0	15.4	
30 1,1,2-Trichloro-1,2,2-trif	101	6.501	6.499	0.002	96	2657038	16.0	15.0	
31 Methylene Chloride	84	6.689	6.682	0.007	98	1155194	16.0	13.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.705	6.698	0.007	98	1134376	16.0	14.2	
33 Carbon disulfide	76	6.861	6.857	0.004	99	3969758	16.0	15.3	
34 trans-1,2-Dichloroethene	96	7.528	7.521	0.007	99	1222745	16.0	14.8	
35 2-Methylpentane	43	7.539	7.532	0.007	93	2499321	16.0	13.8	
36 Methyl tert-butyl ether	73	7.646	7.653	-0.007	97	2582783	16.0	14.9	
37 1,1-Dichloroethane	63	7.964	7.955	0.009	100	2275244	16.0	14.8	
38 Vinyl acetate	43	8.060	8.055	0.005	100	2633160	16.0	15.6	
39 2-Butanone (MEK)	72	8.523	8.524	-0.001	97	396756	16.0	14.0	
40 Hexane	56	8.544	8.537	0.007	90	963328	16.0	14.3	
41 Isopropyl ether	45	8.700	8.702	-0.002	96	3156431	16.0	13.6	
42 cis-1,2-Dichloroethene	96	8.969	8.961	0.008	94	1240681	16.0	15.2	
43 Ethyl acetate	43	9.147	9.146	0.001	99	1885712	16.0	14.8	
44 Chloroform	83	9.319	9.310	0.009	97	2510211	16.0	15.0	
45 Tert-butyl ethyl ether	59	9.394	9.392	0.002	96	2695405	16.0	14.1	
46 Tetrahydrofuran	42	9.727	9.738	-0.011	92	1110580	16.0	15.7	
47 1,1,1-Trichloroethane	97	10.357	10.352	0.005	97	2557765	16.0	14.8	
48 1,2-Dichloroethane	62	10.469	10.461	0.008	97	1621122	16.0	14.5	
49 n-Butanol	31	10.883	10.884	-0.001	92	509145	16.0	16.5	
50 Cyclohexane	69	10.943	10.937	0.006	88	516001	16.0	12.4	
51 Benzene	78	10.943	10.939	0.004	97	3056544	16.0	12.6	
52 Carbon tetrachloride	117	10.964	10.963	0.001	98	2444049	16.0	13.2	
53 2,3-Dimethylpentane	71	11.050	11.044	0.006	91	782517	16.0	14.1	
54 Thiophene	84	11.217	11.210	0.007	97	1921978	16.0	14.3	
55 Tert-amyl methyl ether	73	11.394	11.396	-0.002	98	2536568	16.0	12.8	
56 Isooctane	57	11.674	11.670	0.004	96	5010864	16.0	12.8	
57 n-Heptane	71	12.040	12.033	0.007	91	1209602	16.0	14.3	
58 1,2-Dichloropropane	63	12.136	12.130	0.006	90	1297014	16.0	14.0	
59 Trichloroethene	130	12.169	12.163	0.006	96	1362381	16.0	14.0	
60 Dibromomethane	93	12.260	12.252	0.008	96	1372684	16.0	14.5	
62 Dichlorobromomethane	83	12.395	12.388	0.007	99	2542594	16.0	15.1	
61 1,4-Dioxane	88	12.411	12.413	-0.002	88	399104	16.0	14.7	
63 Methyl methacrylate	41	12.475	12.470	0.005	91	1102637	16.0	14.3	
64 Methylcyclohexane	83	12.922	12.919	0.003	96	2393729	16.0	13.4	
65 4-Methyl-2-pentanone (MIBK	43	13.314	13.310	0.004	97	2160191	16.0	14.4	
66 cis-1,3-Dichloropropene	75	13.373	13.369	0.004	95	1936451	16.0	15.9	
67 trans-1,3-Dichloropropene	75	14.056	14.051	0.005	99	1785545	16.0	16.7	
68 Toluene	91	14.185	14.180	0.005	94	3708453	16.0	13.9	
69 1,1,2-Trichloroethane	83	14.260	14.253	0.007	97	1190782	16.0	14.3	
70 2-Methylthiophene	97	14.336	14.332	0.004	97	3024608	16.0	14.1	
71 3-Methylthiophene	97	14.535	14.530	0.005	98	2968551	16.0	14.4	
72 2-Hexanone	58	14.626	14.624	0.002	94	1094375	16.0	15.1	
73 n-Octane	85	14.847	14.841	0.006	91	1203931	16.0	13.5	
74 Chlorodibromomethane	129	14.960	14.954	0.006	96	2356036	16.0	15.4	
75 Ethylene Dibromide	107	15.250	15.245	0.005	98	2076091	16.0	15.7	
76 Tetrachloroethene	129	15.314	15.312	0.002	95	1298341	16.0	13.0	
77 2,3-Dimethylheptane	43	16.180	16.176	0.004	91	2791997	16.0	10.6	
78 Chlorobenzene	112	16.186	16.180	0.006	94	2558548	16.0	13.7	
79 Ethylbenzene	91	16.460	16.458	0.002	98	4122632	16.0	14.0	
80 2-Ethylthiophene	97	16.567	16.563	0.004	97	3126145	16.0	14.9	
81 m-Xylene & p-Xylene	91	16.621	16.616	0.005	97	5598414	32.0	25.4	
82 n-Nonane	57	17.019	17.015	0.004	88	2301308	16.0	13.2	
83 Bromoform	173	17.078	17.077	0.001	95	2195036	16.0	19.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.084	17.082	0.002	99	2341796	16.0	16.8	
85 o-Xylene	91	17.148	17.142	0.006	100	3180197	16.0	13.2	
86 1,1,2,2-Tetrachloroethane	83	17.465	17.462	0.003	99	2592834	16.0	14.8	
87 1,2,3-Trichloropropane	110	17.627	17.623	0.004	98	646183	16.0	16.0	
88 Isopropylbenzene	105	17.723	17.719	0.004	98	4117496	16.0	13.4	
89 N-Propylbenzene	120	18.240	18.237	0.003	98	1195062	16.0	15.8	
90 2-Chlorotoluene	126	18.288	18.287	0.001	96	1160412	16.0	15.7	
91 4-Ethyltoluene	105	18.385	18.382	0.003	96	3866352	16.0	14.8	
92 1,3,5-Trimethylbenzene	120	18.455	18.452	0.003	93	1880990	16.0	14.4	
93 Alpha Methyl Styrene	118	18.681	18.678	0.003	86	1763503	16.0	18.7	
94 n-Decane	57	18.718	18.716	0.002	94	2385192	16.0	13.3	
95 tert-Butylbenzene	119	18.869	18.865	0.004	91	3350611	16.0	13.2	
96 1,2,4-Trimethylbenzene	105	18.885	18.879	0.006	95	3075224	16.0	13.9	
97 sec-Butylbenzene	105	19.127	19.127	0.000	96	4490227	16.0	12.9	
98 1,3-Dichlorobenzene	146	19.154	19.151	0.003	98	1950364	16.0	18.9	
99 Benzyl chloride	91	19.224	19.222	0.002	98	2389971	16.0	20.7	
100 1,4-Dichlorobenzene	146	19.240	19.236	0.004	92	1819109	16.0	20.6	
101 4-Isopropyltoluene	119	19.288	19.283	0.005	95	3504694	16.0	13.9	
102 1,2,3-Trimethylbenzene	105	19.342	19.340	0.002	98	2457067	16.0	14.3	
103 Butylcyclohexane	83	19.390	19.387	0.003	93	2867784	16.0	12.7	
104 2,3-Dihydroindene	117	19.584	19.585	-0.001	94	2671703	16.0	14.7	
105 1,2-Dichlorobenzene	146	19.589	19.588	0.001	93	1828104	16.0	17.2	
106 n-Butylbenzene	91	19.708	19.706	0.002	99	3209166	16.0	15.4	
107 Indene	116	19.713	19.711	0.002	89	1914125	16.0	17.3	
108 Undecane	57	19.998	19.997	0.001	93	2355117	16.0	14.4	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.073	20.071	0.002	97	2574855	16.0	15.9	
110 1,2-Dibromo-3-Chloropropan	157	20.176	20.176	0.000	96	796269	16.0	27.5	
111 1,2,4,5-Tetramethylbenzene	119	20.455	20.454	0.001	98	3014619	16.0	15.9	
112 1,2,3,5-Tetramethylbenzene	119	20.509	20.509	0.000	96	1900079	16.0	15.7	
113 1,2,3,4-Tetramethylbenzene	119	20.923	20.922	0.001	98	2447419	16.0	16.1	
114 Dodecane	57	21.068	21.067	0.001	94	2101742	16.0	15.0	
115 1,2,4-Trichlorobenzene	180	21.299	21.300	-0.001	94	937716	16.0	38.6	
116 Naphthalene	128	21.445	21.446	-0.001	98	2037663	16.0	28.7	
117 Benzo(b)thiophene	134	21.547	21.545	0.002	99	902790	16.0	31.5	
118 Hexachlorobutadiene	225	21.633	21.631	0.002	95	1735997	16.0	15.7	
119 1,2,3-Trichlorobenzene	180	21.697	21.697	0.000	95	786968	16.0	27.5	
120 2-Methylnaphthalene	142	22.251	22.263	-0.012	99	307877	50.0	84.3	
121 1-Methylnaphthalene	142	22.375	22.359	0.016	99	369497	50.0	75.3	
A 124 Toluene Range	1	14.185	(14.155-14.215)		0	8816266	16.0	14.6	
A 125 C8 Range	1	14.855	(14.808-14.952)		0	10853398	16.0	13.4	
S 126 Xylenes, Total	100				0		48.0	38.5	
S 127 1,2-Dichloroethene, Total	1				0		32.0	30.0	

Reagents:

40L9DNP_00009	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

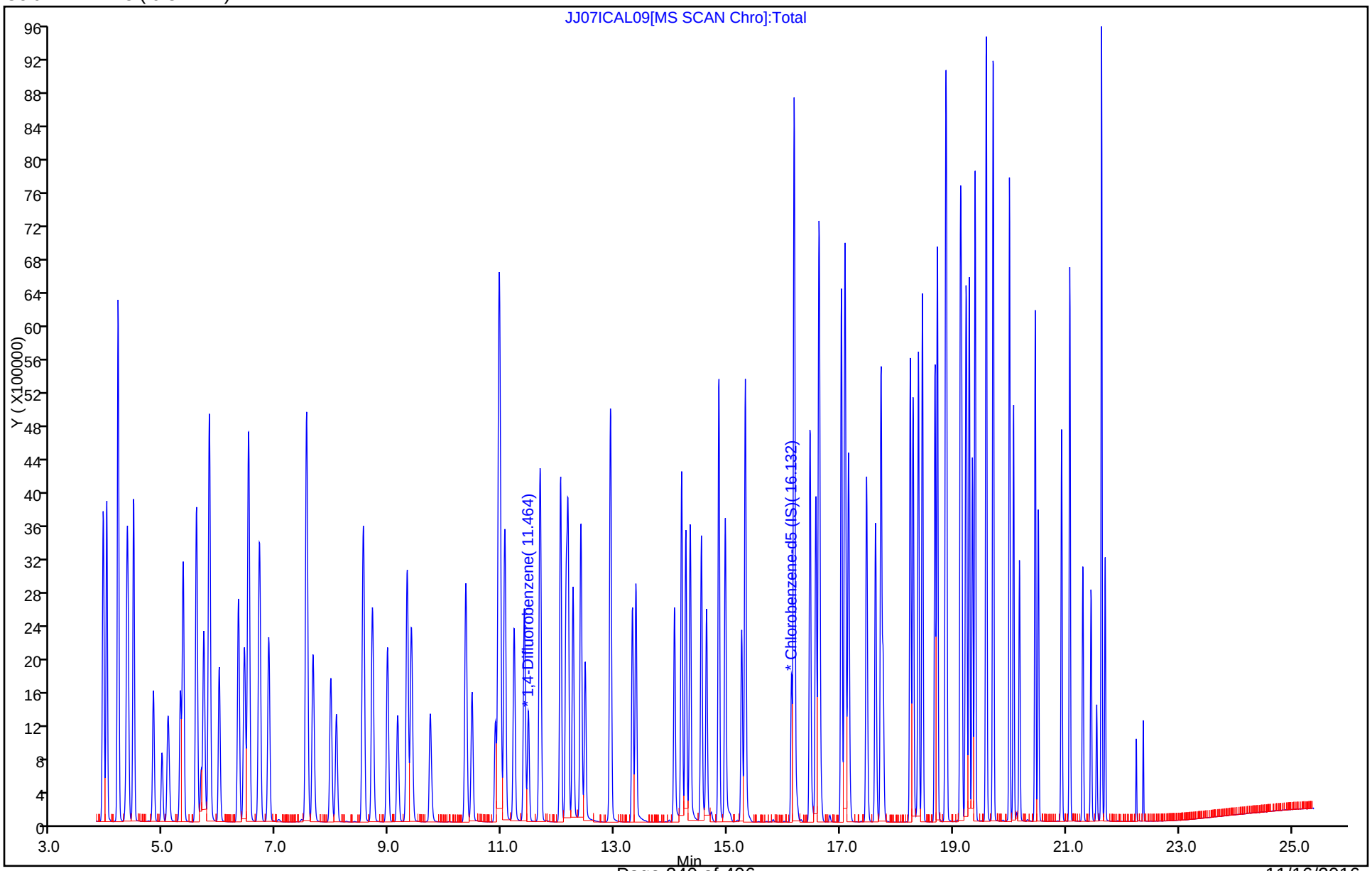
Report Date: 11-Oct-2016 11:31:37 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Injection Date:	09-Oct-2016 02:10:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	IC L9			Worklist Smp#:	11
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

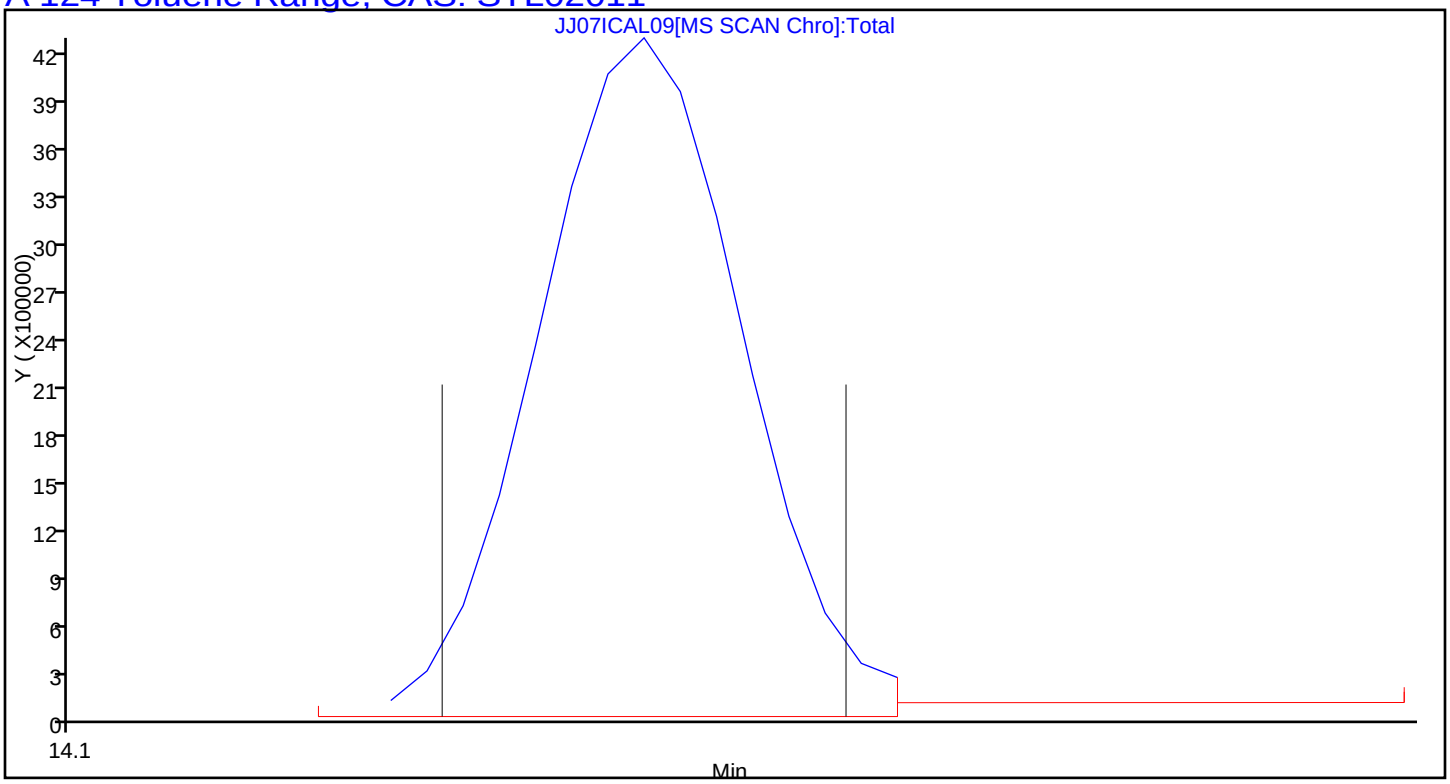


Report Date: 11-Oct-2016 11:31:37 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Injection Date:	09-Oct-2016 02:10:30	Instrument ID:	MJ		
Lims ID:	IC L9				
Client ID:					
Operator ID:	403648	ALS Bottle#:	8	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

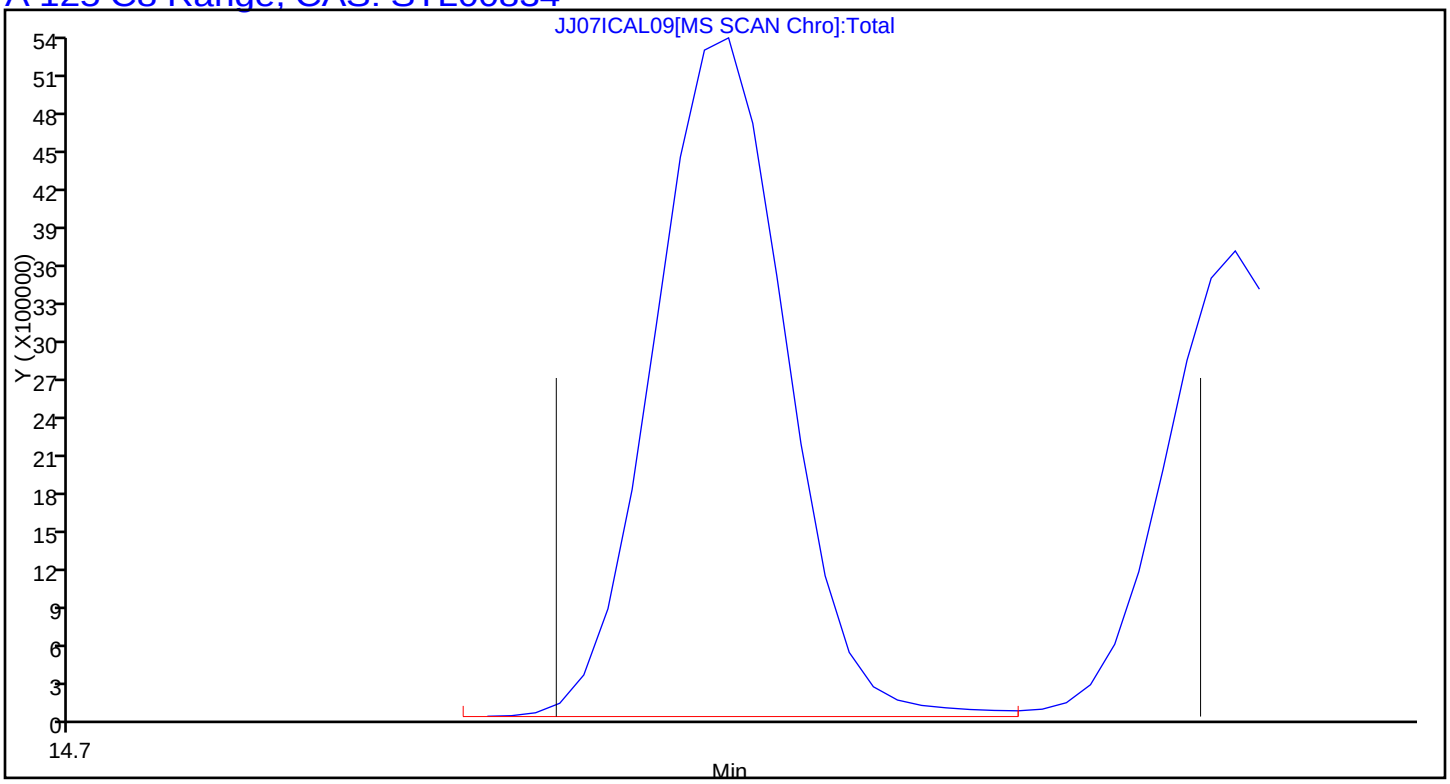


Report Date: 11-Oct-2016 11:31:37 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Injection Date:	09-Oct-2016 02:10:30	Instrument ID:	MJ		
Lims ID:	IC L9				
Client ID:					
Operator ID:	403648	ALS Bottle#:	8	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/09/2016 18:12 Calibration End Date: 10/10/2016 00:36 Calibration ID: 775

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-6852/3	RJ09IC01.D
Level 2	IC 140-6852/4	RJ09IC02.D
Level 3	IC 140-6852/5	RJ09IC03.D
Level 4	IC 140-6852/6	RJ09IC04.D
Level 5	IC 140-6852/7	RJ09IC05.D
Level 6	ICIS 140-6852/8	RJ09CIS06.D
Level 7	IC 140-6852/9	RJ09IC07.D
Level 8	IC 140-6852/10	RJ09IC08.D
Level 9	IC 140-6852/11	RJ09IC09.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.4099	0.4755 0.4001	0.4537 0.3864	0.4596 0.3532	0.4240	Ave		0.4203				9.8		30.0			
Propene	+++++ 1.4840	+++++ 1.4519	1.7300 1.3952	1.6713 1.2536	1.5816	Ave		1.5096				10.9		30.0			
Dichlorodifluoromethane	+++++ 3.8044	3.9909 3.6583	4.0231 3.5538	4.5730 3.1010	4.1120	Ave		3.8521				11.3		30.0			
Chloromethane	+++++ 0.4480	0.4393 0.4266	0.4753 0.4071	0.5061 0.3653	0.4546	Ave		0.4403				9.7		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.8679 2.6362	2.7363 2.5747	2.7580 2.4831	2.8863 2.2718	2.7246	Ave		2.6599				7.3		30.0			
Acetaldehyde	+++++ 0.4865	+++++ 0.4586	+++++ 0.4225	0.5667 0.3705	0.5180	Ave		0.4705				14.8		30.0			
Vinyl chloride	1.4327 1.3015	1.3876 1.2790	1.4012 1.2100	1.4372 1.0744	1.3398	Ave		1.3182				9.0		30.0			
1,3-Butadiene	1.1134 1.0258	1.1360 1.0128	1.0790 0.9537	1.1375 0.8690	1.0519	Ave		1.0421				8.5		30.0			
Butane	+++++ 1.9439	2.1108 1.8886	2.2166 1.7696	2.1536 1.5930	1.9930	Ave		1.9586				10.6		30.0			
Bromomethane	+++++ 1.1314	1.4426 1.1082	1.3126 1.0593	1.2323 0.9848	1.1454	Ave		1.1771				12.5		30.0			
Chloroethane	0.6588 0.5572	0.6563 0.5465	0.6177 0.5178	0.6156 0.4791	0.5554	Ave		0.5783				10.8		30.0			
Ethanol	+++++ 0.4215	+++++ 0.4125	0.4801 0.3755	0.4774 0.3276	0.4372	Ave		0.4188				13.0		30.0			
Vinyl bromide	+++++ 1.0759	1.2428 1.0740	1.2009 1.0272	1.1748 0.9528	1.0949	Ave		1.1054				8.7		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/09/2016 18:12 Calibration End Date: 10/10/2016 00:36 Calibration ID: 775

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	+++++ 1.3115	+++++ 1.2960	1.3803 1.2102	1.4595 1.0784	1.3451	Ave		1.2973				9.5		30.0			
Acrolein	+++++ 0.3792	+++++ 0.4504	0.6635 0.4293	0.4807 0.4095	0.4202	Ave		0.4618				20.5		30.0			
Trichlorofluoromethane	3.4319 3.3231	3.4080 3.3515	3.4732 3.2916	3.6472 3.0880	3.4022	Ave		3.3796				4.5		30.0			
Acetonitrile	+++++ 0.5983	+++++ 0.6084	0.5523 0.5846	0.5840 0.5497	0.5375	Ave		0.5736				4.7		30.0			
Acetone	+++++ 0.6566	+++++ 0.6394	+++++ 0.6102	0.7671 0.5633	0.6876	Ave		0.6540				10.7		30.0			
Isopropyl alcohol	2.3319 2.2348	2.3039 2.1992	2.3298 2.0590	2.4760 1.8421	2.2916	Ave		2.2298				8.3		30.0			
Pentane	+++++ 0.2715	+++++ 0.2708	0.2914 0.2587	0.3043 0.2340	0.2791	Ave		0.2728				8.3		30.0			
Ethyl ether	2.0075 1.7781	2.0018 1.7300	1.8371 1.6522	1.9063 1.5189	1.7765	Ave		1.8009				8.9		30.0			
1,1-Dichloroethene	+++++ 1.3633	1.5590 1.3520	1.4723 1.3399	1.5085 1.2843	1.4157	Ave		1.4119				6.7		30.0			
Acrylonitrile	+++++ 1.1435	1.3339 1.1503	1.2855 1.1314	1.2296 1.0615	1.1734	Ave		1.1886				7.5		30.0			
tert-Butyl alcohol	3.0733 2.9456	2.9996 2.9040	3.0828 2.8088	3.2274 2.6042	3.0592	Ave		2.9672				6.1		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	3.1009 2.9204	3.1976 2.8913	3.1023 2.8309	3.2168 2.6729	3.0074	Ave		2.9934				6.0		30.0			
Methylene Chloride	+++++ 1.2724	+++++ 1.2499	1.8439 1.2014	1.5265 1.1272	1.3462	Ave		1.3668				17.9		30.0			
3-Chloropropene	+++++ 1.3850	1.5477 1.3644	1.5163 1.3318	1.5326 1.1870	1.4374	Ave		1.4128				8.7		30.0			
Carbon disulfide	4.4981 4.2116	4.4406 4.0342	4.3320 3.9853	4.4182 3.7471	4.1802	Ave		4.2053				5.9		30.0			
trans-1,2-Dichloroethene	+++++ 1.4013	1.5646 1.3950	1.4727 1.3911	1.5316 1.3295	1.4289	Ave		1.4394				5.5		30.0			
2-Methylpentane	3.7638 3.3064	3.4700 3.3090	3.4744 3.2014	3.6217 2.9513	3.4322	Ave		3.3923				7.0		30.0			
Methyl tert-butyl ether	4.2220 3.9598	4.0584 3.9390	4.0540 3.8863	4.2481 3.6277	4.0534	Ave		4.0054				4.6		30.0			
1,1-Dichloroethane	2.9941 2.6820	2.8610 2.6766	2.7826 2.5886	2.8862 2.4318	2.7508	Ave		2.7393				6.2		30.0			
Vinyl acetate	4.4886 4.3630	4.3320 4.4348	4.3117 4.3853	4.5949 4.1240	4.4598	Ave		4.3882				3.0		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/09/2016 18:12 Calibration End Date: 10/10/2016 00:36 Calibration ID: 775

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.7179	+++++ 0.7150	0.8714 0.7009	0.7806 0.6696	0.7316	Ave		0.7410				9.0		30.0			
Hexane	1.3937 1.2208	1.5180 1.2286	1.3884 1.2072	1.3310 1.1314	1.2481	Ave		1.2964				9.3		30.0			
C6 Range	+++++ 2.3145	+++++ 2.2375	+++++ 2.1526	2.4668 2.0438	2.3437	Ave		2.2598				6.6		30.0			
Isopropyl ether	5.7609 5.5330	5.7155 5.5137	5.9436 5.3293	6.0818 4.9087	5.5964	Ave		5.5981				6.2		30.0			
cis-1,2-Dichloroethene	+++++ 1.4196	1.6000 1.4284	1.4590 1.4132	1.5197 1.3696	1.4414	Ave		1.4564				5.0		30.0			
Ethyl acetate	3.7604 3.5734	3.7801 3.5993	3.5825 3.5488	3.7968 3.2947	3.6214	Ave		3.6175				4.3		30.0			
Chloroform	+++++ 2.8442	3.0854 2.8428	2.9714 2.8027	3.0437 2.6467	2.9122	Ave		2.8936				4.9		30.0			
Tert-butyl ethyl ether	4.7378 4.4308	4.6076 4.4752	4.5856 4.4256	4.7129 4.0569	4.5053	Ave		4.5042				4.5		30.0			
Tetrahydrofuran	+++++ 1.7983	1.8520 1.8313	1.7905 1.8125	1.9825 1.6702	1.8216	Ave		1.8199				4.7		30.0			
1,1,1-Trichloroethane	3.0851 2.8113	2.9967 2.8227	2.7658 2.8477	2.9309 2.7273	2.7381	Ave		2.8584				4.3		30.0			
1,2-Dichloroethane	0.4872 0.4406	0.4714 0.4421	0.4384 0.4329	0.4519 0.4092	0.4411	Ave		0.4461				5.0		30.0			
1-Butanol	+++++ 0.1540	+++++ 0.1497	+++++ 0.1481	0.1393 0.1346	0.1425	Ave		0.1447				5.0		30.0			
Benzene	+++++ 0.8835	1.0411 0.8852	0.9155 0.8731	0.9193 0.8001	0.8929	Ave		0.9013				7.5		30.0			
Cyclohexane	+++++ 0.1459	+++++ 0.1452	0.1518 0.1405	0.1535 0.1259	0.1472	Ave		0.1443				6.4		30.0			
Carbon tetrachloride	0.6058 0.6198	0.6472 0.6310	0.5808 0.6440	0.6231 0.6192	0.6127	Ave		0.6204				3.2		30.0			
2,3-Dimethylpentane	0.2308 0.2083	0.2400 0.2110	0.2162 0.2087	0.2182 0.1969	0.2105	Ave		0.2156				6.0		30.0			
Thiophene	0.5245 0.4931	0.5446 0.4999	0.4892 0.4930	0.5100 0.4756	0.4982	Ave		0.5031				4.1		30.0			
Tert-amyl methyl ether	+++++ 0.8649	0.6884 0.8760	0.8505 0.8670	0.8656 0.8217	0.9015	Ave		0.8419				7.8		30.0			
2,2,4-Trimethylpentane	1.6933 1.5749	1.6737 1.5906	1.6183 1.5509	1.6515 1.4223	1.6061	Ave		1.5979				5.0		30.0			
1,2-Dichloropropane	0.3977 0.3606	0.3982 0.3623	0.3737 0.3476	0.3772 0.3189	0.3653	Ave		0.3668				6.7		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/09/2016 18:12 Calibration End Date: 10/10/2016 00:36 Calibration ID: 775

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Heptane	0.3396 0.3303	0.3368 0.3343	0.3444 0.3261	0.3440 0.3016	0.3367	Ave		0.3327				3.9		30.0			
Trichloroethene	0.3792 0.3566	0.3613 0.3652	0.3563 0.3716	0.3645 0.3668	0.3614	Ave		0.3648				2.0		30.0			
Dibromomethane	0.3667 0.3500	0.3486 0.3536	0.3436 0.3496	0.3649 0.3323	0.3528	Ave		0.3513				3.0		30.0			
Bromodichloromethane	0.6320 0.6220	0.6085 0.6437	0.5823 0.6401	0.6201 0.6088	0.6175	Ave		0.6194				3.0		30.0			
1,4-Dioxane	0.1440 0.1430	0.1290 0.1466	0.1395 0.1425	0.1460 0.1316	0.1476	Ave		0.1411				4.7		30.0			
Methyl methacrylate	0.5109 0.4750	0.4693 0.4856	0.5284 0.4778	0.4639 0.4486	0.4710	Ave		0.4812				5.1		30.0			
Methylcyclohexane	0.6701 0.6489	0.6416 0.6604	0.6559 0.6492	0.6739 0.6109	0.6589	Ave		0.6522				2.8		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.8310	+++++ 0.8443	0.8751 0.8290	0.8418 0.7706	0.8409	Ave		0.8332				3.8		30.0			
cis-1,3-Dichloropropene	0.4994 0.5291	0.4965 0.5488	0.4862 0.5451	0.5188 0.5178	0.5249	Ave		0.5185				4.1		30.0			
trans-1,3-Dichloropropene	0.5086 0.5183	0.4653 0.5319	0.4608 0.5398	0.5043 0.5105	0.5144	Ave		0.5060				5.3		30.0			
Toluene	+++++ 1.1189	1.1347 1.1176	1.0815 1.1151	1.1486 1.0456	1.1203	Ave		1.1103				2.9		30.0			
1,1,2-Trichloroethane	0.3563 0.3331	0.3335 0.3332	0.3353 0.3280	0.3450 0.3081	0.3376	Ave		0.3344				3.9		30.0			
2-Methylthiophene	0.9078 0.8932	0.9094 0.8928	0.8627 0.8952	0.9220 0.8421	0.9007	Ave		0.8918				2.8		30.0			
3-Methylthiophene	0.9013 0.8908	0.8816 0.8932	0.8643 0.8865	0.9069 0.8362	0.8872	Ave		0.8831				2.4		30.0			
2-Hexanone	+++++ 0.4323	+++++ 0.4365	0.3869 0.4373	0.4132 0.4047	0.4239	Ave		0.4193				4.5		30.0			
Dibromochloromethane	0.5390 0.6416	0.5305 0.6735	0.5322 0.6863	0.5915 0.6528	0.6133	Ave		0.6067				10.2		30.0			
Octane	0.4052 0.3805	0.3895 0.3779	0.3697 0.3696	0.3871 0.3353	0.3835	Ave		0.3776				5.1		30.0			
1,2-Dibromoethane (EDB)	0.5906 0.5981	0.5672 0.6114	0.5492 0.6200	0.5906 0.5980	0.5956	Ave		0.5912				3.6		30.0			
Tetrachloroethene	0.3815 0.3657	0.3695 0.3726	0.3531 0.3753	0.3713 0.3615	0.3681	Ave		0.3687				2.2		30.0			
Chlorobenzene	0.9128 0.8473	0.8604 0.8571	0.8469 0.8575	0.8747 0.8180	0.8537	Ave		0.8587				3.0		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/09/2016 18:12 Calibration End Date: 10/10/2016 00:36 Calibration ID: 775

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2,3-Dimethylheptane	1.2216 1.1650	1.2178 1.1371	1.2105 1.0906	1.2000 0.9567	1.1891	Ave		1.1543				7.4		30.0			
Ethylbenzene	1.5565 1.4813	1.5067 1.4957	1.4589 1.4781	1.5033 1.3603	1.4825	Ave		1.4804				3.6		30.0			
2-Ethylthiophene	1.0893 1.0953	1.0702 1.1028	1.0441 1.0888	1.1021 1.0161	1.0994	Ave		1.0787				2.8		30.0			
m-Xylene & p-Xylene	1.2014 1.1578	1.1618 1.1573	1.1283 1.1238	1.1713 0.9961	1.1679	Ave		1.1407				5.2		30.0			
Bromoform	+++++ 0.6078	0.4389 0.6873	0.4279 0.7609	0.5083 0.7870	0.5526	Ave		0.5963				23.3		30.0			
Styrene	0.7874 0.8730	0.7550 0.8979	0.7509 0.9035	0.8317 0.8574	0.8601	Ave		0.8352				7.0		30.0			
Nonane	0.8801 0.8416	0.8559 0.8169	0.8481 0.7658	0.8657 0.6751	0.8616	Ave		0.8234				7.9		30.0			
o-Xylene	1.2463 1.2064	1.1890 1.1923	1.1689 1.1743	1.1990 1.0831	1.1997	Ave		1.1843				3.7		30.0			
1,1,2,2-Tetrachloroethane	0.8884 0.8970	0.8648 0.8868	0.8222 0.8719	0.9038 0.8111	0.9096	Ave		0.8728				4.0		30.0			
1,2,3-Trichloropropane	0.2417 0.2602	0.2516 0.2599	0.2361 0.2569	0.2609 0.2493	0.2623	Ave		0.2532				3.7		30.0			
Isopropylbenzene	1.7927 1.6216	1.6978 1.6156	1.6367 1.6013	1.6593 1.4768	1.6402	Ave		1.6380				5.1		30.0			
Propylbenzene	0.4357 0.4532	0.4215 0.4555	0.4253 0.4680	0.4421 0.4505	0.4505	Ave		0.4447				3.4		30.0			
2-Chlorotoluene	0.3964 0.3932	0.3828 0.3914	0.3697 0.3976	0.3880 0.3898	0.3899	Ave		0.3888				2.2		30.0			
4-Ethyltoluene	1.6894 1.6934	1.6068 1.6763	1.5570 1.6753	1.6482 1.5437	1.6793	Ave		1.6411				3.5		30.0			
1,3,5-Trimethylbenzene	0.7460 0.7559	0.6880 0.7622	0.6810 0.7803	0.7410 0.7487	0.7621	Ave		0.7406				4.6		30.0			
Alpha Methyl Styrene	+++++ 0.6991	+++++ 0.7221	0.5666 0.7484	0.6271 0.7373	0.6744	Ave		0.6821				9.6		30.0			
Decane	1.1218 1.1212	1.0729 1.0789	1.0653 1.0271	1.1029 0.8976	1.1494	Ave		1.0708				7.0		30.0			
tert-Butylbenzene	1.4751 1.4608	1.3745 1.4694	1.3613 1.4864	1.4341 1.3416	1.4799	Ave		1.4315				4.0		30.0			
1,2,4-Trimethylbenzene	1.4331 1.4373	1.3642 1.4284	1.3446 1.4246	1.4229 1.2744	1.4558	Ave		1.3984				4.2		30.0			
1,3-Dichlorobenzene	0.8795 0.9103	0.8468 0.9413	0.8293 0.9856	0.8762 0.9142	0.9045	Ave		0.8986				5.3		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/09/2016 18:12 Calibration End Date: 10/10/2016 00:36 Calibration ID: 775

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	2.1006 2.0994	1.9823 2.0736	1.9702 2.0463	2.0889 1.7433	2.1496	Ave		2.0282				6.0		30.0			
Benzyl chloride	+++++ 1.2828	+++++ 1.3244	0.9287 1.3485	1.1227 1.2339	1.2521	Ave		1.2133				12.0		30.0			
1,4-Dichlorobenzene	0.8570 0.9176	0.8410 0.9345	0.8214 0.9918	0.8815 0.9414	0.9194	Ave		0.9006				6.1		30.0			
4-Isopropyltoluene	1.6706 1.7318	1.6063 1.7166	1.5709 1.7479	1.6621 1.5652	1.7526	Ave		1.6693				4.4		30.0			
1,2,3-Trimethylbenzene	1.1152 1.1119	1.0385 1.0978	1.0473 1.0941	1.0912 1.0441	1.1212	Ave		1.0846				3.0		30.0			
Butylcyclohexane	1.1627 1.1644	1.1021 1.1256	1.1104 1.0984	1.1573 0.9743	1.1911	Ave		1.1207				5.7		30.0			
1,2-Dichlorobenzene	0.8230 0.8915	0.8169 0.9036	0.8009 0.9536	0.8518 0.8752	0.8937	Ave		0.8678				5.7		30.0			
Indane	1.3039 1.3404	1.2309 1.3352	1.2216 1.3542	1.3103 1.1958	1.3645	Ave		1.2952				4.9		30.0			
Indene	+++++ 1.0291	+++++ 1.0482	0.8841 1.0932	0.9569 1.0552	1.0258	Ave		1.0132				6.9		30.0			
Butylbenzene	1.7232 1.8254	1.6969 1.7772	1.6839 1.7358	1.7925 1.5134	1.8599	Ave		1.7343				5.8		30.0			
Undecane	1.2818 1.3315	1.2341 1.2483	1.2395 1.1576	1.3148 0.8963	1.4094	Ave		1.2348				11.8		30.0			
1,2-Dimethyl-4-Ethylbenzene	1.2726 1.3318	1.2332 1.3219	1.2300 1.3345	1.2930 1.1627	1.3598	Ave		1.2822				5.0		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.4050	0.2811 0.4272	0.2913 0.4579	0.3445 0.4705	0.3881	Ave		0.3832				18.7		30.0			
1,2,4,5-Tetramethylbenzene	1.4980 1.5636	1.3983 1.5577	1.4004 1.5782	1.5192 1.4056	1.6324	Ave		1.5059				5.8		30.0			
1,2,3,5-Tetramethylbenzene	0.9523 0.9511	0.8834 0.9532	0.8681 0.9770	0.9284 0.9168	0.9822	Ave		0.9347				4.2		30.0			
1,2,3,4-Tetramethylbenzene	1.2466 1.3049	1.2253 1.3088	1.1930 1.3350	1.2532 1.2303	1.3484	Ave		1.2717				4.3		30.0			
Dodecane	1.2223 1.3870	1.2432 1.3257	1.3335 1.2650	1.3848 1.0261	1.4721	Ave		1.2955				9.9		30.0			
1,2,4-Trichlorobenzene	0.6625 0.8256	0.6762 0.8701	0.6977 0.9829	0.7337 0.9725	0.8261	Ave		0.8052				15.1		30.0			
Naphthalene	1.6307 1.9868	1.7574 1.9949	1.7991 2.0661	1.8267 1.8124	2.0520	Ave		1.8807				8.0		30.0			
Benzo(b)thiophene	+++++ 1.1070	0.9664 1.1291	0.9979 1.2058	0.9634 1.1465	1.1244	Ave		1.0801				8.5		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/09/2016 18:12 Calibration End Date: 10/10/2016 00:36 Calibration ID: 775

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Hexachlorobutadiene	0.5699 0.6944	0.5613 0.7687	0.5641 0.8965	0.6068 0.8593	0.6851	Ave		0.6896				18.6		30.0			
1,2,3-Trichlorobenzene	+++++ 0.7785	0.6952 0.8186	0.7129 0.9292	0.7135 0.9178	0.8055	Ave		0.7964				11.4		30.0			
2-Methylnaphthalene	+++++ 0.2228	+++++ 0.2214	0.2107 0.2371	0.1971 0.1908	0.2438	Ave		0.2177				9.0		50.0			
1-Methylnaphthalene	+++++ 0.2263	0.2014 0.2134	0.2374 0.2227	0.2193 0.1746	0.2560	Ave		0.2189				11.0		50.0			
4-Bromofluorobenzene (Surr)	0.7494 0.7615	0.7485 0.7447	0.7537 0.7346	0.7588 0.7119	0.7606	Ave		0.7471				2.1		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/09/2016 18:12 Calibration End Date: 10/10/2016 00:36 Calibration ID: 775

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-6852/3	RJ09IC01.D
Level 2	IC 140-6852/4	RJ09IC02.D
Level 3	IC 140-6852/5	RJ09IC03.D
Level 4	IC 140-6852/6	RJ09IC04.D
Level 5	IC 140-6852/7	RJ09IC05.D
Level 6	ICIS 140-6852/8	RJ09CIS06.D
Level 7	IC 140-6852/9	RJ09IC07.D
Level 8	IC 140-6852/10	RJ09IC08.D
Level 9	IC 140-6852/11	RJ09IC09.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 63474	2982 125180	5339 245451	16782 478782	32357	+++++ 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Propene	CBM	Ave	+++++ 229803	+++++ 454306	20358 886267	61020 1699448	120700	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	+++++ 589130	25028 1144707	47343 2257412	166965 4203929	313813	+++++ 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Chloromethane	CBM	Ave	+++++ 69376	2755 133500	5593 258615	18477 495173	34697	+++++ 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	9046 408220	17160 805625	32456 1577267	105384 3079883	207935	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 376672	+++++ 717496	+++++ 1341961	103463 2511140	197671	+++++ 9.99	+++++ 20.0	+++++ 40.0	2.50 80.0	5.01
Vinyl chloride	CBM	Ave	4519 201546	8702 400221	16489 768582	52475 1456587	102249	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,3-Butadiene	CBM	Ave	3512 158855	7124 316904	12697 605781	41533 1178082	80279	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Butane	CBM	Ave	+++++ 301016	13237 590953	26085 1124055	78632 2159629	152101	+++++ 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Bromomethane	CBM	Ave	+++++ 175207	9047 346748	15446 672878	44992 1335103	87416	+++++ 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Chloroethane	CBM	Ave	2078 86278	4116 171011	7269 328938	22477 649564	42383	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Ethanol	CBM	Ave	+++++ 326357	+++++ 645320	28251 1192460	87146 2220289	166820	+++++ 9.99	+++++ 20.0	0.793 40.0	2.50 80.0	5.01
Vinyl bromide	CBM	Ave	+++++ 166603	7794 336045	14132 652495	42892 1291627	83562	+++++ 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
2-Methylbutane	CBM	Ave	+++++ 203097	+++++ 405530	16243 768750	53288 1461895	102656	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/09/2016 18:12 Calibration End Date: 10/10/2016 00:36 Calibration ID: 775

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Acrolein	CBM	Ave	+++++ 58718	+++++ 140945	7808 272672	17551 555105	32065	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
Trichlorofluoromethane	CBM	Ave	10825 514597	21372 1048711	40872 2090856	133163 4186306	259643	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 92650	+++++ 190378	6499 371372	21323 745259	41023	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
Acetone	CBM	Ave	+++++ 305057	+++++ 600254	+++++ 1162994	84034 2291028	157438	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.50 48.0	3.01
Isopropyl alcohol	CBM	Ave	22068 1038259	43348 2064594	82255 3923940	271224 7492553	524697	0.118 5.99	0.235 12.0	0.476 24.0	1.50 48.0	3.01
Pentane	CBM	Ave	+++++ 42040	+++++ 84738	3429 164328	11112 317269	21301	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
Ethyl ether	CBM	Ave	6332 275346	12554 541322	21619 1049488	69600 2059110	135578	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,1-Dichloroethene	CBM	Ave	+++++ 211107	9777 423032	17326 851113	55079 1741042	108043	+++++ 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Acrylonitrile	CBM	Ave	+++++ 177073	8365 359935	15128 718670	44896 1439090	89553	+++++ 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
tert-Butyl alcohol	CBM	Ave	9694 456137	18811 908668	36278 1784213	117835 3530482	233467	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroetha ne	CBM	Ave	9781 452240	20053 904716	36507 1798220	117448 3623618	229515	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 197034	+++++ 391107	21699 763174	55736 1528057	102739	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
3-Chloropropene	CBM	Ave	+++++ 214470	9706 426925	17844 845948	55959 1609149	109699	+++++ 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Carbon disulfide	CBM	Ave	14188 652179	27848 1262329	50978 2531537	161316 5079883	319023	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	+++++ 216995	9812 436512	17331 883675	55921 1802364	109049	+++++ 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
2-Methylpentane	CBM	Ave	11872 512013	21761 1035408	40887 2033560	132232 4000982	261937	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	13317 613185	25451 1232528	47707 2468652	155103 4917993	309344	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,1-Dichloroethane	CBM	Ave	9444 415312	17942 837508	32745 1644321	105380 3296770	209936	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Vinyl acetate	CBM	Ave	14158 675622	27167 1387677	50740 2785584	167766 5590854	340358	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
2-Butanone (MEK)	CBM	Ave	+++++ 111175	+++++ 223732	10254 445213	28502 907783	55830	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
Hexane	CBM	Ave	4396 189046	9520 384425	16339 766848	48596 1533776	95248	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/09/2016 18:12 Calibration End Date: 10/10/2016 00:36 Calibration ID: 775

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
C6 Range	DFBZ	Ave	+++++ 1615404	+++++ 3226150	+++++ 6366301	433205 12672586	817759	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.501 16.0	1.00
Isopropyl ether	CBM	Ave	18171 856801	35843 1725249	69944 3385266	222056 6654602	427105	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	+++++ 219831	10034 446950	17169 897680	55488 1856770	110007	+++++ 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Ethyl acetate	CBM	Ave	11861 553354	23706 1126225	42159 2254237	138627 4466498	276372	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Chloroform	CBM	Ave	+++++ 440433	19349 889515	34967 1780282	111131 3588035	222253	+++++ 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	14944 686135	28895 1400322	53963 2811210	172075 5499856	343831	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Tetrahydrofuran	CBM	Ave	+++++ 278480	11614 573034	21071 1151290	72382 2264259	139021	+++++ 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	9731 435335	18793 883250	32548 1808888	107012 3697284	208965	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,2-Dichloroethane	DFBZ	Ave	7083 307518	13249 637476	24832 1280345	79352 2537399	153903	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1-Butanol	DFBZ	Ave	+++++ 107482	+++++ 215871	+++++ 437905	24466 834896	49711	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.501 16.0	1.00
Benzene	DFBZ	Ave	+++++ 616668	29261 1276405	51860 2582139	161444 4960882	311555	+++++ 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Cyclohexane	DFBZ	Ave	+++++ 101838	+++++ 209294	8598 415402	26954 780409	51355	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
Carbon tetrachloride	DFBZ	Ave	8808 432573	18190 909877	32899 1904537	109423 3839108	213795	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
2,3-Dimethylpentane	DFBZ	Ave	3356 145365	6745 304268	12249 617220	38318 1220673	73456	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Thiophene	DFBZ	Ave	7625 344170	15306 720784	27714 1457933	89555 2949209	173831	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Tert-amyl methyl ether	DFBZ	Ave	+++++ 603677	19348 1263100	48178 2563968	152009 5095033	314545	+++++ 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
2,2,4-Trimethylpentane	DFBZ	Ave	24619 1099199	47040 2293420	91670 4586807	290024 8819004	560387	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,2-Dichloropropane	DFBZ	Ave	5782 251678	11191 522434	21170 1027935	66233 1977348	127472	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Heptane	DFBZ	Ave	4937 230571	9466 482081	19510 964348	60416 1870274	117466	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Trichloroethene	DFBZ	Ave	5513 248864	10154 526560	20181 1098840	64015 2274401	126111	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Dibromomethane	DFBZ	Ave	5331 244306	9798 509811	19464 1033883	64085 2060511	123112	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/09/2016 18:12 Calibration End Date: 10/10/2016 00:36 Calibration ID: 775

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Bromodichloromethane	DFBZ	Ave	9188 434127	17103 928192	32987 1892915	108902 3775139	215448	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,4-Dioxane	DFBZ	Ave	2094 99816	3627 211441	7903 421355	25633 816085	51509	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Methyl methacrylate	DFBZ	Ave	7428 331515	13190 700205	29933 1412987	81469 2781532	164332	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Methylcyclohexane	DFBZ	Ave	9743 452920	18033 952196	37152 1919980	118349 3787739	229900	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	+++++ 580000	+++++ 1217423	49570 2451851	147835 4778126	293389	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
cis-1,3-Dichloropropene	DFBZ	Ave	7261 369296	13955 791249	27543 1612168	91102 3210376	183159	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
trans-1,3-Dichloropropene	CBZd 5	Ave	6848 337751	12027 727439	24166 1516907	82422 3043843	167399	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Toluene	CBZd 5	Ave	+++++ 729179	29326 1528361	56718 3133387	187712 6233771	364552	+++++ 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,1,2-Trichloroethane	CBZd 5	Ave	4798 217068	8619 455643	17582 921739	56376 1836842	109838	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
2-Methylthiophene	CBZd 5	Ave	12223 582127	23504 1221057	45244 2515318	150672 5020438	293070	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
3-Methylthiophene	CBZd 5	Ave	12136 580533	22785 1221604	45329 2490909	148216 4985476	288683	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
2-Hexanone	CBZd 5	Ave	+++++ 281704	+++++ 596900	20293 1228823	67524 2412735	137941	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
Dibromochloromethane	CBZd 5	Ave	7257 418128	13712 921129	27912 1928332	96666 3891978	199567	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Octane	CBZd 5	Ave	5456 247988	10067 516860	19387 1038619	63261 1999170	124781	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	7952 389805	14659 836201	28802 1742065	96523 3565130	193822	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Tetrachloroethene	CBZd 5	Ave	5137 238304	9549 509523	18517 1054431	60688 2155098	119777	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Chlorobenzene	CBZd 5	Ave	12291 552167	22237 1172183	44415 2409409	142944 4876854	277781	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
2,3-Dimethylheptane	CBZd 5	Ave	16449 759234	31473 1555135	63481 3064416	196108 5703642	386933	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Ethylbenzene	CBZd 5	Ave	20958 965372	38942 2045502	76512 4153368	245680 8110087	482417	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
2-Ethylthiophene	CBZd 5	Ave	14667 713796	27659 1508238	54757 3059480	180119 6058139	357727	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
m-Xylene & p-Xylene	CBZd 5	Ave	32354 1509122	60056 3165390	118349 6315407	382846 11877984	760087	0.0784 3.99	0.157 8.00	0.317 16.0	1.00 32.0	2.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/09/2016 18:12 Calibration End Date: 10/10/2016 00:36 Calibration ID: 775

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Bromoform	CBZd 5	Ave	+++++ 396141	11343 939965	22441 2138169	83062 4692161	179801	+++++ 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Styrene	CBZd 5	Ave	10602 568917	19513 1228006	39379 2538777	135925 5111922	279867	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Nonane	CBZd 5	Ave	11851 548492	22121 1117166	44476 2151897	141473 4024775	280367	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
o-Xylene	CBZd 5	Ave	16781 786235	30731 1630604	61303 3299717	195952 6457242	390384	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	11962 584616	22350 1212770	43117 2449909	147709 4835984	295979	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,2,3-Trichloropropane	CBZd 5	Ave	3255 169562	6503 355462	12381 721986	42638 1486092	85367	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Isopropylbenzene	CBZd 5	Ave	24139 1056810	43879 2209437	85832 4499608	271170 8804862	533707	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Propylbenzene	CBZd 5	Ave	5866 295384	10894 623004	22305 1315126	72255 2686013	146599	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
2-Chlorotoluene	CBZd 5	Ave	5338 256242	9893 535283	19389 1117204	63414 2324280	126862	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
4-Ethyltoluene	CBZd 5	Ave	22747 1103588	41529 2292517	81655 4707434	269366 9203727	546443	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,3,5-Trimethylbenzene	CBZd 5	Ave	10045 492659	17781 1042351	35712 2192589	121106 4463741	247987	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Alpha Methyl Styrene	CBZd 5	Ave	+++++ 455598	+++++ 987604	29713 2102914	102477 4395635	219451	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
Decane	CBZd 5	Ave	15105 730730	27728 1475484	55870 2886137	180244 5351555	374016	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
tert-Butylbenzene	CBZd 5	Ave	19862 951996	35524 2009526	71393 4176692	234371 7998877	481563	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,2,4-Trimethylbenzene	CBZd 5	Ave	19297 936719	35259 1953455	70516 4002984	232547 7598209	473709	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,3-Dichlorobenzene	CBZd 5	Ave	11842 593251	21885 1287250	43493 2769395	143202 5450351	294320	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
sec-Butylbenzene	CBZd 5	Ave	28284 1368221	51232 2835834	103325 5749750	341379 10393943	699472	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Benzyl chloride	CBZd 5	Ave	+++++ 836014	+++++ 1811213	48705 3789179	183473 7356468	407422	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
1,4-Dichlorobenzene	CBZd 5	Ave	11539 598011	21737 1277981	43078 2786960	144058 5612396	299184	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
4-Isopropyltoluene	CBZd 5	Ave	22494 1128647	41516 2347578	82381 4911512	271629 9331963	570304	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,2,3-Trimethylbenzene	CBZd 5	Ave	15016 724632	26839 1501410	54922 3074340	178324 6225238	364838	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/09/2016 18:12 Calibration End Date: 10/10/2016 00:36 Calibration ID: 775

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Butylcyclohexane	CBZd 5	Ave	15655 758885	28484 1539349	58235 3086380	189129 5808613	387583	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,2-Dichlorobenzene	CBZd 5	Ave	11081 580993	21114 1235775	42000 2679494	139211 5218100	290819	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Indane	CBZd 5	Ave	17557 873540	31814 1826037	64064 3805113	214137 7129644	443992	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Indene	CBZd 5	Ave	+++++ 670682	+++++ 1433563	46367 3071869	156378 6290885	333779	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
Butylbenzene	CBZd 5	Ave	23202 1189658	43857 2430516	88309 4877498	292942 9022925	605213	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Undecane	CBZd 5	Ave	17259 867772	31895 1707224	65002 3252729	214872 5344011	458631	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	Ave	17136 867967	31873 1807849	64507 3749722	211315 6932200	442472	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	+++++ 263928	7265 584224	15278 1286715	56296 2805076	126291	+++++ 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	20171 1019030	36140 2130343	73443 4434437	248270 8380349	531178	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	12823 619840	22832 1303527	45526 2745281	151722 5465975	319609	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	16785 850414	31668 1789865	62566 3751188	204801 7334947	438782	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Dodecane	CBZd 5	Ave	16458 903894	32131 1813017	69932 3554514	226315 6117545	479017	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,2,4-Trichlorobenzene	CBZd 5	Ave	8920 538083	17476 1189935	36589 2761896	119905 5798007	268804	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Naphthalene	CBZd 5	Ave	21957 1294797	45420 2728153	94353 5805458	298526 10805877	667710	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Benzo(b)thiophene	CBZd 5	Ave	+++++ 721421	24977 1544212	52333 3388213	157444 6835475	365869	+++++ 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
Hexachlorobutadiene	CBZd 5	Ave	7674 452526	14508 1051222	29583 2518960	99162 5123456	222916	0.0392 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
1,2,3-Trichlorobenzene	CBZd 5	Ave	+++++ 507363	17968 1119490	37386 2610987	116597 5471847	262098	+++++ 2.00	0.0784 4.00	0.159 8.00	0.501 16.0	1.00
2-Methylnaphthalene	CBZd 5	Ave	+++++ 453694	+++++ 946126	34523 2081968	100634 3554672	247911	+++++ 6.24	+++++ 12.5	0.496 25.0	1.56 50.0	3.13
1-Methylnaphthalene	CBZd 5	Ave	+++++ 460833	16263 911852	38908 1955760	111980 3252922	260262	+++++ 6.24	0.245 12.5	0.496 25.0	1.56 50.0	3.13
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1029617 993878	987026 1018453	996538 1032019	990447 1061129	988432	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1 Analy Batch No.: 6852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/09/2016 18:12 Calibration End Date: 10/10/2016 00:36 Calibration ID: 775

Curve Type Legend:
Ave = Average ISTD

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC01.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 09-Oct-2016 18:12:30 ALS Bottle#: 1 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003513-003
Misc. Info.: 059244
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Oct-2016 11:37:43 Calib Date: 10-Oct-2016 00:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2016 19:20:46

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.264	8.274	-0.010	98	321859	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.431	10.440	-0.009	96	1483554	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.322	15.323	-0.001	89	1373964	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.010	17.011	-0.001	86	1029617	4.00	4.01	
7 Chlorodifluoromethane	67	3.745	3.734	0.011	96	1850	0.0392	0.0547	
6 Propene	41	3.745	3.739	0.006	86	6187	0.0392	0.0509	
8 Dichlorodifluoromethane	85	3.799	3.790	0.009	99	14436	0.0392	0.0466	
9 Chloromethane	52	3.950	3.940	0.010	80	1900	0.0392	0.0536	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.966	3.960	0.006	92	9046	0.0392	0.0423	
11 Acetaldehyde	44	4.090	4.081	0.009	52	17345	0.1960	0.4582	
12 Vinyl chloride	62	4.095	4.089	0.006	31	4519	0.0392	0.0426	
13 Butadiene	54	4.176	4.168	0.008	69	3512	0.0392	0.0419	
14 Butane	43	4.176	4.171	0.005	83	7340	0.0392	0.0466	
15 Bromomethane	94	4.435	4.432	0.003	94	4306	0.0392	0.0455	
16 Chloroethane	64	4.559	4.555	0.004	94	2078	0.0392	0.0447	
17 Ethanol	31	4.661	4.661	0.000	96	10203	0.1960	0.3028	
18 Vinyl bromide	106	4.812	4.814	-0.002	98	3967	0.0392	0.0446	
19 2-Methylbutane	43	4.872	4.871	0.001	88	5912	0.0392	0.0566	
20 Acrolein	56	5.050	5.049	0.001	43	4075	0.0392	0.1097	
21 Trichlorofluoromethane	101	5.050	5.053	-0.003	99	10825	0.0392	0.0398	
22 Acetonitrile	40	5.093	5.097	-0.004	92	2249	0.0392	0.0487	
23 Acetone	58	5.158	5.150	0.008	98	13229	0.1176	0.2514	
24 Isopropyl alcohol	45	5.255	5.246	0.009	83	22068	0.1176	0.1230	
25 Pentane	72	5.255	5.255	0.000	72	1117	0.0392	0.0509	
26 Ethyl ether	31	5.406	5.394	0.012	95	6332	0.0392	0.0437	
27 1,1-Dichloroethene	96	5.654	5.661	-0.007	95	5922	0.0392	0.0521	
28 Acrylonitrile	53	5.724	5.731	-0.007	97	5386	0.0392	0.0563	
29 2-Methyl-2-propanol	59	5.783	5.764	0.019	95	9694	0.0392	0.0406	
30 1,1,2-Trichloro-1,2,2-trif	101	5.837	5.838	-0.001	96	9781	0.0392	0.0406	
31 Methylene Chloride	84	5.950	5.955	-0.005	98	10059	0.0392	0.0915	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.972	5.975	-0.003	94	5428	0.0392	0.0477	
33 Carbon disulfide	76	6.096	6.098	-0.002	99	14188	0.0392	0.0419	
34 trans-1,2-Dichloroethene	96	6.684	6.693	-0.009	95	5182	0.0392	0.0447	
35 2-Methylpentane	43	6.738	6.743	-0.005	95	11872	0.0392	0.0435	
36 Methyl tert-butyl ether	73	6.840	6.825	0.015	96	13317	0.0392	0.0413	
37 1,1-Dichloroethane	63	7.056	7.063	-0.007	99	9444	0.0392	0.0428	
38 Vinyl acetate	43	7.174	7.172	0.002	99	14158	0.0392	0.0401	
39 2-Butanone (MEK)	72	7.573	7.564	0.009	99	2990	0.0392	0.0501	
40 Hexane	56	7.643	7.649	-0.006	88	4396	0.0392	0.0421	
41 Isopropyl ether	45	7.805	7.792	0.013	97	18171	0.0392	0.0403	
42 cis-1,2-Dichloroethene	96	7.972	7.977	-0.005	95	5650	0.0392	0.0482	
43 Ethyl acetate	43	8.172	8.162	0.010	99	11861	0.0392	0.0407	
44 Chloroform	83	8.296	8.305	-0.009	92	10487	0.0392	0.0450	
45 Tert-butyl ethyl ether	59	8.436	8.426	0.010	95	14944	0.0392	0.0412	
46 Tetrahydrofuran	42	8.684	8.670	0.014	94	6850	0.0392	0.0468	
47 1,1,1-Trichloroethane	97	9.288	9.289	-0.001	97	9731	0.0392	0.0423	
48 1,2-Dichloroethane	62	9.358	9.362	-0.004	96	7083	0.0392	0.0428	
49 n-Butanol	31	9.881	9.860	0.021	69	2028	0.0392	0.0378	
50 Benzene	78	9.865	9.872	-0.007	97	14703	0.0392	0.0440	
51 Cyclohexane	69	9.892	9.897	-0.005	90	2603	0.0392	0.0486	
52 Carbon tetrachloride	117	9.908	9.911	-0.003	94	8808	0.0392	0.0383	
53 2,3-Dimethylpentane	71	10.054	10.055	-0.001	89	3356	0.0392	0.0420	
54 Thiophene	84	10.135	10.140	-0.005	96	7625	0.0392	0.0409	
56 Isooctane	57	10.717	10.721	-0.004	98	24619	0.0392	0.0415	
58 1,2-Dichloropropane	63	11.105	11.111	-0.006	67	5782	0.0392	0.0425	
57 n-Heptane	71	11.111	11.115	-0.004	86	4937	0.0392	0.0400	
59 Trichloroethene	130	11.165	11.172	-0.007	94	5513	0.0392	0.0408	
60 Dibromomethane	93	11.213	11.220	-0.007	94	5331	0.0392	0.0409	
61 Dichlorobromomethane	83	11.380	11.387	-0.007	98	9188	0.0392	0.0400	
62 1,4-Dioxane	88	11.413	11.397	0.016	86	2094	0.0392	0.0400	
63 Methyl methacrylate	41	11.526	11.520	0.006	93	7428	0.0392	0.0416	
64 Methylcyclohexane	83	11.990	11.992	-0.002	88	9743	0.0392	0.0403	
65 4-Methyl-2-pentanone (MIBK	43	12.394	12.387	0.007	96	14974	0.0392	0.0485	
66 cis-1,3-Dichloropropene	75	12.432	12.435	-0.003	95	7261	0.0392	0.0378	
67 trans-1,3-Dichloropropene	75	13.154	13.157	-0.003	98	6848	0.0392	0.0394	
68 Toluene	91	13.295	13.298	-0.003	92	16681	0.0392	0.0437	
69 1,1,2-Trichloroethane	83	13.349	13.353	-0.004	96	4798	0.0392	0.0418	
70 2-Methylthiophene	97	13.446	13.448	-0.002	98	12223	0.0392	0.0399	
71 3-Methylthiophene	97	13.651	13.655	-0.004	99	12136	0.0392	0.0400	
72 2-Hexanone	58	13.791	13.780	0.011	90	4978	0.0392	0.0346	
73 Chlorodibromomethane	129	14.071	14.073	-0.002	96	7257	0.0392	0.0348	
74 n-Octane	85	14.082	14.084	-0.002	94	5456	0.0392	0.0421	
75 Ethylene Dibromide	107	14.362	14.365	-0.003	97	7952	0.0392	0.0392	
76 Tetrachloroethene	129	14.486	14.485	0.001	94	5137	0.0392	0.0406	
77 Chlorobenzene	112	15.371	15.371	0.000	96	12291	0.0392	0.0417	
78 2,3-Dimethylheptane	43	15.462	15.468	-0.006	95	16449	0.0392	0.0415	
79 Ethylbenzene	91	15.683	15.686	-0.003	99	20958	0.0392	0.0412	
80 2-Ethylthiophene	97	15.781	15.784	-0.004	99	14667	0.0392	0.0396	
81 m-Xylene & p-Xylene	91	15.851	15.857	-0.006	99	32354	0.0784	0.0826	
82 Bromoform	173	16.260	16.263	-0.003	91	6129	0.0392	0.0299	
83 Styrene	104	16.325	16.322	0.003	97	10602	0.0392	0.0370	
84 n-Nonane	57	16.347	16.347	0.000	94	11851	0.0392	0.0419	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	16.384	16.386	-0.002	98	16781	0.0392	0.0413	
86 1,1,2,2-Tetrachloroethane	83	16.697	16.698	-0.001	98	11962	0.0392	0.0399	
87 1,2,3-Trichloropropane	110	16.859	16.860	-0.001	97	3255	0.0392	0.0374	
88 Isopropylbenzene	105	16.999	17.002	-0.003	91	24139	0.0392	0.0429	
89 N-Propylbenzene	120	17.582	17.578	0.004	97	5866	0.0392	0.0384	
90 2-Chlorotoluene	126	17.603	17.604	-0.001	89	5338	0.0392	0.0400	
91 4-Ethyltoluene	105	17.743	17.743	0.000	98	22747	0.0392	0.0404	
92 1,3,5-Trimethylbenzene	120	17.824	17.825	-0.001	92	10045	0.0392	0.0395	
93 Alpha Methyl Styrene	118	18.067	18.067	0.000	87	8020	0.0392	0.0342	
94 n-Decane	57	18.186	18.187	-0.001	90	15105	0.0392	0.0411	
95 tert-Butylbenzene	119	18.277	18.276	0.001	90	19862	0.0392	0.0404	
96 1,2,4-Trimethylbenzene	105	18.288	18.290	-0.002	96	19297	0.0392	0.0402	
97 1,3-Dichlorobenzene	146	18.558	18.555	0.003	97	11842	0.0392	0.0384	
98 sec-Butylbenzene	105	18.563	18.565	-0.002	99	28284	0.0392	0.0406	
99 Benzyl chloride	91	18.633	18.634	-0.001	97	11031	0.0392	0.0265	
100 1,4-Dichlorobenzene	146	18.649	18.650	-0.001	90	11539	0.0392	0.0373	
101 4-Isopropyltoluene	119	18.741	18.743	-0.002	97	22494	0.0392	0.0392	
102 1,2,3-Trimethylbenzene	105	18.784	18.785	-0.001	98	15016	0.0392	0.0403	
103 Butylcyclohexane	83	18.870	18.872	-0.002	92	15655	0.0392	0.0407	
104 1,2-Dichlorobenzene	146	19.021	19.027	-0.006	92	11081	0.0392	0.0372	
105 2,3-Dihydroindene	117	19.032	19.035	-0.003	94	17557	0.0392	0.0395	
106 Indene	116	19.167	19.167	0.000	91	12465	0.0392	0.0358	
107 n-Butylbenzene	91	19.205	19.205	0.000	98	23202	0.0392	0.0389	
108 Undecane	57	19.577	19.578	-0.001	95	17259	0.0392	0.0407	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.593	19.594	-0.001	96	17136	0.0392	0.0389	
110 1,2-Dibromo-3-Chloropropan	157	19.658	19.653	0.005	86	3731	0.0392	0.0283	
111 1,2,4,5-Tetramethylbenzene	119	19.997	19.998	-0.001	96	20171	0.0392	0.0390	
112 1,2,3,5-Tetramethylbenzene	119	20.051	20.052	-0.001	94	12823	0.0392	0.0399	
113 1,2,3,4-Tetramethylbenzene	119	20.461	20.457	0.004	97	16785	0.0392	0.0384	
114 Dodecane	57	20.682	20.682	0.000	94	16458	0.0392	0.0370	
115 1,2,4-Trichlorobenzene	180	20.806	20.809	-0.003	92	8920	0.0392	0.0322	
116 Naphthalene	128	20.941	20.942	-0.001	98	21957	0.0392	0.0340	
117 Benzo(b)thiophene	134	21.049	21.046	0.003	98	11900	0.0392	0.0321	
118 Hexachlorobutadiene	225	21.194	21.195	-0.001	89	7674	0.0392	0.0324	
119 1,2,3-Trichlorobenzene	180	21.238	21.239	-0.001	94	9018	0.0392	0.0330	
120 2-Methylnaphthalene	142	21.949	21.947	0.002	97	5732	0.1225	0.0767	
121 1-Methylnaphthalene	142	22.073	22.073	0.000	95	6866	0.1225	0.0913	
A 122 C6 Range	1	7.644	(7.589-7.667)		0	40293	0.0392	0.0481	
S 124 Xylenes, Total	100				0		0.1176	0.1238	
S 125 1,2-Dichloroethene, Total	1				0		0.0784	0.0930	

Reagents:

40L12DNP_00007	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

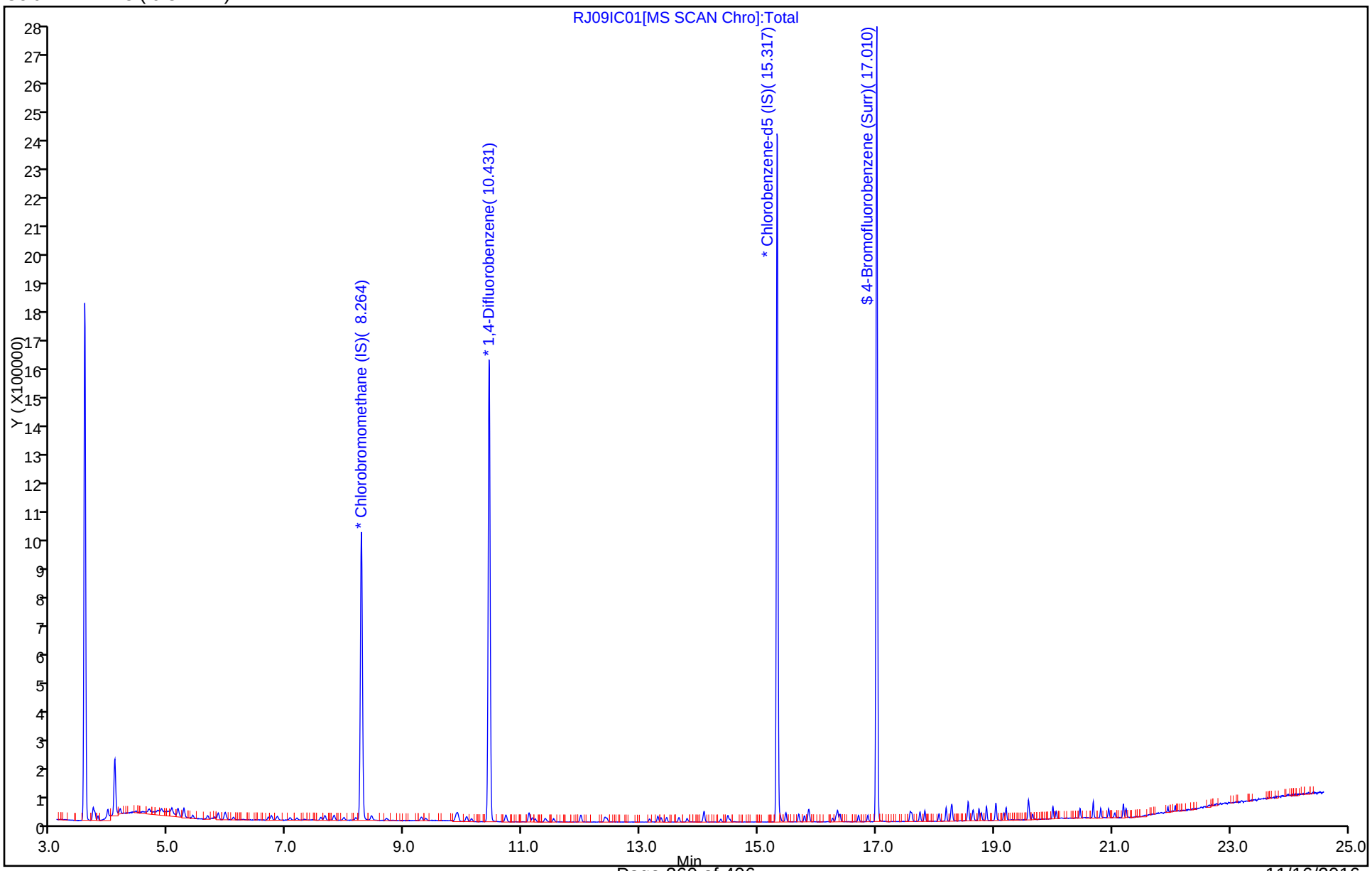
Report Date: 13-Oct-2016 11:37:44 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC01.D

Injection Date:	09-Oct-2016 18:12:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L1			Worklist Smp#:	3
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

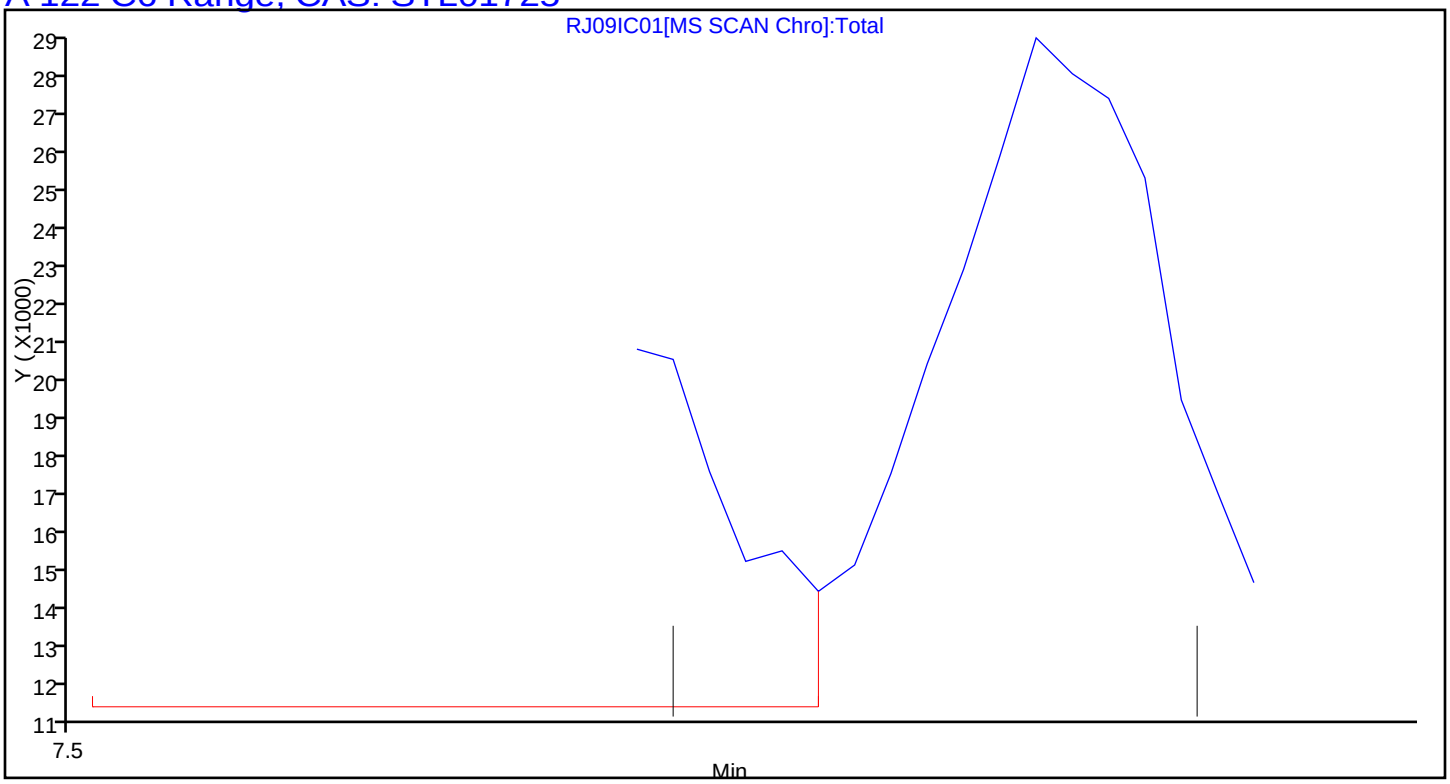


Report Date: 13-Oct-2016 11:37:44 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC01.D				
Injection Date:	09-Oct-2016 18:12:30	Instrument ID:	MR		
Lims ID:	IC L1				
Client ID:					
Operator ID:		ALS Bottle#:	1	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC02.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 09-Oct-2016 19:00:30 ALS Bottle#: 1 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003513-004
Misc. Info.: 059244
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Oct-2016 11:36:49 Calib Date: 10-Oct-2016 00:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2016 19:42:08

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.263	8.274	-0.011	98	319960	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.437	10.440	-0.003	96	1433977	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.322	15.323	-0.001	89	1318627	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.010	17.011	-0.001	85	987026	4.00	4.01	
7 Chlorodifluoromethane	67	3.728	3.734	-0.006	97	2982	0.0784	0.0887	
6 Propene	41	3.728	3.739	-0.011	68	11021	0.0784	0.0913	
8 Dichlorodifluoromethane	85	3.782	3.790	-0.008	100	25028	0.0784	0.0812	
9 Chloromethane	52	3.933	3.940	-0.007	100	2755	0.0784	0.0782	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.955	3.960	-0.005	94	17160	0.0784	0.0807	
11 Acetaldehyde	44	4.079	4.081	-0.002	49	28596	0.3920	0.7599	
12 Vinyl chloride	62	4.079	4.089	-0.010	33	8702	0.0784	0.0825	
13 Butadiene	54	4.160	4.168	-0.008	66	7124	0.0784	0.0855	
14 Butane	43	4.165	4.171	-0.006	86	13237	0.0784	0.0845	
15 Bromomethane	94	4.424	4.432	-0.008	96	9047	0.0784	0.0961	
16 Chloroethane	64	4.543	4.555	-0.012	98	4116	0.0784	0.0890	
17 Ethanol	31	4.661	4.661	0.000	95	19171	0.3920	0.5723	
18 Vinyl bromide	106	4.801	4.814	-0.013	97	7794	0.0784	0.0881	
19 2-Methylbutane	43	4.861	4.871	-0.010	93	9565	0.0784	0.0922	
20 Acrolein	56	5.050	5.049	0.001	47	6259	0.0784	0.1694	
21 Trichlorofluoromethane	101	5.044	5.053	-0.009	99	21372	0.0784	0.0791	
22 Acetonitrile	40	5.093	5.097	-0.004	99	2690	0.0784	0.0586	
23 Acetone	58	5.152	5.150	0.002	98	23594	0.2352	0.4510	
24 Isopropyl alcohol	45	5.249	5.246	0.003	95	43348	0.2352	0.2430	
25 Pentane	72	5.249	5.255	-0.006	95	1954	0.0784	0.0895	
26 Ethyl ether	31	5.395	5.394	0.001	97	12554	0.0784	0.0871	
27 1,1-Dichloroethene	96	5.648	5.661	-0.013	96	9777	0.0784	0.0866	
28 Acrylonitrile	53	5.724	5.731	-0.007	95	8365	0.0784	0.0880	
29 2-Methyl-2-propanol	59	5.778	5.764	0.014	95	18811	0.0784	0.0793	
30 1,1,2-Trichloro-1,2,2-trif	101	5.831	5.838	-0.007	95	20053	0.0784	0.0837	
31 Methylene Chloride	84	5.945	5.955	-0.010	98	14259	0.0784	0.1304	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.961	5.975	-0.014	96	9706	0.0784	0.0859	
33 Carbon disulfide	76	6.090	6.098	-0.008	98	27848	0.0784	0.0828	
34 trans-1,2-Dichloroethene	96	6.683	6.693	-0.010	95	9812	0.0784	0.0852	
35 2-Methylpentane	43	6.737	6.743	-0.006	95	21761	0.0784	0.0802	
36 Methyl tert-butyl ether	73	6.834	6.825	0.009	97	25451	0.0784	0.0794	
37 1,1-Dichloroethane	63	7.050	7.063	-0.013	100	17942	0.0784	0.0819	
38 Vinyl acetate	43	7.169	7.172	-0.003	99	27167	0.0784	0.0774	
39 2-Butanone (MEK)	72	7.568	7.564	0.004	98	5821	0.0784	0.0982	
40 Hexane	56	7.643	7.649	-0.006	88	9520	0.0784	0.0918	
41 Isopropyl ether	45	7.800	7.792	0.008	97	35843	0.0784	0.0800	
42 cis-1,2-Dichloroethene	96	7.967	7.977	-0.010	96	10034	0.0784	0.0861	
43 Ethyl acetate	43	8.166	8.162	0.004	99	23706	0.0784	0.0819	
44 Chloroform	83	8.290	8.305	-0.015	94	19349	0.0784	0.0836	
45 Tert-butyl ethyl ether	59	8.431	8.426	0.005	95	28895	0.0784	0.0802	
46 Tetrahydrofuran	42	8.684	8.670	0.014	95	11614	0.0784	0.0798	
47 1,1,1-Trichloroethane	97	9.283	9.289	-0.006	96	18793	0.0784	0.0822	
48 1,2-Dichloroethane	62	9.353	9.362	-0.009	96	13249	0.0784	0.0828	
49 n-Butanol	31	9.881	9.860	0.021	68	3860	0.0784	0.0744	
50 Benzene	78	9.865	9.872	-0.007	97	29261	0.0784	0.0906	
51 Cyclohexane	69	9.892	9.897	-0.005	90	5287	0.0784	0.1022	
52 Carbon tetrachloride	117	9.903	9.911	-0.008	98	18190	0.0784	0.0818	
53 2,3-Dimethylpentane	71	10.054	10.055	-0.001	91	6745	0.0784	0.0873	
54 Thiophene	84	10.135	10.140	-0.005	97	15306	0.0784	0.0849	
55 Tert-amyl methyl ether	73	10.404	10.392	0.012	95	19348	0.0784	0.0641	
56 Isooctane	57	10.722	10.721	0.001	99	47040	0.0784	0.0821	
58 1,2-Dichloropropane	63	11.105	11.111	-0.006	68	11191	0.0784	0.0851	
57 n-Heptane	71	11.111	11.115	-0.004	87	9466	0.0784	0.0794	
59 Trichloroethene	130	11.170	11.172	-0.002	92	10154	0.0784	0.0777	
60 Dibromomethane	93	11.213	11.220	-0.007	87	9798	0.0784	0.0778	
61 Dichlorobromomethane	83	11.386	11.387	-0.001	97	17103	0.0784	0.0770	
62 1,4-Dioxane	88	11.402	11.397	0.005	91	3627	0.0784	0.0717	
63 Methyl methacrylate	41	11.520	11.520	0.000	94	13190	0.0784	0.0765	
64 Methylcyclohexane	83	11.990	11.992	-0.002	90	18033	0.0784	0.0771	
65 4-Methyl-2-pentanone (MIBK	43	12.394	12.387	0.007	96	26293	0.0784	0.0880	
66 cis-1,3-Dichloropropene	75	12.432	12.435	-0.003	97	13955	0.0784	0.0751	
67 trans-1,3-Dichloropropene	75	13.154	13.157	-0.003	97	12027	0.0784	0.0721	
68 Toluene	91	13.294	13.298	-0.004	93	29326	0.0784	0.0801	
69 1,1,2-Trichloroethane	83	13.354	13.353	0.001	97	8619	0.0784	0.0782	
70 2-Methylthiophene	97	13.445	13.448	-0.003	97	23504	0.0784	0.0800	
71 3-Methylthiophene	97	13.656	13.655	0.001	100	22785	0.0784	0.0783	
72 2-Hexanone	58	13.791	13.780	0.011	91	9948	0.0784	0.0720	
73 Chlorodibromomethane	129	14.071	14.073	-0.002	96	13712	0.0784	0.0686	
74 n-Octane	85	14.082	14.084	-0.002	95	10067	0.0784	0.0809	
75 Ethylene Dibromide	107	14.362	14.365	-0.003	98	14659	0.0784	0.0752	
76 Tetrachloroethene	129	14.481	14.485	-0.004	94	9549	0.0784	0.0786	
77 Chlorobenzene	112	15.371	15.371	0.000	92	22237	0.0784	0.0786	
78 2,3-Dimethylheptane	43	15.468	15.468	0.000	95	31473	0.0784	0.0827	
79 Ethylbenzene	91	15.683	15.686	-0.003	99	38942	0.0784	0.0798	
80 2-Ethylthiophene	97	15.786	15.784	0.002	99	27659	0.0784	0.0778	
81 m-Xylene & p-Xylene	91	15.856	15.857	-0.001	99	60056	0.1568	0.1597	
82 Bromoform	173	16.260	16.263	-0.003	92	11343	0.0784	0.0577	
83 Styrene	104	16.320	16.322	-0.002	99	19513	0.0784	0.0709	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.347	16.347	0.000	96	22121	0.0784	0.0815	
85 o-Xylene	91	16.384	16.386	-0.002	99	30731	0.0784	0.0787	
86 1,1,2,2-Tetrachloroethane	83	16.697	16.698	-0.001	98	22350	0.0784	0.0777	
87 1,2,3-Trichloropropane	110	16.859	16.860	-0.001	97	6503	0.0784	0.0779	
88 Isopropylbenzene	105	16.999	17.002	-0.003	92	43879	0.0784	0.0813	
89 N-Propylbenzene	120	17.576	17.578	-0.002	98	10894	0.0784	0.0743	
90 2-Chlorotoluene	126	17.608	17.604	0.004	97	9893	0.0784	0.0772	
91 4-Ethyltoluene	105	17.738	17.743	-0.005	99	41529	0.0784	0.0768	
92 1,3,5-Trimethylbenzene	120	17.824	17.825	-0.001	92	17781	0.0784	0.0728	
93 Alpha Methyl Styrene	118	18.067	18.067	0.000	87	14223	0.0784	0.0633	
94 n-Decane	57	18.185	18.187	-0.002	88	27728	0.0784	0.0786	
95 tert-Butylbenzene	119	18.277	18.276	0.001	91	35524	0.0784	0.0753	
96 1,2,4-Trimethylbenzene	105	18.288	18.290	-0.002	96	35259	0.0784	0.0765	
97 1,3-Dichlorobenzene	146	18.557	18.555	0.002	97	21885	0.0784	0.0739	
98 sec-Butylbenzene	105	18.563	18.565	-0.002	98	51232	0.0784	0.0766	
99 Benzyl chloride	91	18.633	18.634	-0.001	97	23889	0.0784	0.0597	
100 1,4-Dichlorobenzene	146	18.649	18.650	-0.001	93	21737	0.0784	0.0732	
101 4-Isopropyltoluene	119	18.741	18.743	-0.002	97	41516	0.0784	0.0754	
102 1,2,3-Trimethylbenzene	105	18.784	18.785	-0.001	98	26839	0.0784	0.0751	
103 Butylcyclohexane	83	18.870	18.872	-0.002	89	28484	0.0784	0.0771	
104 1,2-Dichlorobenzene	146	19.027	19.027	0.000	92	21114	0.0784	0.0738	
105 2,3-Dihydroindene	117	19.037	19.035	0.002	94	31814	0.0784	0.0745	
106 Indene	116	19.167	19.167	0.000	92	22634	0.0784	0.0678	
107 n-Butylbenzene	91	19.205	19.205	0.000	98	43857	0.0784	0.0767	
108 Undecane	57	19.577	19.578	-0.001	94	31895	0.0784	0.0784	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.593	19.594	-0.001	97	31873	0.0784	0.0754	
110 1,2-Dibromo-3-Chloropropan	157	19.652	19.653	-0.001	84	7265	0.0784	0.0575	
111 1,2,4,5-Tetramethylbenzene	119	19.997	19.998	-0.001	96	36140	0.0784	0.0728	
112 1,2,3,5-Tetramethylbenzene	119	20.051	20.052	-0.001	94	22832	0.0784	0.0741	
113 1,2,3,4-Tetramethylbenzene	119	20.456	20.457	-0.001	97	31668	0.0784	0.0755	
114 Dodecane	57	20.682	20.682	0.000	94	32131	0.0784	0.0752	
115 1,2,4-Trichlorobenzene	180	20.811	20.809	0.002	92	17476	0.0784	0.0658	
116 Naphthalene	128	20.941	20.942	-0.001	99	45420	0.0784	0.0733	
117 Benzo(b)thiophene	134	21.049	21.046	0.003	99	24977	0.0784	0.0702	
118 Hexachlorobutadiene	225	21.194	21.195	-0.001	90	14508	0.0784	0.0638	
119 1,2,3-Trichlorobenzene	180	21.237	21.239	-0.002	94	17968	0.0784	0.0684	
120 2-Methylnaphthalene	142	21.949	21.947	0.002	99	14176	0.2450	0.1976	
121 1-Methylnaphthalene	142	22.073	22.073	0.000	99	16263	0.2450	0.2254	
A 122 C6 Range	1	7.647	(7.573-7.673)		0	68676	0.0784	0.0848	
S 124 Xylenes, Total	100				0		0.2352	0.2384	
S 125 1,2-Dichloroethene, Total	1				0		0.1568	0.1714	

Reagents:

40L12DNP_00007	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

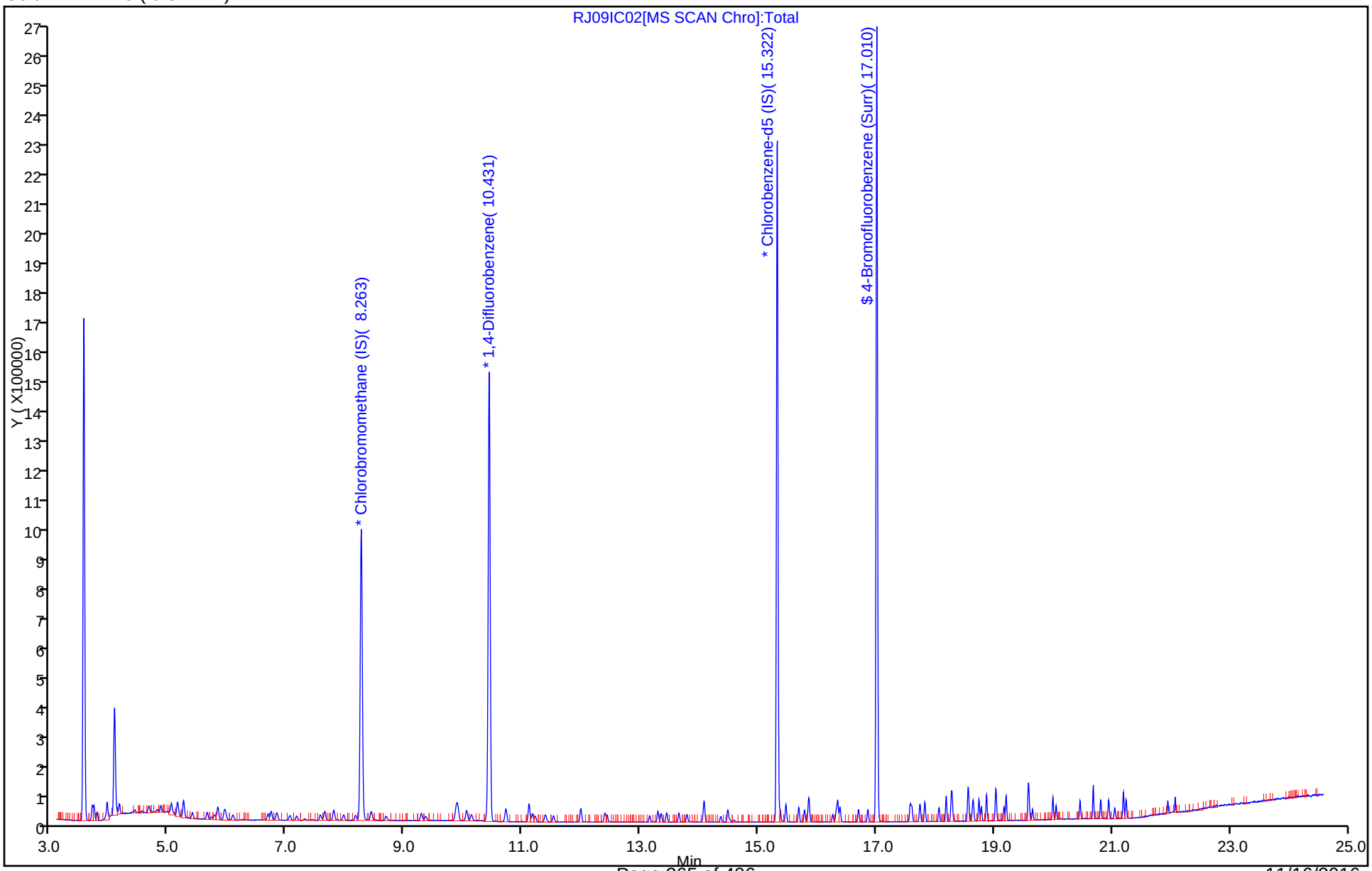
Report Date: 13-Oct-2016 11:36:52 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC02.D

Injection Date:	09-Oct-2016 19:00:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L2			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

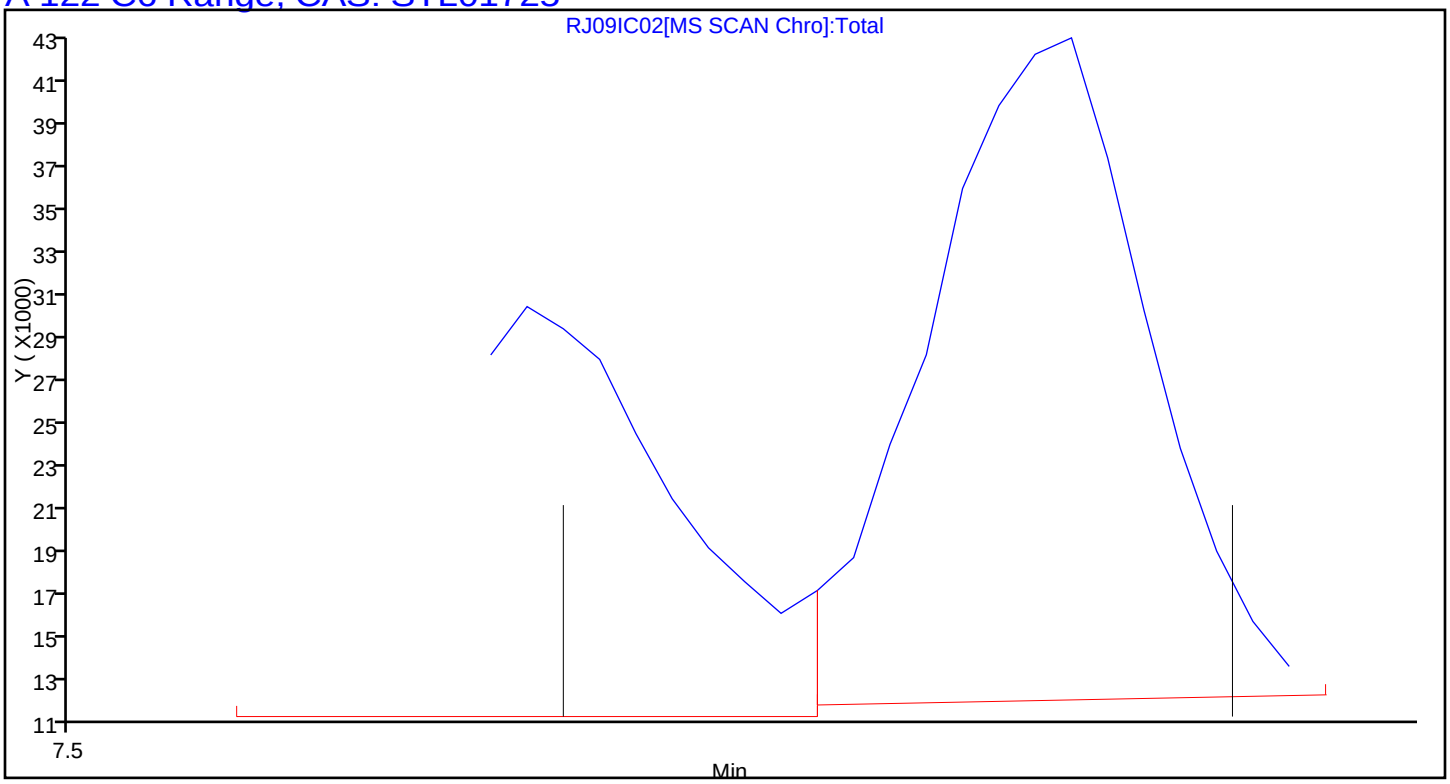


Report Date: 13-Oct-2016 11:36:52 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC02.D				
Injection Date:	09-Oct-2016 19:00:30	Instrument ID:	MR		
Lims ID:	IC L2				
Client ID:					
Operator ID:		ALS Bottle#:	1	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC03.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 09-Oct-2016 19:48:30 ALS Bottle#: 2 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003513-005
Misc. Info.: 059243
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Oct-2016 11:37:00 Calib Date: 10-Oct-2016 00:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: barlozhetskayaa Date: 10-Oct-2016 18:24:05

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.269	8.274	-0.005	98	296670	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.437	10.440	-0.004	96	1428076	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.322	15.323	-0.001	89	1322107	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.010	17.011	-0.001	88	996538	4.00	4.04	
7 Chlorodifluoromethane	67	3.739	3.734	0.005	97	5339	0.1587	0.1713	
6 Propene	41	3.745	3.739	0.006	98	20358	0.1587	0.1818	
8 Dichlorodifluoromethane	85	3.793	3.790	0.003	100	47343	0.1587	0.1657	
9 Chloromethane	52	3.939	3.940	-0.001	100	5593	0.1587	0.1713	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.960	3.960	0.000	93	32456	0.1587	0.1645	
11 Acetaldehyde	44	4.074	4.081	-0.007	100	55700	0.7933	1.60	
12 Vinyl chloride	62	4.090	4.089	0.001	98	16489	0.1587	0.1687	
13 Butadiene	54	4.165	4.168	-0.003	67	12697	0.1587	0.1643	
14 Butane	43	4.171	4.171	0.000	85	26085	0.1587	0.1796	
15 Bromomethane	94	4.429	4.432	-0.003	99	15446	0.1587	0.1769	
16 Chloroethane	64	4.548	4.555	-0.007	95	7269	0.1587	0.1695	
17 Ethanol	31	4.661	4.661	0.000	95	28251	0.7933	0.9095	
18 Vinyl bromide	106	4.807	4.814	-0.007	98	14132	0.1587	0.1724	
19 2-Methylbutane	43	4.872	4.871	0.001	91	16243	0.1587	0.1688	
20 Acrolein	56	5.050	5.049	0.001	36	7808	0.1587	0.2280	
21 Trichlorofluoromethane	101	5.050	5.053	-0.003	99	40872	0.1587	0.1631	
22 Acetonitrile	40	5.093	5.097	-0.004	100	6499	0.1587	0.1528	
23 Acetone	58	5.147	5.150	-0.003	98	40583	0.4760	0.8366	
24 Isopropyl alcohol	45	5.244	5.246	-0.002	93	82255	0.4760	0.4974	
25 Pentane	72	5.254	5.255	-0.001	97	3429	0.1587	0.1695	
26 Ethyl ether	31	5.395	5.394	0.001	94	21619	0.1587	0.1619	
27 1,1-Dichloroethene	96	5.659	5.661	-0.002	95	17326	0.1587	0.1655	
28 Acrylonitrile	53	5.729	5.731	-0.002	95	15128	0.1587	0.1716	
29 2-Methyl-2-propanol	59	5.767	5.764	0.003	95	36278	0.1587	0.1648	
30 1,1,2-Trichloro-1,2,2-trif	101	5.831	5.838	-0.007	95	36507	0.1587	0.1644	
31 Methylene Chloride	84	5.950	5.955	-0.005	99	21699	0.1587	0.2141	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.972	5.975	-0.003	93	17844	0.1587	0.1703	
33 Carbon disulfide	76	6.090	6.098	-0.008	98	50978	0.1587	0.1634	
34 trans-1,2-Dichloroethene	96	6.689	6.693	-0.004	96	17331	0.1587	0.1623	
35 2-Methylpentane	43	6.743	6.743	0.000	95	40887	0.1587	0.1625	
36 Methyl tert-butyl ether	73	6.829	6.825	0.004	97	47707	0.1587	0.1606	
37 1,1-Dichloroethane	63	7.055	7.063	-0.008	100	32745	0.1587	0.1612	
38 Vinyl acetate	43	7.169	7.172	-0.003	100	50740	0.1587	0.1559	
39 2-Butanone (MEK)	72	7.568	7.564	0.004	99	10254	0.1587	0.1866	
40 Hexane	56	7.643	7.649	-0.006	90	16339	0.1587	0.1699	
41 Isopropyl ether	45	7.794	7.792	0.002	98	69944	0.1587	0.1685	
42 cis-1,2-Dichloroethene	96	7.972	7.977	-0.005	98	17169	0.1587	0.1589	
43 Ethyl acetate	43	8.161	8.162	-0.001	99	42159	0.1587	0.1571	
44 Chloroform	83	8.301	8.305	-0.004	96	34967	0.1587	0.1629	
45 Tert-butyl ethyl ether	59	8.425	8.426	-0.001	97	53963	0.1587	0.1615	
46 Tetrahydrofuran	42	8.679	8.670	0.009	94	21071	0.1587	0.1561	
47 1,1,1-Trichloroethane	97	9.283	9.289	-0.006	96	32548	0.1587	0.1535	
48 1,2-Dichloroethane	62	9.358	9.362	-0.004	96	24832	0.1587	0.1559	
49 n-Butanol	31	9.881	9.860	0.021	67	6904	0.1587	0.1336	
50 Benzene	78	9.865	9.872	-0.007	97	51860	0.1587	0.1612	
51 Cyclohexane	69	9.892	9.897	-0.005	94	8598	0.1587	0.1669	
52 Carbon tetrachloride	117	9.908	9.911	-0.003	98	32899	0.1587	0.1485	
53 2,3-Dimethylpentane	71	10.048	10.055	-0.007	91	12249	0.1587	0.1591	
54 Thiophene	84	10.135	10.140	-0.005	97	27714	0.1587	0.1543	
55 Tert-amyl methyl ether	73	10.393	10.392	0.001	96	48178	0.1587	0.1603	M
56 Isooctane	57	10.717	10.721	-0.004	99	91670	0.1587	0.1607	
58 1,2-Dichloropropane	63	11.105	11.111	-0.006	78	21170	0.1587	0.1616	
57 n-Heptane	71	11.111	11.115	-0.004	87	19510	0.1587	0.1643	
59 Trichloroethene	130	11.170	11.172	-0.002	93	20181	0.1587	0.1550	
60 Dibromomethane	93	11.218	11.220	-0.002	92	19464	0.1587	0.1552	
61 Dichlorobromomethane	83	11.386	11.387	-0.001	98	32987	0.1587	0.1492	
62 1,4-Dioxane	88	11.402	11.397	0.005	94	7903	0.1587	0.1569	
63 Methyl methacrylate	41	11.520	11.520	0.000	95	29933	0.1587	0.1742	
64 Methylcyclohexane	83	11.990	11.992	-0.002	93	37152	0.1587	0.1596	
65 4-Methyl-2-pentanone (MIBK	43	12.389	12.387	0.002	97	49570	0.1587	0.1666	
66 cis-1,3-Dichloropropene	75	12.432	12.435	-0.003	95	27543	0.1587	0.1488	
67 trans-1,3-Dichloropropene	75	13.154	13.157	-0.003	97	24166	0.1587	0.1445	
68 Toluene	91	13.300	13.298	0.002	93	56718	0.1587	0.1546	
69 1,1,2-Trichloroethane	83	13.348	13.353	-0.005	97	17582	0.1587	0.1591	
70 2-Methylthiophene	97	13.445	13.448	-0.003	98	45244	0.1587	0.1535	
71 3-Methylthiophene	97	13.650	13.655	-0.005	99	45329	0.1587	0.1553	
72 2-Hexanone	58	13.780	13.780	0.000	92	20293	0.1587	0.1464	
73 Chlorodibromomethane	129	14.071	14.073	-0.002	97	27912	0.1587	0.1392	
74 n-Octane	85	14.082	14.084	-0.002	97	19387	0.1587	0.1553	
75 Ethylene Dibromide	107	14.362	14.365	-0.003	98	28802	0.1587	0.1474	
76 Tetrachloroethene	129	14.481	14.485	-0.004	93	18517	0.1587	0.1519	
77 Chlorobenzene	112	15.371	15.371	0.000	93	44415	0.1587	0.1565	
78 2,3-Dimethylheptane	43	15.468	15.468	0.000	96	63481	0.1587	0.1664	
79 Ethylbenzene	91	15.683	15.686	-0.003	99	76512	0.1587	0.1564	
80 2-Ethylthiophene	97	15.780	15.784	-0.004	99	54757	0.1587	0.1536	
81 m-Xylene & p-Xylene	91	15.856	15.857	-0.001	99	118349	0.3173	0.3139	
82 Bromoform	173	16.260	16.263	-0.003	93	22441	0.1587	0.1139	
83 Styrene	104	16.320	16.322	-0.002	99	39379	0.1587	0.1426	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.347	16.347	0.000	95	44476	0.1587	0.1634	
85 o-Xylene	91	16.384	16.386	-0.002	98	61303	0.1587	0.1566	
86 1,1,2,2-Tetrachloroethane	83	16.697	16.698	-0.001	98	43117	0.1587	0.1495	
87 1,2,3-Trichloropropane	110	16.859	16.860	-0.001	97	12381	0.1587	0.1479	
88 Isopropylbenzene	105	16.999	17.002	-0.003	96	85832	0.1587	0.1585	
89 N-Propylbenzene	120	17.576	17.578	-0.002	98	22305	0.1587	0.1517	
90 2-Chlorotoluene	126	17.603	17.604	-0.001	95	19389	0.1587	0.1509	
91 4-Ethyltoluene	105	17.743	17.743	0.000	99	81655	0.1587	0.1505	
92 1,3,5-Trimethylbenzene	120	17.824	17.825	-0.001	92	35712	0.1587	0.1459	
93 Alpha Methyl Styrene	118	18.067	18.067	0.000	87	29713	0.1587	0.1318	
94 n-Decane	57	18.185	18.187	-0.002	90	55870	0.1587	0.1579	
95 tert-Butylbenzene	119	18.272	18.276	-0.004	92	71393	0.1587	0.1509	
96 1,2,4-Trimethylbenzene	105	18.288	18.290	-0.002	96	70516	0.1587	0.1526	
97 1,3-Dichlorobenzene	146	18.552	18.555	-0.003	96	43493	0.1587	0.1464	
98 sec-Butylbenzene	105	18.563	18.565	-0.002	99	103325	0.1587	0.1541	
99 Benzyl chloride	91	18.633	18.634	-0.001	97	48705	0.1587	0.1215	
100 1,4-Dichlorobenzene	146	18.649	18.650	-0.001	91	43078	0.1587	0.1447	
101 4-Isopropyltoluene	119	18.741	18.743	-0.002	97	82381	0.1587	0.1493	
102 1,2,3-Trimethylbenzene	105	18.784	18.785	-0.001	98	54922	0.1587	0.1532	
103 Butylcyclohexane	83	18.870	18.872	-0.002	91	58235	0.1587	0.1572	
104 1,2-Dichlorobenzene	146	19.027	19.027	0.000	91	42000	0.1587	0.1464	
105 2,3-Dihydroindene	117	19.032	19.035	-0.003	94	64064	0.1587	0.1496	
106 Indene	116	19.167	19.167	0.000	92	46367	0.1587	0.1385	
107 n-Butylbenzene	91	19.205	19.205	-0.001	98	88309	0.1587	0.1541	
108 Undecane	57	19.577	19.578	-0.001	96	65002	0.1587	0.1593	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.593	19.594	-0.001	97	64507	0.1587	0.1522	
110 1,2-Dibromo-3-Chloropropan	157	19.652	19.653	-0.001	87	15278	0.1587	0.1206	
111 1,2,4,5-Tetramethylbenzene	119	19.997	19.998	-0.001	96	73443	0.1587	0.1475	
112 1,2,3,5-Tetramethylbenzene	119	20.051	20.052	-0.001	94	45526	0.1587	0.1474	
113 1,2,3,4-Tetramethylbenzene	119	20.456	20.457	-0.001	97	62566	0.1587	0.1488	
114 Dodecane	57	20.682	20.682	0.000	95	69932	0.1587	0.1633	
115 1,2,4-Trichlorobenzene	180	20.806	20.809	-0.003	93	36589	0.1587	0.1375	
116 Naphthalene	128	20.941	20.942	-0.001	99	94353	0.1587	0.1518	
117 Benzo(b)thiophene	134	21.049	21.046	0.003	99	52333	0.1587	0.1466	
118 Hexachlorobutadiene	225	21.194	21.195	-0.001	92	29583	0.1587	0.1298	
119 1,2,3-Trichlorobenzene	180	21.237	21.239	-0.002	94	37386	0.1587	0.1420	
120 2-Methylnaphthalene	142	21.949	21.947	0.002	99	34523	0.4958	0.4799	
121 1-Methylnaphthalene	142	22.073	22.073	0.000	99	38908	0.4958	0.5378	
A 122 C6 Range	1	7.647	(7.595-7.673)		0	134086	0.1587	0.1662	
S 124 Xylenes, Total	100				0		0.4760	0.4705	
S 125 1,2-Dichloroethene, Total	1				0		0.3173	0.3213	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L3DNP_00008	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

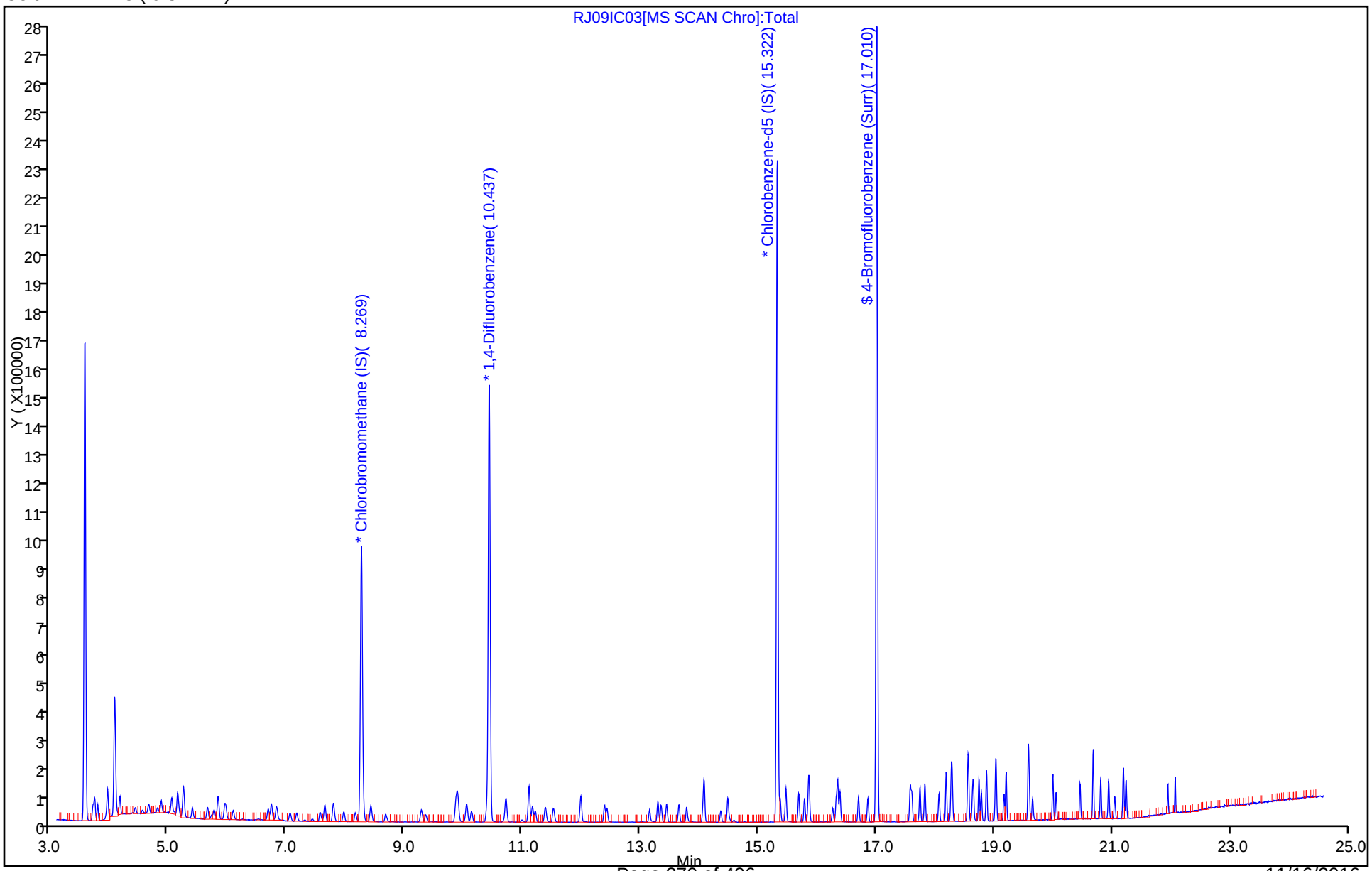
Report Date: 13-Oct-2016 11:37:02 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC03.D

Injection Date:	09-Oct-2016 19:48:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L3			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

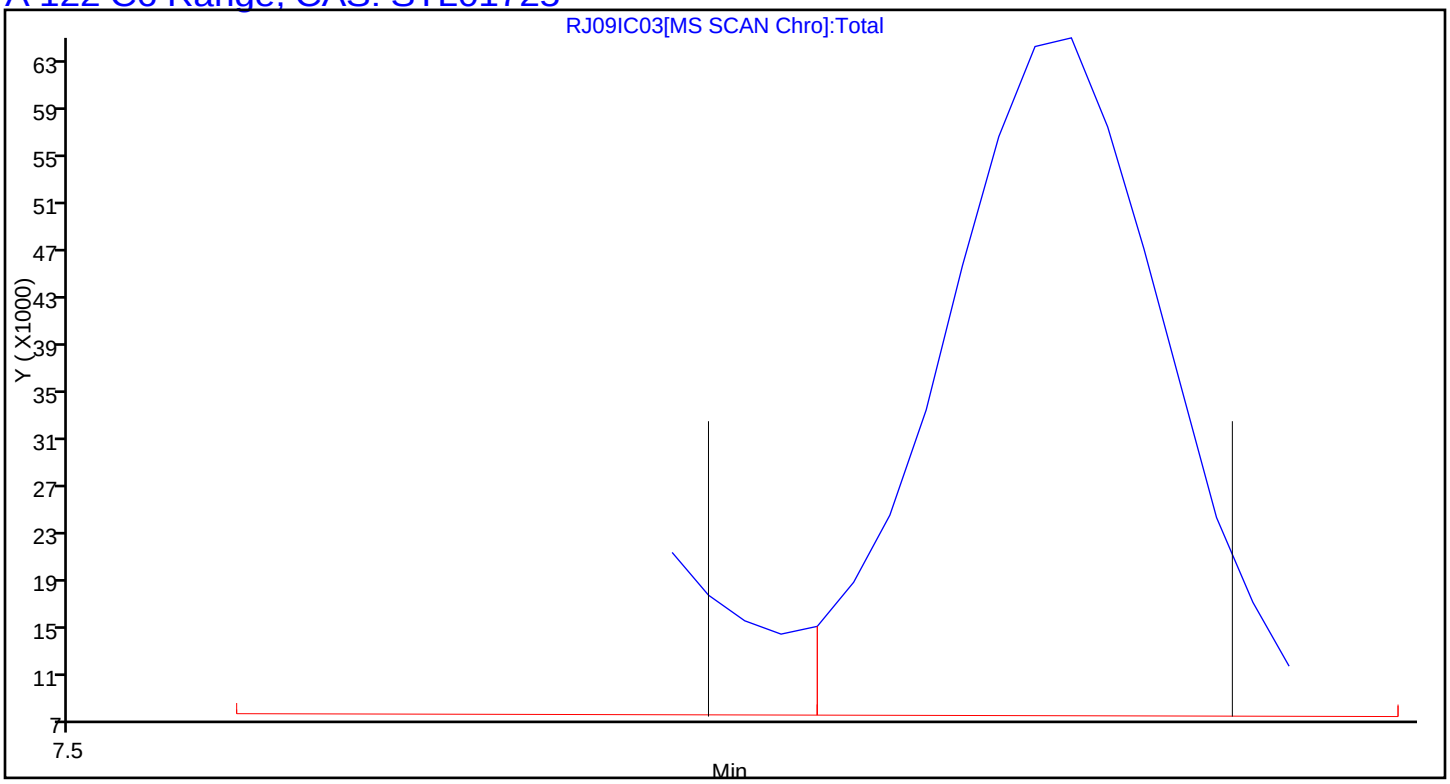


Report Date: 13-Oct-2016 11:37:02 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC03.D				
Injection Date:	09-Oct-2016 19:48:30	Instrument ID:	MR		
Lims ID:	IC L3				
Client ID:					
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

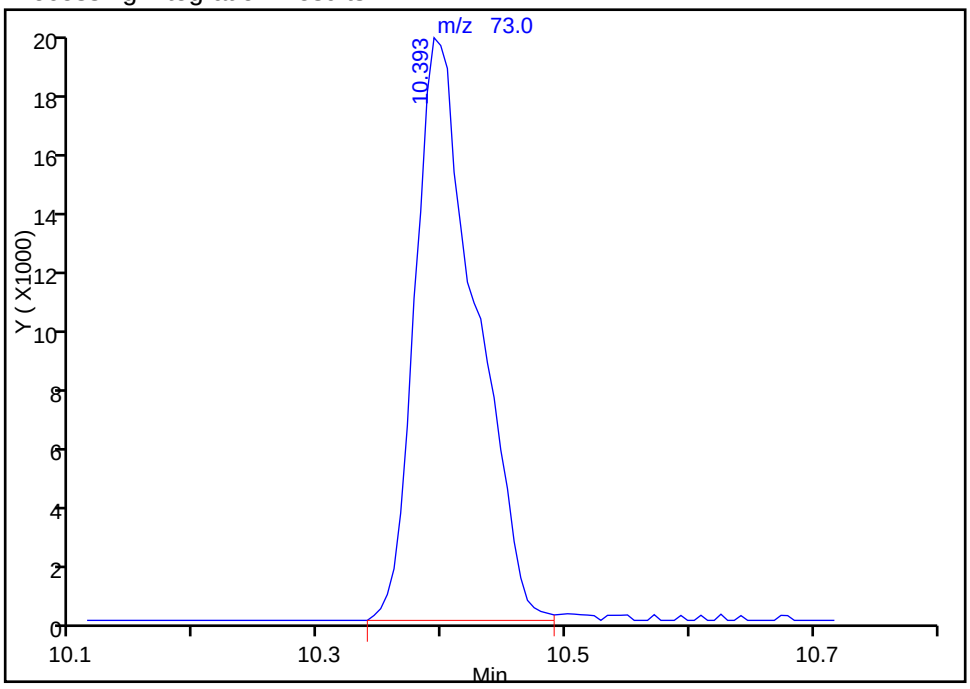
Data File:	\\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC03.D				
Injection Date:	09-Oct-2016 19:48:30	Instrument ID:	MR		
Lims ID:	IC L3				
Client ID:					
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

55 Tert-amyl methyl ether, CAS: 994-05-8

Signal: 1

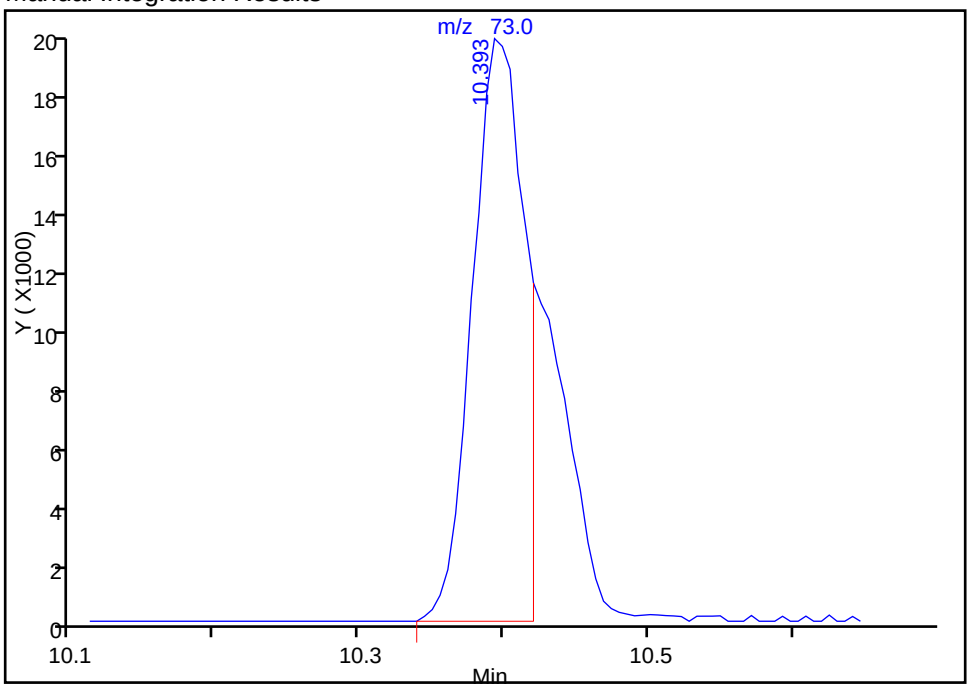
Processing Integration Results

RT: 10.39
Area: 64899
Amount: 0.204394
Amount Units: ppb v/v



Manual Integration Results

RT: 10.39
Area: 48178
Amount: 0.160278
Amount Units: ppb v/v



Reviewer: barlozhetskayaa, 11-Oct-2016 15:52:36

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC04.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 09-Oct-2016 20:35:30 ALS Bottle#: 3 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003513-006
Misc. Info.: 059241
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Oct-2016 11:37:08 Calib Date: 10-Oct-2016 00:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: barlozhetskayaa Date: 11-Oct-2016 15:43:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.274	8.274	0.000	98	291624	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.437	10.440	-0.003	96	1402667	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.322	15.323	-0.001	89	1305322	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.010	17.011	-0.001	89	990447	4.00	4.06	
7 Chlorodifluoromethane	67	3.739	3.734	0.005	97	16782	0.5008	0.5477	
6 Propene	41	3.745	3.739	0.006	99	61020	0.5008	0.5544	
8 Dichlorodifluoromethane	85	3.793	3.790	0.003	100	166965	0.5008	0.5945	
9 Chloromethane	52	3.944	3.940	0.004	100	18477	0.5008	0.5756	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.960	3.960	0.000	97	105384	0.5008	0.5434	
11 Acetaldehyde	44	4.079	4.081	-0.002	95	103463	2.50	3.02	
12 Vinyl chloride	62	4.090	4.089	0.001	98	52475	0.5008	0.5460	
13 Butadiene	54	4.165	4.168	-0.003	96	41533	0.5008	0.5467	
14 Butane	43	4.171	4.171	0.000	93	78632	0.5008	0.5507	
15 Bromomethane	94	4.430	4.432	-0.002	98	44992	0.5008	0.5243	
16 Chloroethane	64	4.554	4.555	-0.001	94	22477	0.5008	0.5331	
17 Ethanol	31	4.656	4.661	-0.005	95	87146	2.50	2.85	
18 Vinyl bromide	106	4.812	4.814	-0.002	99	42892	0.5008	0.5322	
19 2-Methylbutane	43	4.872	4.871	0.001	92	53288	0.5008	0.5634	
20 Acrolein	56	5.050	5.049	0.001	95	17551	0.5008	0.5213	
21 Trichlorofluoromethane	101	5.050	5.053	-0.003	99	133163	0.5008	0.5404	
22 Acetonitrile	40	5.093	5.097	-0.004	100	21323	0.5008	0.5099	
23 Acetone	58	5.147	5.150	-0.003	98	84034	1.50	1.76	
24 Isopropyl alcohol	45	5.238	5.246	-0.008	94	271224	1.50	1.67	
25 Pentane	72	5.255	5.255	0.000	94	11112	0.5008	0.5586	
26 Ethyl ether	31	5.395	5.394	0.001	95	69600	0.5008	0.5301	
27 1,1-Dichloroethene	96	5.659	5.661	-0.002	95	55079	0.5008	0.5351	
28 Acrylonitrile	53	5.729	5.731	-0.002	96	44896	0.5008	0.5181	
29 2-Methyl-2-propanol	59	5.756	5.764	-0.008	96	117835	0.5008	0.5447	
30 1,1,2-Trichloro-1,2,2-trif	101	5.837	5.838	-0.001	96	117448	0.5008	0.5382	
31 Methylene Chloride	84	5.950	5.955	-0.005	98	55736	0.5008	0.5593	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.972	5.975	-0.003	94	55959	0.5008	0.5433	
33 Carbon disulfide	76	6.096	6.098	-0.002	99	161316	0.5008	0.5262	
34 trans-1,2-Dichloroethene	96	6.689	6.693	-0.004	96	55921	0.5008	0.5329	
35 2-Methylpentane	43	6.743	6.743	0.000	96	132232	0.5008	0.5347	
36 Methyl tert-butyl ether	73	6.824	6.825	-0.001	97	155103	0.5008	0.5311	
37 1,1-Dichloroethane	63	7.061	7.063	-0.002	100	105380	0.5008	0.5277	
38 Vinyl acetate	43	7.169	7.172	-0.003	100	167766	0.5008	0.5244	
39 2-Butanone (MEK)	72	7.562	7.564	-0.002	99	28502	0.5008	0.5276	
40 Hexane	56	7.649	7.649	0.000	90	48596	0.5008	0.5142	
41 Isopropyl ether	45	7.789	7.792	-0.003	98	222056	0.5008	0.5441	
42 cis-1,2-Dichloroethene	96	7.972	7.977	-0.005	97	55488	0.5008	0.5226	
43 Ethyl acetate	43	8.161	8.162	-0.001	98	138627	0.5008	0.5256	
44 Chloroform	83	8.301	8.305	-0.004	97	111131	0.5008	0.5268	
45 Tert-butyl ethyl ether	59	8.420	8.426	-0.006	96	172075	0.5008	0.5240	
46 Tetrahydrofuran	42	8.668	8.670	-0.002	94	72382	0.5008	0.5455	
47 1,1,1-Trichloroethane	97	9.288	9.289	-0.001	96	107012	0.5008	0.5135	
48 1,2-Dichloroethane	62	9.358	9.362	-0.004	96	79352	0.5008	0.5073	
49 n-Butanol	31	9.860	9.860	0.000	63	24466	0.5008	0.4822	
50 Benzene	78	9.870	9.872	-0.002	98	161444	0.5008	0.5108	
51 Cyclohexane	69	9.892	9.897	-0.005	95	26954	0.5008	0.5328	
52 Carbon tetrachloride	117	9.908	9.911	-0.003	97	109423	0.5008	0.5030	
53 2,3-Dimethylpentane	71	10.054	10.055	-0.001	91	38318	0.5008	0.5068	
54 Thiophene	84	10.135	10.140	-0.005	97	89555	0.5008	0.5076	
55 Tert-amyl methyl ether	73	10.388	10.392	-0.004	96	152009	0.5008	0.5149	M
56 Isooctane	57	10.717	10.721	-0.004	98	290024	0.5008	0.5176	
58 1,2-Dichloropropane	63	11.111	11.111	0.000	67	66233	0.5008	0.5149	
57 n-Heptane	71	11.116	11.115	0.001	87	60416	0.5008	0.5179	
59 Trichloroethene	130	11.170	11.172	-0.002	96	64015	0.5008	0.5005	
60 Dibromomethane	93	11.219	11.220	-0.001	92	64085	0.5008	0.5201	
61 Dichlorobromomethane	83	11.386	11.387	-0.001	99	108902	0.5008	0.5013	
62 1,4-Dioxane	88	11.396	11.397	-0.001	94	25633	0.5008	0.5181	
63 Methyl methacrylate	41	11.520	11.520	0.000	95	81469	0.5008	0.4828	
64 Methylcyclohexane	83	11.990	11.992	-0.002	93	118349	0.5008	0.5175	
65 4-Methyl-2-pentanone (MIBK	43	12.383	12.387	-0.004	98	147835	0.5008	0.5060	
66 cis-1,3-Dichloropropene	75	12.432	12.435	-0.003	96	91102	0.5008	0.5010	
67 trans-1,3-Dichloropropene	75	13.154	13.157	-0.003	98	82422	0.5008	0.4991	
68 Toluene	91	13.295	13.298	-0.003	93	187712	0.5008	0.5181	
69 1,1,2-Trichloroethane	83	13.349	13.353	-0.005	98	56376	0.5008	0.5166	
70 2-Methylthiophene	97	13.446	13.448	-0.002	98	150672	0.5008	0.5178	
71 3-Methylthiophene	97	13.650	13.655	-0.005	100	148216	0.5008	0.5143	
72 2-Hexanone	58	13.780	13.780	0.000	92	67524	0.5008	0.4935	
73 Chlorodibromomethane	129	14.071	14.073	-0.002	98	96666	0.5008	0.4882	
74 n-Octane	85	14.082	14.084	-0.002	96	63261	0.5008	0.5134	
75 Ethylene Dibromide	107	14.362	14.365	-0.003	98	96523	0.5008	0.5003	
76 Tetrachloroethene	129	14.481	14.485	-0.004	94	60688	0.5008	0.5044	
77 Chlorobenzene	112	15.371	15.371	0.000	92	142944	0.5008	0.5101	
78 2,3-Dimethylheptane	43	15.468	15.468	0.000	96	196108	0.5008	0.5206	
79 Ethylbenzene	91	15.683	15.686	-0.003	99	245680	0.5008	0.5086	
80 2-Ethylthiophene	97	15.780	15.784	-0.004	99	180119	0.5008	0.5117	
81 m-Xylene & p-Xylene	91	15.856	15.857	-0.001	99	382846	1.00	1.03	
82 Bromoform	173	16.260	16.263	-0.003	93	83062	0.5008	0.4268	
83 Styrene	104	16.320	16.322	-0.002	98	135925	0.5008	0.4987	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.347	16.347	0.000	94	141473	0.5008	0.5265	
85 o-Xylene	91	16.384	16.386	-0.002	99	195952	0.5008	0.5070	
86 1,1,2,2-Tetrachloroethane	83	16.697	16.698	-0.001	99	147709	0.5008	0.5186	
87 1,2,3-Trichloropropane	110	16.859	16.860	-0.001	98	42638	0.5008	0.5160	
88 Isopropylbenzene	105	16.999	17.002	-0.003	97	271170	0.5008	0.5073	
89 N-Propylbenzene	120	17.576	17.578	-0.002	98	72255	0.5008	0.4979	
90 2-Chlorotoluene	126	17.603	17.604	-0.001	98	63414	0.5008	0.4999	
91 4-Ethyltoluene	105	17.743	17.743	0.000	99	269366	0.5008	0.5030	
92 1,3,5-Trimethylbenzene	120	17.824	17.825	-0.001	93	121106	0.5008	0.5011	
93 Alpha Methyl Styrene	118	18.067	18.067	0.000	87	102477	0.5008	0.4604	
94 n-Decane	57	18.185	18.187	-0.002	89	180244	0.5008	0.5158	
95 tert-Butylbenzene	119	18.272	18.276	-0.004	90	234371	0.5008	0.5017	
96 1,2,4-Trimethylbenzene	105	18.288	18.290	-0.002	96	232547	0.5008	0.5096	
97 1,3-Dichlorobenzene	146	18.552	18.555	-0.003	97	143202	0.5008	0.4883	
98 sec-Butylbenzene	105	18.563	18.565	-0.002	99	341379	0.5008	0.5158	
99 Benzyl chloride	91	18.633	18.634	-0.001	97	183473	0.5008	0.4634	
100 1,4-Dichlorobenzene	146	18.649	18.650	-0.001	95	144058	0.5008	0.4902	
101 4-Isopropyltoluene	119	18.741	18.743	-0.002	97	271629	0.5008	0.4986	
102 1,2,3-Trimethylbenzene	105	18.784	18.785	-0.001	98	178324	0.5008	0.5038	
103 Butylcyclohexane	83	18.870	18.872	-0.002	91	189129	0.5008	0.5171	
104 1,2-Dichlorobenzene	146	19.027	19.027	0.000	94	139211	0.5008	0.4916	
105 2,3-Dihydroindene	117	19.032	19.035	-0.003	94	214137	0.5008	0.5066	
106 Indene	116	19.167	19.167	0.000	92	156378	0.5008	0.4730	
107 n-Butylbenzene	91	19.205	19.205	0.000	98	292942	0.5008	0.5176	
108 Undecane	57	19.577	19.578	-0.001	96	214872	0.5008	0.5332	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.593	19.594	-0.001	97	211315	0.5008	0.5050	
110 1,2-Dibromo-3-Chloropropan	157	19.652	19.653	-0.001	89	56296	0.5008	0.4502	
111 1,2,4,5-Tetramethylbenzene	119	19.997	19.998	-0.001	96	248270	0.5008	0.5052	
112 1,2,3,5-Tetramethylbenzene	119	20.051	20.052	-0.001	94	151722	0.5008	0.4974	
113 1,2,3,4-Tetramethylbenzene	119	20.456	20.457	-0.001	97	204801	0.5008	0.4935	
114 Dodecane	57	20.682	20.682	0.000	94	226315	0.5008	0.5353	
115 1,2,4-Trichlorobenzene	180	20.806	20.809	-0.003	93	119905	0.5008	0.4563	
116 Naphthalene	128	20.941	20.942	-0.001	99	298526	0.5008	0.4864	
117 Benzo(b)thiophene	134	21.043	21.046	-0.003	99	157444	0.5008	0.4467	
118 Hexachlorobutadiene	225	21.194	21.195	-0.001	91	99162	0.5008	0.4407	
119 1,2,3-Trichlorobenzene	180	21.238	21.239	-0.001	93	116597	0.5008	0.4486	
120 2-Methylnaphthalene	142	21.944	21.947	-0.003	99	100634	1.56	1.42	
121 1-Methylnaphthalene	142	22.073	22.073	0.000	99	111980	1.56	1.57	
A 122 C6 Range	1	7.650	(7.589-7.689)		0	433205	0.5008	0.5467	
S 124 Xylenes, Total	100				0		1.50	1.54	
S 125 1,2-Dichloroethene, Total	1				0		1.00	1.06	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L5DNP_00007	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

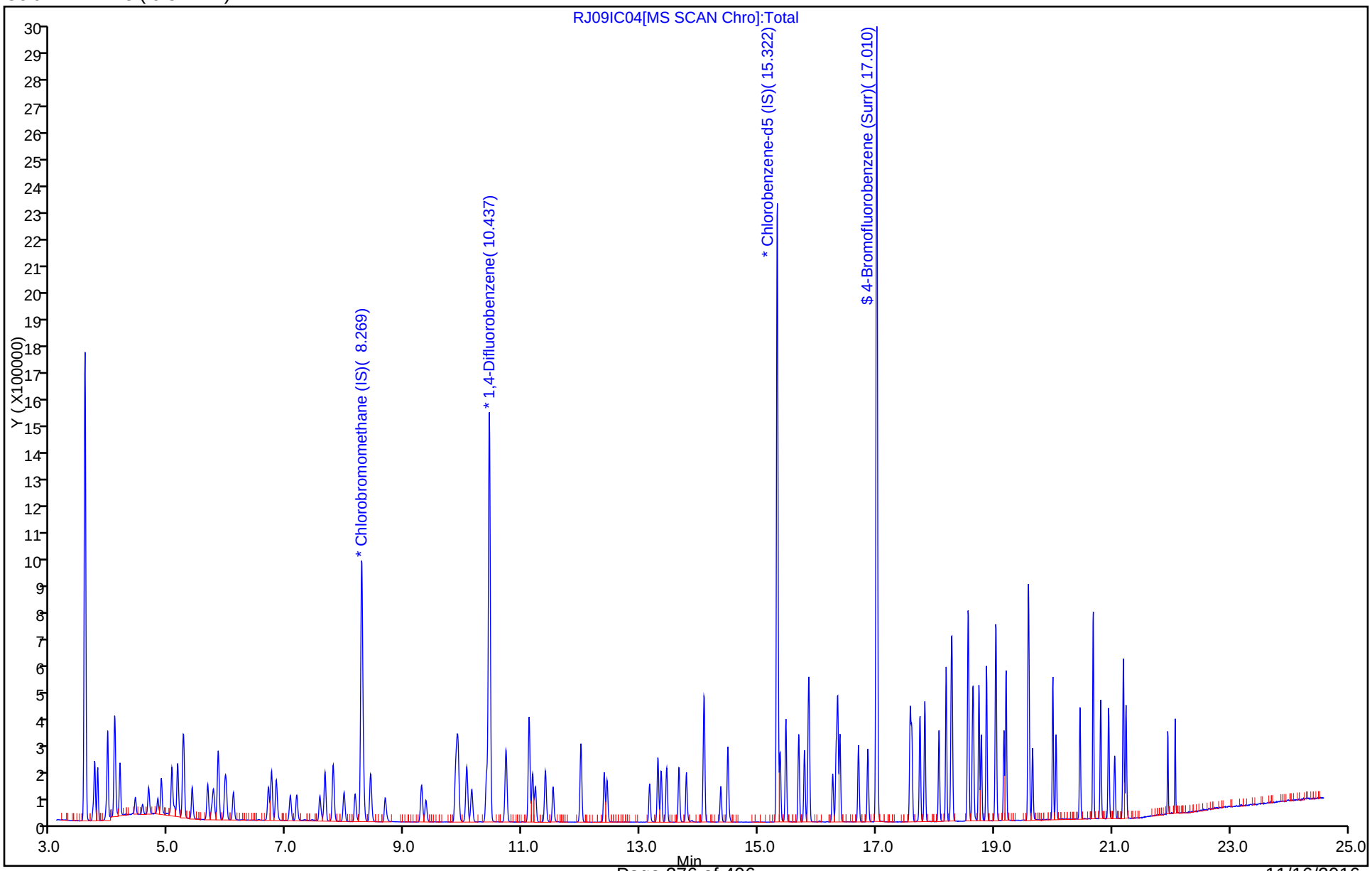
Report Date: 13-Oct-2016 11:37:09 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC04.D

Injection Date:	09-Oct-2016 20:35:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L4			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

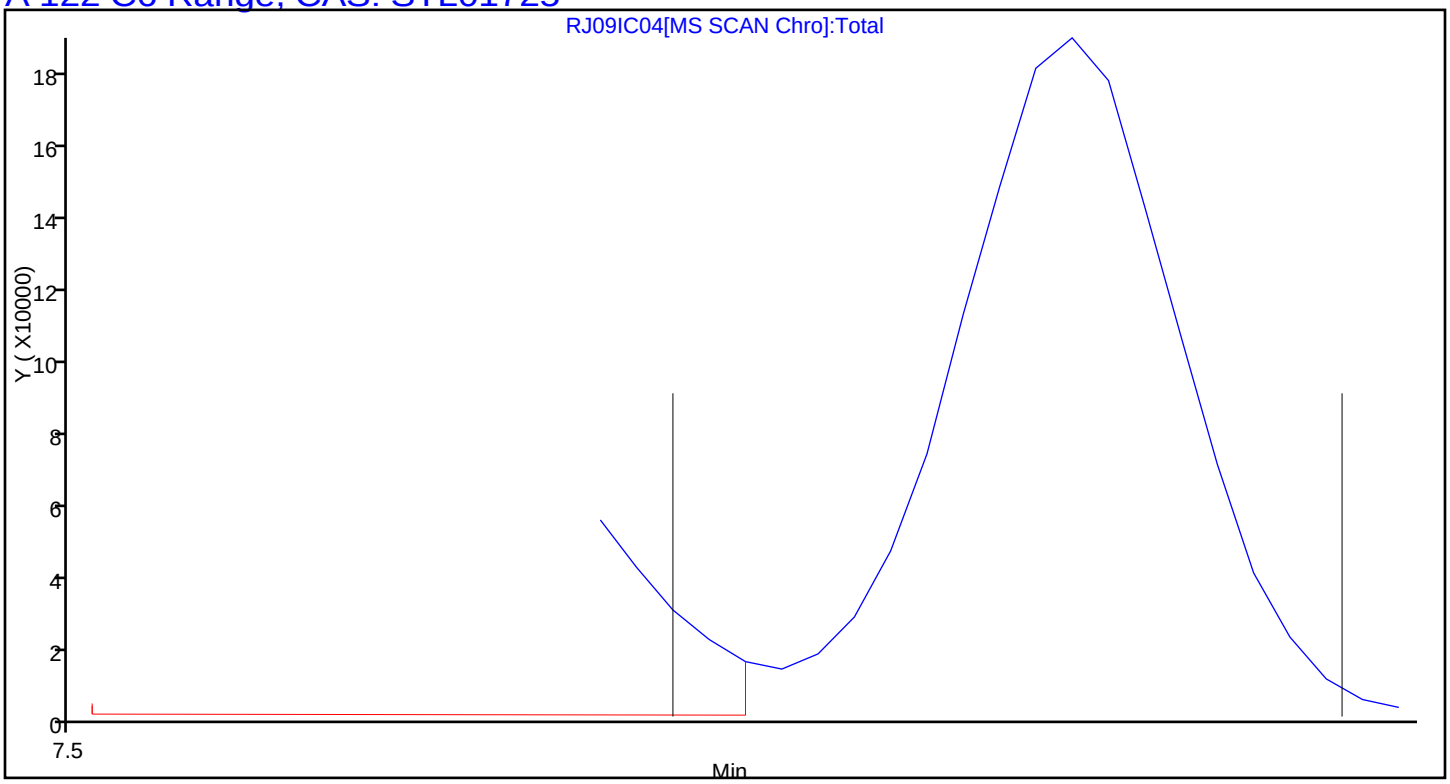


Report Date: 13-Oct-2016 11:37:10 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC04.D				
Injection Date:	09-Oct-2016 20:35:30	Instrument ID:	MR		
Lims ID:	IC L4				
Client ID:					
Operator ID:		ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

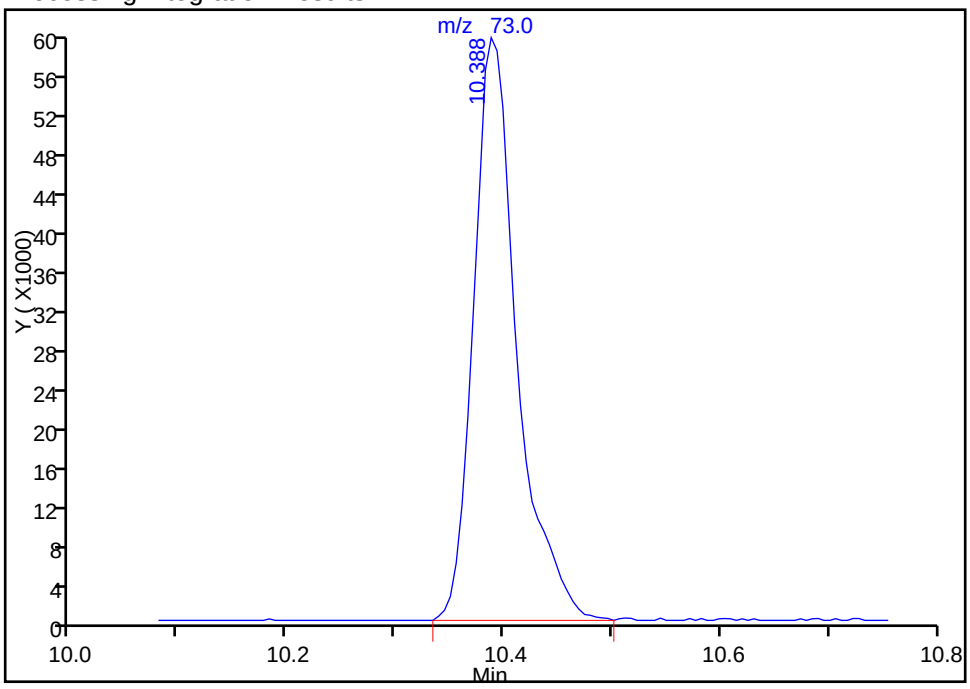
Data File:	\\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC04.D				
Injection Date:	09-Oct-2016 20:35:30	Instrument ID:	MR		
Lims ID:	IC L4				
Client ID:					
Operator ID:		ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

55 Tert-amyl methyl ether, CAS: 994-05-8

Signal: 1

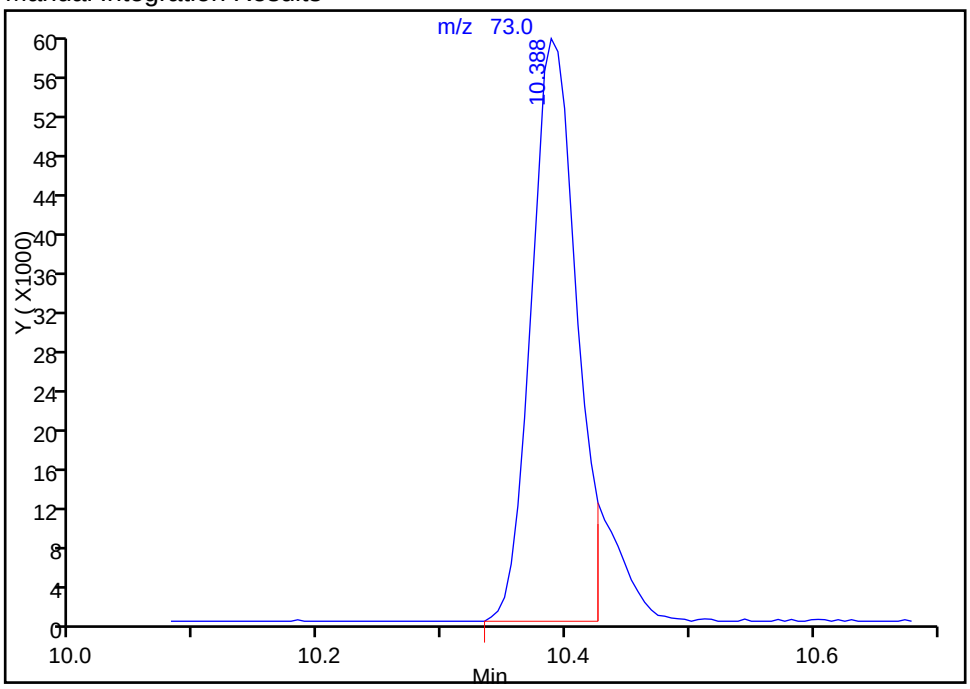
Processing Integration Results

RT: 10.39
Area: 166790
Amount: 0.557955
Amount Units: ppb v/v



Manual Integration Results

RT: 10.39
Area: 152009
Amount: 0.514863
Amount Units: ppb v/v



Reviewer: barlozhetskayaa, 11-Oct-2016 15:54:12

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC05.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 09-Oct-2016 21:23:30 ALS Bottle#: 3 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003513-007
Misc. Info.: 059241
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Oct-2016 11:37:13 Calib Date: 10-Oct-2016 00:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: barlozhetskayaa Date: 11-Oct-2016 15:41:24

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.269	8.274	-0.005	98	304781	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.437	10.440	-0.003	96	1393442	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.322	15.323	-0.001	89	1299511	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.010	17.011	-0.001	88	988432	4.00	4.07	
7 Chlorodifluoromethane	67	3.723	3.734	-0.011	97	32357	1.00	1.01	
6 Propene	41	3.729	3.739	-0.010	98	120700	1.00	1.05	
8 Dichlorodifluoromethane	85	3.777	3.790	-0.013	100	313813	1.00	1.07	
9 Chloromethane	52	3.928	3.940	-0.012	100	34697	1.00	1.03	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.950	3.960	-0.010	96	207935	1.00	1.03	
11 Acetaldehyde	44	4.068	4.081	-0.013	98	197671	5.01	5.51	
12 Vinyl chloride	62	4.079	4.089	-0.010	98	102249	1.00	1.02	
13 Butadiene	54	4.155	4.168	-0.013	98	80279	1.00	1.01	
14 Butane	43	4.160	4.171	-0.011	93	152101	1.00	1.02	
15 Bromomethane	94	4.419	4.432	-0.013	99	87416	1.00	0.9747	
16 Chloroethane	64	4.543	4.555	-0.012	95	42383	1.00	0.9619	
17 Ethanol	31	4.651	4.661	-0.010	95	166820	5.01	5.23	
18 Vinyl bromide	106	4.802	4.814	-0.012	99	83562	1.00	0.99	
19 2-Methylbutane	43	4.861	4.871	-0.010	91	102656	1.00	1.04	
20 Acrolein	56	5.039	5.049	-0.010	33	32065	1.00	0.9112	
21 Trichlorofluoromethane	101	5.044	5.053	-0.009	99	259643	1.00	1.01	
22 Acetonitrile	40	5.093	5.097	-0.004	94	41023	1.00	0.9387	
23 Acetone	58	5.141	5.150	-0.009	98	157438	3.01	3.16	
24 Isopropyl alcohol	45	5.233	5.246	-0.013	95	524697	3.01	3.09	
25 Pentane	72	5.244	5.255	-0.011	96	21301	1.00	1.02	
26 Ethyl ether	31	5.384	5.394	-0.010	95	135578	1.00	0.9880	
27 1,1-Dichloroethene	96	5.654	5.661	-0.007	95	108043	1.00	1.00	
28 Acrylonitrile	53	5.724	5.731	-0.007	94	89553	1.00	0.9888	
29 2-Methyl-2-propanol	59	5.751	5.764	-0.013	96	233467	1.00	1.03	
30 1,1,2-Trichloro-1,2,2-trif	101	5.832	5.838	-0.006	96	229515	1.00	1.01	
31 Methylene Chloride	84	5.945	5.955	-0.010	99	102739	1.00	0.9865	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.966	5.975	-0.009	94	109699	1.00	1.02	
33 Carbon disulfide	76	6.085	6.098	-0.013	99	319023	1.00	1.00	
34 trans-1,2-Dichloroethene	96	6.684	6.693	-0.009	96	109049	1.00	0.99	
35 2-Methylpentane	43	6.738	6.743	-0.005	96	261937	1.00	1.01	
36 Methyl tert-butyl ether	73	6.818	6.825	-0.007	97	309344	1.00	1.01	
37 1,1-Dichloroethane	63	7.056	7.063	-0.007	100	209936	1.00	1.01	
38 Vinyl acetate	43	7.164	7.172	-0.008	100	340358	1.00	1.02	
39 2-Butanone (MEK)	72	7.557	7.564	-0.007	99	55830	1.00	0.9888	
40 Hexane	56	7.643	7.649	-0.006	89	95248	1.00	0.9643	
41 Isopropyl ether	45	7.784	7.792	-0.008	98	427105	1.00	1.00	
42 cis-1,2-Dichloroethene	96	7.972	7.977	-0.005	97	110007	1.00	0.99	
43 Ethyl acetate	43	8.156	8.162	-0.006	99	276372	1.00	1.00	
44 Chloroform	83	8.301	8.305	-0.004	97	222253	1.00	1.01	
45 Tert-butyl ethyl ether	59	8.420	8.426	-0.006	96	343831	1.00	1.00	
46 Tetrahydrofuran	42	8.663	8.670	-0.007	95	139021	1.00	1.00	
47 1,1,1-Trichloroethane	97	9.288	9.289	-0.001	96	208965	1.00	0.9595	
48 1,2-Dichloroethane	62	9.358	9.362	-0.004	97	153903	1.00	0.99	
49 n-Butanol	31	9.849	9.860	-0.011	61	49711	1.00	0.9862	
50 Benzene	78	9.870	9.872	-0.002	97	311555	1.00	0.99	
51 Cyclohexane	69	9.892	9.897	-0.005	96	51355	1.00	1.02	
52 Carbon tetrachloride	117	9.908	9.911	-0.003	98	213795	1.00	0.9892	
53 2,3-Dimethylpentane	71	10.048	10.055	-0.007	91	73456	1.00	0.9779	
54 Thiophene	84	10.135	10.140	-0.005	97	173831	1.00	0.99	
55 Tert-amyl methyl ether	73	10.388	10.392	-0.004	96	314545	1.00	1.07	
56 Isooctane	57	10.717	10.721	-0.004	98	560387	1.00	1.01	
58 1,2-Dichloropropane	63	11.111	11.111	0.000	87	127472	1.00	1.00	
57 n-Heptane	71	11.111	11.115	-0.004	92	117466	1.00	1.01	
59 Trichloroethene	130	11.170	11.172	-0.002	94	126111	1.00	0.99	
60 Dibromomethane	93	11.219	11.220	-0.001	91	123112	1.00	1.01	
61 Dichlorobromomethane	83	11.386	11.387	-0.001	98	215448	1.00	1.00	
62 1,4-Dioxane	88	11.391	11.397	-0.006	92	51509	1.00	1.05	
63 Methyl methacrylate	41	11.515	11.520	-0.005	94	164332	1.00	0.9804	
64 Methylcyclohexane	83	11.990	11.992	-0.002	93	229900	1.00	1.01	
65 4-Methyl-2-pentanone (MIBK	43	12.383	12.387	-0.004	98	293389	1.00	1.01	
66 cis-1,3-Dichloropropene	75	12.432	12.435	-0.003	96	183159	1.00	1.01	
67 trans-1,3-Dichloropropene	75	13.154	13.157	-0.003	98	167399	1.00	1.02	
68 Toluene	91	13.295	13.298	-0.003	93	364552	1.00	1.01	
69 1,1,2-Trichloroethane	83	13.349	13.353	-0.004	98	109838	1.00	1.01	
70 2-Methylthiophene	97	13.446	13.448	-0.002	98	293070	1.00	1.01	
71 3-Methylthiophene	97	13.656	13.655	0.001	100	288683	1.00	1.01	
72 2-Hexanone	58	13.775	13.780	-0.005	92	137941	1.00	1.01	
73 Chlorodibromomethane	129	14.071	14.073	-0.002	97	199567	1.00	1.01	
74 n-Octane	85	14.082	14.084	-0.002	96	124781	1.00	1.02	
75 Ethylene Dibromide	107	14.362	14.365	-0.003	98	193822	1.00	1.01	
76 Tetrachloroethene	129	14.481	14.485	-0.004	94	119777	1.00	1.00	
77 Chlorobenzene	112	15.371	15.371	0.000	92	277781	1.00	1.00	
78 2,3-Dimethylheptane	43	15.468	15.468	0.000	96	386933	1.00	1.03	
79 Ethylbenzene	91	15.683	15.686	-0.003	99	482417	1.00	1.00	
80 2-Ethylthiophene	97	15.781	15.784	-0.003	99	357727	1.00	1.02	
81 m-Xylene & p-Xylene	91	15.856	15.857	-0.001	99	760087	2.00	2.05	
82 Bromoform	173	16.260	16.263	-0.003	94	179801	1.00	0.9281	
83 Styrene	104	16.320	16.322	-0.002	99	279867	1.00	1.03	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.347	16.347	0.000	95	280367	1.00	1.05	
85 o-Xylene	91	16.384	16.386	-0.002	99	390384	1.00	1.01	
86 1,1,2,2-Tetrachloroethane	83	16.697	16.698	-0.001	98	295979	1.00	1.04	
87 1,2,3-Trichloropropane	110	16.859	16.860	-0.001	97	85367	1.00	1.04	
88 Isopropylbenzene	105	16.999	17.002	-0.003	98	533707	1.00	1.00	
89 N-Propylbenzene	120	17.576	17.578	-0.002	99	146599	1.00	1.01	
90 2-Chlorotoluene	126	17.603	17.604	-0.001	97	126862	1.00	1.00	
91 4-Ethyltoluene	105	17.743	17.743	0.000	99	546443	1.00	1.02	
92 1,3,5-Trimethylbenzene	120	17.824	17.825	-0.001	92	247987	1.00	1.03	
93 Alpha Methyl Styrene	118	18.067	18.067	0.000	88	219451	1.00	0.99	
94 n-Decane	57	18.186	18.187	-0.001	89	374016	1.00	1.08	
95 tert-Butylbenzene	119	18.272	18.276	-0.004	90	481563	1.00	1.04	
96 1,2,4-Trimethylbenzene	105	18.288	18.290	-0.002	96	473709	1.00	1.04	
97 1,3-Dichlorobenzene	146	18.552	18.555	-0.003	97	294320	1.00	1.01	
98 sec-Butylbenzene	105	18.563	18.565	-0.002	98	699472	1.00	1.06	
99 Benzyl chloride	91	18.633	18.634	-0.001	97	407422	1.00	1.03	
100 1,4-Dichlorobenzene	146	18.649	18.650	-0.001	94	299184	1.00	1.02	
101 4-Isopropyltoluene	119	18.741	18.743	-0.002	97	570304	1.00	1.05	
102 1,2,3-Trimethylbenzene	105	18.784	18.785	-0.001	98	364838	1.00	1.04	
103 Butylcyclohexane	83	18.870	18.872	-0.002	91	387583	1.00	1.06	
104 1,2-Dichlorobenzene	146	19.027	19.027	0.000	92	290819	1.00	1.03	
105 2,3-Dihydroindene	117	19.032	19.035	-0.003	94	443992	1.00	1.06	
106 Indene	116	19.167	19.167	0.000	92	333779	1.00	1.01	
107 n-Butylbenzene	91	19.205	19.205	0.000	98	605213	1.00	1.07	
108 Undecane	57	19.577	19.578	-0.001	97	458631	1.00	1.14	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.593	19.594	-0.001	97	442472	1.00	1.06	
110 1,2-Dibromo-3-Chloropropan	157	19.652	19.653	-0.001	97	126291	1.00	1.01	
111 1,2,4,5-Tetramethylbenzene	119	19.997	19.998	-0.001	96	531178	1.00	1.09	
112 1,2,3,5-Tetramethylbenzene	119	20.051	20.052	-0.001	94	319609	1.00	1.05	
113 1,2,3,4-Tetramethylbenzene	119	20.456	20.457	-0.001	97	438782	1.00	1.06	
114 Dodecane	57	20.682	20.682	0.000	95	479017	1.00	1.14	
115 1,2,4-Trichlorobenzene	180	20.806	20.809	-0.003	93	268804	1.00	1.03	
116 Naphthalene	128	20.941	20.942	-0.001	99	667710	1.00	1.09	
117 Benzo(b)thiophene	134	21.043	21.046	-0.003	99	365869	1.00	1.04	
118 Hexachlorobutadiene	225	21.194	21.195	-0.001	93	222916	1.00	1.00	
119 1,2,3-Trichlorobenzene	180	21.238	21.239	-0.001	94	262098	1.00	1.01	
120 2-Methylnaphthalene	142	21.944	21.947	-0.003	100	247911	3.13	3.51	
121 1-Methylnaphthalene	142	22.073	22.073	0.000	99	260262	3.13	3.66	
A 122 C6 Range	1	7.644	(7.579-7.678)		0	817759	1.00	1.04	
S 124 Xylenes, Total	100				0		3.00	3.07	
S 125 1,2-Dichloroethene, Total	1				0		2.00	1.99	

Reagents:

40L5DNP_00007	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

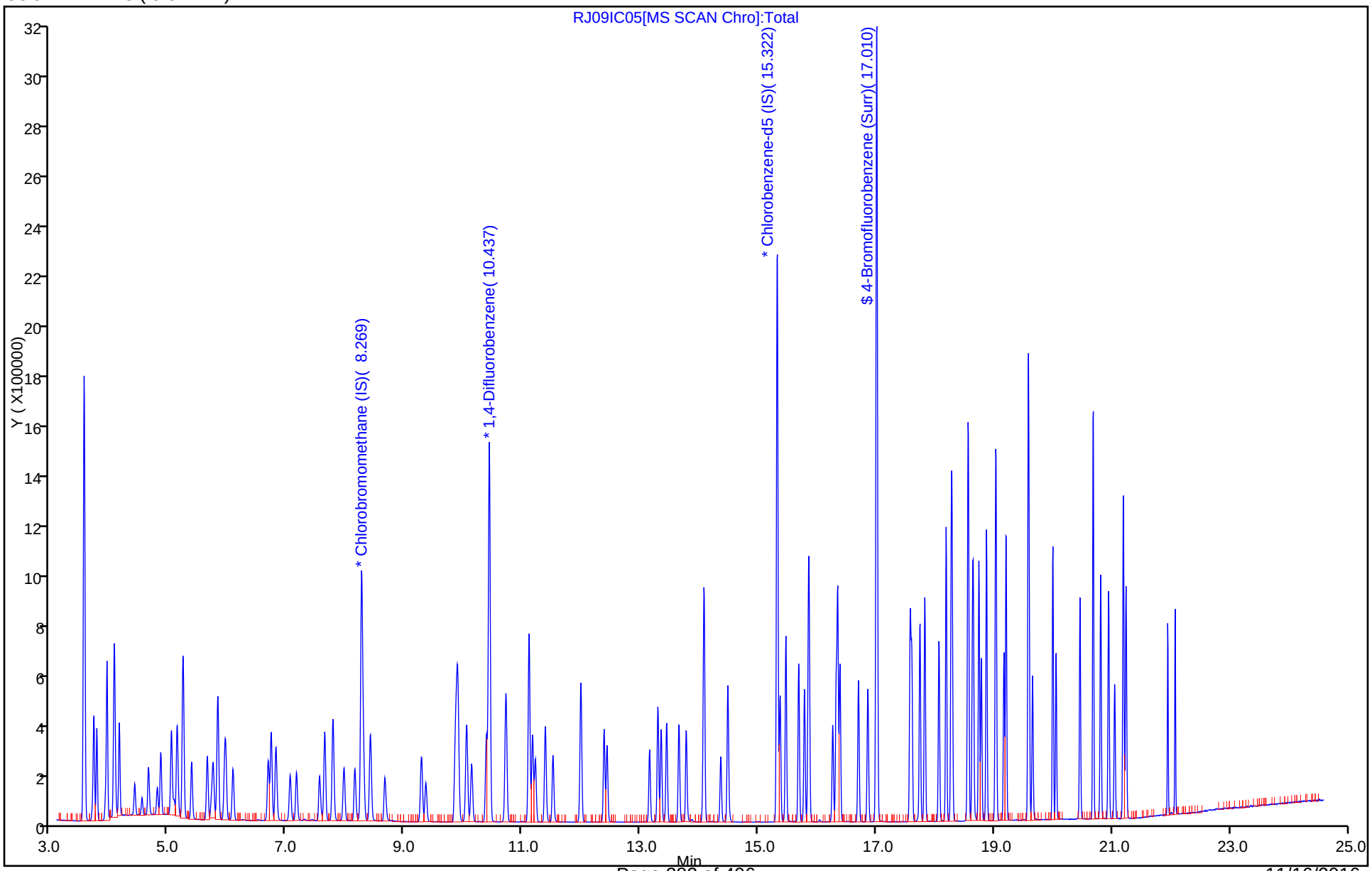
Report Date: 13-Oct-2016 11:37:14 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC05.D

Injection Date:	09-Oct-2016 21:23:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L5			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

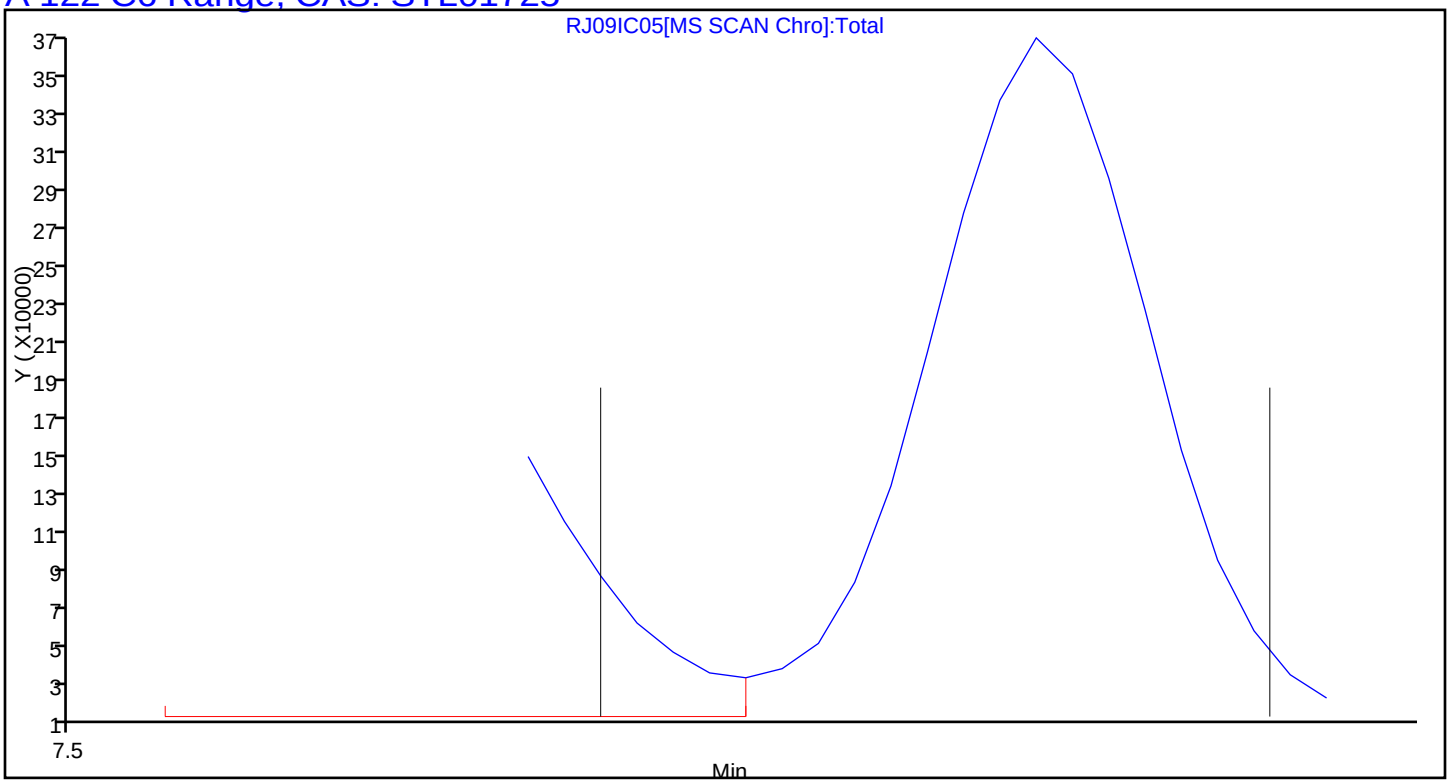


Report Date: 13-Oct-2016 11:37:14 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC05.D				
Injection Date:	09-Oct-2016 21:23:30	Instrument ID:	MR		
Lims ID:	IC L5				
Client ID:					
Operator ID:		ALS Bottle#:	3	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09CIS06.D
Lims ID: ICIS L6
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 09-Oct-2016 22:11:30 ALS Bottle#: 4 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003513-008
Misc. Info.: 059240
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Oct-2016 11:37:20 Calib Date: 10-Oct-2016 00:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: barlozhetskayaa Date: 10-Oct-2016 10:17:33

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.274	8.274	0.000	98	310122	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.437	10.440	-0.003	96	1397792	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.322	15.323	-0.001	89	1305166	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.010	17.011	-0.001	89	993878	4.00	4.08	
7 Chlorodifluoromethane	67	3.723	3.734	-0.011	97	63474	2.00	1.95	
6 Propene	41	3.729	3.739	-0.010	99	229803	2.00	1.96	
8 Dichlorodifluoromethane	85	3.777	3.790	-0.013	100	589130	2.00	1.97	
9 Chloromethane	52	3.928	3.940	-0.012	100	69376	2.00	2.03	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.950	3.960	-0.010	93	408220	2.00	1.98	
11 Acetaldehyde	44	4.074	4.081	-0.007	95	376672	9.99	10.3	
12 Vinyl chloride	62	4.079	4.089	-0.010	77	201546	2.00	1.97	
13 Butadiene	54	4.160	4.168	-0.008	96	158855	2.00	1.97	
14 Butane	43	4.160	4.171	-0.011	92	301016	2.00	1.98	
15 Bromomethane	94	4.424	4.432	-0.008	99	175207	2.00	1.92	
16 Chloroethane	64	4.548	4.555	-0.007	96	86278	2.00	1.92	
17 Ethanol	31	4.656	4.661	-0.005	95	326357	9.99	10.1	
18 Vinyl bromide	106	4.807	4.814	-0.007	98	166603	2.00	1.94	
19 2-Methylbutane	43	4.866	4.871	-0.005	92	203097	2.00	2.02	
20 Acrolein	56	5.039	5.049	-0.010	94	58718	2.00	1.64	
21 Trichlorofluoromethane	101	5.044	5.053	-0.009	99	514597	2.00	1.96	
22 Acetonitrile	40	5.087	5.097	-0.010	99	92650	2.00	2.08	
23 Acetone	58	5.141	5.150	-0.009	98	305057	5.99	6.02	
24 Isopropyl alcohol	45	5.238	5.246	-0.008	96	1038259	5.99	6.01	
25 Pentane	72	5.249	5.255	-0.006	95	42040	2.00	1.99	
26 Ethyl ether	31	5.384	5.394	-0.010	95	275346	2.00	1.97	
27 1,1-Dichloroethene	96	5.654	5.661	-0.007	95	211107	2.00	1.93	
28 Acrylonitrile	53	5.729	5.731	-0.002	95	177073	2.00	1.92	
29 2-Methyl-2-propanol	59	5.751	5.764	-0.013	95	456137	2.00	1.98	
30 1,1,2-Trichloro-1,2,2-trif	101	5.832	5.838	-0.006	96	452240	2.00	1.95	
31 Methylene Chloride	84	5.950	5.955	-0.005	99	197034	2.00	1.86	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.972	5.975	-0.003	94	214470	2.00	1.96	
33 Carbon disulfide	76	6.090	6.098	-0.008	99	652179	2.00	2.00	
34 trans-1,2-Dichloroethene	96	6.689	6.693	-0.004	96	216995	2.00	1.94	
35 2-Methylpentane	43	6.738	6.743	-0.005	96	512013	2.00	1.95	
36 Methyl tert-butyl ether	73	6.818	6.825	-0.007	97	613185	2.00	1.97	
37 1,1-Dichloroethane	63	7.061	7.063	-0.002	100	415312	2.00	1.96	
38 Vinyl acetate	43	7.169	7.172	-0.003	100	675622	2.00	1.99	
39 2-Butanone (MEK)	72	7.557	7.564	-0.007	99	111175	2.00	1.94	
40 Hexane	56	7.649	7.649	0.000	90	189046	2.00	1.88	
41 Isopropyl ether	45	7.784	7.792	-0.008	99	856801	2.00	1.97	
42 cis-1,2-Dichloroethene	96	7.972	7.977	-0.005	96	219831	2.00	1.95	
43 Ethyl acetate	43	8.156	8.162	-0.006	99	553354	2.00	1.97	
44 Chloroform	83	8.307	8.305	0.002	98	440433	2.00	1.96	
45 Tert-butyl ethyl ether	59	8.420	8.426	-0.006	96	686135	2.00	1.96	
46 Tetrahydrofuran	42	8.663	8.670	-0.007	95	278480	2.00	1.97	
47 1,1,1-Trichloroethane	97	9.288	9.289	-0.001	97	435335	2.00	1.96	
48 1,2-Dichloroethane	62	9.364	9.362	0.002	97	307518	2.00	1.97	
49 n-Butanol	31	9.844	9.860	-0.016	86	107482	2.00	2.13	
50 Benzene	78	9.876	9.872	0.004	97	616668	2.00	1.96	
51 Cyclohexane	69	9.897	9.897	0.000	97	101838	2.00	2.02	
52 Carbon tetrachloride	117	9.908	9.911	-0.003	98	432573	2.00	2.00	
53 2,3-Dimethylpentane	71	10.054	10.055	-0.001	91	145365	2.00	1.93	
54 Thiophene	84	10.140	10.140	0.000	97	344170	2.00	1.96	
55 Tert-amyl methyl ether	73	10.388	10.392	-0.004	96	603677	2.00	2.05	
56 Isooctane	57	10.722	10.721	0.001	99	1099199	2.00	1.97	
58 1,2-Dichloropropane	63	11.111	11.111	0.000	89	251678	2.00	1.96	
57 n-Heptane	71	11.116	11.115	0.001	91	230571	2.00	1.98	
59 Trichloroethene	130	11.170	11.172	-0.002	96	248864	2.00	1.95	
60 Dibromomethane	93	11.219	11.220	-0.001	93	244306	2.00	1.99	
61 Dichlorobromomethane	83	11.386	11.387	-0.001	99	434127	2.00	2.01	
62 1,4-Dioxane	88	11.391	11.397	-0.006	92	99816	2.00	2.02	
63 Methyl methacrylate	41	11.515	11.520	-0.005	95	331515	2.00	1.97	
64 Methylcyclohexane	83	11.990	11.992	-0.002	93	452920	2.00	1.99	
65 4-Methyl-2-pentanone (MIBK	43	12.383	12.387	-0.004	98	580000	2.00	1.99	
66 cis-1,3-Dichloropropene	75	12.437	12.435	0.002	96	369296	2.00	2.04	
67 trans-1,3-Dichloropropene	75	13.154	13.157	-0.003	98	337751	2.00	2.05	
68 Toluene	91	13.300	13.298	0.002	93	729179	2.00	2.01	
69 1,1,2-Trichloroethane	83	13.354	13.353	0.001	98	217068	2.00	1.99	
70 2-Methylthiophene	97	13.446	13.448	-0.002	98	582127	2.00	2.00	
71 3-Methylthiophene	97	13.656	13.655	0.001	99	580533	2.00	2.01	
72 2-Hexanone	58	13.775	13.780	-0.005	92	281704	2.00	2.06	
73 Chlorodibromomethane	129	14.071	14.073	-0.002	97	418128	2.00	2.11	
74 n-Octane	85	14.082	14.084	-0.002	95	247988	2.00	2.01	
75 Ethylene Dibromide	107	14.362	14.365	-0.003	99	389805	2.00	2.02	
76 Tetrachloroethene	129	14.486	14.485	0.001	95	238304	2.00	1.98	
77 Chlorobenzene	112	15.371	15.371	0.000	92	552167	2.00	1.97	
78 2,3-Dimethylheptane	43	15.468	15.468	0.000	96	759234	2.00	2.02	
79 Ethylbenzene	91	15.689	15.686	0.003	99	965372	2.00	2.00	
80 2-Ethylthiophene	97	15.786	15.784	0.002	99	713796	2.00	2.03	
81 m-Xylene & p-Xylene	91	15.856	15.857	-0.001	100	1509122	3.99	4.05	
82 Bromoform	173	16.260	16.263	-0.003	95	396141	2.00	2.04	
83 Styrene	104	16.320	16.322	-0.002	99	568917	2.00	2.09	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.347	16.347	0.000	94	548492	2.00	2.04	
85 o-Xylene	91	16.384	16.386	-0.002	98	786235	2.00	2.03	
86 1,1,2,2-Tetrachloroethane	83	16.697	16.698	-0.001	98	584616	2.00	2.05	
87 1,2,3-Trichloropropane	110	16.859	16.860	-0.001	97	169562	2.00	2.05	
88 Isopropylbenzene	105	17.005	17.002	0.003	98	1056810	2.00	1.98	
89 N-Propylbenzene	120	17.576	17.578	-0.002	99	295384	2.00	2.04	
90 2-Chlorotoluene	126	17.603	17.604	-0.001	96	256242	2.00	2.02	
91 4-Ethyltoluene	105	17.743	17.743	0.000	99	1103588	2.00	2.06	
92 1,3,5-Trimethylbenzene	120	17.824	17.825	-0.001	92	492659	2.00	2.04	
93 Alpha Methyl Styrene	118	18.067	18.067	0.000	87	455598	2.00	2.05	
94 n-Decane	57	18.186	18.187	-0.001	89	730730	2.00	2.09	
95 tert-Butylbenzene	119	18.277	18.276	0.001	91	951996	2.00	2.04	
96 1,2,4-Trimethylbenzene	105	18.288	18.290	-0.002	96	936719	2.00	2.05	
97 1,3-Dichlorobenzene	146	18.552	18.555	-0.003	98	593251	2.00	2.02	
98 sec-Butylbenzene	105	18.563	18.565	-0.002	98	1368221	2.00	2.07	
99 Benzyl chloride	91	18.633	18.634	-0.001	98	836014	2.00	2.11	
100 1,4-Dichlorobenzene	146	18.649	18.650	-0.001	95	598011	2.00	2.03	
101 4-Isopropyltoluene	119	18.741	18.743	-0.002	97	1128647	2.00	2.07	
102 1,2,3-Trimethylbenzene	105	18.784	18.785	-0.001	98	724632	2.00	2.05	
103 Butylcyclohexane	83	18.870	18.872	-0.002	91	758885	2.00	2.08	
104 1,2-Dichlorobenzene	146	19.027	19.027	0.000	94	580993	2.00	2.05	
105 2,3-Dihydroindene	117	19.032	19.035	-0.003	95	873540	2.00	2.07	
106 Indene	116	19.167	19.167	0.000	93	670682	2.00	2.03	
107 n-Butylbenzene	91	19.205	19.205	0.000	98	1189658	2.00	2.10	
108 Undecane	57	19.577	19.578	-0.001	97	867772	2.00	2.15	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.593	19.594	-0.001	97	867967	2.00	2.07	
110 1,2-Dibromo-3-Chloropropan	157	19.652	19.653	-0.001	95	263928	2.00	2.11	
111 1,2,4,5-Tetramethylbenzene	119	19.997	19.998	-0.001	97	1019030	2.00	2.07	
112 1,2,3,5-Tetramethylbenzene	119	20.051	20.052	-0.001	95	619840	2.00	2.03	
113 1,2,3,4-Tetramethylbenzene	119	20.456	20.457	-0.001	97	850414	2.00	2.05	
114 Dodecane	57	20.682	20.682	0.000	96	903894	2.00	2.14	
115 1,2,4-Trichlorobenzene	180	20.812	20.809	0.003	94	538083	2.00	2.05	
116 Naphthalene	128	20.941	20.942	-0.001	99	1294797	2.00	2.11	
117 Benzo(b)thiophene	134	21.043	21.046	-0.003	99	721421	2.00	2.05	
118 Hexachlorobutadiene	225	21.194	21.195	-0.001	94	452526	2.00	2.01	
119 1,2,3-Trichlorobenzene	180	21.238	21.239	-0.001	94	507363	2.00	1.95	
120 2-Methylnaphthalene	142	21.944	21.947	-0.003	99	453694	6.24	6.39	
121 1-Methylnaphthalene	142	22.073	22.073	0.000	99	460833	6.24	6.45	
A 122 C6 Range	1	7.652	(7.590-7.678)		0	1615404	2.00	2.05	
S 124 Xylenes, Total	100				0		5.99	6.09	
S 125 1,2-Dichloroethene, Total	1				0		3.99	3.89	

Reagents:

40L6DNP_00008	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

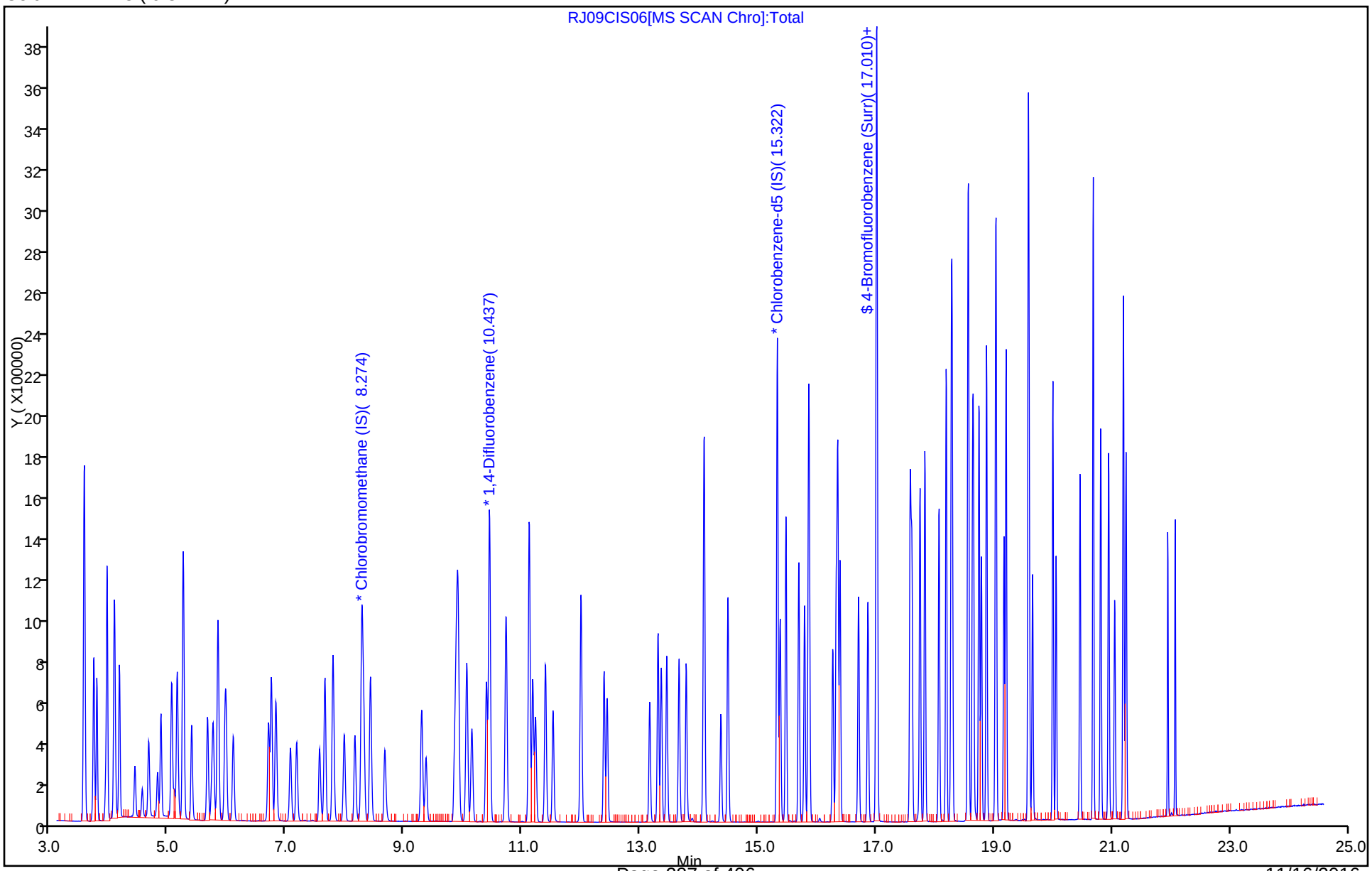
Report Date: 13-Oct-2016 11:37:21 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09CIS06.D

Injection Date:	09-Oct-2016 22:11:30	Instrument ID:	MR	Operator ID:	
Lims ID:	ICIS L6			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

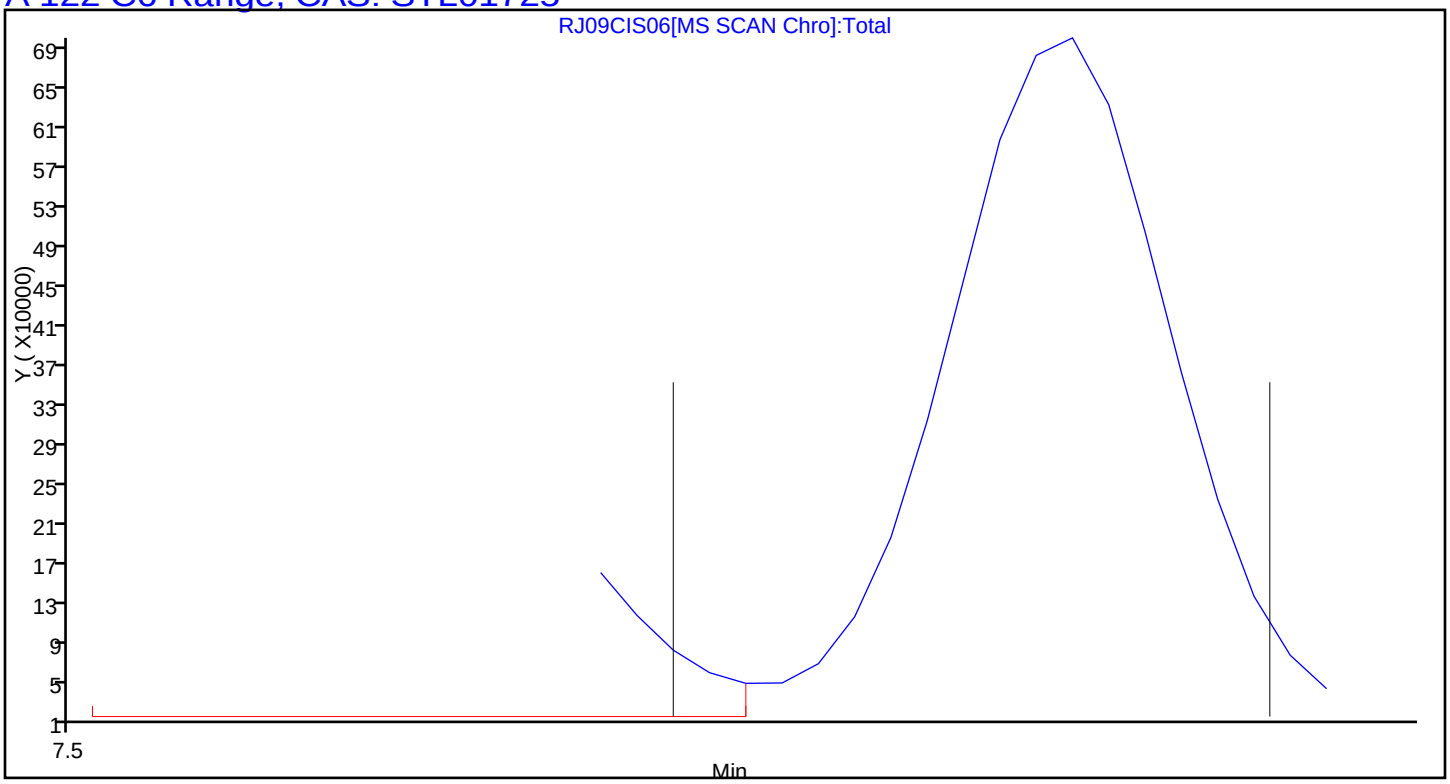


Report Date: 13-Oct-2016 11:37:21 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09CIS06.D				
Injection Date:	09-Oct-2016 22:11:30	Instrument ID:	MR		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC07.D
Lims ID: IC L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 09-Oct-2016 22:59:30 ALS Bottle#: 5 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003513-009
Misc. Info.: 059239
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Oct-2016 11:37:25 Calib Date: 10-Oct-2016 00:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: barlozhetskayaa Date: 11-Oct-2016 15:37:06

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.280	8.274	0.006	97	312905	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.442	10.440	0.002	95	1441865	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.322	15.323	-0.001	88	1367595	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.010	17.011	-0.001	92	1018453	4.00	3.99	
7 Chlorodifluoromethane	67	3.734	3.734	0.000	97	125180	4.00	3.81	
6 Propene	41	3.745	3.739	0.006	99	454306	4.00	3.85	
8 Dichlorodifluoromethane	85	3.793	3.790	0.003	100	1144707	4.00	3.80	
9 Chloromethane	52	3.944	3.940	0.004	100	133500	4.00	3.88	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.966	3.960	0.006	93	805625	4.00	3.87	
11 Acetaldehyde	44	4.084	4.081	0.003	99	717496	20.0	19.5	
12 Vinyl chloride	62	4.095	4.089	0.006	99	400221	4.00	3.88	
13 Butadiene	54	4.171	4.168	0.003	95	316904	4.00	3.89	
14 Butane	43	4.176	4.171	0.005	92	590953	4.00	3.86	
15 Bromomethane	94	4.440	4.432	0.008	99	346748	4.00	3.77	
16 Chloroethane	64	4.564	4.555	0.009	96	171011	4.00	3.78	
17 Ethanol	31	4.661	4.661	0.000	95	645320	20.0	19.7	
18 Vinyl bromide	106	4.823	4.814	0.009	99	336045	4.00	3.89	
19 2-Methylbutane	43	4.877	4.871	0.006	91	405530	4.00	4.00	
20 Acrolein	56	5.050	5.049	0.001	94	140945	4.00	3.90	
21 Trichlorofluoromethane	101	5.060	5.053	0.007	99	1048711	4.00	3.97	
22 Acetonitrile	40	5.104	5.097	0.007	99	190378	4.00	4.24	
23 Acetone	58	5.152	5.150	0.002	98	600254	12.0	11.7	
24 Isopropyl alcohol	45	5.244	5.246	-0.002	95	2064594	12.0	11.8	
25 Pentane	72	5.260	5.255	0.005	97	84738	4.00	3.97	
26 Ethyl ether	31	5.395	5.394	0.001	95	541322	4.00	3.84	
27 1,1-Dichloroethene	96	5.670	5.661	0.009	96	423032	4.00	3.83	
28 Acrylonitrile	53	5.734	5.731	0.003	95	359935	4.00	3.87	
29 2-Methyl-2-propanol	59	5.756	5.764	-0.008	95	908668	4.00	3.91	
30 1,1,2-Trichloro-1,2,2-trif	101	5.842	5.838	0.004	96	904716	4.00	3.86	
31 Methylene Chloride	84	5.966	5.955	0.011	99	391107	4.00	3.66	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.983	5.975	0.008	94	426925	4.00	3.86	
33 Carbon disulfide	76	6.107	6.098	0.009	99	1262329	4.00	3.84	
34 trans-1,2-Dichloroethene	96	6.700	6.693	0.007	96	436512	4.00	3.88	
35 2-Methylpentane	43	6.748	6.743	0.005	96	1035408	4.00	3.90	
36 Methyl tert-butyl ether	73	6.818	6.825	-0.007	97	1232528	4.00	3.93	
37 1,1-Dichloroethane	63	7.072	7.063	0.009	100	837508	4.00	3.91	
38 Vinyl acetate	43	7.174	7.172	0.002	100	1387677	4.00	4.04	
39 2-Butanone (MEK)	72	7.563	7.564	-0.002	99	223732	4.00	3.86	
40 Hexane	56	7.654	7.649	0.005	90	384425	4.00	3.79	
41 Isopropyl ether	45	7.789	7.792	-0.003	99	1725249	4.00	3.94	
42 cis-1,2-Dichloroethene	96	7.983	7.977	0.006	96	446950	4.00	3.92	
43 Ethyl acetate	43	8.161	8.162	-0.001	99	1126225	4.00	3.98	
44 Chloroform	83	8.312	8.305	0.007	97	889515	4.00	3.93	
45 Tert-butyl ethyl ether	59	8.425	8.426	-0.001	95	1400322	4.00	3.97	
46 Tetrahydrofuran	42	8.663	8.670	-0.007	96	573034	4.00	4.03	
47 1,1,1-Trichloroethane	97	9.293	9.289	0.004	97	883250	4.00	3.95	
48 1,2-Dichloroethane	62	9.369	9.362	0.007	97	637476	4.00	3.96	
49 n-Butanol	31	9.843	9.860	-0.017	87	215871	4.00	4.14	
50 Benzene	78	9.876	9.872	0.004	97	1276405	4.00	3.93	
51 Cyclohexane	69	9.903	9.897	0.006	96	209294	4.00	4.02	
52 Carbon tetrachloride	117	9.914	9.911	0.003	98	909877	4.00	4.07	
53 2,3-Dimethylpentane	71	10.059	10.055	0.004	91	304268	4.00	3.91	
54 Thiophene	84	10.145	10.140	0.005	97	720784	4.00	3.97	
55 Tert-amyl methyl ether	73	10.388	10.392	-0.004	97	1263100	4.00	4.16	
56 Isooctane	57	10.722	10.721	0.001	98	2293420	4.00	3.98	
58 1,2-Dichloropropane	63	11.116	11.111	0.005	86	522434	4.00	3.95	
57 n-Heptane	71	11.116	11.115	0.001	91	482081	4.00	4.02	
59 Trichloroethene	130	11.175	11.172	0.003	97	526560	4.00	4.00	
60 Dibromomethane	93	11.224	11.220	0.004	96	509811	4.00	4.03	
61 Dichlorobromomethane	83	11.391	11.387	0.004	99	928192	4.00	4.16	
62 1,4-Dioxane	88	11.391	11.397	-0.006	42	211441	4.00	4.16	
63 Methyl methacrylate	41	11.521	11.520	0.000	94	700205	4.00	4.04	
64 Methylcyclohexane	83	11.995	11.992	0.003	93	952196	4.00	4.05	
65 4-Methyl-2-pentanone (MIBK	43	12.383	12.387	-0.004	98	1217423	4.00	4.05	
66 cis-1,3-Dichloropropene	75	12.437	12.435	0.002	96	791249	4.00	4.23	
67 trans-1,3-Dichloropropene	75	13.160	13.157	0.003	99	727439	4.00	4.20	
68 Toluene	91	13.300	13.298	0.002	94	1528361	4.00	4.03	
69 1,1,2-Trichloroethane	83	13.354	13.353	0.001	98	455643	4.00	3.98	
70 2-Methylthiophene	97	13.451	13.448	0.003	97	1221057	4.00	4.00	
71 3-Methylthiophene	97	13.656	13.655	0.001	99	1221604	4.00	4.05	
72 2-Hexanone	58	13.775	13.780	-0.005	92	596900	4.00	4.16	
73 Chlorodibromomethane	129	14.076	14.073	0.003	98	921129	4.00	4.44	
74 n-Octane	85	14.087	14.084	0.003	95	516860	4.00	4.00	
75 Ethylene Dibromide	107	14.368	14.365	0.003	99	836201	4.00	4.14	
76 Tetrachloroethene	129	14.486	14.485	0.001	96	509523	4.00	4.04	
77 Chlorobenzene	112	15.371	15.371	0.000	92	1172183	4.00	3.99	
78 2,3-Dimethylheptane	43	15.468	15.468	0.000	97	1555135	4.00	3.94	
79 Ethylbenzene	91	15.689	15.686	0.003	98	2045502	4.00	4.04	
80 2-Ethylthiophene	97	15.786	15.784	0.002	98	1508238	4.00	4.09	
81 m-Xylene & p-Xylene	91	15.856	15.857	-0.001	100	3165390	8.00	8.12	
82 Bromoform	173	16.266	16.263	0.003	96	939965	4.00	4.61	
83 Styrene	104	16.320	16.322	-0.002	99	1228006	4.00	4.30	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.347	16.347	0.000	94	1117166	4.00	3.97	
85 o-Xylene	91	16.384	16.386	-0.002	99	1630604	4.00	4.03	
86 1,1,2,2-Tetrachloroethane	83	16.697	16.698	-0.001	99	1212770	4.00	4.06	
87 1,2,3-Trichloropropane	110	16.859	16.860	-0.001	97	355462	4.00	4.11	
88 Isopropylbenzene	105	17.005	17.002	0.003	97	2209437	4.00	3.95	
89 N-Propylbenzene	120	17.576	17.578	-0.002	99	623004	4.00	4.10	
90 2-Chlorotoluene	126	17.603	17.604	-0.001	96	535283	4.00	4.03	
91 4-Ethyltoluene	105	17.743	17.743	0.000	99	2292517	4.00	4.09	
92 1,3,5-Trimethylbenzene	120	17.824	17.825	-0.001	92	1042351	4.00	4.12	
93 Alpha Methyl Styrene	118	18.067	18.067	0.000	88	987604	4.00	4.23	
94 n-Decane	57	18.185	18.187	-0.002	90	1475484	4.00	4.03	
95 tert-Butylbenzene	119	18.277	18.276	0.001	93	2009526	4.00	4.11	
96 1,2,4-Trimethylbenzene	105	18.288	18.290	-0.002	96	1953455	4.00	4.09	
97 1,3-Dichlorobenzene	146	18.558	18.555	0.003	98	1287250	4.00	4.19	
98 sec-Butylbenzene	105	18.568	18.565	0.003	98	2835834	4.00	4.09	
99 Benzyl chloride	91	18.633	18.634	-0.001	98	1811213	4.00	4.37	
100 1,4-Dichlorobenzene	146	18.649	18.650	-0.001	95	1277981	4.00	4.15	
101 4-Isopropyltoluene	119	18.746	18.743	0.003	97	2347578	4.00	4.11	
102 1,2,3-Trimethylbenzene	105	18.784	18.785	-0.001	98	1501410	4.00	4.05	
103 Butylcyclohexane	83	18.870	18.872	-0.002	91	1539349	4.00	4.02	
104 1,2-Dichlorobenzene	146	19.027	19.027	0.000	95	1235775	4.00	4.17	
105 2,3-Dihydroindene	117	19.037	19.035	0.002	95	1826037	4.00	4.12	
106 Indene	116	19.167	19.167	0.000	93	1433563	4.00	4.14	
107 n-Butylbenzene	91	19.205	19.205	0.000	98	2430516	4.00	4.10	
108 Undecane	57	19.577	19.578	-0.001	97	1707224	4.00	4.04	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.593	19.594	-0.001	97	1807849	4.00	4.12	
110 1,2-Dibromo-3-Chloropropan	157	19.652	19.653	-0.001	96	584224	4.00	4.46	
111 1,2,4,5-Tetramethylbenzene	119	19.997	19.998	-0.001	97	2130343	4.00	4.14	
112 1,2,3,5-Tetramethylbenzene	119	20.051	20.052	-0.001	95	1303527	4.00	4.08	
113 1,2,3,4-Tetramethylbenzene	119	20.456	20.457	-0.001	97	1789865	4.00	4.12	
114 Dodecane	57	20.682	20.682	0.000	96	1813017	4.00	4.09	
115 1,2,4-Trichlorobenzene	180	20.812	20.809	0.003	94	1189935	4.00	4.32	
116 Naphthalene	128	20.941	20.942	-0.001	99	2728153	4.00	4.24	
117 Benzo(b)thiophene	134	21.043	21.046	-0.003	99	1544212	4.00	4.18	
118 Hexachlorobutadiene	225	21.194	21.195	-0.001	96	1051222	4.00	4.46	
119 1,2,3-Trichlorobenzene	180	21.238	21.239	-0.001	95	1119490	4.00	4.11	
120 2-Methylnaphthalene	142	21.944	21.947	-0.003	99	946126	12.5	12.7	
121 1-Methylnaphthalene	142	22.073	22.073	0.000	99	911852	12.5	12.2	
A 122 C6 Range	1	7.658	(7.595-7.694)		0	3226150	4.00	3.96	
S 124 Xylenes, Total	100				0		12.0	12.1	
S 125 1,2-Dichloroethene, Total	1				0		8.00	7.80	

Reagents:

40L7DNP_00007	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

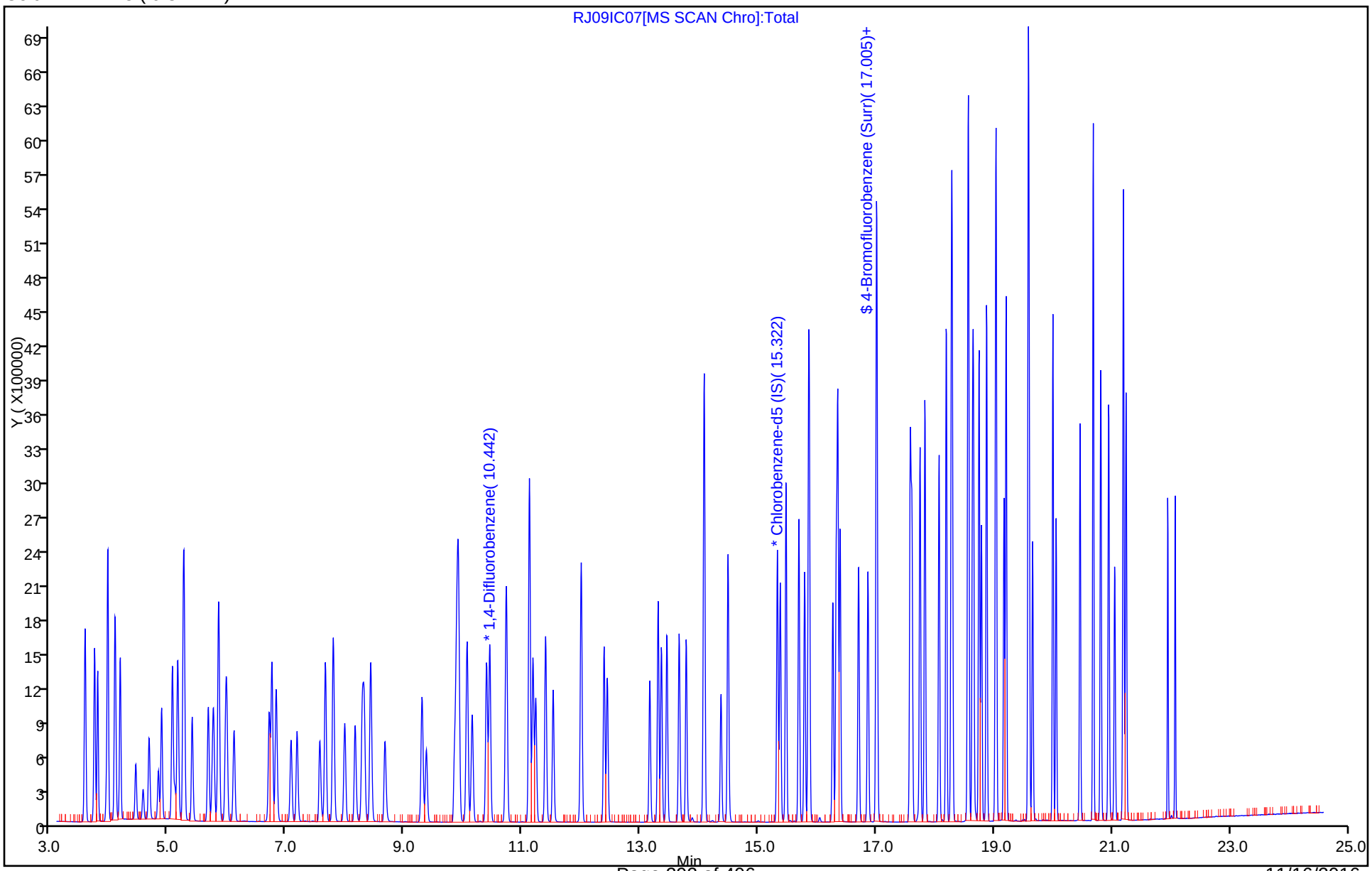
Report Date: 13-Oct-2016 11:37:26 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC07.D

Injection Date:	09-Oct-2016 22:59:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L7			Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

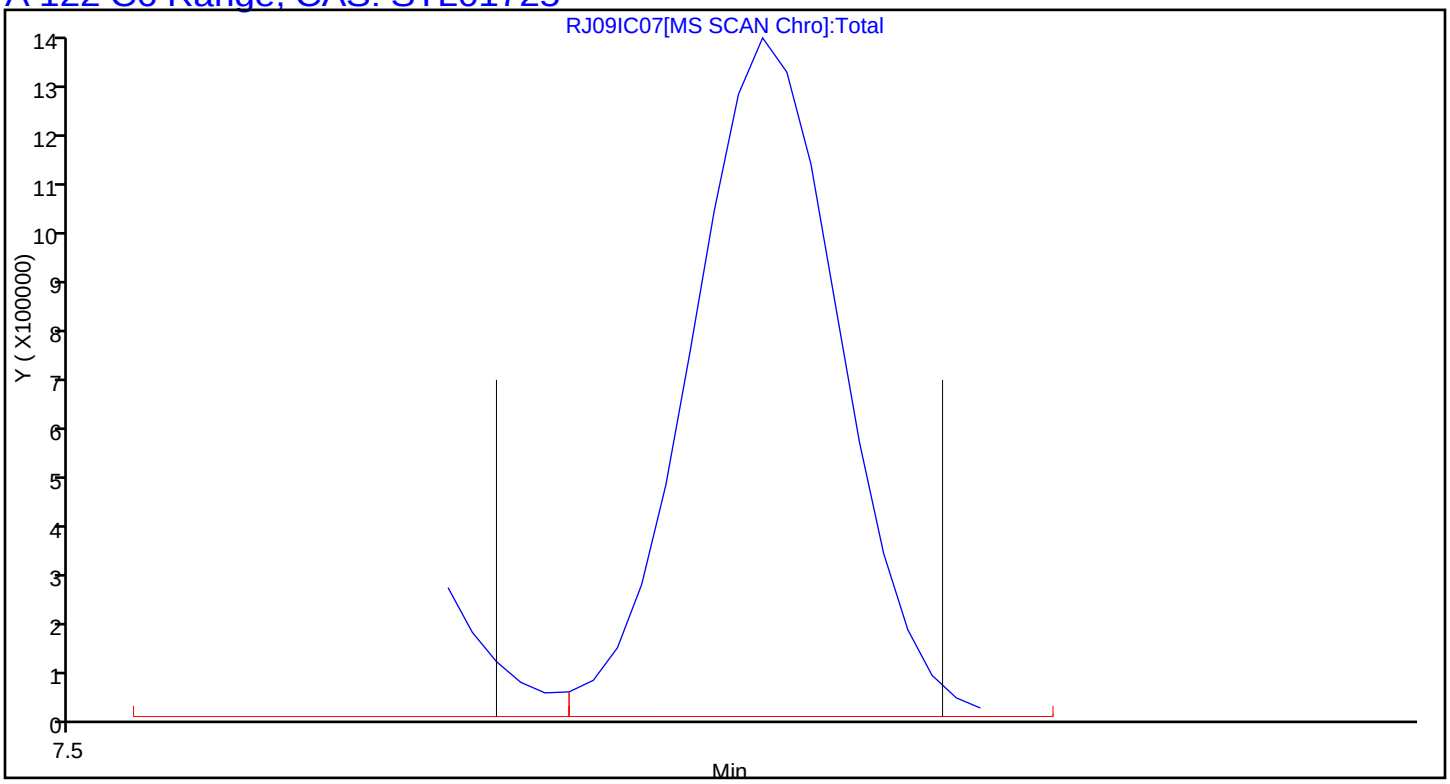


Report Date: 13-Oct-2016 11:37:26 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC07.D				
Injection Date:	09-Oct-2016 22:59:30	Instrument ID:	MR		
Lims ID:	IC L7				
Client ID:					
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC08.D
Lims ID: IC l8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 09-Oct-2016 23:48:30 ALS Bottle#: 6 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003513-010
Misc. Info.: 059238
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Oct-2016 11:37:30 Calib Date: 10-Oct-2016 00:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: barlozhetskayaa Date: 10-Oct-2016 18:26:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.285	8.274	0.011	97	317606	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.447	10.440	0.007	95	1478713	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.322	15.323	-0.001	88	1404945	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.010	17.011	-0.001	93	1032019	4.00	3.93	
7 Chlorodifluoromethane	67	3.734	3.734	0.000	97	245451	8.00	7.36	
6 Propene	41	3.739	3.739	0.000	98	886267	8.00	7.39	
8 Dichlorodifluoromethane	85	3.793	3.790	0.003	100	2257412	8.00	7.38	
9 Chloromethane	52	3.944	3.940	0.004	100	258615	8.00	7.40	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.966	3.960	0.006	92	1577267	8.00	7.47	
11 Acetaldehyde	44	4.084	4.081	0.003	100	1341961	40.0	35.9	
12 Vinyl chloride	62	4.095	4.089	0.006	98	768582	8.00	7.34	
13 Butadiene	54	4.176	4.168	0.008	95	605781	8.00	7.32	
14 Butane	43	4.176	4.171	0.005	91	1124055	8.00	7.23	
15 Bromomethane	94	4.440	4.432	0.008	99	672878	8.00	7.20	
16 Chloroethane	64	4.564	4.555	0.009	96	328938	8.00	7.16	
17 Ethanol	31	4.667	4.661	0.006	95	1192460	40.0	35.9	
18 Vinyl bromide	106	4.823	4.814	0.009	99	652495	8.00	7.43	
19 2-Methylbutane	43	4.877	4.871	0.006	91	768750	8.00	7.46	
20 Acrolein	56	5.055	5.049	0.006	93	272672	8.00	7.44	
21 Trichlorofluoromethane	101	5.061	5.053	0.008	99	2090856	8.00	7.79	
22 Acetonitrile	40	5.104	5.097	0.007	99	371372	8.00	8.15	
23 Acetone	58	5.152	5.150	0.002	98	1162994	24.0	22.4	
24 Isopropyl alcohol	45	5.249	5.246	0.003	98	3923940	24.0	22.2	
25 Pentane	72	5.260	5.255	0.005	97	164328	8.00	7.59	
26 Ethyl ether	31	5.395	5.394	0.001	95	1049488	8.00	7.34	
27 1,1-Dichloroethene	96	5.670	5.661	0.009	96	851113	8.00	7.59	
28 Acrylonitrile	53	5.740	5.731	0.009	95	718670	8.00	7.61	
29 2-Methyl-2-propanol	59	5.762	5.764	-0.002	95	1784213	8.00	7.57	
30 1,1,2-Trichloro-1,2,2-trif	101	5.842	5.838	0.004	98	1798220	8.00	7.57	
31 Methylene Chloride	84	5.966	5.955	0.011	99	763174	8.00	7.03	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.988	5.975	0.013	95	845948	8.00	7.54	
33 Carbon disulfide	76	6.107	6.098	0.009	99	2531537	8.00	7.58	
34 trans-1,2-Dichloroethene	96	6.705	6.693	0.012	97	883675	8.00	7.73	
35 2-Methylpentane	43	6.748	6.743	0.005	96	2033560	8.00	7.55	
36 Methyl tert-butyl ether	73	6.818	6.825	-0.007	97	2468652	8.00	7.76	
37 1,1-Dichloroethane	63	7.072	7.063	0.009	100	1644321	8.00	7.56	
38 Vinyl acetate	43	7.174	7.172	0.002	100	2785584	8.00	7.99	
39 2-Butanone (MEK)	72	7.563	7.564	-0.001	99	445213	8.00	7.57	
40 Hexane	56	7.654	7.649	0.005	90	766848	8.00	7.45	
41 Isopropyl ether	45	7.789	7.792	-0.003	99	3385266	8.00	7.62	
42 cis-1,2-Dichloroethene	96	7.983	7.977	0.006	96	897680	8.00	7.76	
43 Ethyl acetate	43	8.161	8.162	-0.001	99	2254237	8.00	7.85	
44 Chloroform	83	8.312	8.305	0.007	98	1780282	8.00	7.75	
45 Tert-butyl ethyl ether	59	8.425	8.426	-0.001	95	2811210	8.00	7.86	
46 Tetrahydrofuran	42	8.663	8.670	-0.007	95	1151290	8.00	7.97	
47 1,1,1-Trichloroethane	97	9.294	9.289	0.005	97	1808888	8.00	7.97	
48 1,2-Dichloroethane	62	9.369	9.362	0.007	97	1280345	8.00	7.76	
49 n-Butanol	31	9.844	9.860	-0.016	86	437905	8.00	8.19	
50 Benzene	78	9.876	9.872	0.004	97	2582139	8.00	7.75	
51 Cyclohexane	69	9.903	9.897	0.006	97	415402	8.00	7.79	
52 Carbon tetrachloride	117	9.919	9.911	0.008	98	1904537	8.00	8.30	
53 2,3-Dimethylpentane	71	10.059	10.055	0.004	91	617220	8.00	7.74	
54 Thiophene	84	10.146	10.140	0.006	97	1457933	8.00	7.84	
55 Tert-amyl methyl ether	73	10.388	10.392	-0.004	97	2563968	8.00	8.24	
56 Isooctane	57	10.723	10.721	0.001	98	4586807	8.00	7.76	
58 1,2-Dichloropropane	63	11.116	11.111	0.005	86	1027935	8.00	7.58	
57 n-Heptane	71	11.122	11.115	0.007	91	964348	8.00	7.84	
59 Trichloroethene	130	11.175	11.172	0.003	97	1098840	8.00	8.15	
60 Dibromomethane	93	11.224	11.220	0.004	96	1033883	8.00	7.96	
61 Dichlorobromomethane	83	11.391	11.387	0.004	99	1892915	8.00	8.27	
62 1,4-Dioxane	88	11.391	11.397	-0.006	41	421355	8.00	8.08	
63 Methyl methacrylate	41	11.521	11.520	0.001	93	1412987	8.00	7.94	
64 Methylcyclohexane	83	11.995	11.992	0.003	93	1919980	8.00	7.96	
65 4-Methyl-2-pentanone (MIBK	43	12.383	12.387	-0.004	98	2451851	8.00	7.96	
66 cis-1,3-Dichloropropene	75	12.437	12.435	0.002	95	1612168	8.00	8.41	
67 trans-1,3-Dichloropropene	75	13.160	13.157	0.003	99	1516907	8.00	8.54	
68 Toluene	91	13.300	13.298	0.002	94	3133387	8.00	8.03	
69 1,1,2-Trichloroethane	83	13.354	13.353	0.001	98	921739	8.00	7.85	
70 2-Methylthiophene	97	13.451	13.448	0.003	98	2515318	8.00	8.03	
71 3-Methylthiophene	97	13.656	13.655	0.001	99	2490909	8.00	8.03	
72 2-Hexanone	58	13.775	13.780	-0.005	92	1228823	8.00	8.34	
73 Chlorodibromomethane	129	14.077	14.073	0.004	98	1928332	8.00	9.05	
74 n-Octane	85	14.087	14.084	0.003	96	1038619	8.00	7.83	
75 Ethylene Dibromide	107	14.368	14.365	0.003	99	1742065	8.00	8.39	
76 Tetrachloroethene	129	14.486	14.485	0.001	96	1054431	8.00	8.14	
77 Chlorobenzene	112	15.371	15.371	0.000	93	2409409	8.00	7.99	
78 2,3-Dimethylheptane	43	15.468	15.468	0.000	97	3064416	8.00	7.56	
79 Ethylbenzene	91	15.689	15.686	0.003	98	4153368	8.00	7.99	
80 2-Ethylthiophene	97	15.786	15.784	0.002	98	3059480	8.00	8.08	
81 m-Xylene & p-Xylene	91	15.861	15.857	0.004	99	6315407	16.0	15.8	
82 Bromoform	173	16.266	16.263	0.003	97	2138169	8.00	10.2	
83 Styrene	104	16.325	16.322	0.003	98	2538777	8.00	8.65	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.347	16.347	0.000	94	2151897	8.00	7.44	
85 o-Xylene	91	16.390	16.386	0.004	99	3299717	8.00	7.93	
86 1,1,2,2-Tetrachloroethane	83	16.703	16.698	0.005	99	2449909	8.00	7.99	
87 1,2,3-Trichloropropane	110	16.864	16.860	0.004	97	721986	8.00	8.12	
88 Isopropylbenzene	105	17.005	17.002	0.003	96	4499608	8.00	7.82	
89 N-Propylbenzene	120	17.582	17.578	0.004	99	1315126	8.00	8.42	
90 2-Chlorotoluene	126	17.603	17.604	-0.001	96	1117204	8.00	8.18	
91 4-Ethyltoluene	105	17.743	17.743	0.000	98	4707434	8.00	8.17	
92 1,3,5-Trimethylbenzene	120	17.830	17.825	0.005	93	2192589	8.00	8.43	
93 Alpha Methyl Styrene	118	18.067	18.067	0.000	89	2102914	8.00	8.78	
94 n-Decane	57	18.191	18.187	0.004	90	2886137	8.00	7.67	
95 tert-Butylbenzene	119	18.277	18.276	0.001	92	4176692	8.00	8.31	
96 1,2,4-Trimethylbenzene	105	18.293	18.290	0.003	95	4002984	8.00	8.15	
97 1,3-Dichlorobenzene	146	18.558	18.555	0.003	98	2769395	8.00	8.77	
98 sec-Butylbenzene	105	18.568	18.565	0.003	98	5749750	8.00	8.07	
99 Benzyl chloride	91	18.633	18.634	-0.001	98	3789179	8.00	8.89	
100 1,4-Dichlorobenzene	146	18.649	18.650	-0.001	96	2786960	8.00	8.81	
101 4-Isopropyltoluene	119	18.746	18.743	0.003	97	4911512	8.00	8.38	
102 1,2,3-Trimethylbenzene	105	18.784	18.785	-0.001	97	3074340	8.00	8.07	
103 Butylcyclohexane	83	18.876	18.872	0.004	92	3086380	8.00	7.84	
104 1,2-Dichlorobenzene	146	19.027	19.027	0.000	96	2679494	8.00	8.79	
105 2,3-Dihydroindene	117	19.038	19.035	0.003	95	3805113	8.00	8.36	
106 Indene	116	19.167	19.167	0.000	93	3071869	8.00	8.63	
107 n-Butylbenzene	91	19.205	19.205	0.000	99	4877498	8.00	8.01	
108 Undecane	57	19.582	19.578	0.004	96	3252729	8.00	7.50	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.598	19.594	0.004	98	3749722	8.00	8.33	
110 1,2-Dibromo-3-Chloropropan	157	19.652	19.653	-0.001	99	1286715	8.00	9.56	
111 1,2,4,5-Tetramethylbenzene	119	19.997	19.998	-0.001	97	4434437	8.00	8.38	
112 1,2,3,5-Tetramethylbenzene	119	20.051	20.052	-0.001	95	2745281	8.00	8.36	
113 1,2,3,4-Tetramethylbenzene	119	20.461	20.457	0.004	97	3751188	8.00	8.40	
114 Dodecane	57	20.682	20.682	0.000	97	3554514	8.00	7.81	
115 1,2,4-Trichlorobenzene	180	20.812	20.809	0.003	93	2761896	8.00	9.77	
116 Naphthalene	128	20.946	20.942	0.004	99	5805458	8.00	8.79	
117 Benzo(b)thiophene	134	21.049	21.046	0.003	99	3388213	8.00	8.93	
118 Hexachlorobutadiene	225	21.194	21.195	-0.001	94	2518960	8.00	10.4	
119 1,2,3-Trichlorobenzene	180	21.243	21.239	0.004	95	2610987	8.00	9.33	
120 2-Methylnaphthalene	142	21.949	21.947	0.002	99	2081968	25.0	27.2	
121 1-Methylnaphthalene	142	22.073	22.073	0.000	99	1955760	25.0	25.4	
A 122 C6 Range	1	7.666	(7.590-7.711)		0	6366301	8.00	7.62	
S 124 Xylenes, Total	100				0		24.0	23.7	
S 125 1,2-Dichloroethene, Total	1				0		16.0	15.5	

Reagents:

40L8DNP_00007	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

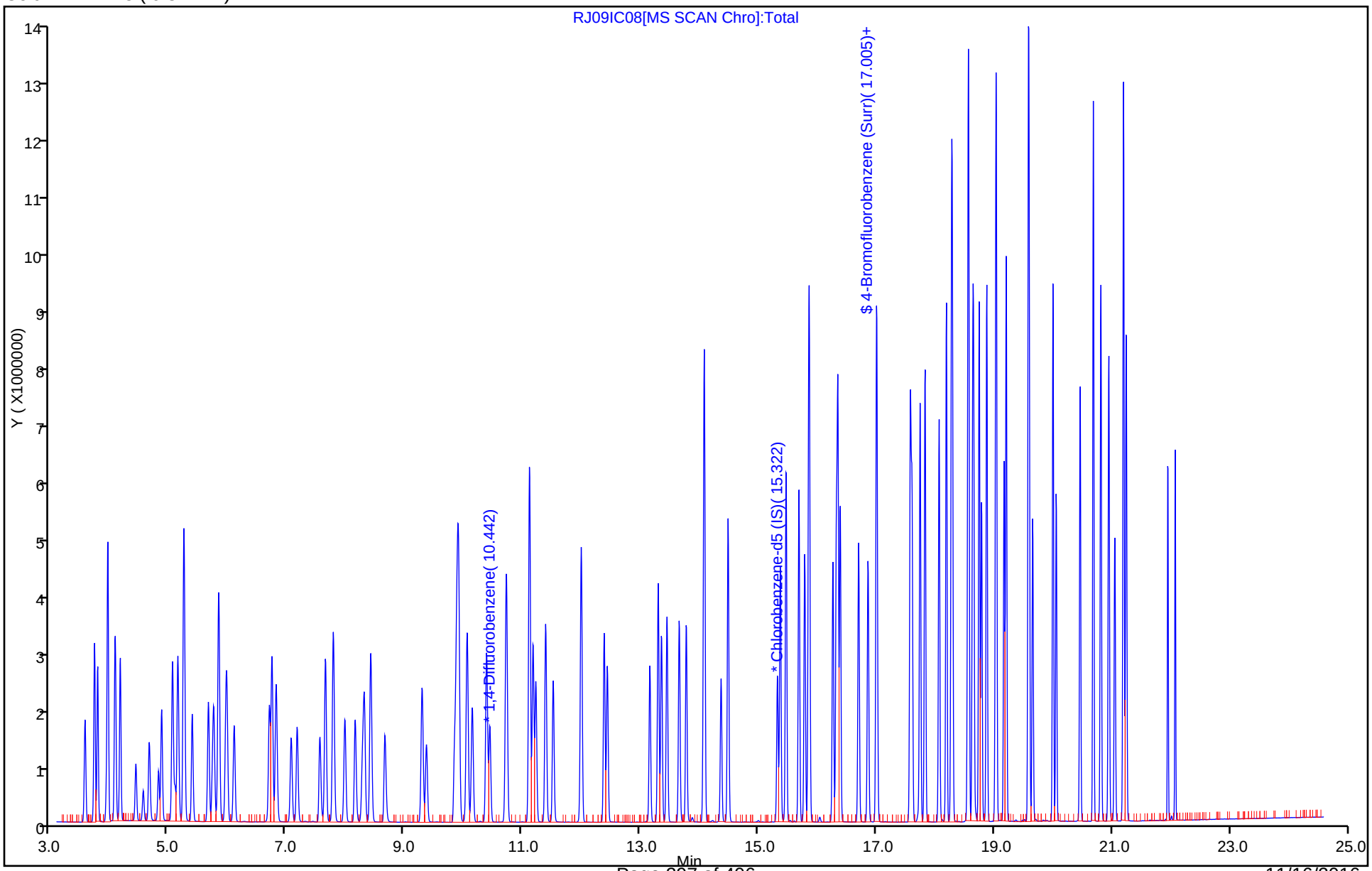
Report Date: 13-Oct-2016 11:37:31 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC08.D

Injection Date:	09-Oct-2016 23:48:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC I8			Worklist Smp#:	10
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

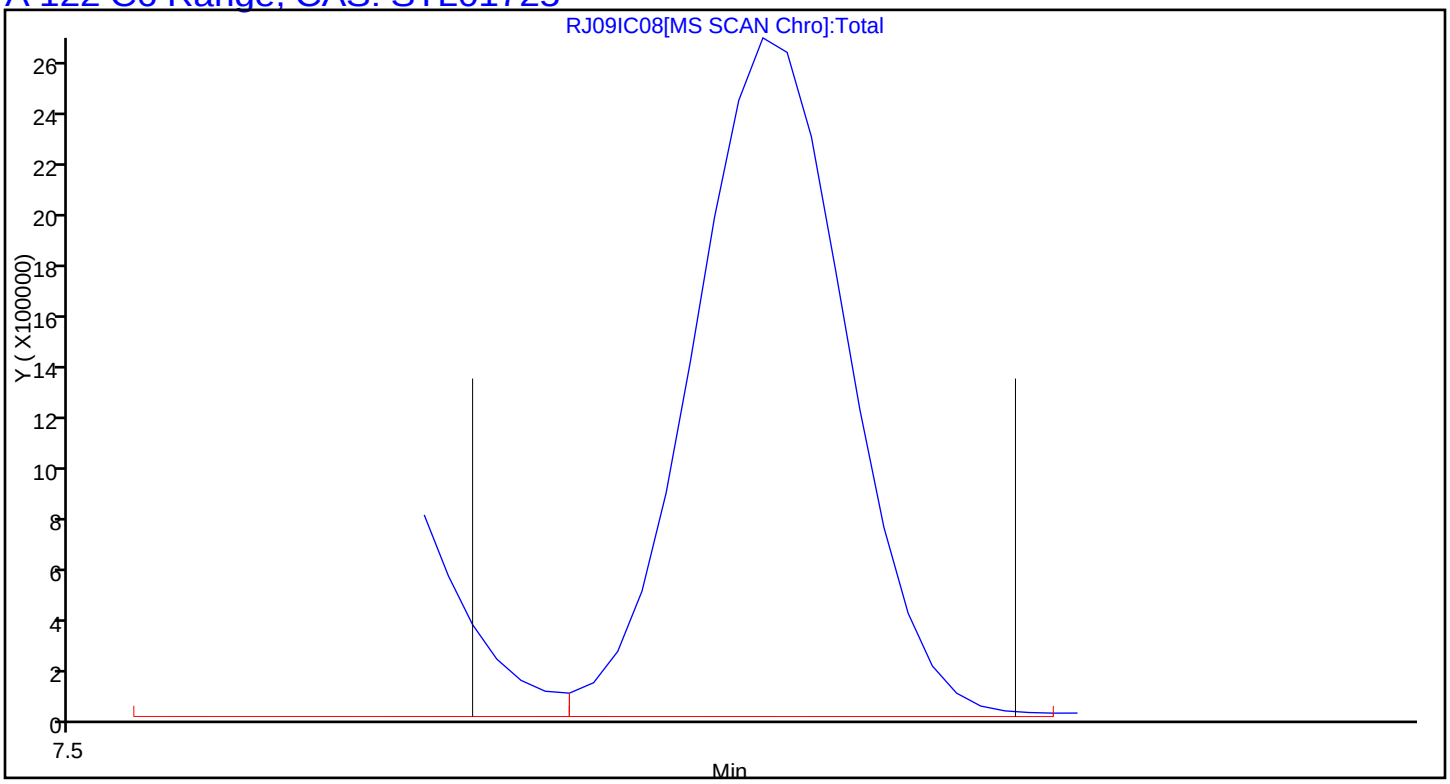


Report Date: 13-Oct-2016 11:37:31 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC08.D				
Injection Date:	09-Oct-2016 23:48:30	Instrument ID:	MR		
Lims ID:	IC I8				
Client ID:					
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC09.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 10-Oct-2016 00:36:30 ALS Bottle#: 7 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003513-011
Misc. Info.: 059233
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Oct-2016 11:37:35 Calib Date: 10-Oct-2016 00:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: barlozhetskayaa Date: 10-Oct-2016 18:03:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.290	8.274	0.016	97	338919	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.453	10.440	0.013	95	1550152	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.328	15.323	0.005	89	1490515	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.015	17.011	0.004	96	1061129	4.00	3.81	
7 Chlorodifluoromethane	67	3.739	3.734	0.005	97	478782	16.0	13.4	
6 Propene	41	3.745	3.739	0.006	99	1699448	16.0	13.3	
8 Dichlorodifluoromethane	85	3.799	3.790	0.009	100	4203929	16.0	12.9	
9 Chloromethane	52	3.950	3.940	0.010	100	495173	16.0	13.3	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.971	3.960	0.011	92	3079883	16.0	13.7	
11 Acetaldehyde	44	4.095	4.081	0.014	100	2511140	80.0	63.0	
12 Vinyl chloride	62	4.101	4.089	0.012	98	1456587	16.0	13.0	
13 Butadiene	54	4.181	4.168	0.013	96	1178082	16.0	13.3	
14 Butane	43	4.181	4.171	0.010	91	2159629	16.0	13.0	
15 Bromomethane	94	4.446	4.432	0.014	99	1335103	16.0	13.4	
16 Chloroethane	64	4.575	4.555	0.020	97	649564	16.0	13.3	
17 Ethanol	31	4.678	4.661	0.017	95	2220289	80.0	62.6	
18 Vinyl bromide	106	4.834	4.814	0.020	99	1291627	16.0	13.8	
19 2-Methylbutane	43	4.883	4.871	0.011	90	1461895	16.0	13.3	
20 Acrolein	56	5.060	5.049	0.011	94	555105	16.0	14.2	
21 Trichlorofluoromethane	101	5.071	5.053	0.018	99	4186306	16.0	14.6	
22 Acetonitrile	40	5.114	5.097	0.017	99	745259	16.0	15.3	
23 Acetone	58	5.158	5.150	0.008	97	2291028	48.0	41.3	
24 Isopropyl alcohol	45	5.265	5.246	0.019	92	7492553	48.0	39.7	
25 Pentane	72	5.271	5.255	0.016	93	317269	16.0	13.7	
26 Ethyl ether	31	5.400	5.394	0.006	96	2059110	16.0	13.5	
27 1,1-Dichloroethene	96	5.681	5.661	0.020	97	1741042	16.0	14.6	
28 Acrylonitrile	53	5.745	5.731	0.014	95	1439090	16.0	14.3	
29 2-Methyl-2-propanol	59	5.778	5.764	0.014	95	3530482	16.0	14.0	
30 1,1,2-Trichloro-1,2,2-trif	101	5.853	5.838	0.015	98	3623618	16.0	14.3	
31 Methylene Chloride	84	5.972	5.955	0.017	98	1528057	16.0	13.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.993	5.975	0.018	95	1609149	16.0	13.4	
33 Carbon disulfide	76	6.117	6.098	0.019	99	5079883	16.0	14.3	
34 trans-1,2-Dichloroethene	96	6.711	6.693	0.018	98	1802364	16.0	14.8	
35 2-Methylpentane	43	6.759	6.743	0.016	96	4000982	16.0	13.9	
36 Methyl tert-butyl ether	73	6.824	6.825	-0.001	97	4917993	16.0	14.5	
37 1,1-Dichloroethane	63	7.083	7.063	0.020	100	3296770	16.0	14.2	
38 Vinyl acetate	43	7.185	7.172	0.013	100	5590854	16.0	15.0	
39 2-Butanone (MEK)	72	7.568	7.564	0.004	99	907783	16.0	14.5	
40 Hexane	56	7.665	7.649	0.016	89	1533776	16.0	14.0	
41 Isopropyl ether	45	7.794	7.792	0.002	98	6654602	16.0	14.0	
42 cis-1,2-Dichloroethene	96	7.994	7.977	0.017	95	1856770	16.0	15.0	
43 Ethyl acetate	43	8.166	8.162	0.004	99	4466498	16.0	14.6	
44 Chloroform	83	8.323	8.305	0.018	99	3588035	16.0	14.6	
45 Tert-butyl ethyl ether	59	8.431	8.426	0.005	95	5499856	16.0	14.4	
46 Tetrahydrofuran	42	8.668	8.670	-0.002	95	2264259	16.0	14.7	
47 1,1,1-Trichloroethane	97	9.299	9.289	0.010	96	3697284	16.0	15.3	
48 1,2-Dichloroethane	62	9.374	9.362	0.012	97	2537399	16.0	14.7	
49 n-Butanol	31	9.854	9.860	-0.006	89	834896	16.0	14.9	
50 Benzene	78	9.887	9.872	0.015	97	4960882	16.0	14.2	
51 Cyclohexane	69	9.908	9.897	0.011	99	780409	16.0	14.0	
52 Carbon tetrachloride	117	9.924	9.911	0.013	98	3839108	16.0	16.0	
53 2,3-Dimethylpentane	71	10.065	10.055	0.010	91	1220673	16.0	14.6	
54 Thiophene	84	10.156	10.140	0.016	97	2949209	16.0	15.1	
55 Tert-amyl methyl ether	73	10.399	10.392	0.007	97	5095033	16.0	15.6	
56 Isooctane	57	10.733	10.721	0.012	98	8819004	16.0	14.2	
58 1,2-Dichloropropane	63	11.121	11.111	0.010	89	1977348	16.0	13.9	
57 n-Heptane	71	11.127	11.115	0.012	90	1870274	16.0	14.5	
59 Trichloroethene	130	11.186	11.172	0.014	98	2274401	16.0	16.1	
60 Dibromomethane	93	11.229	11.220	0.009	92	2060511	16.0	15.1	
61 Dichlorobromomethane	83	11.396	11.387	0.009	99	3775139	16.0	15.7	
62 1,4-Dioxane	88	11.396	11.397	-0.001	41	816085	16.0	14.9	
63 Methyl methacrylate	41	11.526	11.520	0.006	93	2781532	16.0	14.9	
64 Methylcyclohexane	83	12.000	11.992	0.008	94	3787739	16.0	15.0	
65 4-Methyl-2-pentanone (MIBK	43	12.389	12.387	0.002	98	4778126	16.0	14.8	
66 cis-1,3-Dichloropropene	75	12.443	12.435	0.008	95	3210376	16.0	16.0	
67 trans-1,3-Dichloropropene	75	13.165	13.157	0.008	99	3043843	16.0	16.1	
68 Toluene	91	13.305	13.298	0.007	94	6233771	16.0	15.1	
69 1,1,2-Trichloroethane	83	13.365	13.353	0.012	98	1836842	16.0	14.7	
70 2-Methylthiophene	97	13.456	13.448	0.008	97	5020438	16.0	15.1	
71 3-Methylthiophene	97	13.661	13.655	0.006	99	4985476	16.0	15.1	
72 2-Hexanone	58	13.785	13.780	0.005	93	2412735	16.0	15.4	
73 Chlorodibromomethane	129	14.082	14.073	0.009	97	3891978	16.0	17.2	
74 n-Octane	85	14.093	14.084	0.009	92	1999170	16.0	14.2	
75 Ethylene Dibromide	107	14.373	14.365	0.008	99	3565130	16.0	16.2	
76 Tetrachloroethene	129	14.492	14.485	0.007	97	2155098	16.0	15.7	
77 Chlorobenzene	112	15.376	15.371	0.005	94	4876854	16.0	15.2	
78 2,3-Dimethylheptane	43	15.473	15.468	0.005	96	5703642	16.0	13.3	
79 Ethylbenzene	91	15.694	15.686	0.008	98	8110087	16.0	14.7	
80 2-Ethylthiophene	97	15.791	15.784	0.007	97	6058139	16.0	15.1	
81 m-Xylene & p-Xylene	91	15.867	15.857	0.010	98	11877984	32.0	27.9	
82 Bromoform	173	16.271	16.263	0.008	98	4692161	16.0	21.1	
83 Styrene	104	16.325	16.322	0.003	98	5111922	16.0	16.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.352	16.347	0.005	91	4024775	16.0	13.1	
85 o-Xylene	91	16.390	16.386	0.004	100	6457242	16.0	14.6	
86 1,1,2,2-Tetrachloroethane	83	16.703	16.698	0.005	99	4835984	16.0	14.9	
87 1,2,3-Trichloropropane	110	16.864	16.860	0.004	97	1486092	16.0	15.7	
88 Isopropylbenzene	105	17.005	17.002	0.003	96	8804862	16.0	14.4	
89 N-Propylbenzene	120	17.582	17.578	0.004	99	2686013	16.0	16.2	
90 2-Chlorotoluene	126	17.609	17.604	0.004	97	2324280	16.0	16.0	
91 4-Ethyltoluene	105	17.749	17.743	0.006	98	9203727	16.0	15.1	
92 1,3,5-Trimethylbenzene	120	17.830	17.825	0.005	94	4463741	16.0	16.2	
93 Alpha Methyl Styrene	118	18.067	18.067	0.000	90	4395635	16.0	17.3	
94 n-Decane	57	18.196	18.187	0.009	91	5351555	16.0	13.4	
95 tert-Butylbenzene	119	18.283	18.276	0.007	93	7998877	16.0	15.0	
96 1,2,4-Trimethylbenzene	105	18.299	18.290	0.009	95	7598209	16.0	14.6	
97 1,3-Dichlorobenzene	146	18.558	18.555	0.003	98	5450351	16.0	16.3	
98 sec-Butylbenzene	105	18.574	18.565	0.009	97	10393943	16.0	13.8	
99 Benzyl chloride	91	18.638	18.634	0.004	99	7356468	16.0	16.3	
100 1,4-Dichlorobenzene	146	18.655	18.650	0.005	95	5612396	16.0	16.7	
101 4-Isopropyltoluene	119	18.752	18.743	0.009	96	9331963	16.0	15.0	
102 1,2,3-Trimethylbenzene	105	18.789	18.785	0.004	97	6225238	16.0	15.4	
103 Butylcyclohexane	83	18.881	18.872	0.009	92	5808613	16.0	13.9	
104 1,2-Dichlorobenzene	146	19.032	19.027	0.005	96	5218100	16.0	16.1	
105 2,3-Dihydroindene	117	19.043	19.035	0.008	95	7129644	16.0	14.8	
106 Indene	116	19.172	19.167	0.005	94	6290885	16.0	16.7	
107 n-Butylbenzene	91	19.205	19.205	0.000	99	9022925	16.0	14.0	
108 Undecane	57	19.582	19.578	0.004	95	5344011	16.0	11.6	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.598	19.594	0.004	98	6932200	16.0	14.5	
110 1,2-Dibromo-3-Chloropropan	157	19.658	19.653	0.005	96	2805076	16.0	19.6	
111 1,2,4,5-Tetramethylbenzene	119	20.003	19.998	0.005	98	8380349	16.0	14.9	
112 1,2,3,5-Tetramethylbenzene	119	20.057	20.052	0.005	96	5465975	16.0	15.7	
113 1,2,3,4-Tetramethylbenzene	119	20.461	20.457	0.004	98	7334947	16.0	15.5	
114 Dodecane	57	20.682	20.682	0.000	97	6117545	16.0	12.7	
115 1,2,4-Trichlorobenzene	180	20.812	20.809	0.003	94	5798007	16.0	19.3	
116 Naphthalene	128	20.946	20.942	0.004	98	10805877	16.0	15.4	
117 Benzo(b)thiophene	134	21.049	21.046	0.003	99	6835475	16.0	17.0	
118 Hexachlorobutadiene	225	21.200	21.195	0.005	93	5123456	16.0	19.9	
119 1,2,3-Trichlorobenzene	180	21.243	21.239	0.004	96	5471847	16.0	18.4	
120 2-Methylnaphthalene	142	21.949	21.947	0.002	100	3554672	50.0	43.8	
121 1-Methylnaphthalene	142	22.073	22.073	0.000	100	3252922	50.0	39.9	
A 122 C6 Range	1	7.670	(7.606-7.737)		0	12672586	16.0	14.5	
S 124 Xylenes, Total	100				0		48.0	42.6	
S 125 1,2-Dichloroethene, Total	1				0		32.0	29.8	

Reagents:

40L9DNP_00009	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

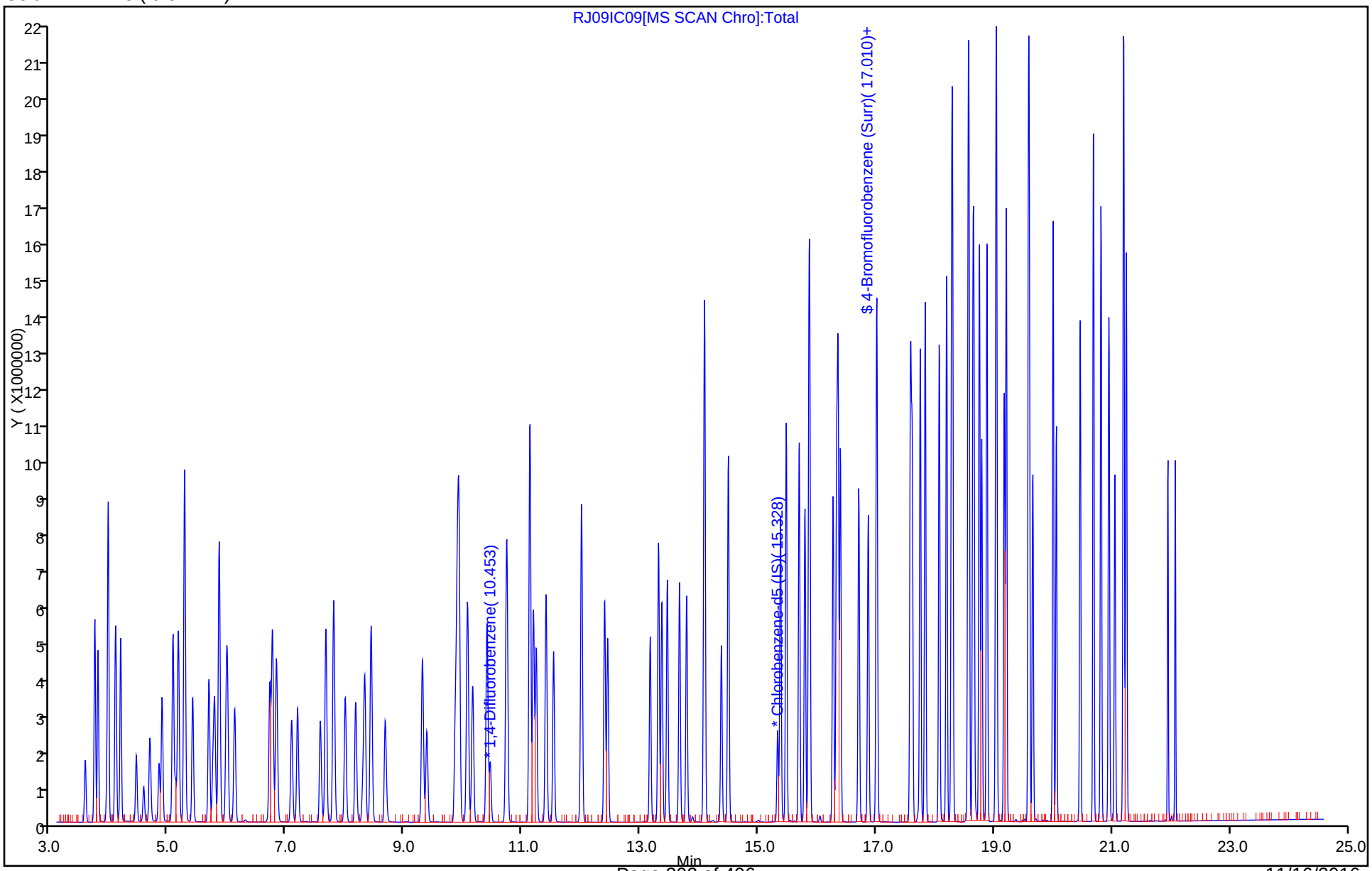
Report Date: 13-Oct-2016 11:37:36 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC09.D

Injection Date:	10-Oct-2016 00:36:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L9			Worklist Smp#:	11
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

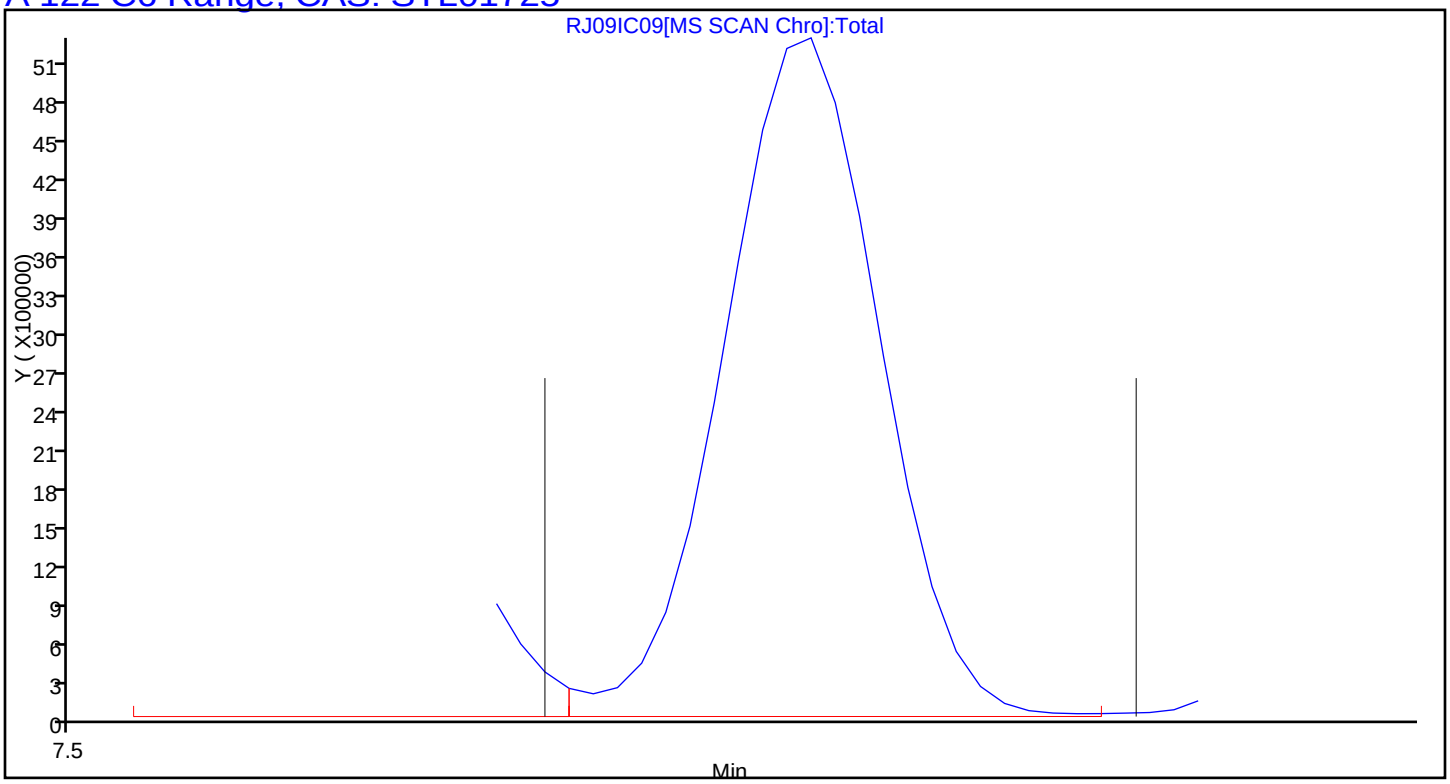


Report Date: 13-Oct-2016 11:37:36 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC09.D				
Injection Date:	10-Oct-2016 00:36:30	Instrument ID:	MR		
Lims ID:	IC L9				
Client ID:					
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Lab Sample ID: ICV 140-6845/17 Calibration Date: 10/09/2016 07:04

Instrument ID: MJ Calib Start Date: 10/08/2016 19:01

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/09/2016 02:10

Lab File ID: JJ08LCS.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4073	0.4360		2.14	2.00	7.1	35.0
Propene	Ave	1.399	1.498		2.14	2.00	7.1	35.0
Dichlorodifluoromethane	Ave	3.938	4.219		2.14	2.00	7.1	35.0
Chloromethane	Ave	0.4515	0.4605		2.04	2.00	2.0	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.073	2.123		2.05	2.00	2.4	35.0
Acetaldehyde	Ave	0.4172	0.3708		8.89	10.0	-11.1	35.0
Vinyl chloride	Ave	1.359	1.477		2.18	2.00	8.7	35.0
1,3-Butadiene	Ave	1.010	1.081		2.14	2.00	7.0	35.0
Butane	Ave	1.971	2.080		2.11	2.00	5.5	35.0
Bromomethane	Ave	1.230	1.299		2.11	2.00	5.6	35.0
Chloroethane	Ave	0.5688	0.6180		2.17	2.00	8.7	35.0
Ethanol	Ave	0.3812	0.3603		9.46	10.0	-5.5	35.0
Vinyl bromide	Ave	1.277	1.456		2.28	2.00	14.0	35.0
2-Methylbutane	Ave	1.622	1.794		2.21	2.00	10.6	35.0
Trichlorofluoromethane	Ave	3.433	3.741		2.18	2.00	9.0	35.0
Acrolein	Ave	0.3514	0.3286		1.87	2.00	-6.5	35.0
Acetonitrile	Ave	0.4327	0.4317		2.00	2.00	-0.2	35.0
Acetone	Ave	0.4327	0.4021		5.58	6.00	-7.1	35.0
Isopropyl alcohol	Ave	1.496	1.528		6.13	6.00	2.1	35.0
Pentane	Ave	0.2000	0.2291		2.29	2.00	14.6	35.0
Ethyl ether	Ave	1.260	1.162		1.84	2.00	-7.8	35.0
1,1-Dichloroethene	Ave	1.257	1.371		2.18	2.00	9.1	35.0
tert-Butyl alcohol	Ave	1.943	1.906		1.96	2.00	-1.9	35.0
Acrylonitrile	Ave	0.7216	0.6765		1.88	2.00	-6.3	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.661	2.992		2.25	2.00	12.4	35.0
Methylene Chloride	Ave	1.271	1.315		2.07	2.00	3.5	35.0
3-Chloropropene	Ave	1.198	1.267		2.12	2.00	5.8	35.0
Carbon disulfide	Ave	3.881	4.087		2.11	2.00	5.3	35.0
trans-1,2-Dichloroethene	Ave	1.239	1.372		2.22	2.00	10.8	35.0
2-Methylpentane	Ave	2.721	3.325		2.44	2.00	22.2	35.0
Methyl tert-butyl ether	Ave	2.592	2.382		1.84	2.00	-8.1	35.0
1,1-Dichloroethane	Ave	2.297	2.533		2.21	2.00	10.3	35.0
Vinyl acetate	Ave	2.526	2.213		1.75	2.00	-12.4	35.0
2-Butanone (MEK)	Ave	0.4246	0.3850		1.81	2.00	-9.3	35.0
Hexane	Ave	1.009	1.097		2.17	2.00	8.7	35.0
Isopropyl ether	Ave	3.491	2.967		1.70	2.00	-15.0	35.0
cis-1,2-Dichloroethene	Ave	1.220	1.353		2.22	2.00	10.9	35.0
Ethyl acetate	Ave	1.913	1.712		1.79	2.00	-10.5	35.0
Chloroform	Ave	2.515	2.586		2.06	2.00	2.8	35.0
Tert-butyl ethyl ether	Ave	2.864	2.813		1.97	2.00	-1.8	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Lab Sample ID: ICV 140-6845/17 Calibration Date: 10/09/2016 07:04

Instrument ID: MJ Calib Start Date: 10/08/2016 19:01

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/09/2016 02:10

Lab File ID: JJ08LCS.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.061	0.9762		1.84	2.00	-8.0	35.0
1,1,1-Trichloroethane	Ave	2.584	2.783		2.16	2.00	7.7	35.0
1,2-Dichloroethane	Ave	0.3427	0.3958		2.31	2.00	15.5	35.0
1-Butanol	Ave	0.0944	0.1025		2.17	2.00	8.7	35.0
Benzene	Ave	0.7399	0.8480		2.29	2.00	14.6	35.0
Cyclohexane	Ave	0.1274	0.1553		2.44	2.00	21.9	35.0
Carbon tetrachloride	Ave	0.5676	0.6786		2.39	2.00	19.6	35.0
2,3-Dimethylpentane	Ave	0.1696	0.1865		2.20	2.00	10.0	35.0
Thiophene	Ave	0.4127	0.4847		2.35	2.00	17.5	35.0
Tert-amyl methyl ether	Ave	0.6531	0.6553		2.01	2.00	0.3	35.0
2,2,4-Trimethylpentane	Ave	1.194	1.356		2.27	2.00	13.5	35.0
Heptane	Ave	0.2581	0.2849		2.21	2.00	10.4	35.0
1,2-Dichloropropane	Ave	0.2830	0.3049		2.16	2.00	7.7	35.0
Trichloroethene	Ave	0.2971	0.3390		2.28	2.00	14.1	35.0
Dibromomethane	Ave	0.2887	0.3263		2.26	2.00	13.0	35.0
Bromodichloromethane	Ave	0.5158	0.5761		2.24	2.00	11.7	35.0
1,4-Dioxane	Ave	0.0833	0.0886		2.13	2.00	6.3	35.0
Methyl methacrylate	Ave	0.2356	0.2237		1.90	2.00	-5.0	35.0
Methylcyclohexane	Ave	0.5478	0.5258		1.92	2.00	-4.0	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4587	0.4841		2.11	2.00	5.5	35.0
cis-1,3-Dichloropropene	Ave	0.3725	0.4136		2.22	2.00	11.0	35.0
trans-1,3-Dichloropropene	Ave	0.3515	0.3792		2.16	2.00	7.9	35.0
Toluene	Ave	0.8769	0.9365		2.14	2.00	6.8	35.0
1,1,2-Trichloroethane	Ave	0.2733	0.2849		2.09	2.00	4.3	35.0
2-Methylthiophene	Ave	0.7071	0.8099		2.29	2.00	14.5	35.0
3-Methylthiophene	Ave	0.6759	0.7922		2.35	2.00	17.2	35.0
2-Hexanone	Ave	0.2377	0.2522		2.12	2.00	6.1	35.0
Octane	Ave	0.2927	0.3177		2.17	2.00	8.5	35.0
Dibromochloromethane	Ave	0.5033	0.5559		2.21	2.00	10.5	35.0
1,2-Dibromoethane (EDB)	Ave	0.4354	0.4760		2.19	2.00	9.3	35.0
Tetrachloroethene	Ave	0.3284	0.3556		2.17	2.00	8.3	35.0
2,3-Dimethylheptane	Ave	0.8637	0.9400		2.18	2.00	8.8	35.0
Chlorobenzene	Ave	0.6155	0.6685		2.17	2.00	8.6	35.0
Ethylbenzene	Ave	0.9686	0.9699		2.00	2.00	0.1	35.0
2-Ethylthiophene	Ave	0.6914	0.7018		2.03	2.00	1.5	35.0
m-Xylene & p-Xylene	Ave	0.7248	0.7307		4.03	4.00	0.8	35.0
Nonane	Ave	0.5723	0.6149		2.15	2.00	7.4	35.0
Bromoform	Ave	0.3787	0.4257		2.25	2.00	12.4	35.0
Styrene	Ave	0.4578	0.5106		2.23	2.00	11.5	35.0
o-Xylene	Ave	0.7946	0.7726		1.95	2.00	-2.8	35.0
1,1,2,2-Tetrachloroethane	Ave	0.5758	0.5832		2.03	2.00	1.3	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Lab Sample ID: ICV 140-6845/17 Calibration Date: 10/09/2016 07:04

Instrument ID: MJ Calib Start Date: 10/08/2016 19:01

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/09/2016 02:10

Lab File ID: JJ08LCS.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1324	0.1339		2.02	2.00	1.1	35.0
Isopropylbenzene	Ave	1.009	1.036		2.05	2.00	2.6	35.0
Propylbenzene	Ave	0.2492	0.2586		2.08	2.00	3.8	35.0
2-Chlorotoluene	Ave	0.2430	0.2558		2.11	2.00	5.3	35.0
4-Ethyltoluene	Ave	0.8584	0.8422		1.96	2.00	-1.9	35.0
1,3,5-Trimethylbenzene	Ave	0.4295	0.4357		2.03	2.00	1.5	35.0
Alpha Methyl Styrene	Ave	0.3098	0.3159		2.04	2.00	2.0	35.0
Decane	Ave	0.5873	0.6059		2.06	2.00	3.2	35.0
tert-Butylbenzene	Ave	0.8323	0.8488		2.04	2.00	2.0	35.0
1,2,4-Trimethylbenzene	Ave	0.7289	0.7687		2.11	2.00	5.5	35.0
sec-Butylbenzene	Ave	1.140	1.162		2.04	2.00	1.9	35.0
1,3-Dichlorobenzene	Ave	0.3388	0.3542		2.09	2.00	4.6	35.0
Benzyl chloride	Ave	0.3789	0.3714		1.96	2.00	-2.0	35.0
1,4-Dichlorobenzene	Ave	0.2901	0.2939		2.03	2.00	1.3	35.0
4-Isopropyltoluene	Ave	0.8275	0.8626		2.09	2.00	4.3	35.0
1,2,3-Trimethylbenzene	Ave	0.5630	0.6328		2.25	2.00	12.4	35.0
Butylcyclohexane	Ave	0.7399	0.7529		2.04	2.00	1.8	35.0
Indane	Ave	0.5985	0.5941		1.99	2.00	-0.7	35.0
1,2-Dichlorobenzene	Ave	0.3500	0.3648		2.09	2.00	4.3	35.0
Butylbenzene	Ave	0.6858	0.7376		2.15	2.00	7.6	35.0
Indene	Ave	0.3630	0.4709		2.60	2.00	29.7	35.0
Undecane	Ave	0.5362	0.5224		1.95	2.00	-2.6	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.5328	0.6957		2.61	2.00	30.6	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.0953	0.0888		1.86	2.00	-6.8	35.0
1,2,4,5-Tetramethylbenzene	Ave	0.6244	0.7067		2.26	2.00	13.2	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.3986	0.4571		2.29	2.00	14.7	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.4982	0.5408		2.17	2.00	8.6	35.0
Dodecane	Ave	0.4604	0.4600		2.00	2.00	-0.0	35.0
1,2,4-Trichlorobenzene	Ave	0.0799	0.0917		2.30	2.00	14.7	35.0
Naphthalene	Ave	0.2334	0.2634		2.26	2.00	12.8	35.0
Benzo(b)thiophene	Ave	0.0943	0.1047		2.22	2.00	11.0	35.0
Hexachlorobutadiene	Ave	0.3631	0.3101		1.71	2.00	-14.6	35.0
1,2,3-Trichlorobenzene	Ave	0.0941	0.0989		2.10	2.00	5.0	35.0
2-Methylnaphthalene	Ave	0.0120	0.0115		6.00	6.25	-4.0	50.0
1-Methylnaphthalene	Ave	0.0161	0.0136		5.28	6.25	-15.5	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6030	0.6447		4.28	4.00	6.9	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08LCS.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 09-Oct-2016 07:04:30 ALS Bottle#: 10 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003509-017
Misc. Info.: 059230
Operator ID: 403648 Instrument ID: MJ
Sublist:

Method: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 12:05:23 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 11-Oct-2016 12:05:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.299	9.302	-0.003	97	290428	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.461	11.461	0.000	95	1211046	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.128	16.131	-0.003	88	1042574	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.752	17.750	-0.001	88	672133	4.00	4.28	
6 Chlorodifluoromethane	67	3.916	3.917	-0.002	97	63342	2.00	2.14	
7 Propene	41	3.927	3.931	-0.006	99	217637	2.00	2.14	
8 Dichlorodifluoromethane	85	3.986	3.986	-0.001	100	612992	2.00	2.14	
9 Chloromethane	52	4.180	4.182	-0.003	99	66902	2.00	2.04	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.185	4.187	-0.003	92	308406	2.00	2.05	
11 Acetaldehyde	44	4.347	4.348	-0.002	100	269335	10.0	8.89	
12 Vinyl chloride	62	4.368	4.368	-0.001	99	214639	2.00	2.18	
14 Butadiene	54	4.459	4.462	-0.004	68	157055	2.00	2.14	
13 Butane	43	4.459	4.463	-0.006	86	302205	2.00	2.11	
15 Bromomethane	94	4.809	4.813	-0.006	99	188724	2.00	2.11	
16 Chloroethane	64	4.960	4.963	-0.004	97	89791	2.00	2.17	
17 Ethanol	31	5.056	5.061	-0.007	98	261752	10.0	9.46	
18 Vinyl bromide	106	5.288	5.288	-0.002	99	211537	2.00	2.28	
19 2-Methylbutane	43	5.336	5.339	-0.005	92	260686	2.00	2.21	
20 Trichlorofluoromethane	101	5.573	5.574	-0.003	100	543594	2.00	2.18	
21 Acrolein	56	5.583	5.585	-0.003	95	47736	2.00	1.87	
22 Acetonitrile	40	5.653	5.656	-0.004	99	62723	2.00	2.00	
23 Acetone	58	5.702	5.710	-0.010	98	175266	6.00	5.58	
24 Isopropyl alcohol	45	5.782	5.791	-0.011	97	666200	6.00	6.13	
25 Pentane	72	5.804	5.803	-0.001	97	33292	2.00	2.29	
26 Ethyl ether	31	5.981	5.985	-0.006	93	168771	2.00	1.84	
27 1,1-Dichloroethene	96	6.315	6.317	-0.004	97	199162	2.00	2.18	
28 2-Methyl-2-propanol	59	6.406	6.417	-0.013	95	276883	2.00	1.96	
29 Acrylonitrile	53	6.428	6.427	-0.001	94	98293	2.00	1.88	
30 1,1,2-Trichloro-1,2,2-trif	101	6.497	6.497	-0.002	95	434702	2.00	2.25	
31 Methylene Chloride	84	6.680	6.680	-0.002	97	191023	2.00	2.07	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.696	6.696	-0.002	96	184128	2.00	2.12	
33 Carbon disulfide	76	6.858	6.855	0.001	99	593873	2.00	2.11	
34 trans-1,2-Dichloroethene	96	7.519	7.519	-0.002	98	199394	2.00	2.22	
35 2-Methylpentane	43	7.530	7.530	-0.002	95	483025	2.00	2.44	
36 Methyl tert-butyl ether	73	7.643	7.651	-0.010	97	346127	2.00	1.84	
37 1,1-Dichloroethane	63	7.949	7.953	-0.006	100	367991	2.00	2.21	
38 Vinyl acetate	43	8.052	8.052	-0.003	100	321595	2.00	1.75	
39 2-Butanone (MEK)	72	8.519	8.521	-0.005	96	55943	2.00	1.81	
40 Hexane	56	8.536	8.534	-0.001	90	159317	2.00	2.17	
41 Isopropyl ether	45	8.691	8.699	-0.011	98	431058	2.00	1.70	
42 cis-1,2-Dichloroethene	96	8.955	8.958	-0.006	95	196616	2.00	2.22	
43 Ethyl acetate	43	9.143	9.143	-0.003	99	248704	2.00	1.79	
44 Chloroform	83	9.310	9.307	0.000	97	375741	2.00	2.06	
45 Tert-butyl ethyl ether	59	9.385	9.389	-0.007	96	408722	2.00	1.97	
46 Tetrahydrofuran	42	9.729	9.734	-0.009	93	141837	2.00	1.84	
47 1,1,1-Trichloroethane	97	10.348	10.349	-0.004	96	404365	2.00	2.16	
48 1,2-Dichloroethane	62	10.461	10.456	0.000	98	239762	2.00	2.31	
49 n-Butanol	31	10.869	10.878	-0.015	91	62123	2.00	2.17	
50 Cyclohexane	69	10.939	10.932	0.002	72	94106	2.00	2.44	
51 Benzene	78	10.939	10.933	0.000	97	513774	2.00	2.29	
52 Carbon tetrachloride	117	10.961	10.957	-0.002	97	411138	2.00	2.39	
53 2,3-Dimethylpentane	71	11.041	11.039	-0.003	92	113015	2.00	2.20	
54 Thiophene	84	11.208	11.205	-0.002	97	293664	2.00	2.35	
55 Tert-amyl methyl ether	73	11.391	11.394	-0.005	98	341818	2.00	2.01	
56 Isooctane	57	11.665	11.664	-0.005	98	821283	2.00	2.27	
57 n-Heptane	71	12.031	12.027	-0.002	93	172588	2.00	2.21	
58 1,2-Dichloropropane	63	12.128	12.124	-0.002	91	184700	2.00	2.16	
59 Trichloroethene	130	12.160	12.158	-0.003	95	205397	2.00	2.28	
60 Dibromomethane	93	12.251	12.247	-0.001	93	197677	2.00	2.26	
62 Dichlorobromomethane	83	12.386	12.382	-0.002	99	349032	2.00	2.24	
61 1,4-Dioxane	88	12.402	12.407	-0.011	93	53657	2.00	2.13	
63 Methyl methacrylate	41	12.466	12.464	-0.004	91	135535	2.00	1.90	
64 Methylcyclohexane	83	12.918	12.913	-0.001	95	318536	2.00	1.92	
65 4-Methyl-2-pentanone (MIBK	43	13.305	13.304	-0.005	98	293313	2.00	2.11	
66 cis-1,3-Dichloropropene	75	13.370	13.362	0.001	95	250575	2.00	2.22	
67 trans-1,3-Dichloropropene	75	14.053	14.049	0.002	98	197773	2.00	2.16	
68 Toluene	91	14.176	14.177	-0.004	94	488441	2.00	2.14	
69 1,1,2-Trichloroethane	83	14.252	14.248	-0.001	97	148611	2.00	2.09	
70 2-Methylthiophene	97	14.332	14.329	0.000	97	422434	2.00	2.29	
71 3-Methylthiophene	97	14.531	14.527	0.001	99	413182	2.00	2.35	
72 2-Hexanone	58	14.623	14.622	-0.001	92	131514	2.00	2.12	
73 n-Octane	85	14.843	14.839	0.002	95	165697	2.00	2.17	
74 Chlorodibromomethane	129	14.951	14.951	-0.003	98	289960	2.00	2.21	
75 Ethylene Dibromide	107	15.241	15.242	-0.004	98	248278	2.00	2.19	
76 Tetrachloroethene	129	15.311	15.309	-0.001	95	185443	2.00	2.17	
77 2,3-Dimethylheptane	43	16.177	16.173	0.001	96	490258	2.00	2.18	
78 Chlorobenzene	112	16.177	16.177	-0.003	75	348675	2.00	2.17	
79 Ethylbenzene	91	16.456	16.455	-0.002	99	505889	2.00	2.00	
80 2-Ethylthiophene	97	16.558	16.560	-0.005	98	366040	2.00	2.03	
81 m-Xylene & p-Xylene	91	16.618	16.613	0.002	99	762243	4.00	4.03	
82 n-Nonane	57	17.016	17.012	0.001	93	320711	2.00	2.15	
83 Bromoform	173	17.075	17.074	-0.002	92	222043	2.00	2.25	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.080	17.079	-0.002	99	266334	2.00	2.23	
85 o-Xylene	91	17.139	17.139	-0.003	99	402947	2.00	1.95	
86 1,1,2,2-Tetrachloroethane	83	17.456	17.459	-0.006	99	304189	2.00	2.03	
87 1,2,3-Trichloropropane	110	17.618	17.619	-0.005	99	69823	2.00	2.02	
88 Isopropylbenzene	105	17.715	17.715	-0.004	97	540094	2.00	2.05	
89 N-Propylbenzene	120	18.236	18.234	-0.001	99	134863	2.00	2.08	
90 2-Chlorotoluene	126	18.285	18.284	-0.002	98	133435	2.00	2.11	
91 4-Ethyltoluene	105	18.381	18.379	-0.001	98	439253	2.00	1.96	
92 1,3,5-Trimethylbenzene	120	18.451	18.448	-0.001	92	227267	2.00	2.03	
93 Alpha Methyl Styrene	118	18.677	18.674	-0.001	87	164775	2.00	2.04	
94 n-Decane	57	18.715	18.712	-0.001	90	315988	2.00	2.06	
95 tert-Butylbenzene	119	18.865	18.861	0.000	90	442717	2.00	2.04	
96 1,2,4-Trimethylbenzene	105	18.876	18.876	-0.003	96	400946	2.00	2.11	
97 sec-Butylbenzene	105	19.123	19.123	-0.004	98	606177	2.00	2.04	
98 1,3-Dichlorobenzene	146	19.145	19.147	-0.006	98	184753	2.00	2.09	
99 Benzyl chloride	91	19.220	19.218	-0.002	98	193714	2.00	1.96	
100 1,4-Dichlorobenzene	146	19.231	19.233	-0.005	95	153293	2.00	2.03	
101 4-Isopropyltoluene	119	19.279	19.279	-0.004	96	449920	2.00	2.09	
102 1,2,3-Trimethylbenzene	105	19.339	19.336	-0.001	98	330018	2.00	2.25	
103 Butylcyclohexane	83	19.387	19.383	0.000	92	392685	2.00	2.04	
104 2,3-Dihydroindene	117	19.581	19.581	-0.004	94	309857	2.00	1.99	
105 1,2-Dichlorobenzene	146	19.586	19.585	-0.002	96	190286	2.00	2.09	
106 n-Butylbenzene	91	19.704	19.702	-0.002	98	384717	2.00	2.15	
107 Indene	116	19.710	19.708	-0.001	90	245592	2.00	2.60	
108 Undecane	57	19.995	19.993	-0.002	96	272459	2.00	1.95	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.070	20.067	-0.001	98	362852	2.00	2.61	
110 1,2-Dibromo-3-Chloropropan	157	20.177	20.172	0.001	91	46307	2.00	1.86	
111 1,2,4,5-Tetramethylbenzene	119	20.452	20.450	-0.002	97	368574	2.00	2.26	
112 1,2,3,5-Tetramethylbenzene	119	20.505	20.505	-0.004	95	238392	2.00	2.29	
113 1,2,3,4-Tetramethylbenzene	119	20.920	20.918	-0.002	97	282060	2.00	2.17	
114 Dodecane	57	21.065	21.063	-0.002	95	239909	2.00	2.00	
115 1,2,4-Trichlorobenzene	180	21.301	21.296	0.001	94	47814	2.00	2.30	
116 Naphthalene	128	21.446	21.442	0.000	99	137359	2.00	2.26	
117 Benzo(b)thiophene	134	21.543	21.541	-0.002	99	54595	2.00	2.22	
118 Hexachlorobutadiene	225	21.629	21.627	-0.002	96	161730	2.00	1.71	
119 1,2,3-Trichlorobenzene	180	21.694	21.693	-0.003	95	51585	2.00	2.10	
120 2-Methylnaphthalene	142	22.248	22.259	-0.015	99	18796	6.25	6.00	
121 1-Methylnaphthalene	142	22.371	22.355	0.012	98	22203	6.25	5.28	
A 124 Toluene Range	1	14.180	(14.155-14.204)		0	1189423	2.00	2.30	
A 125 C8 Range	1	14.880	(14.808-14.952)		0	1558269	2.00	2.25	
S 126 Xylenes, Total	100				0		6.00	5.98	
S 127 1,2-Dichloroethene, Total	1				0		4.00	4.44	

Reagents:

40CV101S_00019	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

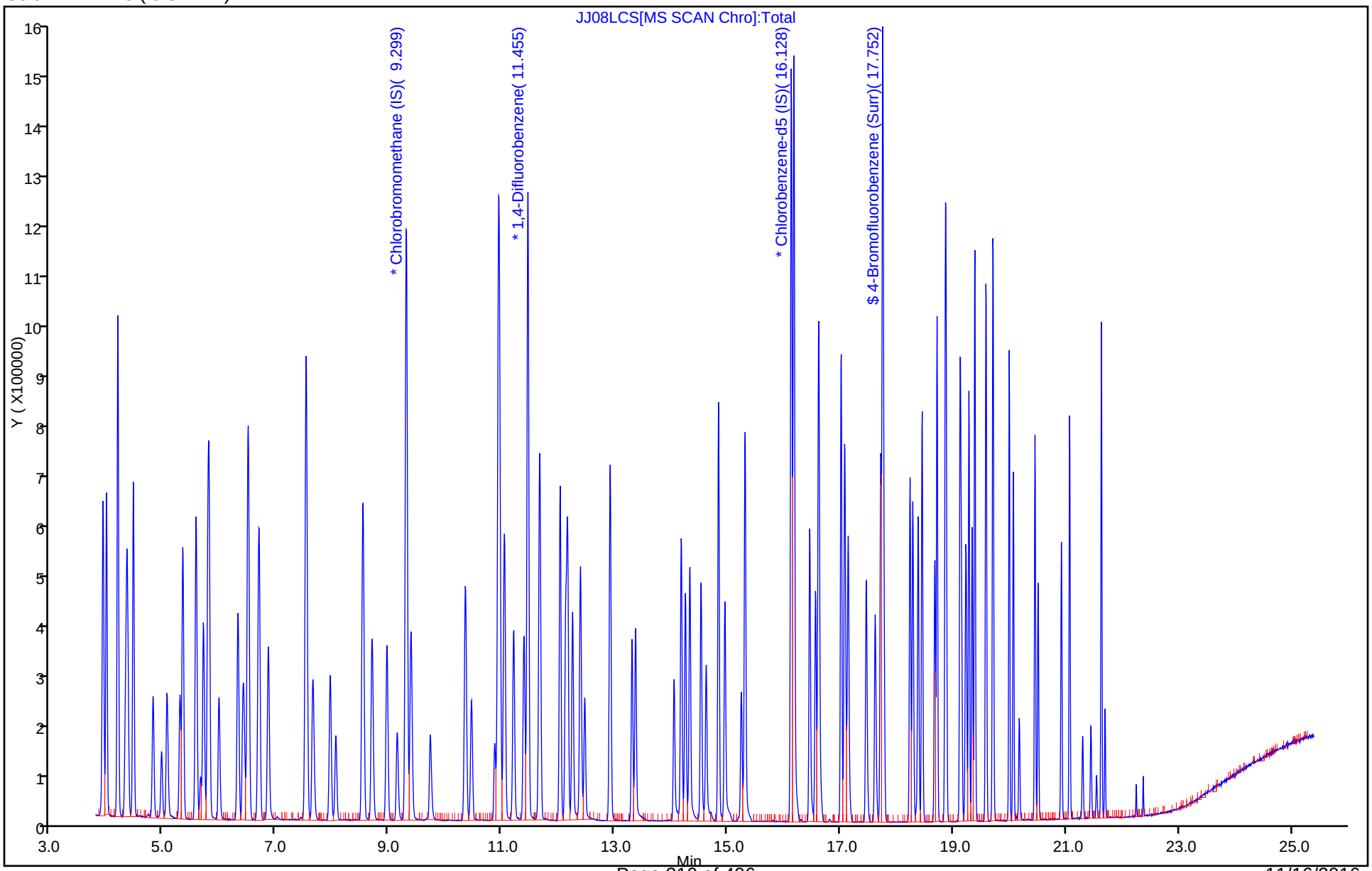
Report Date: 11-Oct-2016 12:05:25 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ08LCS.D

Injection Date:	09-Oct-2016 07:04:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	ICV			Worklist Smp#:	17
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Lab Sample ID: CCVIS 140-7085/6 Calibration Date: 11/07/2016 11:58

Instrument ID: MJ Calib Start Date: 10/08/2016 19:01

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/09/2016 02:10

Lab File ID: JCCVK07A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4073	0.4711		2.30	1.99	15.7	30.0
Propene	Ave	1.399	1.638		2.33	1.99	17.1	30.0
Dichlorodifluoromethane	Ave	3.938	4.700		2.38	1.99	19.4	30.0
Chloromethane	Ave	0.4515	0.5415		2.39	1.99	20.0	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.073	2.856		2.74	1.99	37.8*	30.0
Acetaldehyde	Ave	0.4172	0.4842		11.6	9.96	16.1	30.0
Vinyl chloride	Ave	1.359	1.680		2.46	1.99	23.6	30.0
1,3-Butadiene	Ave	1.010	1.274		2.51	1.99	26.0	30.0
Butane	Ave	1.971	2.530		2.56	1.99	28.4	30.0
Bromomethane	Ave	1.230	1.512		2.45	1.99	23.0	30.0
Chloroethane	Ave	0.5688	0.7298		2.56	1.99	28.3	30.0
Ethanol	Ave	0.3812	0.4479		11.7	9.96	17.5	30.0
Vinyl bromide	Ave	1.277	1.446		2.25	1.99	13.2	30.0
2-Methylbutane	Ave	1.622	2.001		2.46	1.99	23.4	30.0
Trichlorofluoromethane	Ave	3.433	3.963		2.30	1.99	15.4	30.0
Acrolein	Ave	0.3514	0.3491		1.98	1.99	-0.7	30.0
Acetonitrile	Ave	0.4327	0.5230		2.41	1.99	20.9	30.0
Acetone	Ave	0.4327	0.4640		6.41	5.97	7.2	30.0
Isopropyl alcohol	Ave	1.496	1.617		6.46	5.97	8.1	30.0
Pentane	Ave	0.2000	0.2354		2.34	1.99	17.7	30.0
Ethyl ether	Ave	1.260	1.542		2.44	1.99	22.4	30.0
1,1-Dichloroethene	Ave	1.257	1.423		2.25	1.99	13.2	30.0
tert-Butyl alcohol	Ave	1.943	1.993		2.04	1.99	2.6	30.0
Acrylonitrile	Ave	0.7216	0.7747		2.14	1.99	7.3	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.661	2.986		2.23	1.99	12.2	30.0
Methylene Chloride	Ave	1.271	1.333		2.09	1.99	4.9	30.0
3-Chloropropene	Ave	1.198	1.311		2.18	1.99	9.4	30.0
Carbon disulfide	Ave	3.881	4.479		2.30	1.99	15.4	30.0
trans-1,2-Dichloroethene	Ave	1.239	1.380		2.22	1.99	11.4	30.0
2-Methylpentane	Ave	2.721	3.173		2.32	1.99	16.6	30.0
Methyl tert-butyl ether	Ave	2.592	2.809		2.16	1.99	8.4	30.0
1,1-Dichloroethane	Ave	2.297	2.463		2.14	1.99	7.2	30.0
Vinyl acetate	Ave	2.526	2.734		2.16	1.99	8.3	30.0
2-Butanone (MEK)	Ave	0.4246	0.4178		1.96	1.99	-1.6	30.0
Hexane	Ave	1.009	1.090		2.15	1.99	8.0	30.0
Isopropyl ether	Ave	3.491	3.923		2.24	1.99	12.4	30.0
cis-1,2-Dichloroethene	Ave	1.220	1.263		2.06	1.99	3.5	30.0
Ethyl acetate	Ave	1.913	2.032		2.12	1.99	6.2	30.0
Chloroform	Ave	2.515	2.717		2.15	1.99	8.0	30.0
Tert-butyl ethyl ether	Ave	2.864	3.083		2.14	1.99	7.6	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Lab Sample ID: CCVIS 140-7085/6 Calibration Date: 11/07/2016 11:58

Instrument ID: MJ Calib Start Date: 10/08/2016 19:01

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/09/2016 02:10

Lab File ID: JCCVK07A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.061	1.147		2.15	1.99	8.1	30.0
1,1,1-Trichloroethane	Ave	2.584	2.706		2.09	1.99	4.7	30.0
1,2-Dichloroethane	Ave	0.3427	0.3625		2.11	1.99	5.8	30.0
1-Butanol	Ave	0.0944	0.0968		2.04	1.99	2.5	30.0
Benzene	Ave	0.7399	0.7881		2.12	1.99	6.5	30.0
Cyclohexane	Ave	0.1274	0.1416		2.21	1.99	11.1	30.0
Carbon tetrachloride	Ave	0.5676	0.5855		2.05	1.99	3.1	30.0
2,3-Dimethylpentane	Ave	0.1696	0.1786		2.10	1.99	5.3	30.0
Thiophene	Ave	0.4127	0.4139		2.00	1.99	0.3	30.0
Tert-amyl methyl ether	Ave	0.6531	0.6614		2.02	1.99	1.3	30.0
2,2,4-Trimethylpentane	Ave	1.194	1.283		2.14	1.99	7.4	30.0
Heptane	Ave	0.2581	0.2643		2.04	1.99	2.4	30.0
1,2-Dichloropropane	Ave	0.2830	0.2951		2.08	1.99	4.3	30.0
Trichloroethene	Ave	0.2971	0.2800		1.88	1.99	-5.7	30.0
Dibromomethane	Ave	0.2887	0.2915		2.01	1.99	1.0	30.0
Bromodichloromethane	Ave	0.5158	0.5329		2.06	1.99	3.3	30.0
1,4-Dioxane	Ave	0.0833	0.0799		1.91	1.99	-4.1	30.0
Methyl methacrylate	Ave	0.2356	0.2325		1.97	1.99	-1.3	30.0
Methylcyclohexane	Ave	0.5478	0.5739		2.09	1.99	4.8	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4587	0.4733		2.05	1.99	3.2	30.0
cis-1,3-Dichloropropene	Ave	0.3725	0.3599		1.92	1.99	-3.4	30.0
trans-1,3-Dichloropropene	Ave	0.3515	0.3011		1.71	1.99	-14.4	30.0
Toluene	Ave	0.8769	0.8888		2.02	1.99	1.4	30.0
1,1,2-Trichloroethane	Ave	0.2733	0.2726		1.99	1.99	-0.2	30.0
2-Methylthiophene	Ave	0.7071	0.6811		1.92	1.99	-3.7	30.0
3-Methylthiophene	Ave	0.6759	0.6340		1.87	1.99	-6.2	30.0
2-Hexanone	Ave	0.2377	0.2434		2.04	1.99	2.4	30.0
Octane	Ave	0.2927	0.2971		2.02	1.99	1.5	30.0
Dibromochloromethane	Ave	0.5033	0.4920		1.95	1.99	-2.3	30.0
1,2-Dibromoethane (EDB)	Ave	0.4354	0.3952		1.81	1.99	-9.2	30.0
Tetrachloroethene	Ave	0.3284	0.3228		1.96	1.99	-1.7	30.0
2,3-Dimethylheptane	Ave	0.8637	0.9679		2.23	1.99	12.1	30.0
Chlorobenzene	Ave	0.6155	0.5921		1.92	1.99	-3.8	30.0
Ethylbenzene	Ave	0.9686	0.9850		2.03	1.99	1.7	30.0
2-Ethylthiophene	Ave	0.6914	0.6809		1.96	1.99	-1.5	30.0
m-Xylene & p-Xylene	Ave	0.7248	0.7422		4.08	3.98	2.4	30.0
Nonane	Ave	0.5723	0.6097		2.12	1.99	6.5	30.0
Bromoform	Ave	0.3787	0.3401		1.79	1.99	-10.2	30.0
Styrene	Ave	0.4578	0.4764		2.07	1.99	4.1	30.0
o-Xylene	Ave	0.7946	0.7969		2.00	1.99	0.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5758	0.5738		1.98	1.99	-0.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Lab Sample ID: CCVIS 140-7085/6 Calibration Date: 11/07/2016 11:58

Instrument ID: MJ Calib Start Date: 10/08/2016 19:01

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/09/2016 02:10

Lab File ID: JCCVK07A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1324	0.1281		1.93	1.99	-3.3	30.0
Isopropylbenzene	Ave	1.009	1.036		2.04	1.99	2.6	30.0
Propylbenzene	Ave	0.2492	0.2417		1.93	1.99	-3.0	30.0
2-Chlorotoluene	Ave	0.2430	0.2354		1.93	1.99	-3.1	30.0
4-Ethyltoluene	Ave	0.8584	0.8639		2.00	1.99	0.6	30.0
1,3,5-Trimethylbenzene	Ave	0.4295	0.4231		1.96	1.99	-1.5	30.0
Alpha Methyl Styrene	Ave	0.3098	0.2911		1.87	1.99	-6.0	30.0
Decane	Ave	0.5873	0.6077		2.06	1.99	3.5	30.0
tert-Butylbenzene	Ave	0.8323	0.8248		1.97	1.99	-0.9	30.0
1,2,4-Trimethylbenzene	Ave	0.7289	0.7405		2.02	1.99	1.6	30.0
sec-Butylbenzene	Ave	1.140	1.125		1.96	1.99	-1.3	30.0
1,3-Dichlorobenzene	Ave	0.3388	0.3063		1.80	1.99	-9.6	30.0
Benzyl chloride	Ave	0.3789	0.3210		1.69	1.99	-15.3	30.0
1,4-Dichlorobenzene	Ave	0.2901	0.2556		1.75	1.99	-11.9	30.0
4-Isopropyltoluene	Ave	0.8275	0.8117		1.95	1.99	-1.9	30.0
1,2,3-Trimethylbenzene	Ave	0.5630	0.5504		1.95	1.99	-2.2	30.0
Butylcyclohexane	Ave	0.7399	0.7336		1.97	1.99	-0.8	30.0
Indane	Ave	0.5985	0.5881		1.96	1.99	-1.7	30.0
1,2-Dichlorobenzene	Ave	0.3500	0.3203		1.82	1.99	-8.5	30.0
Butylbenzene	Ave	0.6858	0.6941		2.02	1.99	1.2	30.0
Indene	Ave	0.3630	0.3292		1.81	1.99	-9.3	30.0
Undecane	Ave	0.5362	0.4839		1.80	1.99	-9.8	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.5328	0.4935		1.84	1.99	-7.4	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.0953	0.0883		1.85	1.99	-7.3	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.6244	0.5520		1.76	1.99	-11.6	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.3986	0.3411		1.70	1.99	-14.4	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.4982	0.4114		1.64	1.99	-17.4	30.0
Dodecane	Ave	0.4604	0.3879		1.68	1.99	-15.8	30.0
1,2,4-Trichlorobenzene	Ave	0.0799	0.0808		2.01	1.99	1.1	30.0
Naphthalene	Ave	0.2334	0.2309		1.97	1.99	-1.1	30.0
Benzo(b)thiophene	Ave	0.0943	0.0925		1.95	1.99	-1.9	30.0
Hexachlorobutadiene	Ave	0.3631	0.2972		1.63	1.99	-18.1	30.0
1,2,3-Trichlorobenzene	Ave	0.0941	0.0920		1.95	1.99	-2.3	30.0
2-Methylnaphthalene	Ave	0.0120	0.0108		5.60	6.22	-10.0	50.0
1-Methylnaphthalene	Ave	0.0161	0.0137		5.28	6.22	-15.2	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6030	0.6388		4.24	4.00	5.9	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JCCVK07A.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 07-Nov-2016 11:58:30 ALS Bottle#: 15 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003595-002
Misc. Info.: P24
Operator ID: 007126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 08-Nov-2016 10:14:16 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: tajh Date: 08-Nov-2016 10:03:59

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.290	9.290	0.000	97	267540	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.446	11.446	0.000	96	1244200	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.125	16.125	0.000	90	1055215	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.749	17.749	0.000	87	674104	4.00	4.24	
6 Chlorodifluoromethane	67	3.918	3.918	0.000	98	62754	1.99	2.30	
7 Propene	41	3.929	3.929	0.000	99	218175	1.99	2.33	
8 Dichlorodifluoromethane	85	3.983	3.983	0.000	100	626067	1.99	2.38	
9 Chloromethane	52	4.182	4.182	0.000	98	72130	1.99	2.39	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.187	4.187	0.000	93	380399	1.99	2.74	
11 Acetaldehyde	44	4.348	4.348	0.000	98	322505	9.96	11.6	
12 Vinyl chloride	62	4.364	4.364	0.000	99	223822	1.99	2.46	
14 Butadiene	54	4.461	4.461	0.000	67	169657	1.99	2.51	
13 Butane	43	4.461	4.461	0.000	86	336946	1.99	2.56	
15 Bromomethane	94	4.805	4.805	0.000	99	201420	1.99	2.45	
16 Chloroethane	64	4.961	4.961	0.000	94	97208	1.99	2.56	
17 Ethanol	31	5.058	5.058	0.000	97	298324	9.96	11.7	
18 Vinyl bromide	106	5.284	5.284	0.000	98	192550	1.99	2.25	
19 2-Methylbutane	43	5.332	5.332	0.000	92	266484	1.99	2.46	
20 Trichlorofluoromethane	101	5.569	5.569	0.000	99	527811	1.99	2.30	
21 Acrolein	56	5.580	5.580	0.000	96	46493	1.99	1.98	
22 Acetonitrile	40	5.650	5.650	0.000	97	69669	1.99	2.41	
23 Acetone	58	5.698	5.698	0.000	98	185422	5.97	6.41	
24 Isopropyl alcohol	45	5.779	5.779	0.000	96	646068	5.97	6.46	
25 Pentane	72	5.795	5.795	0.000	96	31358	1.99	2.34	
26 Ethyl ether	31	5.972	5.972	0.000	91	205387	1.99	2.44	
27 1,1-Dichloroethene	96	6.306	6.306	0.000	96	189480	1.99	2.25	
28 2-Methyl-2-propanol	59	6.408	6.408	0.000	96	265432	1.99	2.04	
29 Acrylonitrile	53	6.419	6.419	0.000	95	103183	1.99	2.14	
30 1,1,2-Trichloro-1,2,2-trif	101	6.488	6.488	0.000	93	397785	1.99	2.23	
31 Methylene Chloride	84	6.671	6.671	0.000	98	177536	1.99	2.09	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.687	6.687	0.000	94	174590	1.99	2.18	
33 Carbon disulfide	76	6.843	6.843	0.000	99	596567	1.99	2.30	
34 trans-1,2-Dichloroethene	96	7.510	7.510	0.000	97	183804	1.99	2.22	
35 2-Methylpentane	43	7.521	7.521	0.000	95	422645	1.99	2.32	
36 Methyl tert-butyl ether	73	7.639	7.639	0.000	97	374130	1.99	2.16	
37 1,1-Dichloroethane	63	7.940	7.940	0.000	100	328037	1.99	2.14	
38 Vinyl acetate	43	8.043	8.043	0.000	100	364173	1.99	2.16	
39 2-Butanone (MEK)	72	8.510	8.510	0.000	96	55656	1.99	1.96	
40 Hexane	56	8.526	8.526	0.000	89	145136	1.99	2.15	
41 Isopropyl ether	45	8.682	8.682	0.000	98	522511	1.99	2.24	
42 cis-1,2-Dichloroethene	96	8.946	8.946	0.000	96	168175	1.99	2.06	
43 Ethyl acetate	43	9.129	9.129	0.000	98	270686	1.99	2.12	
44 Chloroform	83	9.295	9.295	0.000	97	361870	1.99	2.15	
45 Tert-butyl ethyl ether	59	9.371	9.371	0.000	97	410595	1.99	2.14	
46 Tetrahydrofuran	42	9.715	9.715	0.000	94	152806	1.99	2.15	
47 1,1,1-Trichloroethane	97	10.339	10.339	0.000	97	360397	1.99	2.09	
48 1,2-Dichloroethane	62	10.446	10.446	0.000	97	224530	1.99	2.11	
49 n-Butanol	31	10.871	10.871	0.000	93	59937	1.99	2.04	
50 Cyclohexane	69	10.925	10.925	0.000	87	87702	1.99	2.21	
51 Benzene	78	10.925	10.925	0.000	97	488184	1.99	2.12	
52 Carbon tetrachloride	117	10.946	10.946	0.000	96	362675	1.99	2.05	
53 2,3-Dimethylpentane	71	11.032	11.032	0.000	92	110644	1.99	2.10	
54 Thiophene	84	11.194	11.194	0.000	97	256416	1.99	2.00	
55 Tert-amyl methyl ether	73	11.382	11.382	0.000	97	347471	1.99	2.02	
56 Isooctane	57	11.656	11.656	0.000	98	794561	1.99	2.14	
57 n-Heptane	71	12.022	12.022	0.000	94	163729	1.99	2.04	
58 1,2-Dichloropropane	63	12.119	12.119	0.000	90	182807	1.99	2.08	
59 Trichloroethene	130	12.151	12.151	0.000	94	173469	1.99	1.88	
60 Dibromomethane	93	12.242	12.242	0.000	90	180557	1.99	2.01	
62 Dichlorobromomethane	83	12.382	12.382	0.000	99	330100	1.99	2.06	
61 1,4-Dioxane	88	12.398	12.398	0.000	94	49488	1.99	1.91	
63 Methyl methacrylate	41	12.463	12.463	0.000	93	144049	1.99	1.97	
64 Methylcyclohexane	83	12.909	12.909	0.000	94	355520	1.99	2.09	
65 4-Methyl-2-pentanone (MIBK	43	13.302	13.302	0.000	98	293193	1.99	2.05	
66 cis-1,3-Dichloropropene	75	13.361	13.361	0.000	96	222942	1.99	1.92	
67 trans-1,3-Dichloropropene	75	14.044	14.044	0.000	98	158170	1.99	1.71	
68 Toluene	91	14.173	14.173	0.000	93	466939	1.99	2.02	
69 1,1,2-Trichloroethane	83	14.248	14.248	0.000	97	143234	1.99	1.99	
70 2-Methylthiophene	97	14.323	14.323	0.000	98	357840	1.99	1.92	
71 3-Methylthiophene	97	14.522	14.522	0.000	99	333055	1.99	1.87	
72 2-Hexanone	58	14.619	14.619	0.000	91	127867	1.99	2.04	
73 n-Octane	85	14.834	14.834	0.000	96	156103	1.99	2.02	
74 Chlorodibromomethane	129	14.947	14.947	0.000	97	258459	1.99	1.95	
75 Ethylene Dibromide	107	15.237	15.237	0.000	98	207643	1.99	1.81	
76 Tetrachloroethene	129	15.302	15.302	0.000	93	169594	1.99	1.96	
77 2,3-Dimethylheptane	43	16.173	16.173	0.000	96	508511	1.99	2.23	
78 Chlorobenzene	112	16.173	16.173	0.000	73	311038	1.99	1.92	
79 Ethylbenzene	91	16.453	16.453	0.000	99	517451	1.99	2.03	
80 2-Ethylthiophene	97	16.560	16.560	0.000	98	357723	1.99	1.96	
81 m-Xylene & p-Xylene	91	16.614	16.614	0.000	100	779834	3.98	4.08	
82 n-Nonane	57	17.012	17.012	0.000	93	320306	1.99	2.12	
83 Bromoform	173	17.071	17.071	0.000	91	178660	1.99	1.79	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.076	17.076	0.000	99	250271	1.99	2.07	
85 o-Xylene	91	17.136	17.136	0.000	98	418652	1.99	2.00	
86 1,1,2,2-Tetrachloroethane	83	17.458	17.458	0.000	98	301473	1.99	1.98	
87 1,2,3-Trichloropropane	110	17.614	17.614	0.000	98	67286	1.99	1.93	
88 Isopropylbenzene	105	17.716	17.716	0.000	96	544083	1.99	2.04	
89 N-Propylbenzene	120	18.233	18.233	0.000	98	126988	1.99	1.93	
90 2-Chlorotoluene	126	18.286	18.286	0.000	98	123681	1.99	1.93	
91 4-Ethyltoluene	105	18.378	18.378	0.000	98	453867	1.99	2.00	
92 1,3,5-Trimethylbenzene	120	18.448	18.448	0.000	92	222272	1.99	1.96	
93 Alpha Methyl Styrene	118	18.674	18.674	0.000	86	152909	1.99	1.87	
94 n-Decane	57	18.717	18.717	0.000	90	319260	1.99	2.06	
95 tert-Butylbenzene	119	18.862	18.862	0.000	91	433288	1.99	1.97	
96 1,2,4-Trimethylbenzene	105	18.878	18.878	0.000	96	389032	1.99	2.02	
97 sec-Butylbenzene	105	19.125	19.125	0.000	98	591063	1.99	1.96	
98 1,3-Dichlorobenzene	146	19.147	19.147	0.000	98	160913	1.99	1.80	
99 Benzyl chloride	91	19.217	19.217	0.000	97	168633	1.99	1.69	
100 1,4-Dichlorobenzene	146	19.233	19.233	0.000	91	134271	1.99	1.75	
101 4-Isopropyltoluene	119	19.281	19.281	0.000	96	426446	1.99	1.95	
102 1,2,3-Trimethylbenzene	105	19.340	19.340	0.000	99	289168	1.99	1.95	
103 Butylcyclohexane	83	19.383	19.383	0.000	91	385420	1.99	1.97	
104 2,3-Dihydroindene	117	19.582	19.582	0.000	94	308985	1.99	1.96	
105 1,2-Dichlorobenzene	146	19.588	19.588	0.000	94	168250	1.99	1.82	
106 n-Butylbenzene	91	19.706	19.706	0.000	98	364627	1.99	2.02	
107 Indene	116	19.711	19.711	0.000	90	172953	1.99	1.81	
108 Undecane	57	19.996	19.996	0.000	96	254228	1.99	1.80	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.072	20.072	0.000	98	259275	1.99	1.84	
110 1,2-Dibromo-3-Chloropropan	157	20.174	20.174	0.000	89	46403	1.99	1.85	
111 1,2,4,5-Tetramethylbenzene	119	20.453	20.453	0.000	97	290004	1.99	1.76	
112 1,2,3,5-Tetramethylbenzene	119	20.507	20.507	0.000	94	179215	1.99	1.70	
113 1,2,3,4-Tetramethylbenzene	119	20.921	20.921	0.000	97	216133	1.99	1.64	
114 Dodecane	57	21.072	21.072	0.000	95	203776	1.99	1.68	
115 1,2,4-Trichlorobenzene	180	21.298	21.298	0.000	93	42424	1.99	2.01	
116 Naphthalene	128	21.448	21.448	0.000	99	121324	1.99	1.97	
117 Benzo(b)thiophene	134	21.545	21.545	0.000	99	48598	1.99	1.95	
118 Hexachlorobutadiene	225	21.631	21.631	0.000	96	156152	1.99	1.63	
119 1,2,3-Trichlorobenzene	180	21.696	21.696	0.000	95	48332	1.99	1.95	
120 2-Methylnaphthalene	142	22.249	22.249	0.000	100	17736	6.22	5.60	
121 1-Methylnaphthalene	142	22.373	22.373	0.000	99	22444	6.22	5.28	
A 124 Toluene Range	1	14.173	(14.143-14.203)		0	1130403	1.99	2.16	
A 125 C8 Range	1	14.830	(14.790-14.869)		0	1579876	1.99	2.26	
S 126 Xylenes, Total	100				0		5.97	6.08	
S 127 1,2-Dichloroethene, Total	1				0		3.98	4.28	

Reagents:

40CV101P_00024	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

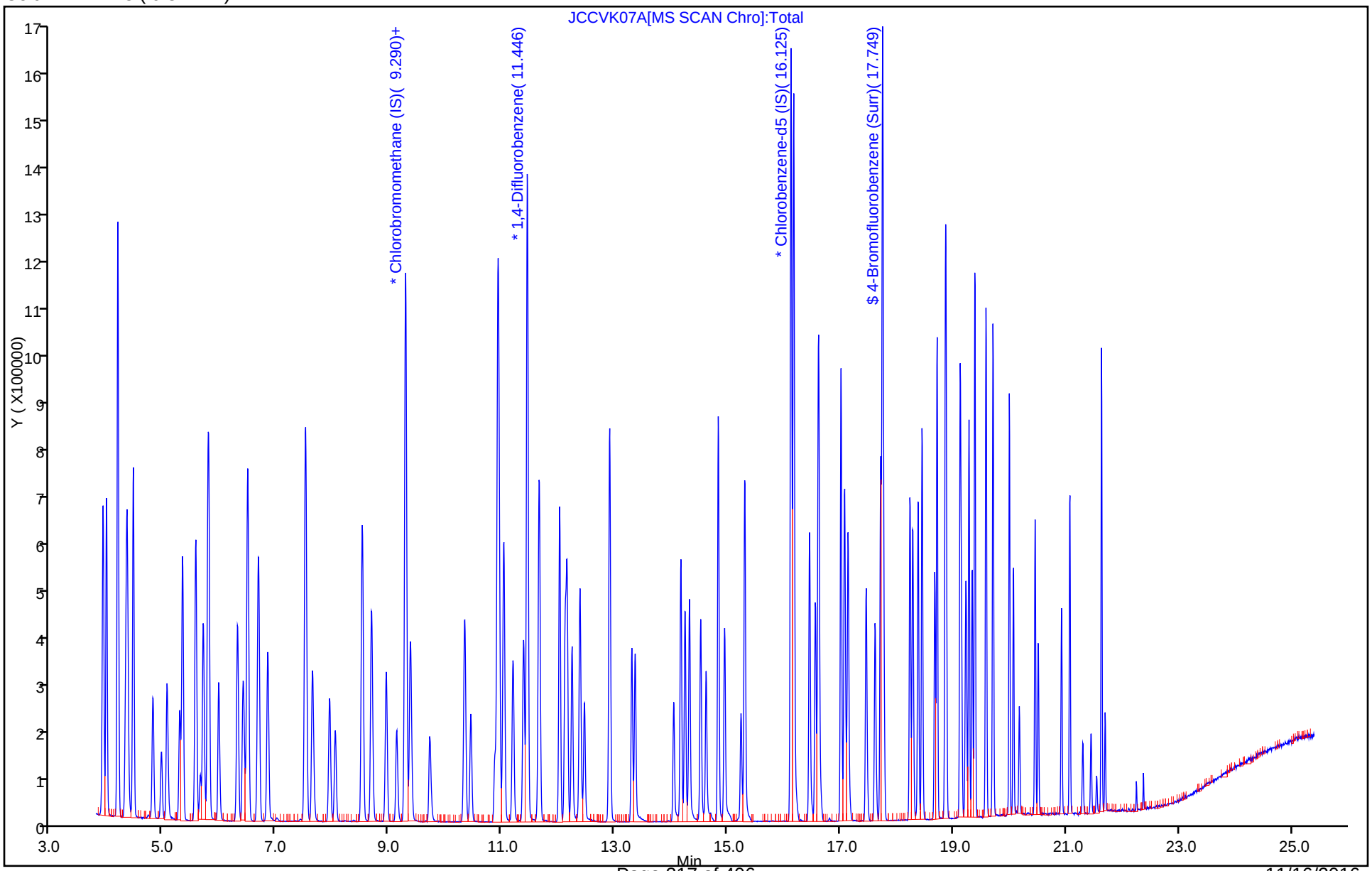
Report Date: 08-Nov-2016 10:14:17 Chrom Revision: 2.2 17-Oct-2016 09:27:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JCCVK07A.D

Injection Date:	07-Nov-2016 11:58:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	CCVIS			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Lab Sample ID: ICV 140-6852/17 Calibration Date: 10/10/2016 05:03

Instrument ID: MR Calib Start Date: 10/09/2016 18:12

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/10/2016 00:36

Lab File ID: RJ09LCS.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4203	0.4656		2.22	2.00	10.8	35.0
Propene	Ave	1.510	1.682		2.23	2.00	11.4	35.0
Dichlorodifluoromethane	Ave	3.852	4.666		2.42	2.00	21.1	35.0
Chloromethane	Ave	0.4403	0.5109		2.32	2.00	16.0	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.660	3.047		2.29	2.00	14.6	35.0
Acetaldehyde	Ave	0.4705	0.5244		11.1	10.0	11.5	35.0
Vinyl chloride	Ave	1.318	1.558		2.36	2.00	18.2	35.0
1,3-Butadiene	Ave	1.042	1.175		2.26	2.00	12.8	35.0
Butane	Ave	1.959	2.280		2.33	2.00	16.4	35.0
Bromomethane	Ave	1.177	1.270		2.16	2.00	7.9	35.0
Chloroethane	Ave	0.5783	0.6369		2.20	2.00	10.1	35.0
Ethanol	Ave	0.4188	0.4943		11.8	10.0	18.0	35.0
Vinyl bromide	Ave	1.105	1.277		2.31	2.00	15.5	35.0
2-Methylbutane	Ave	1.297	1.564		2.41	2.00	20.6	35.0
Acrolein	Ave	0.4618	0.5166		2.24	2.00	11.9	35.0
Trichlorofluoromethane	Ave	3.380	3.676		2.18	2.00	8.8	35.0
Acetonitrile	Ave	0.5736	0.5546		1.93	2.00	-3.3	35.0
Acetone	Ave	0.6540	0.7584		6.96	6.00	15.9	35.0
Isopropyl alcohol	Ave	2.230	2.444		6.58	6.00	9.6	35.0
Pentane	Ave	0.2728	0.3106		2.28	2.00	13.8	35.0
Ethyl ether	Ave	1.801	1.928		2.14	2.00	7.1	35.0
1,1-Dichloroethene	Ave	1.412	1.453		2.06	2.00	2.9	35.0
Acrylonitrile	Ave	1.189	1.283		2.16	2.00	7.9	35.0
tert-Butyl alcohol	Ave	2.967	2.953		1.99	2.00	-0.5	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.993	3.117		2.08	2.00	4.1	35.0
Methylene Chloride	Ave	1.367	1.336		1.95	2.00	-2.3	35.0
3-Chloropropene	Ave	1.413	1.481		2.10	2.00	4.8	35.0
Carbon disulfide	Ave	4.205	4.243		2.02	2.00	0.9	35.0
trans-1,2-Dichloroethene	Ave	1.439	1.440		2.00	2.00	0.0	35.0
2-Methylpentane	Ave	3.392	3.848		2.27	2.00	13.4	35.0
Methyl tert-butyl ether	Ave	4.005	4.050		2.02	2.00	1.1	35.0
1,1-Dichloroethane	Ave	2.739	2.854		2.08	2.00	4.2	35.0
Vinyl acetate	Ave	4.388	4.672		2.13	2.00	6.5	35.0
2-Butanone (MEK)	Ave	0.7410	0.7512		2.03	2.00	1.4	35.0
Hexane	Ave	1.296	1.283		1.98	2.00	-1.0	35.0
Isopropyl ether	Ave	5.598	5.481		1.96	2.00	-2.1	35.0
cis-1,2-Dichloroethene	Ave	1.456	1.479		2.03	2.00	1.5	35.0
Ethyl acetate	Ave	3.617	3.607		1.99	2.00	-0.3	35.0
Chloroform	Ave	2.894	2.897		2.00	2.00	0.1	35.0
Tert-butyl ethyl ether	Ave	4.504	4.933		2.19	2.00	9.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Lab Sample ID: ICV 140-6852/17 Calibration Date: 10/10/2016 05:03

Instrument ID: MR Calib Start Date: 10/09/2016 18:12

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/10/2016 00:36

Lab File ID: RJ09LCS.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.820	1.899		2.09	2.00	4.3	35.0
1,1,1-Trichloroethane	Ave	2.858	2.797		1.96	2.00	-2.1	35.0
1,2-Dichloroethane	Ave	0.4461	0.4396		1.97	2.00	-1.5	35.0
1-Butanol	Ave	0.1447	0.1487		2.05	2.00	2.7	35.0
Benzene	Ave	0.9013	0.9165		2.03	2.00	1.7	35.0
Cyclohexane	Ave	0.1443	0.1470		2.04	2.00	1.9	35.0
Carbon tetrachloride	Ave	0.6204	0.6090		1.96	2.00	-1.8	35.0
2,3-Dimethylpentane	Ave	0.2156	0.1986		1.84	2.00	-7.9	35.0
Thiophene	Ave	0.5031	0.5236		2.08	2.00	4.1	35.0
Tert-amyl methyl ether	Ave	0.8419	0.8728		2.07	2.00	3.7	35.0
2,2,4-Trimethylpentane	Ave	1.598	1.670		2.09	2.00	4.5	35.0
1,2-Dichloropropane	Ave	0.3668	0.3763		2.05	2.00	2.6	35.0
Heptane	Ave	0.3327	0.3385		2.04	2.00	1.8	35.0
Trichloroethene	Ave	0.3648	0.3564		1.95	2.00	-2.3	35.0
Dibromomethane	Ave	0.3513	0.3627		2.06	2.00	3.2	35.0
Bromodichloromethane	Ave	0.6194	0.6356		2.05	2.00	2.6	35.0
1,4-Dioxane	Ave	0.1411	0.1346		1.91	2.00	-4.6	35.0
Methyl methacrylate	Ave	0.4812	0.4821		2.00	2.00	0.2	35.0
Methylcyclohexane	Ave	0.6522	0.5331		1.63	2.00	-18.3	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.8332	0.8682		2.08	2.00	4.2	35.0
cis-1,3-Dichloropropene	Ave	0.5185	0.5532		2.13	2.00	6.7	35.0
trans-1,3-Dichloropropene	Ave	0.5060	0.5343		2.11	2.00	5.6	35.0
Toluene	Ave	1.110	1.172		2.11	2.00	5.6	35.0
1,1,2-Trichloroethane	Ave	0.3344	0.3358		2.01	2.00	0.4	35.0
2-Methylthiophene	Ave	0.8918	0.9543		2.14	2.00	7.0	35.0
3-Methylthiophene	Ave	0.8831	0.9806		2.22	2.00	11.0	35.0
2-Hexanone	Ave	0.4193	0.4361		2.08	2.00	4.0	35.0
Dibromochloromethane	Ave	0.6067	0.6443		2.12	2.00	6.2	35.0
Octane	Ave	0.3776	0.3858		2.04	2.00	2.2	35.0
1,2-Dibromoethane (EDB)	Ave	0.5912	0.6050		2.05	2.00	2.3	35.0
Tetrachloroethene	Ave	0.3687	0.3668		1.99	2.00	-0.5	35.0
Chlorobenzene	Ave	0.8587	0.8770		2.04	2.00	2.1	35.0
2,3-Dimethylheptane	Ave	1.154	1.250		2.17	2.00	8.3	35.0
Ethylbenzene	Ave	1.480	1.518		2.05	2.00	2.5	35.0
2-Ethylthiophene	Ave	1.079	1.106		2.05	2.00	2.6	35.0
m-Xylene & p-Xylene	Ave	1.141	1.195		4.19	4.00	4.8	35.0
Bromoform	Ave	0.5963	0.5929		1.99	2.00	-0.6	35.0
Styrene	Ave	0.8352	0.9025		2.16	2.00	8.1	35.0
Nonane	Ave	0.8234	0.8769		2.13	2.00	6.5	35.0
o-Xylene	Ave	1.184	1.223		2.07	2.00	3.3	35.0
1,1,2,2-Tetrachloroethane	Ave	0.8728	0.9072		2.08	2.00	3.9	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Lab Sample ID: ICV 140-6852/17 Calibration Date: 10/10/2016 05:03

Instrument ID: MR Calib Start Date: 10/09/2016 18:12

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/10/2016 00:36

Lab File ID: RJ09LCS.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2532	0.2533		2.00	2.00	0.0	35.0
Isopropylbenzene	Ave	1.638	1.707		2.08	2.00	4.2	35.0
Propylbenzene	Ave	0.4447	0.4622		2.08	2.00	3.9	35.0
2-Chlorotoluene	Ave	0.3888	0.4003		2.06	2.00	3.0	35.0
4-Ethyltoluene	Ave	1.641	1.621		1.98	2.00	-1.2	35.0
1,3,5-Trimethylbenzene	Ave	0.7406	0.7628		2.06	2.00	3.0	35.0
Alpha Methyl Styrene	Ave	0.6821	0.6954		2.04	2.00	1.9	35.0
Decane	Ave	1.071	1.166		2.18	2.00	8.9	35.0
tert-Butylbenzene	Ave	1.431	1.506		2.10	2.00	5.2	35.0
1,2,4-Trimethylbenzene	Ave	1.398	1.470		2.10	2.00	5.1	35.0
1,3-Dichlorobenzene	Ave	0.8986	0.9156		2.04	2.00	1.9	35.0
sec-Butylbenzene	Ave	2.028	2.183		2.15	2.00	7.6	35.0
Benzyl chloride	Ave	1.213	1.325		2.18	2.00	9.2	35.0
1,4-Dichlorobenzene	Ave	0.9006	0.9145		2.03	2.00	1.5	35.0
4-Isopropyltoluene	Ave	1.669	1.758		2.11	2.00	5.3	35.0
1,2,3-Trimethylbenzene	Ave	1.085	1.237		2.28	2.00	14.0	35.0
Butylcyclohexane	Ave	1.121	1.185		2.12	2.00	5.8	35.0
1,2-Dichlorobenzene	Ave	0.8678	0.8944		2.06	2.00	3.1	35.0
Indane	Ave	1.295	1.319		2.04	2.00	1.9	35.0
Indene	Ave	1.013	1.336		2.64	2.00	31.8	35.0
Butylbenzene	Ave	1.734	1.900		2.19	2.00	9.5	35.0
Undecane	Ave	1.235	1.351		2.19	2.00	9.4	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	1.282	1.727		2.69	2.00	34.7	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.3832	0.3222		1.68	2.00	-15.9	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.506	1.776		2.36	2.00	18.0	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.9347	1.098		2.35	2.00	17.5	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.272	1.434		2.25	2.00	12.7	35.0
Dodecane	Ave	1.296	1.304		2.01	2.00	0.7	35.0
1,2,4-Trichlorobenzene	Ave	0.8052	0.7590		1.89	2.00	-5.7	35.0
Naphthalene	Ave	1.881	1.855		1.97	2.00	-1.4	35.0
Benzo(b)thiophene	Ave	1.080	1.126		2.08	2.00	4.2	35.0
Hexachlorobutadiene	Ave	0.6896	0.6367		1.85	2.00	-7.7	35.0
1,2,3-Trichlorobenzene	Ave	0.7964	0.7084		1.78	2.00	-11.1	35.0
2-Methylnaphthalene	Ave	0.2177	0.2149		6.17	6.25	-1.3	50.0
1-Methylnaphthalene	Ave	0.2189	0.1782		5.09	6.25	-18.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7471	0.7743		4.15	4.00	3.6	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09LCS.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 10-Oct-2016 05:03:30 ALS Bottle#: 9 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003513-017
Misc. Info.: 059232
Operator ID: Instrument ID: MR
Sublist:

Method: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Oct-2016 11:37:43 Calib Date: 10-Oct-2016 00:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: barlozhetskayaa Date: 10-Oct-2016 10:23:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.274	8.274	0.000	98	248358	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.437	10.440	-0.003	96	1155245	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.322	15.323	-0.001	89	1083815	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.010	17.011	-0.001	91	839237	4.00	4.15	
7 Chlorodifluoromethane	67	3.723	3.734	-0.011	97	57820	2.00	2.22	
6 Propene	41	3.729	3.739	-0.010	98	208891	2.00	2.23	
8 Dichlorodifluoromethane	85	3.777	3.790	-0.013	100	579393	2.00	2.42	
9 Chloromethane	52	3.928	3.940	-0.012	100	63439	2.00	2.32	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.955	3.960	-0.005	93	378423	2.00	2.29	
11 Acetaldehyde	44	4.074	4.081	-0.007	97	325613	10.0	11.1	
12 Vinyl chloride	62	4.079	4.089	-0.010	99	193412	2.00	2.36	
13 Butadiene	54	4.160	4.168	-0.008	96	145924	2.00	2.26	
14 Butane	43	4.165	4.171	-0.006	93	283084	2.00	2.33	
15 Bromomethane	94	4.424	4.432	-0.008	98	157753	2.00	2.16	
16 Chloroethane	64	4.548	4.555	-0.007	95	79087	2.00	2.20	
17 Ethanol	31	4.656	4.661	-0.005	96	306894	10.0	11.8	
18 Vinyl bromide	106	4.807	4.814	-0.007	99	158516	2.00	2.31	
19 2-Methylbutane	43	4.866	4.871	-0.005	91	194248	2.00	2.41	
20 Acrolein	56	5.044	5.049	-0.005	96	64148	2.00	2.24	
21 Trichlorofluoromethane	101	5.050	5.053	-0.003	99	456534	2.00	2.18	
22 Acetonitrile	40	5.093	5.097	-0.004	99	68871	2.00	1.93	
23 Acetone	58	5.141	5.150	-0.009	98	282539	6.00	6.96	
24 Isopropyl alcohol	45	5.238	5.246	-0.008	97	910455	6.00	6.58	
25 Pentane	72	5.255	5.255	0.000	96	38565	2.00	2.28	
26 Ethyl ether	31	5.389	5.394	-0.005	95	239461	2.00	2.14	
27 1,1-Dichloroethene	96	5.659	5.661	-0.002	95	180399	2.00	2.06	
28 Acrylonitrile	53	5.729	5.731	-0.002	95	159338	2.00	2.16	
29 2-Methyl-2-propanol	59	5.756	5.764	-0.008	96	366725	2.00	1.99	
30 1,1,2-Trichloro-1,2,2-trif	101	5.832	5.838	-0.006	94	387065	2.00	2.08	
31 Methylene Chloride	84	5.956	5.955	0.001	98	165870	2.00	1.95	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.972	5.975	-0.003	94	183855	2.00	2.10	
33 Carbon disulfide	76	6.090	6.098	-0.008	99	526877	2.00	2.02	
34 trans-1,2-Dichloroethene	96	6.689	6.693	-0.004	96	178863	2.00	2.00	
35 2-Methylpentane	43	6.738	6.743	-0.005	96	477830	2.00	2.27	
36 Methyl tert-butyl ether	73	6.813	6.825	-0.012	98	502927	2.00	2.02	
37 1,1-Dichloroethane	63	7.061	7.063	-0.002	100	354366	2.00	2.08	
38 Vinyl acetate	43	7.169	7.172	-0.003	100	580184	2.00	2.13	
39 2-Butanone (MEK)	72	7.557	7.564	-0.007	99	93286	2.00	2.03	
40 Hexane	56	7.649	7.649	0.000	90	159372	2.00	1.98	
41 Isopropyl ether	45	7.784	7.792	-0.008	98	680696	2.00	1.96	
42 cis-1,2-Dichloroethene	96	7.972	7.977	-0.005	97	183614	2.00	2.03	
43 Ethyl acetate	43	8.156	8.162	-0.006	99	447961	2.00	1.99	
44 Chloroform	83	8.307	8.305	0.002	98	359801	2.00	2.00	
45 Tert-butyl ethyl ether	59	8.420	8.426	-0.006	96	612654	2.00	2.19	
46 Tetrahydrofuran	42	8.663	8.670	-0.007	95	235807	2.00	2.09	
47 1,1,1-Trichloroethane	97	9.288	9.289	-0.001	97	347328	2.00	1.96	
48 1,2-Dichloroethane	62	9.358	9.362	-0.004	96	253904	2.00	1.97	
49 n-Butanol	31	9.844	9.860	-0.016	88	85876	2.00	2.05	
50 Benzene	78	9.870	9.872	-0.002	97	529408	2.00	2.03	
51 Cyclohexane	69	9.892	9.897	-0.005	97	84883	2.00	2.04	
52 Carbon tetrachloride	117	9.908	9.911	-0.003	97	351775	2.00	1.96	
53 2,3-Dimethylpentane	71	10.054	10.055	-0.001	91	114703	2.00	1.84	
54 Thiophene	84	10.140	10.140	0.000	97	302442	2.00	2.08	
55 Tert-amyl methyl ether	73	10.388	10.392	-0.004	97	504208	2.00	2.07	
56 Isooctane	57	10.717	10.721	-0.004	98	964643	2.00	2.09	
58 1,2-Dichloropropane	63	11.111	11.111	0.000	88	217336	2.00	2.05	
57 n-Heptane	71	11.111	11.115	-0.004	93	195522	2.00	2.04	
59 Trichloroethene	130	11.170	11.172	-0.002	94	205842	2.00	1.95	
60 Dibromomethane	93	11.219	11.220	-0.001	92	209479	2.00	2.06	
61 Dichlorobromomethane	83	11.386	11.387	-0.001	98	367134	2.00	2.05	
62 1,4-Dioxane	88	11.391	11.397	-0.006	95	77727	2.00	1.91	
63 Methyl methacrylate	41	11.515	11.520	-0.005	94	278444	2.00	2.00	
64 Methylcyclohexane	83	11.990	11.992	-0.002	92	307927	2.00	1.63	
65 4-Methyl-2-pentanone (MIBK	43	12.383	12.387	-0.004	98	501517	2.00	2.08	
66 cis-1,3-Dichloropropene	75	12.432	12.435	-0.003	96	319565	2.00	2.13	
67 trans-1,3-Dichloropropene	75	13.154	13.157	-0.003	98	289529	2.00	2.11	
68 Toluene	91	13.295	13.298	-0.003	93	635089	2.00	2.11	
69 1,1,2-Trichloroethane	83	13.354	13.353	0.001	98	181961	2.00	2.01	
70 2-Methylthiophene	97	13.446	13.448	-0.002	98	517158	2.00	2.14	
71 3-Methylthiophene	97	13.656	13.655	0.001	99	531396	2.00	2.22	
72 2-Hexanone	58	13.775	13.780	-0.005	92	236338	2.00	2.08	
73 Chlorodibromomethane	129	14.071	14.073	-0.002	97	349135	2.00	2.12	
74 n-Octane	85	14.082	14.084	-0.002	96	209084	2.00	2.04	
75 Ethylene Dibromide	107	14.362	14.365	-0.003	99	327868	2.00	2.05	
76 Tetrachloroethene	129	14.486	14.485	0.001	94	198785	2.00	1.99	
77 Chlorobenzene	112	15.371	15.371	0.000	92	475235	2.00	2.04	
78 2,3-Dimethylheptane	43	15.468	15.468	0.000	96	677197	2.00	2.17	
79 Ethylbenzene	91	15.683	15.686	-0.003	99	822565	2.00	2.05	
80 2-Ethylthiophene	97	15.786	15.784	0.002	99	599591	2.00	2.05	
81 m-Xylene & p-Xylene	91	15.856	15.857	-0.001	100	1295117	4.00	4.19	
82 Bromoform	173	16.260	16.263	-0.003	94	321270	2.00	1.99	
83 Styrene	104	16.320	16.322	-0.002	99	489055	2.00	2.16	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.347	16.347	0.000	95	475219	2.00	2.13	
85 o-Xylene	91	16.384	16.386	-0.002	99	662782	2.00	2.07	
86 1,1,2,2-Tetrachloroethane	83	16.697	16.698	-0.001	99	491631	2.00	2.08	
87 1,2,3-Trichloropropane	110	16.859	16.860	-0.001	97	137278	2.00	2.00	
88 Isopropylbenzene	105	16.999	17.002	-0.003	97	925134	2.00	2.08	
89 N-Propylbenzene	120	17.576	17.578	-0.002	99	250449	2.00	2.08	
90 2-Chlorotoluene	126	17.603	17.604	-0.001	96	216942	2.00	2.06	
91 4-Ethyltoluene	105	17.743	17.743	0.000	99	878461	2.00	1.98	
92 1,3,5-Trimethylbenzene	120	17.824	17.825	-0.001	92	413351	2.00	2.06	
93 Alpha Methyl Styrene	118	18.067	18.067	0.000	87	376833	2.00	2.04	
94 n-Decane	57	18.186	18.187	-0.001	89	632001	2.00	2.18	
95 tert-Butylbenzene	119	18.277	18.276	0.001	93	816370	2.00	2.10	
96 1,2,4-Trimethylbenzene	105	18.288	18.290	-0.002	96	796609	2.00	2.10	
97 1,3-Dichlorobenzene	146	18.552	18.555	-0.003	97	496144	2.00	2.04	
98 sec-Butylbenzene	105	18.563	18.565	-0.002	98	1182784	2.00	2.15	
99 Benzyl chloride	91	18.633	18.634	-0.001	97	718160	2.00	2.18	
100 1,4-Dichlorobenzene	146	18.649	18.650	-0.001	92	495566	2.00	2.03	
101 4-Isopropyltoluene	119	18.741	18.743	-0.002	97	952496	2.00	2.11	
102 1,2,3-Trimethylbenzene	105	18.784	18.785	-0.001	99	670139	2.00	2.28	
103 Butylcyclohexane	83	18.870	18.872	-0.002	91	642388	2.00	2.12	
104 1,2-Dichlorobenzene	146	19.027	19.027	0.000	92	484680	2.00	2.06	
105 2,3-Dihydroindene	117	19.032	19.035	-0.003	94	714924	2.00	2.04	
106 Indene	116	19.167	19.167	0.000	93	723743	2.00	2.64	
107 n-Butylbenzene	91	19.205	19.205	0.000	98	1029418	2.00	2.19	
108 Undecane	57	19.577	19.578	-0.001	97	732083	2.00	2.19	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.593	19.594	-0.001	97	936121	2.00	2.69	
110 1,2-Dibromo-3-Chloropropan	157	19.652	19.653	-0.001	92	174622	2.00	1.68	
111 1,2,4,5-Tetramethylbenzene	119	19.997	19.998	-0.001	97	962647	2.00	2.36	
112 1,2,3,5-Tetramethylbenzene	119	20.051	20.052	-0.001	94	595205	2.00	2.35	
113 1,2,3,4-Tetramethylbenzene	119	20.456	20.457	-0.001	97	776902	2.00	2.25	
114 Dodecane	57	20.682	20.682	0.000	95	706779	2.00	2.01	
115 1,2,4-Trichlorobenzene	180	20.806	20.809	-0.003	94	411287	2.00	1.89	
116 Naphthalene	128	20.941	20.942	-0.001	99	1005108	2.00	1.97	
117 Benzo(b)thiophene	134	21.043	21.046	-0.003	99	610150	2.00	2.08	
118 Hexachlorobutadiene	225	21.194	21.195	-0.001	94	345010	2.00	1.85	
119 1,2,3-Trichlorobenzene	180	21.238	21.239	-0.001	94	383861	2.00	1.78	
120 2-Methylnaphthalene	142	21.944	21.947	-0.003	99	363906	6.25	6.17	
121 1-Methylnaphthalene	142	22.073	22.073	0.000	99	301858	6.25	5.09	
A 122 C6 Range	1	7.644	(7.589-7.667)		0	1349826	2.00	2.07	
S 124 Xylenes, Total	100				0		6.00	6.26	
S 125 1,2-Dichloroethene, Total	1				0		4.00	4.03	

Reagents:

40CV101S_00021	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

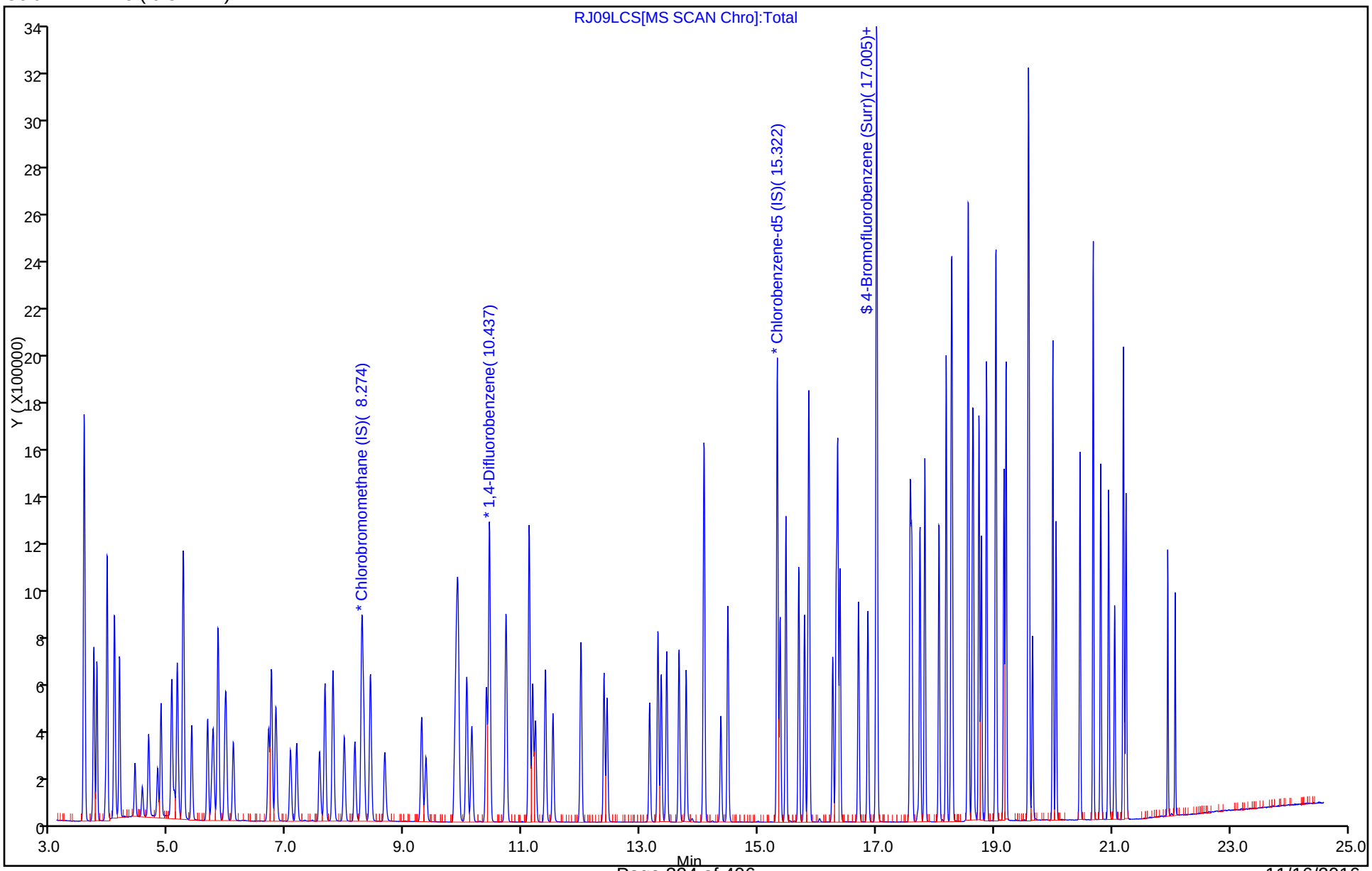
Report Date: 13-Oct-2016 11:37:51 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09LCS.D

Injection Date:	10-Oct-2016 05:03:30	Instrument ID:	MR	Operator ID:	
Lims ID:	ICV			Worklist Smp#:	17
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Lab Sample ID: CCVIS 140-7105/2 Calibration Date: 11/08/2016 11:18

Instrument ID: MR Calib Start Date: 10/09/2016 18:12

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/10/2016 00:36

Lab File ID: RCCVK08.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4203	0.4689		2.23	2.00	11.6	30.0
Propene	Ave	1.510	1.865		2.47	2.00	23.5	30.0
Dichlorodifluoromethane	Ave	3.852	3.973		2.06	2.00	3.2	30.0
Chloromethane	Ave	0.4403	0.5187		2.36	2.00	17.8	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.660	2.912		2.19	2.00	9.5	30.0
Acetaldehyde	Ave	0.4705	0.5304		11.3	10.0	12.7	30.0
Vinyl chloride	Ave	1.318	1.442		2.19	2.00	9.4	30.0
1,3-Butadiene	Ave	1.042	1.097		2.11	2.00	5.3	30.0
Butane	Ave	1.959	2.138		2.18	2.00	9.2	30.0
Bromomethane	Ave	1.177	1.387		2.36	2.00	17.9	30.0
Chloroethane	Ave	0.5783	0.6280		2.17	2.00	8.6	30.0
Ethanol	Ave	0.4188	0.4969		11.9	10.0	18.6	30.0
Vinyl bromide	Ave	1.105	1.232		2.23	2.00	11.5	30.0
2-Methylbutane	Ave	1.297	1.410		2.17	2.00	8.7	30.0
Acrolein	Ave	0.4618	0.3537		1.53	2.00	-23.4	30.0
Trichlorofluoromethane	Ave	3.380	4.830		2.86	2.00	42.9*	30.0
Acetonitrile	Ave	0.5736	0.5059		1.76	2.00	-11.8	30.0
Acetone	Ave	0.6540	0.6458		5.92	6.00	-1.3	30.0
Isopropyl alcohol	Ave	2.230	2.423		6.52	6.00	8.7	30.0
Pentane	Ave	0.2728	0.2893		2.12	2.00	6.0	30.0
Ethyl ether	Ave	1.801	1.958		2.17	2.00	8.7	30.0
1,1-Dichloroethene	Ave	1.412	1.426		2.02	2.00	1.0	30.0
Acrylonitrile	Ave	1.189	1.334		2.24	2.00	12.2	30.0
tert-Butyl alcohol	Ave	2.967	2.987		2.01	2.00	0.7	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.993	3.198		2.14	2.00	6.8	30.0
Methylene Chloride	Ave	1.367	1.380		2.02	2.00	0.9	30.0
3-Chloropropene	Ave	1.413	1.615		2.29	2.00	14.3	30.0
Carbon disulfide	Ave	4.205	4.470		2.13	2.00	6.3	30.0
trans-1,2-Dichloroethene	Ave	1.439	1.476		2.05	2.00	2.5	30.0
2-Methylpentane	Ave	3.392	3.893		2.30	2.00	14.8	30.0
Methyl tert-butyl ether	Ave	4.005	4.033		2.01	2.00	0.7	30.0
1,1-Dichloroethane	Ave	2.739	2.886		2.11	2.00	5.4	30.0
Vinyl acetate	Ave	4.388	4.924		2.24	2.00	12.2	30.0
2-Butanone (MEK)	Ave	0.7410	0.7390		1.99	2.00	-0.3	30.0
Hexane	Ave	1.296	1.367		2.11	2.00	5.4	30.0
Isopropyl ether	Ave	5.598	6.439		2.30	2.00	15.0	30.0
cis-1,2-Dichloroethene	Ave	1.456	1.482		2.04	2.00	1.8	30.0
Ethyl acetate	Ave	3.617	4.215		2.33	2.00	16.5	30.0
Chloroform	Ave	2.894	2.967		2.05	2.00	2.5	30.0
Tert-butyl ethyl ether	Ave	4.504	4.604		2.04	2.00	2.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Lab Sample ID: CCVIS 140-7105/2 Calibration Date: 11/08/2016 11:18

Instrument ID: MR Calib Start Date: 10/09/2016 18:12

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/10/2016 00:36

Lab File ID: RCCVK08.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.820	2.088		2.29	2.00	14.7	30.0
1,1,1-Trichloroethane	Ave	2.858	2.773		1.94	2.00	-3.0	30.0
1,2-Dichloroethane	Ave	0.4461	0.4521		2.03	2.00	1.3	30.0
1-Butanol	Ave	0.1447	0.1550		2.14	2.00	7.1	30.0
Benzene	Ave	0.9013	0.9224		2.05	2.00	2.3	30.0
Cyclohexane	Ave	0.1443	0.1431		1.98	2.00	-0.8	30.0
Carbon tetrachloride	Ave	0.6204	0.6207		2.00	2.00	0.0	30.0
2,3-Dimethylpentane	Ave	0.2156	0.2115		1.96	2.00	-1.9	30.0
Thiophene	Ave	0.5031	0.4934		1.96	2.00	-1.9	30.0
Tert-amyl methyl ether	Ave	0.8419	0.8596		2.04	2.00	2.1	30.0
2,2,4-Trimethylpentane	Ave	1.598	1.626		2.03	2.00	1.7	30.0
1,2-Dichloropropane	Ave	0.3668	0.3682		2.01	2.00	0.4	30.0
Heptane	Ave	0.3327	0.3179		1.91	2.00	-4.4	30.0
Trichloroethene	Ave	0.3648	0.3456		1.89	2.00	-5.3	30.0
Dibromomethane	Ave	0.3513	0.3470		1.98	2.00	-1.2	30.0
1,4-Dioxane	Ave	0.1411	0.1293		1.83	2.00	-8.3	30.0
Bromodichloromethane	Ave	0.6194	0.5798		1.87	2.00	-6.4	30.0
Methyl methacrylate	Ave	0.4812	0.4747		1.97	2.00	-1.3	30.0
Methylcyclohexane	Ave	0.6522	0.6146		1.88	2.00	-5.8	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.8332	0.8681		2.08	2.00	4.2	30.0
cis-1,3-Dichloropropene	Ave	0.5185	0.5015		1.93	2.00	-3.3	30.0
trans-1,3-Dichloropropene	Ave	0.5060	0.4695		1.86	2.00	-7.2	30.0
Toluene	Ave	1.110	1.104		1.99	2.00	-0.6	30.0
1,1,2-Trichloroethane	Ave	0.3344	0.3377		2.02	2.00	1.0	30.0
2-Methylthiophene	Ave	0.8918	0.8659		1.94	2.00	-2.9	30.0
3-Methylthiophene	Ave	0.8831	0.8564		1.94	2.00	-3.0	30.0
2-Hexanone	Ave	0.4193	0.4349		2.07	2.00	3.7	30.0
Dibromochloromethane	Ave	0.6067	0.6097		2.01	2.00	0.5	30.0
Octane	Ave	0.3776	0.3709		1.96	2.00	-1.8	30.0
1,2-Dibromoethane (EDB)	Ave	0.5912	0.5792		1.96	2.00	-2.0	30.0
Tetrachloroethene	Ave	0.3687	0.3487		1.89	2.00	-5.4	30.0
Chlorobenzene	Ave	0.8587	0.8343		1.94	2.00	-2.8	30.0
2,3-Dimethylheptane	Ave	1.154	1.293		2.24	2.00	12.1	30.0
Ethylbenzene	Ave	1.480	1.446		1.95	2.00	-2.3	30.0
2-Ethylthiophene	Ave	1.079	1.027		1.90	2.00	-4.8	30.0
m-Xylene & p-Xylene	Ave	1.141	1.130		3.96	4.00	-0.9	30.0
Bromoform	Ave	0.5963	0.5728		1.92	2.00	-3.9	30.0
Styrene	Ave	0.8352	0.8578		2.05	2.00	2.7	30.0
Nonane	Ave	0.8234	0.8593		2.09	2.00	4.4	30.0
o-Xylene	Ave	1.184	1.154		1.95	2.00	-2.6	30.0
1,1,2,2-Tetrachloroethane	Ave	0.8728	0.8817		2.02	2.00	1.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Lab Sample ID: CCVIS 140-7105/2 Calibration Date: 11/08/2016 11:18

Instrument ID: MR Calib Start Date: 10/09/2016 18:12

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/10/2016 00:36

Lab File ID: RCCVK08.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2532	0.2295		1.81	2.00	-9.4	30.0
Isopropylbenzene	Ave	1.638	1.645		2.01	2.00	0.5	30.0
Propylbenzene	Ave	0.4447	0.4321		1.94	2.00	-2.8	30.0
2-Chlorotoluene	Ave	0.3888	0.3737		1.92	2.00	-3.9	30.0
4-Ethyltoluene	Ave	1.641	1.559		1.90	2.00	-5.0	30.0
1,3,5-Trimethylbenzene	Ave	0.7406	0.7174		1.94	2.00	-3.1	30.0
Alpha Methyl Styrene	Ave	0.6821	0.6208		1.82	2.00	-9.0	30.0
Decane	Ave	1.071	1.070		2.00	2.00	-0.0	30.0
tert-Butylbenzene	Ave	1.431	1.375		1.92	2.00	-3.9	30.0
1,2,4-Trimethylbenzene	Ave	1.398	1.338		1.91	2.00	-4.3	30.0
1,3-Dichlorobenzene	Ave	0.8986	0.8581		1.91	2.00	-4.5	30.0
sec-Butylbenzene	Ave	2.028	2.042		2.01	2.00	0.7	30.0
Benzyl chloride	Ave	1.213	1.183		1.95	2.00	-2.5	30.0
1,4-Dichlorobenzene	Ave	0.9006	0.8700		1.93	2.00	-3.4	30.0
4-Isopropyltoluene	Ave	1.669	1.599		1.92	2.00	-4.2	30.0
1,2,3-Trimethylbenzene	Ave	1.085	0.9933		1.83	2.00	-8.4	30.0
Butylcyclohexane	Ave	1.121	1.109		1.98	2.00	-1.1	30.0
1,2-Dichlorobenzene	Ave	0.8678	0.8390		1.93	2.00	-3.3	30.0
Indane	Ave	1.295	1.278		1.97	2.00	-1.3	30.0
Indene	Ave	1.013	0.9058		1.79	2.00	-10.6	30.0
Butylbenzene	Ave	1.734	1.725		1.99	2.00	-0.5	30.0
Undecane	Ave	1.235	1.280		2.07	2.00	3.7	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	1.282	1.204		1.88	2.00	-6.1	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3832	0.3470		1.81	2.00	-9.4	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.506	1.331		1.77	2.00	-11.6	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.9347	0.7988		1.71	2.00	-14.5	30.0
1,2,3,4-Tetramethylbenzene	Ave	1.272	1.072		1.69	2.00	-15.7	30.0
Dodecane	Ave	1.296	1.170		1.81	2.00	-9.7	30.0
1,2,4-Trichlorobenzene	Ave	0.8052	0.6807		1.69	2.00	-15.5	30.0
Naphthalene	Ave	1.881	1.616		1.72	2.00	-14.1	30.0
Benzo(b)thiophene	Ave	1.080	0.8516		1.58	2.00	-21.2	30.0
Hexachlorobutadiene	Ave	0.6896	0.5274		1.53	2.00	-23.5	30.0
1,2,3-Trichlorobenzene	Ave	0.7964	0.6177		1.55	2.00	-22.4	30.0
2-Methylnaphthalene	Ave	0.2177	0.1893		5.43	6.25	-13.1	50.0
1-Methylnaphthalene	Ave	0.2189	0.2012		5.75	6.25	-8.1	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7471	0.7032		3.77	4.00	-5.9	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\RCCVK08.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 08-Nov-2016 11:18:30 ALS Bottle#: 16 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003605-002
Misc. Info.: P26
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 08-Nov-2016 15:27:46 Calib Date: 10-Oct-2016 00:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: tajh Date: 08-Nov-2016 11:48:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.247	8.247	0.000	95	285301	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.415	10.415	0.000	96	1323176	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.306	15.306	0.000	89	1209335	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.994	16.994	0.000	89	850439	4.00	3.77	
7 Chlorodifluoromethane	67	3.718	3.718	0.000	97	66883	2.00	2.23	
6 Propene	41	3.723	3.723	0.000	99	266019	2.00	2.47	
8 Dichlorodifluoromethane	85	3.772	3.772	0.000	100	566808	2.00	2.06	
9 Chloromethane	52	3.917	3.917	0.000	100	73993	2.00	2.36	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.944	3.944	0.000	94	415362	2.00	2.19	
11 Acetaldehyde	44	4.063	4.063	0.000	98	378309	10.0	11.3	
12 Vinyl chloride	62	4.074	4.074	0.000	99	205662	2.00	2.19	
13 Butadiene	54	4.149	4.149	0.000	93	156537	2.00	2.11	
14 Butane	43	4.155	4.155	0.000	91	305035	2.00	2.18	
15 Bromomethane	94	4.419	4.419	0.000	98	197915	2.00	2.36	
16 Chloroethane	64	4.537	4.537	0.000	91	89583	2.00	2.17	
17 Ethanol	31	4.634	4.634	0.000	96	354391	10.0	11.9	
18 Vinyl bromide	106	4.796	4.796	0.000	97	175774	2.00	2.23	
19 2-Methylbutane	43	4.850	4.850	0.000	88	201187	2.00	2.17	
20 Acrolein	56	5.023	5.023	0.000	94	50456	2.00	1.53	
21 Trichlorofluoromethane	101	5.034	5.034	0.000	99	689039	2.00	2.86	
22 Acetonitrile	40	5.077	5.077	0.000	98	72172	2.00	1.76	
23 Acetone	58	5.125	5.125	0.000	99	276397	6.00	5.92	
24 Isopropyl alcohol	45	5.217	5.217	0.000	93	1037097	6.00	6.52	
25 Pentane	72	5.233	5.233	0.000	94	41268	2.00	2.12	
26 Ethyl ether	31	5.368	5.368	0.000	94	279339	2.00	2.17	
27 1,1-Dichloroethene	96	5.637	5.637	0.000	94	203420	2.00	2.02	
28 Acrylonitrile	53	5.708	5.708	0.000	97	190244	2.00	2.24	
29 2-Methyl-2-propanol	59	5.729	5.729	0.000	96	426070	2.00	2.01	
30 1,1,2-Trichloro-1,2,2-trif	101	5.815	5.815	0.000	93	456254	2.00	2.14	
31 Methylene Chloride	84	5.934	5.934	0.000	96	196823	2.00	2.02	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.956	5.956	0.000	95	230338	2.00	2.29	
33 Carbon disulfide	76	6.074	6.074	0.000	100	637681	2.00	2.13	
34 trans-1,2-Dichloroethene	96	6.673	6.673	0.000	95	210515	2.00	2.05	
35 2-Methylpentane	43	6.721	6.721	0.000	96	555398	2.00	2.30	
36 Methyl tert-butyl ether	73	6.797	6.797	0.000	97	575353	2.00	2.01	
37 1,1-Dichloroethane	63	7.039	7.039	0.000	100	411696	2.00	2.11	
38 Vinyl acetate	43	7.147	7.147	0.000	100	702476	2.00	2.24	
39 2-Butanone (MEK)	72	7.530	7.530	0.000	98	105423	2.00	1.99	
40 Hexane	56	7.627	7.627	0.000	91	194967	2.00	2.11	
41 Isopropyl ether	45	7.762	7.762	0.000	97	918554	2.00	2.30	
42 cis-1,2-Dichloroethene	96	7.951	7.951	0.000	97	211388	2.00	2.04	
43 Ethyl acetate	43	8.129	8.129	0.000	98	601263	2.00	2.33	
44 Chloroform	83	8.280	8.280	0.000	98	423274	2.00	2.05	
45 Tert-butyl ethyl ether	59	8.398	8.398	0.000	97	656807	2.00	2.04	
46 Tetrahydrofuran	42	8.636	8.636	0.000	95	297893	2.00	2.29	
47 1,1,1-Trichloroethane	97	9.267	9.267	0.000	96	395638	2.00	1.94	
48 1,2-Dichloroethane	62	9.337	9.337	0.000	96	299098	2.00	2.03	
49 n-Butanol	31	9.822	9.822	0.000	87	102515	2.00	2.14	
50 Benzene	78	9.849	9.849	0.000	97	610269	2.00	2.05	
51 Cyclohexane	69	9.876	9.876	0.000	96	94652	2.00	1.98	
52 Carbon tetrachloride	117	9.887	9.887	0.000	96	410628	2.00	2.00	
53 2,3-Dimethylpentane	71	10.032	10.032	0.000	90	139940	2.00	1.96	
54 Thiophene	84	10.113	10.113	0.000	96	326431	2.00	1.96	
55 Tert-amyl methyl ether	73	10.361	10.361	0.000	95	568718	2.00	2.04	
56 Isooctane	57	10.695	10.695	0.000	97	1075412	2.00	2.03	
58 1,2-Dichloropropane	63	11.089	11.089	0.000	86	243622	2.00	2.01	
57 n-Heptane	71	11.095	11.095	0.000	94	210293	2.00	1.91	
59 Trichloroethene	130	11.148	11.148	0.000	94	228634	2.00	1.89	
60 Dibromomethane	93	11.197	11.197	0.000	91	229552	2.00	1.98	
62 1,4-Dioxane	88	11.364	11.364	0.000	41	85566	2.00	1.83	
61 Dichlorobromomethane	83	11.364	11.364	0.000	97	383588	2.00	1.87	
63 Methyl methacrylate	41	11.494	11.494	0.000	94	314063	2.00	1.97	
64 Methylcyclohexane	83	11.973	11.973	0.000	89	406610	2.00	1.88	
65 4-Methyl-2-pentanone (MIBK	43	12.362	12.362	0.000	97	574346	2.00	2.08	
66 cis-1,3-Dichloropropene	75	12.416	12.416	0.000	98	331782	2.00	1.93	
67 trans-1,3-Dichloropropene	75	13.138	13.138	0.000	96	283870	2.00	1.86	
68 Toluene	91	13.278	13.278	0.000	93	667655	2.00	1.99	
69 1,1,2-Trichloroethane	83	13.332	13.332	0.000	97	204211	2.00	2.02	
70 2-Methylthiophene	97	13.429	13.429	0.000	98	523598	2.00	1.94	
71 3-Methylthiophene	97	13.634	13.634	0.000	99	517857	2.00	1.94	
72 2-Hexanone	58	13.758	13.758	0.000	91	262949	2.00	2.07	
73 Chlorodibromomethane	129	14.055	14.055	0.000	96	368666	2.00	2.01	
74 n-Octane	85	14.066	14.066	0.000	97	224291	2.00	1.96	
75 Ethylene Dibromide	107	14.346	14.346	0.000	97	350238	2.00	1.96	
76 Tetrachloroethene	129	14.465	14.465	0.000	93	210831	2.00	1.89	
77 Chlorobenzene	112	15.355	15.355	0.000	92	504498	2.00	1.94	
78 2,3-Dimethylheptane	43	15.452	15.452	0.000	95	782087	2.00	2.24	
79 Ethylbenzene	91	15.673	15.673	0.000	99	874578	2.00	1.95	
80 2-Ethylthiophene	97	15.770	15.770	0.000	99	621110	2.00	1.90	
81 m-Xylene & p-Xylene	91	15.840	15.840	0.000	100	1366594	4.00	3.96	
82 Bromoform	173	16.244	16.244	0.000	92	346354	2.00	1.92	
83 Styrene	104	16.309	16.309	0.000	97	518687	2.00	2.05	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.336	16.336	0.000	96	519592	2.00	2.09	
85 o-Xylene	91	16.368	16.368	0.000	99	697704	2.00	1.95	
86 1,1,2,2-Tetrachloroethane	83	16.686	16.686	0.000	98	533154	2.00	2.02	
87 1,2,3-Trichloropropane	110	16.843	16.843	0.000	96	138775	2.00	1.81	
88 Isopropylbenzene	105	16.988	16.988	0.000	98	994962	2.00	2.01	
89 N-Propylbenzene	120	17.565	17.565	0.000	99	261286	2.00	1.94	
90 2-Chlorotoluene	126	17.592	17.592	0.000	98	225991	2.00	1.92	
91 4-Ethyltoluene	105	17.727	17.727	0.000	99	942776	2.00	1.90	
92 1,3,5-Trimethylbenzene	120	17.813	17.813	0.000	93	433759	2.00	1.94	
93 Alpha Methyl Styrene	118	18.051	18.051	0.000	88	375401	2.00	1.82	
94 n-Decane	57	18.175	18.175	0.000	87	647173	2.00	2.00	
95 tert-Butylbenzene	119	18.261	18.261	0.000	92	831466	2.00	1.92	
96 1,2,4-Trimethylbenzene	105	18.277	18.277	0.000	96	809079	2.00	1.91	
97 1,3-Dichlorobenzene	146	18.541	18.541	0.000	96	518861	2.00	1.91	
98 sec-Butylbenzene	105	18.552	18.552	0.000	99	1234796	2.00	2.01	
99 Benzyl chloride	91	18.622	18.622	0.000	97	715514	2.00	1.95	
100 1,4-Dichlorobenzene	146	18.638	18.638	0.000	95	526084	2.00	1.93	
101 4-Isopropyltoluene	119	18.730	18.730	0.000	97	966699	2.00	1.92	
102 1,2,3-Trimethylbenzene	105	18.773	18.773	0.000	96	600632	2.00	1.83	
103 Butylcyclohexane	83	18.860	18.860	0.000	90	670450	2.00	1.98	
104 1,2-Dichlorobenzene	146	19.016	19.016	0.000	96	507317	2.00	1.93	
105 2,3-Dihydroindene	117	19.021	19.021	0.000	94	772777	2.00	1.97	
106 Indene	116	19.156	19.156	0.000	94	547733	2.00	1.79	
107 n-Butylbenzene	91	19.194	19.194	0.000	98	1042879	2.00	1.99	
108 Undecane	57	19.571	19.571	0.000	94	774107	2.00	2.07	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.582	19.582	0.000	97	727760	2.00	1.88	
110 1,2-Dibromo-3-Chloropropan	157	19.641	19.641	0.000	91	209830	2.00	1.81	
111 1,2,4,5-Tetramethylbenzene	119	19.987	19.987	0.000	97	804972	2.00	1.77	
112 1,2,3,5-Tetramethylbenzene	119	20.040	20.040	0.000	95	483003	2.00	1.71	
113 1,2,3,4-Tetramethylbenzene	119	20.445	20.445	0.000	98	648100	2.00	1.69	
114 Dodecane	57	20.671	20.671	0.000	91	707508	2.00	1.81	
115 1,2,4-Trichlorobenzene	180	20.795	20.795	0.000	93	411614	2.00	1.69	
116 Naphthalene	128	20.930	20.930	0.000	98	977311	2.00	1.72	
117 Benzo(b)thiophene	134	21.033	21.033	0.000	99	514920	2.00	1.58	
118 Hexachlorobutadiene	225	21.184	21.184	0.000	89	318874	2.00	1.53	
119 1,2,3-Trichlorobenzene	180	21.227	21.227	0.000	94	373523	2.00	1.55	
120 2-Methylnaphthalene	142	21.939	21.939	0.000	100	357589	6.25	5.43	
121 1-Methylnaphthalene	142	22.063	22.063	0.000	100	380214	6.25	5.75	
A 122 C6 Range	1	7.625	(7.573-7.662)		0	1704305	2.00	2.28	
S 124 Xylenes, Total	100				0		6.00	5.91	
S 125 1,2-Dichloroethene, Total	1				0		4.00	4.09	

Reagents:

40CV101P_00026	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

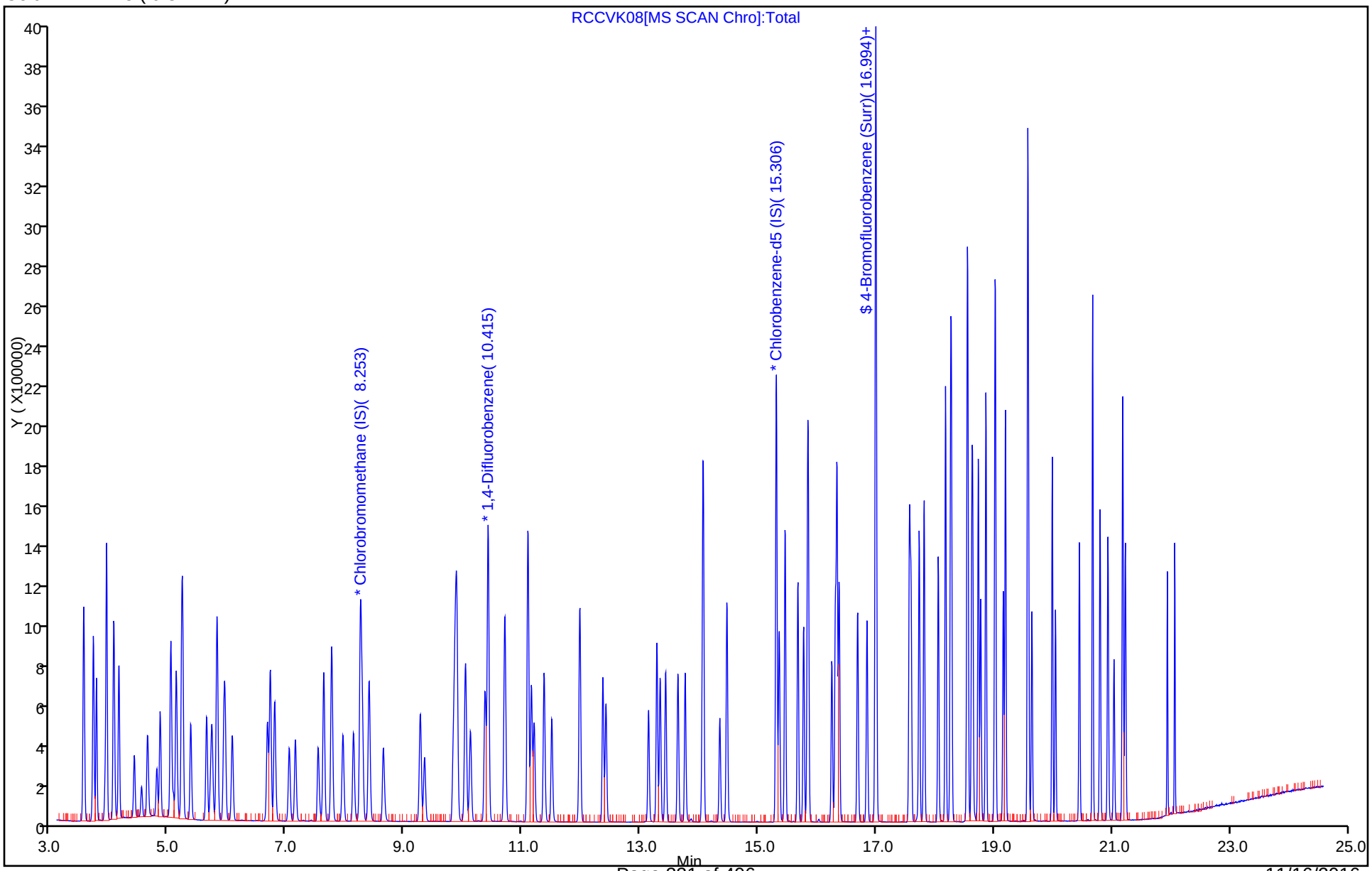
Report Date: 08-Nov-2016 15:27:49 Chrom Revision: 2.2 17-Oct-2016 09:27:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\RCCVK08.D

Injection Date:	08-Nov-2016 11:18:30	Instrument ID:	MR	Operator ID:	
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JBFBJ08.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	08-Oct-2016 17:39:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003509-001				
Misc. Info.:	BFB				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	11-Oct-2016 11:30:12	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				
First Level Reviewer: barlozhetskayaa		Date:	08-Oct-2016 18:15:31		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.039	4.039	0.000	0	254915	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

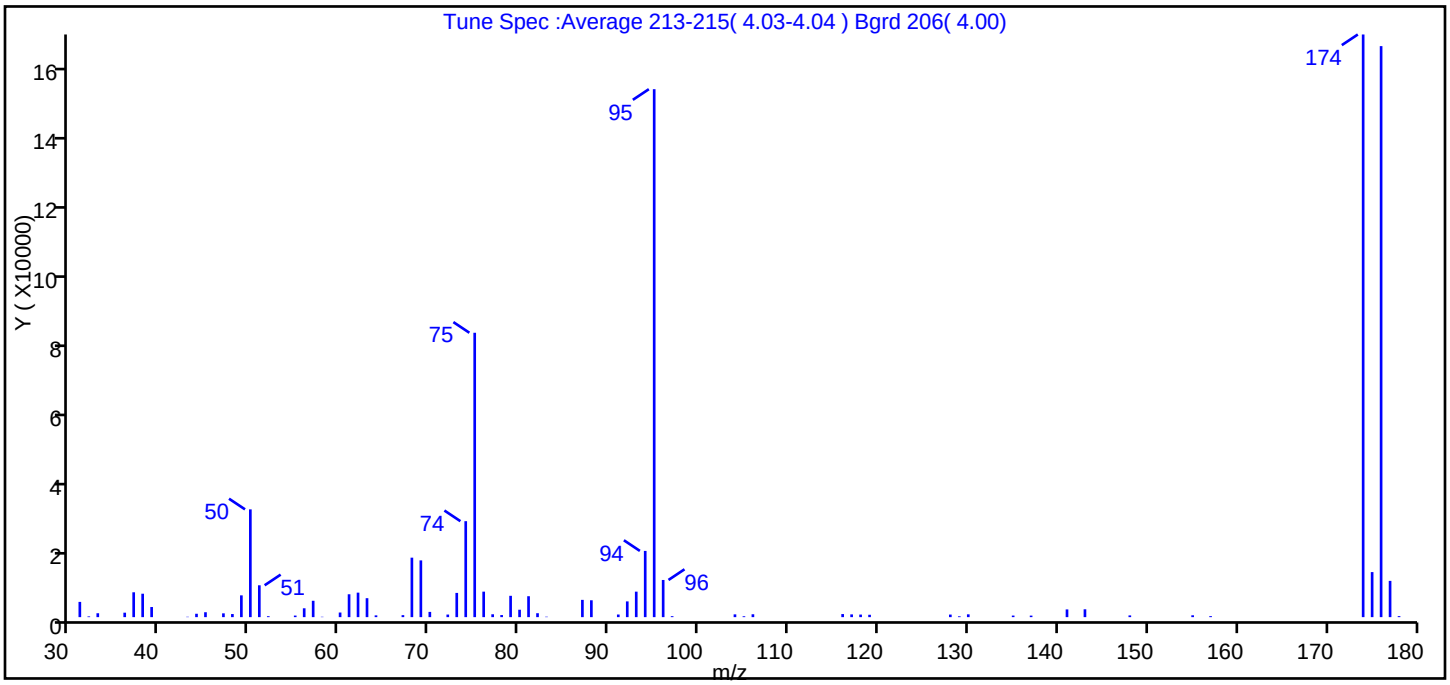
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JBFBJ08.D
Injection Date: 08-Oct-2016 17:39:30 Instrument ID: MJ
Lims ID: BFB
Client ID:
Operator ID: 403648 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	20.4
75	30 to 60% of m/z 95	53.9
96	5 to 9% of m/z 95	7.0
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	110.4
175	5 to 9% of m/z 174	8.5 (7.7)
176	Greater than 95% but less than 101% of m/z 174	108.2 (98.0)
177	5 to 9% of m/z 176	6.9 (6.4)

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JBFBJ08.D\MJ_TO15.rslt\spectra.d
Injection Date: 08-Oct-2016 17:39:30
Spectrum: Tune Spec :Average 213-215(4.03-4.04) Bgrd 206(4.00)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 72

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	4194	57.00	4502	79.00	5865	117.00	759
32.00	200	58.00	100	80.00	2039	118.00	708
33.00	1072	60.00	1271	81.00	5753	119.00	655
36.00	1226	61.00	6290	82.00	1080	128.00	708
37.00	6834	62.00	6736	83.00	120	129.00	228
38.00	6441	63.00	5213	87.00	4750	130.00	774
39.00	2781	64.00	489	88.00	4639	135.00	434
43.00	101	67.00	549	91.00	724	137.00	423
44.00	931	68.00	16354	92.00	4329	141.00	2125
45.00	1349	69.00	15602	93.00	7009	143.00	2162
47.00	1046	70.00	1443	94.00	18208	148.00	476
48.00	853	72.00	711	95.00	145152	155.00	512
49.00	5990	73.00	6661	96.00	10220	157.00	274
50.00	29632	74.00	26384	97.00	262	174.00	160192
51.00	8759	75.00	78184	104.00	766	175.00	12385
52.00	256	76.00	7010	105.00	239	176.00	156992
55.00	431	77.00	792	106.00	795	177.00	9970
56.00	2436	78.00	573	116.00	850	178.00	275

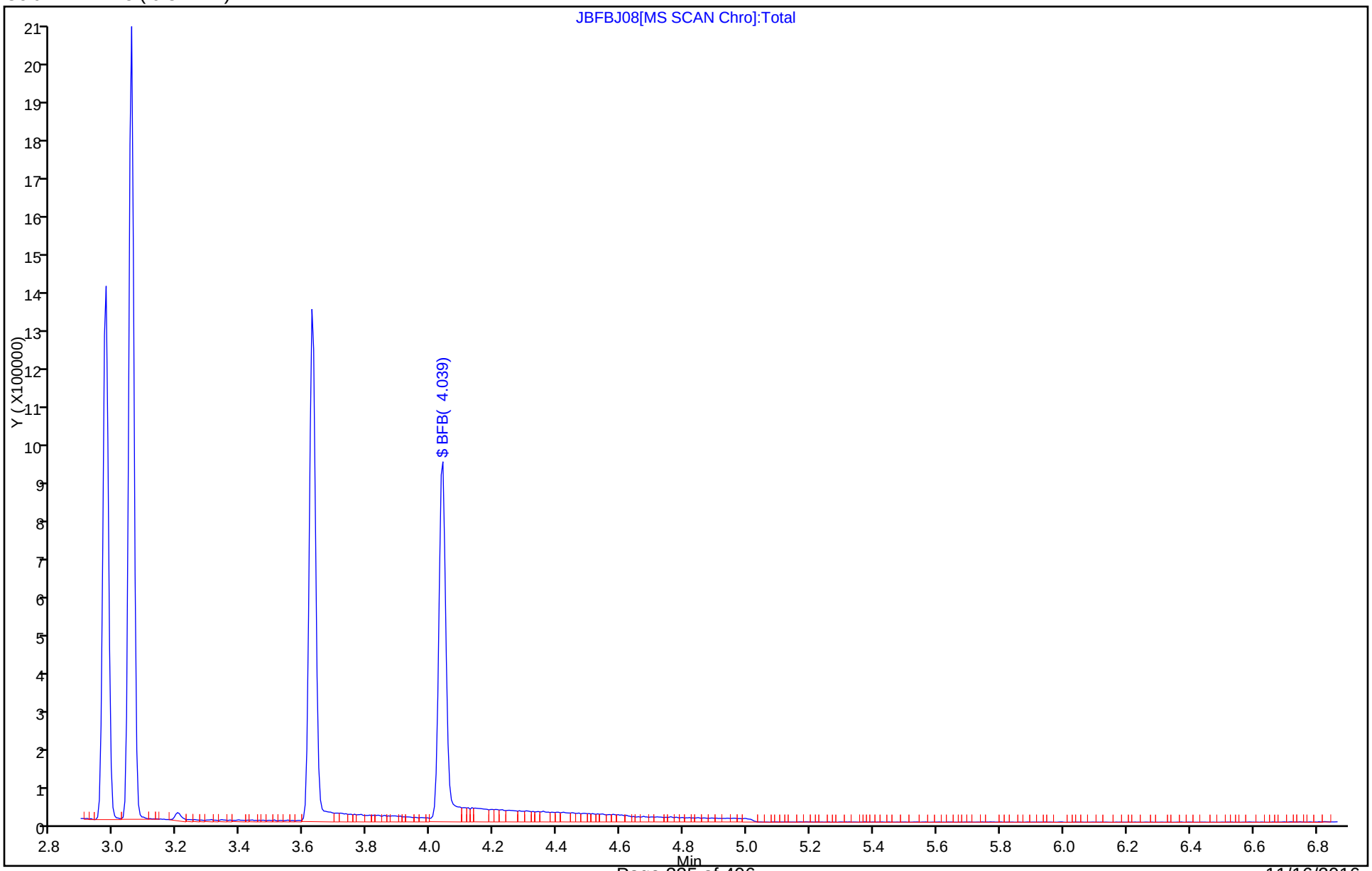
Report Date: 11-Oct-2016 11:30:14 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JBFBJ08.D

Injection Date:	08-Oct-2016 17:39:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JBFBK07A.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	07-Nov-2016 11:32:30	ALS Bottle#:	16	Worklist Smp#:	5
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003595-001				
Misc. Info.:	BFB				
Operator ID:	007126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	08-Nov-2016 10:14:14	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.029	4.029	0.000	0	220719	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

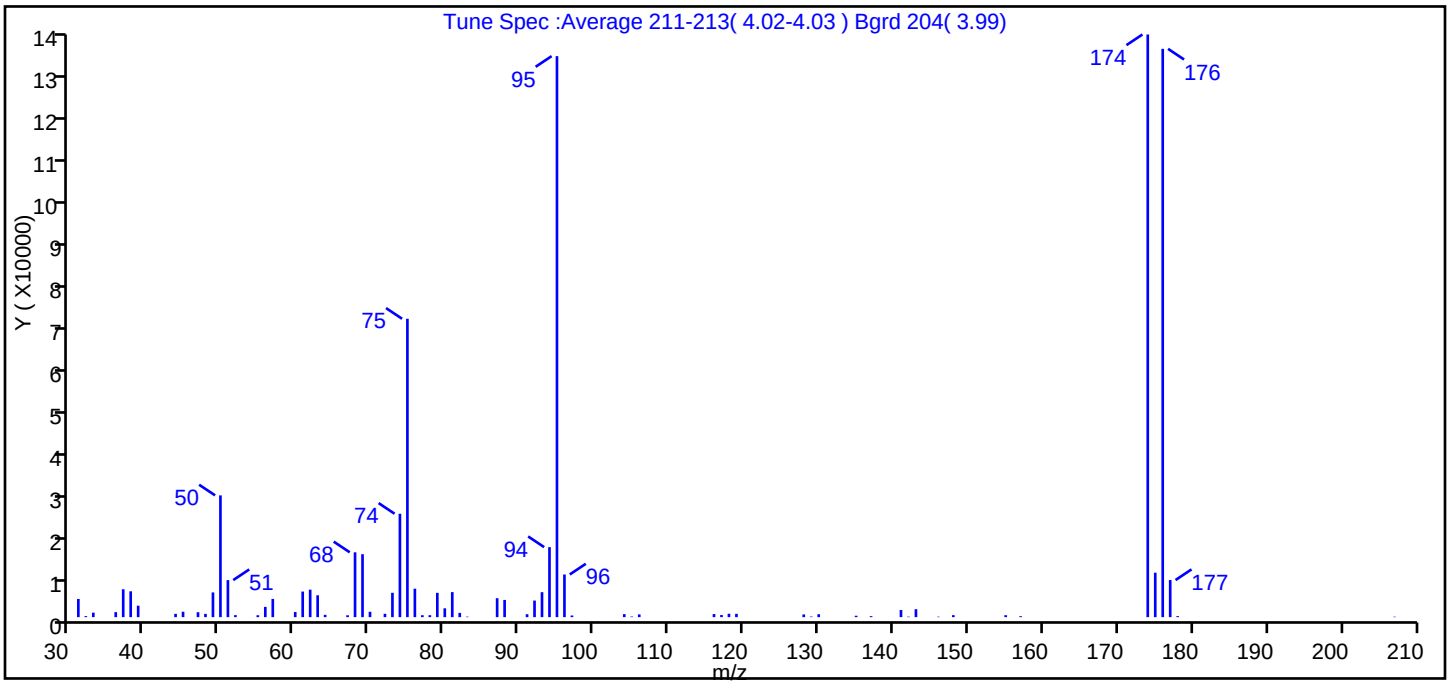
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JBFBK07A.D
Injection Date: 07-Nov-2016 11:32:30 Instrument ID: MJ
Lims ID: BFB
Client ID:
Operator ID: 007126 ALS Bottle#: 16 Worklist Smp#: 5
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.7
75	30 to 60% of m/z 95	53.2
96	5 to 9% of m/z 95	7.6
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	103.9
175	5 to 9% of m/z 174	7.9 (7.6)
176	Greater than 95% but less than 101% of m/z 174	101.3 (97.5)
177	5 to 9% of m/z 176	6.6 (6.5)

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JBFBK07A.D\MJ_TO15.rslt\spectra.d
Injection Date: 07-Nov-2016 11:32:30
Spectrum: Tune Spec :Average 211-213(4.02-4.03) Bgrd 204(3.99)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 74

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	4211	60.00	1197	82.00	985	129.00	131
32.00	240	61.00	5927	83.00	111	130.00	670
33.00	1039	62.00	6365	87.00	4387	135.00	328
36.00	1162	63.00	5061	88.00	3987	137.00	231
37.00	6458	64.00	534	91.00	677	141.00	1659
38.00	5987	67.00	438	92.00	3841	142.00	113
39.00	2654	68.00	15020	93.00	5784	143.00	1840
44.00	763	69.00	14585	94.00	16219	146.00	105
45.00	1252	70.00	1247	95.00	129960	148.00	460
47.00	1144	72.00	776	96.00	9885	155.00	449
48.00	762	73.00	5642	97.00	382	157.00	218
49.00	5727	74.00	23952	104.00	699	174.00	134976
50.00	28208	75.00	69120	105.00	141	175.00	10301
51.00	8581	76.00	6592	106.00	636	176.00	131648
52.00	466	77.00	445	116.00	712	177.00	8595
54.00	8	78.00	449	117.00	486	178.00	235
55.00	444	79.00	5627	118.00	792	207.00	100
56.00	2376	80.00	2049	119.00	772		
57.00	4222	81.00	5799	128.00	628		

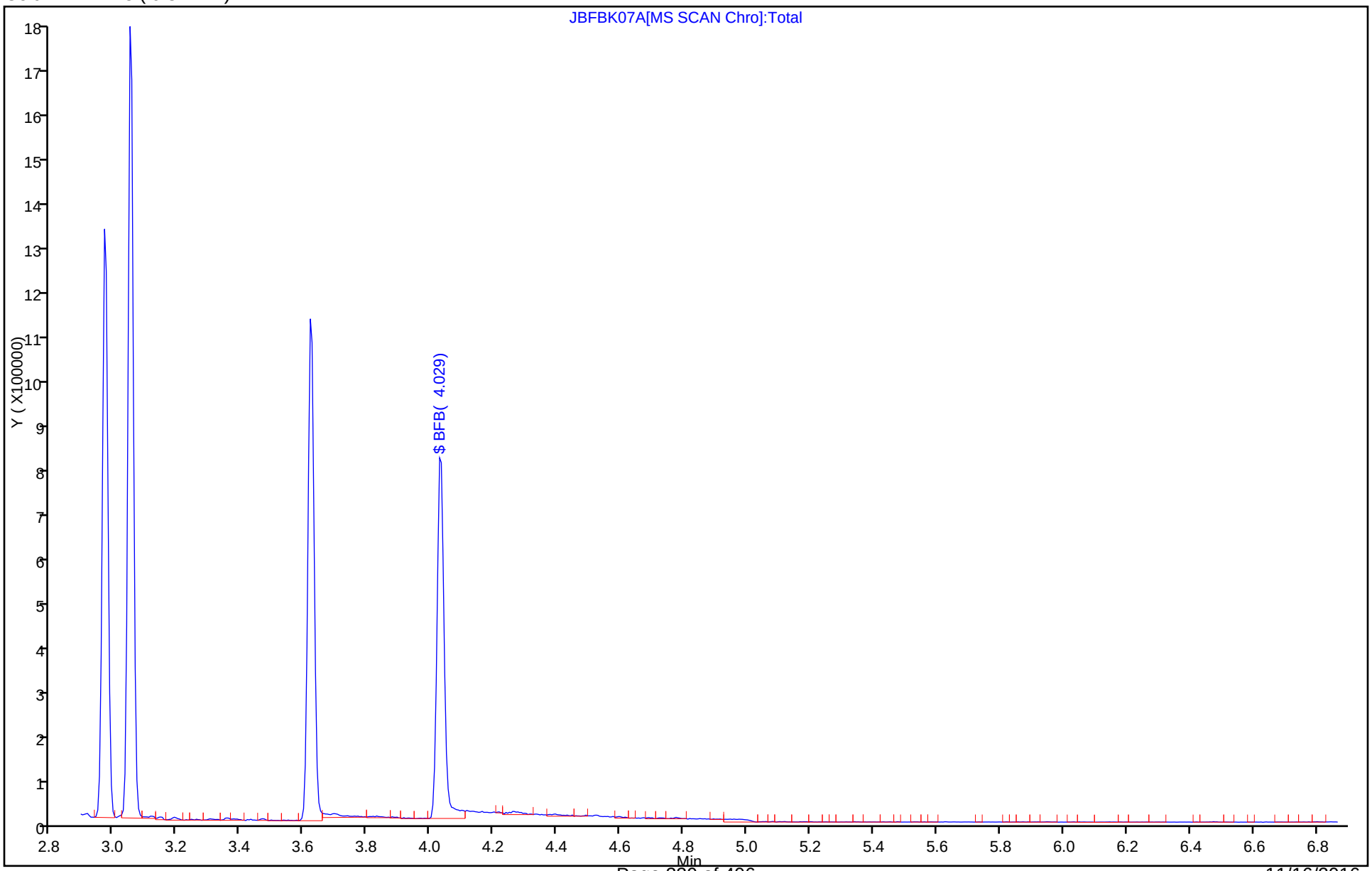
Report Date: 08-Nov-2016 10:14:14 Chrom Revision: 2.2 17-Oct-2016 09:27:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JBFBK07A.D

Injection Date:	07-Nov-2016 11:32:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	BFB			Worklist Smp#:	5
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RBFBJ09.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 09-Oct-2016 16:53:30 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Sample Info: 140-0003513-001
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Oct-2016 11:37:40 Calib Date: 10-Oct-2016 00:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: barlozhetskayaa Date: 09-Oct-2016 17:32:20

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.572	4.572	0.000	0	887187	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

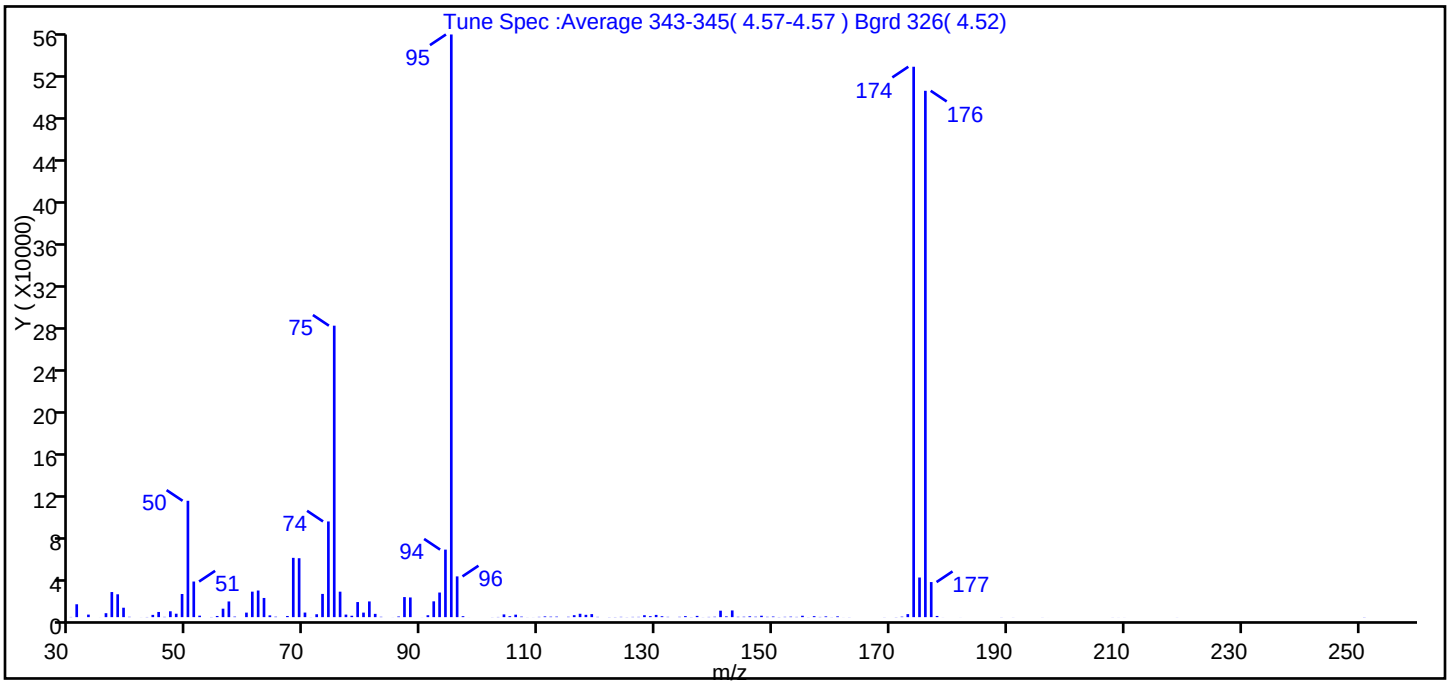
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RBFBJ09.D
Injection Date: 09-Oct-2016 16:53:30 Instrument ID: MR
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	20.0
75	30 to 60% of m/z 95	50.0
96	5 to 9% of m/z 95	7.0
173	Less than 2% of m/z 174	0.5 (0.6)
174	50 to 120% of m/z 95	94.5
175	5 to 9% of m/z 174	6.8 (7.2)
176	Greater than 95% but less than 101% of m/z 174	90.3 (95.6)
177	5 to 9% of m/z 176	6.0 (6.7)

Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RBFBJ09.D\MR_TO15.rslt\spectra.d
Injection Date: 09-Oct-2016 16:53:30
Spectrum: Tune Spec :Average 343-345(4.57-4.57) Bgrd 326(4.52)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 141

m/z	Y	m/z	Y	m/z	Y	m/z	Y
30.00	180	72.00	2746	113.00	505	151.00	142
31.00	12238	73.00	22072	115.00	345	152.00	300
33.00	2423	74.00	90920	116.00	1859	153.00	476
35.00	34	75.00	276928	117.00	3209	154.00	233
36.00	3764	76.00	24200	118.00	2206	155.00	1321
37.00	23856	77.00	2423	119.00	2887	156.00	84
38.00	21720	78.00	1321	120.00	250	157.00	943
39.00	8953	79.00	14336	122.00	115	158.00	209
40.00	308	80.00	4309	123.00	141	159.00	723
42.00	42	81.00	14932	124.00	271	160.00	88
43.00	154	82.00	3122	125.00	99	161.00	761
44.00	2153	83.00	324	126.00	241	162.00	41
45.00	4921	85.00	36	127.00	255	163.00	86
46.00	258	86.00	619	128.00	1829	169.00	81
47.00	5567	87.00	19064	129.00	908	171.00	125
48.00	3262	88.00	18712	130.00	2123	172.00	468
49.00	21992	90.00	45	131.00	869	173.00	2888
50.00	110552	91.00	1810	132.00	278	174.00	522944
51.00	33840	92.00	15015	133.00	6	175.00	37656
52.00	1425	93.00	23384	134.00	308	176.00	500096
54.00	144	94.00	64168	135.00	990	177.00	33328
55.00	1112	95.00	553600	136.00	121	178.00	1122
56.00	8033	96.00	38720	137.00	1195	179.00	43
57.00	14909	97.00	915	138.00	68	182.00	37
58.00	504	98.00	30	139.00	216	189.00	82
60.00	4294	102.00	78	140.00	388	191.00	56
61.00	24224	103.00	182	141.00	6133	196.00	57
62.00	25304	104.00	2596	142.00	709	197.00	11
63.00	18224	105.00	878	143.00	6373	208.00	61
64.00	1691	106.00	2356	144.00	340	209.00	39
65.00	427	107.00	491	145.00	390	210.00	38
67.00	1099	108.00	60	146.00	802	219.00	48
68.00	56344	109.00	49	147.00	411	251.00	134

Report Date: 13-Oct-2016 11:37:41 Chrom Revision: 2.2 08-Sep-2016 14:45:52
Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RBFBJ09.D\MR_TO15.rslt\spectra.d
Injection Date: 09-Oct-2016 16:53:30
Spectrum: Tune Spec :Average 343-345(4.57-4.57) Bgrd 326(4.52)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 141

m/z	Y	m/z	Y	m/z	Y	m/z	Y
69.00	55976	110.00	264	148.00	1352		
70.00	4344	111.00	698	149.00	306		
71.00	73	112.00	464	150.00	578		

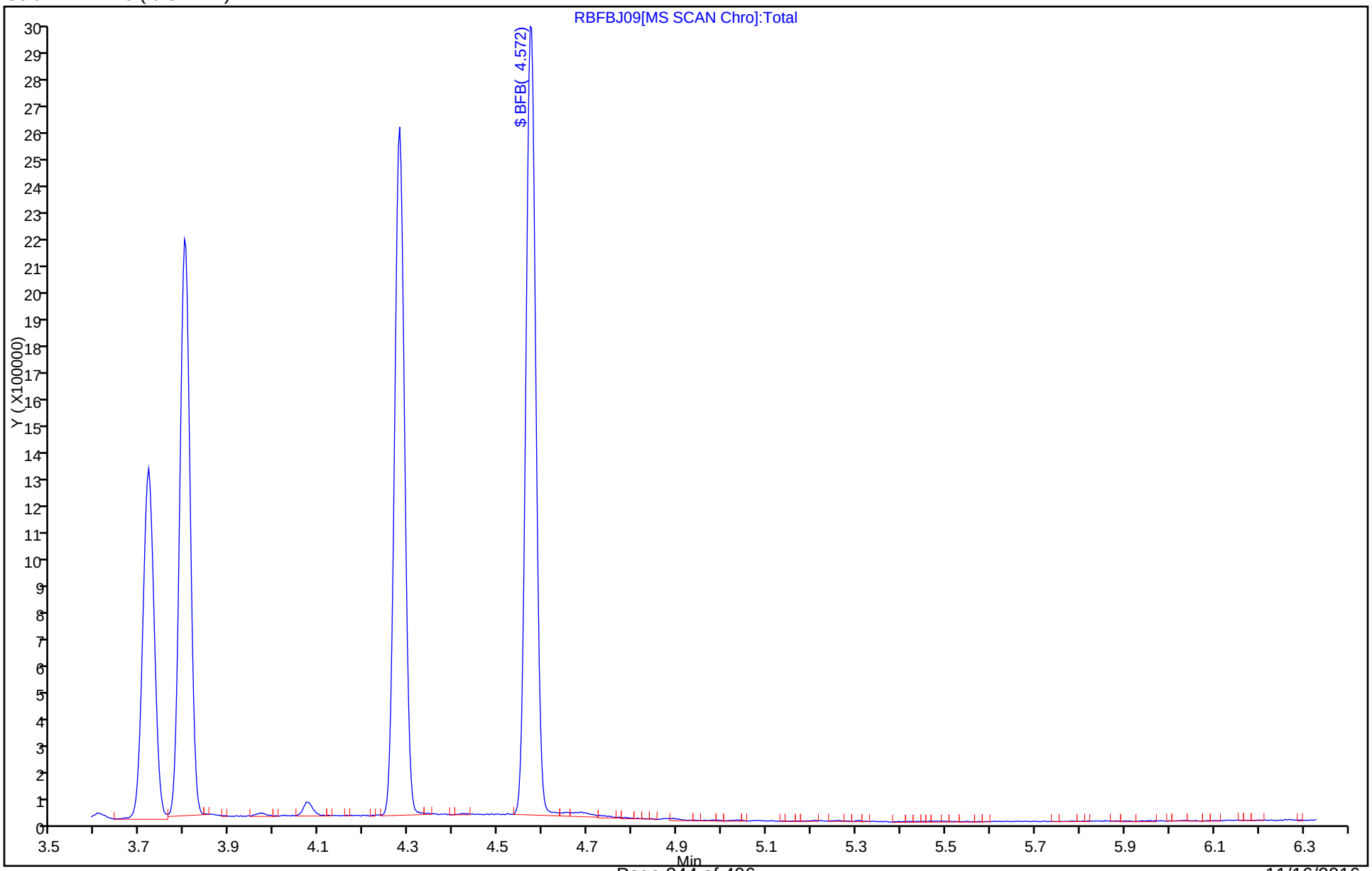
Report Date: 13-Oct-2016 11:37:41 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RBFBJ09.D

Injection Date:	09-Oct-2016 16:53:30	Instrument ID:	MR	Operator ID:	
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\RBFBK08.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 08-Nov-2016 10:46:30 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Sample Info: 140-0003605-001
Misc. Info.: TUNE
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 08-Nov-2016 15:27:43 Calib Date: 10-Oct-2016 00:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK018

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.555	4.555	0.000	0	1064593	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

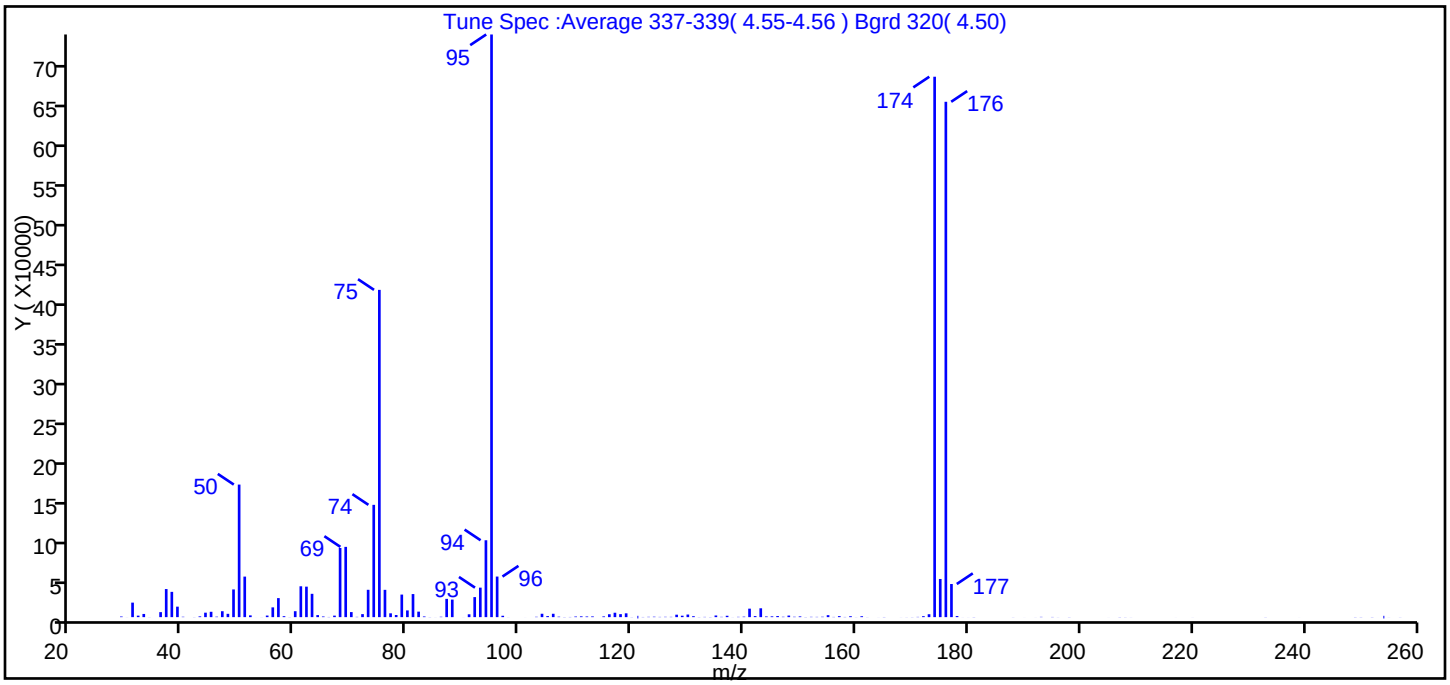
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\RBFBK08.D
Injection Date: 08-Nov-2016 10:46:30 Instrument ID: MR
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	22.8
75	30 to 60% of m/z 95	56.2
96	5 to 9% of m/z 95	7.0
173	Less than 2% of m/z 174	0.5 (0.5)
174	50 to 120% of m/z 95	92.7
175	5 to 9% of m/z 174	6.5 (7.1)
176	Greater than 95% but less than 101% of m/z 174	88.4 (95.4)
177	5 to 9% of m/z 176	5.7 (6.4)

Data File: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\RBFBK08.D\MR_TO15.rslt\spectra.d
Injection Date: 08-Nov-2016 10:46:30
Spectrum: Tune Spec :Average 337-339(4.55-4.56) Bgrd 320(4.50)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 164

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	775	72.00	3794	118.00	3746	159.00	1144
30.00	54	73.00	34304	119.00	4798	160.00	85
31.00	18216	74.00	140864	120.00	135	161.00	1120
32.00	1878	75.00	410496	121.00	2	162.00	84
33.00	4001	76.00	34248	122.00	209	164.00	48
34.00	93	77.00	4809	123.00	374	165.00	189
36.00	6281	78.00	2671	124.00	534	168.00	52
37.00	35232	79.00	28304	125.00	295	169.00	89
38.00	31712	80.00	8445	126.00	403	170.00	131
39.00	13153	81.00	28944	127.00	350	171.00	301
40.00	472	82.00	6901	128.00	3076	172.00	1197
42.00	123	83.00	841	129.00	1797	173.00	3647
43.00	947	84.00	142	130.00	3267	174.00	677824
44.00	5598	85.00	56	131.00	1168	175.00	47864
45.00	6725	86.00	490	132.00	156	176.00	646400
46.00	582	87.00	22920	133.00	298	177.00	41560
47.00	7429	88.00	22016	134.00	182	178.00	1328
48.00	4168	90.00	45	135.00	2074	179.00	45
49.00	34760	91.00	3566	136.00	354	180.00	47
50.00	166272	92.00	25136	137.00	1731	181.00	170
51.00	50848	93.00	37008	138.00	67	188.00	90
52.00	2212	94.00	96440	139.00	349	190.00	35
53.00	20	95.00	730816	140.00	609	192.00	42
54.00	71	96.00	50912	141.00	10647	193.00	342
55.00	1987	97.00	1719	142.00	1330	195.00	246
56.00	12253	98.00	65	143.00	11116	196.00	80
57.00	23872	101.00	33	144.00	845	198.00	142
58.00	1188	103.00	438	145.00	1002	205.00	34
59.00	129	104.00	4254	146.00	1386	207.00	168
60.00	7441	105.00	1309	147.00	470	208.00	112
61.00	38704	106.00	4235	148.00	1981	209.00	60
62.00	38248	107.00	592	149.00	471	217.00	29
63.00	29256	108.00	185	150.00	938	220.00	43

Report Date: 08-Nov-2016 15:27:44 Chrom Revision: 2.2 17-Oct-2016 09:27:18
Data File: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\RBFBK08.D\MR_TO15.rslt\spectra.d
Injection Date: 08-Nov-2016 10:46:30
Spectrum: Tune Spec :Average 337-339(4.55-4.56) Bgrd 320(4.50)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 164

m/z	Y	m/z	Y	m/z	Y	m/z	Y
64.00	2555	109.00	226	151.00	175	233.00	122
65.00	815	110.00	764	152.00	382	239.00	28
66.00	226	111.00	1007	153.00	323	249.00	185
67.00	1907	112.00	833	154.00	492	250.00	150
68.00	86752	113.00	897	155.00	2462	252.00	165
69.00	88144	115.00	930	156.00	263	254.00	1
70.00	6337	116.00	3625	157.00	1278	255.00	53
71.00	342	117.00	5535	158.00	232	257.00	102

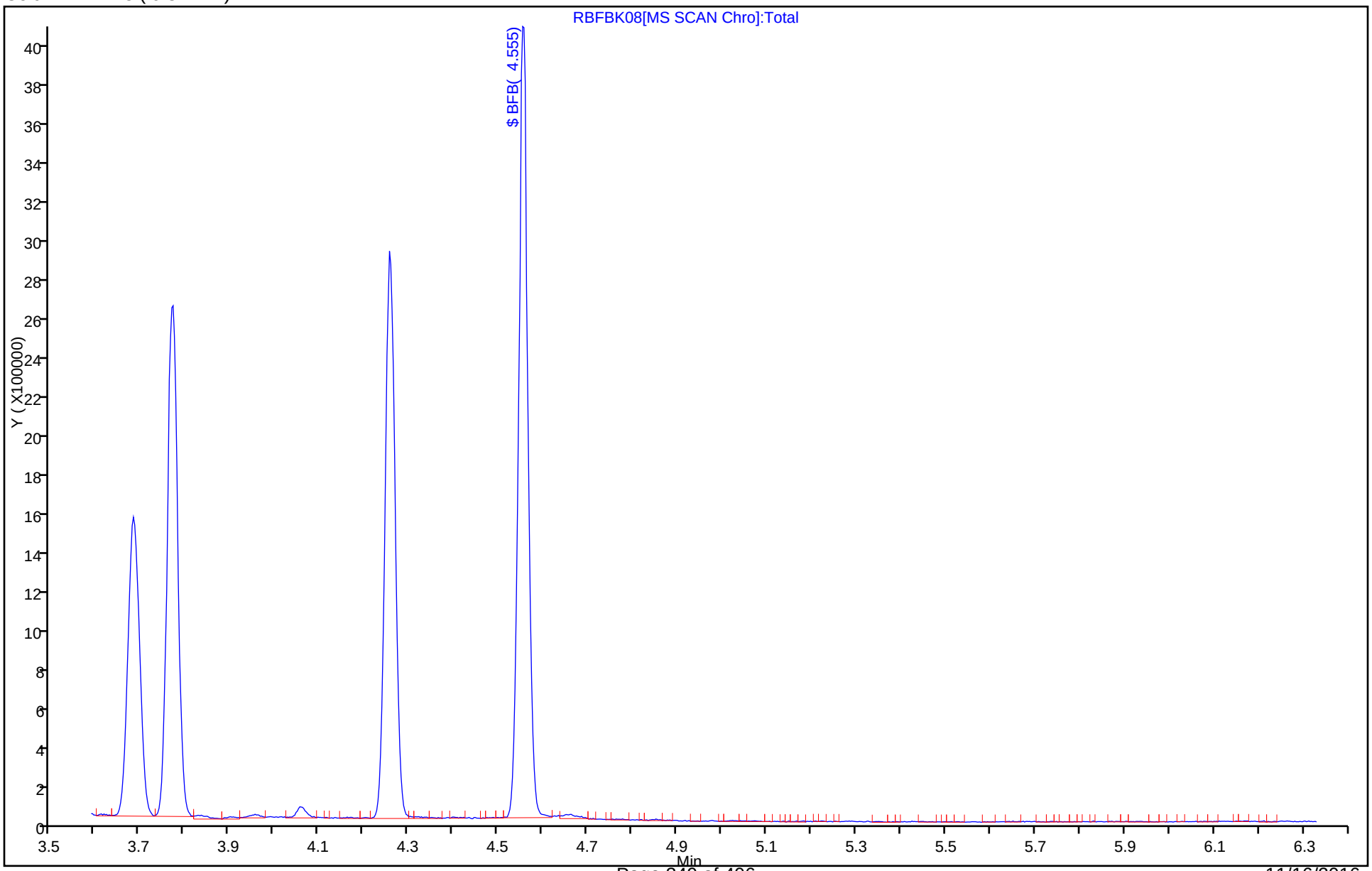
Report Date: 08-Nov-2016 15:27:44 Chrom Revision: 2.2 17-Oct-2016 09:27:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\RBFBK08.D

Injection Date:	08-Nov-2016 10:46:30	Instrument ID:	MR	Operator ID:	
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6285-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-7085/9

Matrix: Air | Lab File ID: J500BK07.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 11/07/2016 14:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7085 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6285-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-7085/9

Matrix: Air | Lab File ID: J500BK07.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 11/07/2016 14:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7085 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\J500BK07.D
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 07-Nov-2016 14:57:30 ALS Bottle#: 16 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003595-009
Misc. Info.: 500ml blk
Operator ID: 7126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 08-Nov-2016 10:14:16 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: tajh Date: 07-Nov-2016 15:52:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.280	9.290	-0.010	98	257105	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.447	11.446	0.001	96	1152939	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.126	16.125	0.001	90	882969	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.750	17.749	0.001	85	503393	4.00	3.78	
31 Methylene Chloride	84	6.667	6.671	-0.004	98	5733		0.0702	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

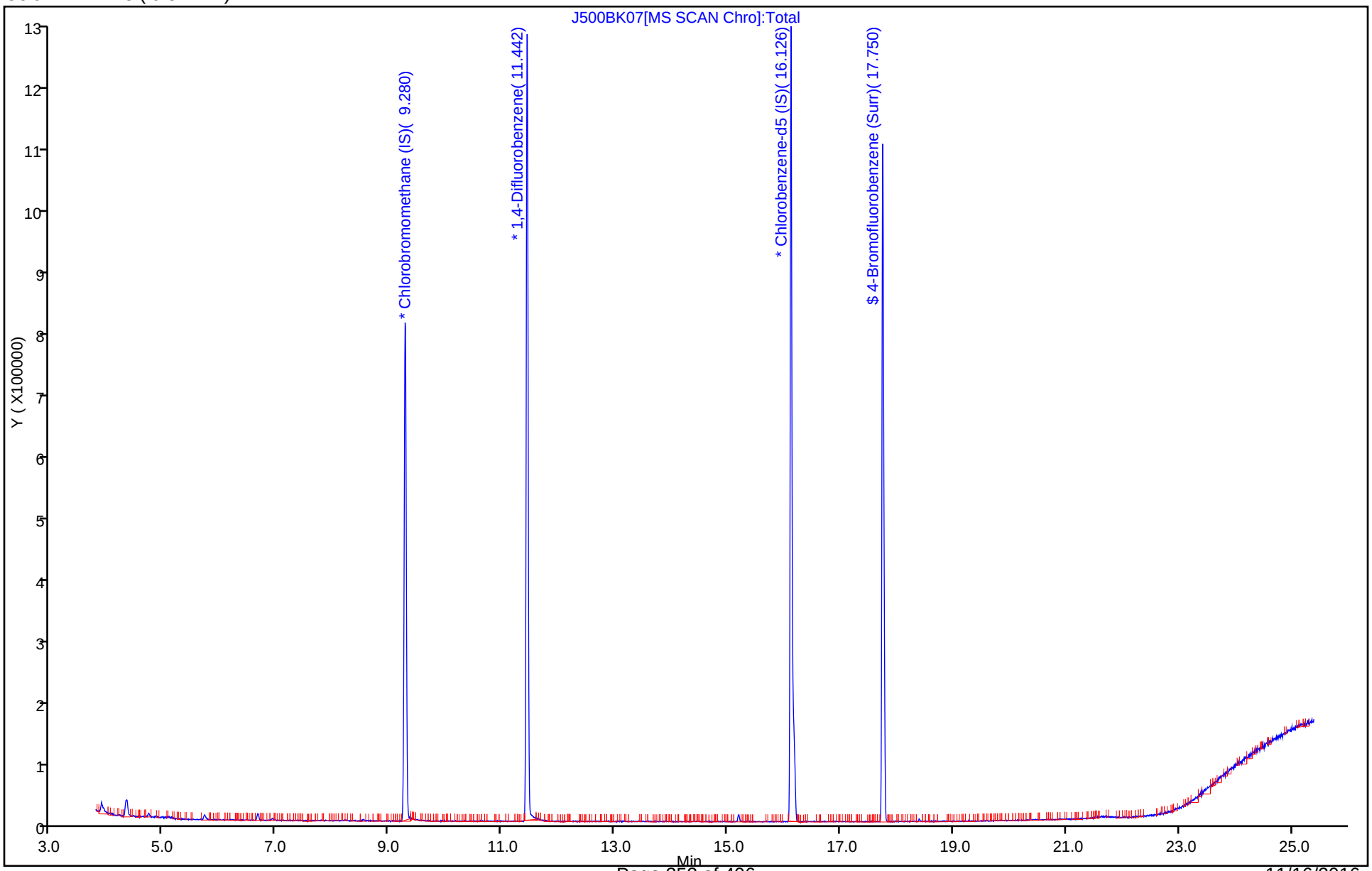
Report Date: 08-Nov-2016 10:14:26 Chrom Revision: 2.2 17-Oct-2016 09:27:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\J500BK07.D

Injection Date:	07-Nov-2016 14:57:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	mb			Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\J500BK07.D				
Lims ID:	mb				
Client ID:					
Sample Type:	MB				
Inject. Date:	07-Nov-2016 14:57:30	ALS Bottle#:	16	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003595-009				
Misc. Info.:	500ml blk				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	08-Nov-2016 10:14:16	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				
First Level Reviewer: tajh		Date:	07-Nov-2016 15:52:41		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.78	94.54

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6285-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-7105/4

Matrix: Air | Lab File ID: R500MLK08.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 11/08/2016 13:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7105 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6285-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-7105/4

Matrix: Air | Lab File ID: R500MLK08.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 11/08/2016 13:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7105 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\R500MLK08.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 08-Nov-2016 13:19:30 ALS Bottle#: 16 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003605-004
Misc. Info.: 500ML BLK
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 08-Nov-2016 15:27:46 Calib Date: 10-Oct-2016 00:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: tajh Date: 08-Nov-2016 13:57:55

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	8.236	8.247	-0.011	95	243043	4.00	4.00	
*	2 1,4-Difluorobenzene	114	10.404	10.415	-0.011	96	1115119	4.00	4.00	
*	3 Chlorobenzene-d5 (IS)	117	15.306	15.306	0.000	89	983228	4.00	4.00	
$	4 4-Bromofluorobenzene (Surr	95	16.994	16.994	0.000	87	626086	4.00	3.41	
	31 Methylene Chloride	84	5.912	5.934	-0.022	97	5261		0.0633	
	65 4-Methyl-2-pentanone (MIBK	43	12.383	12.362	0.021	97	11894		0.0512	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

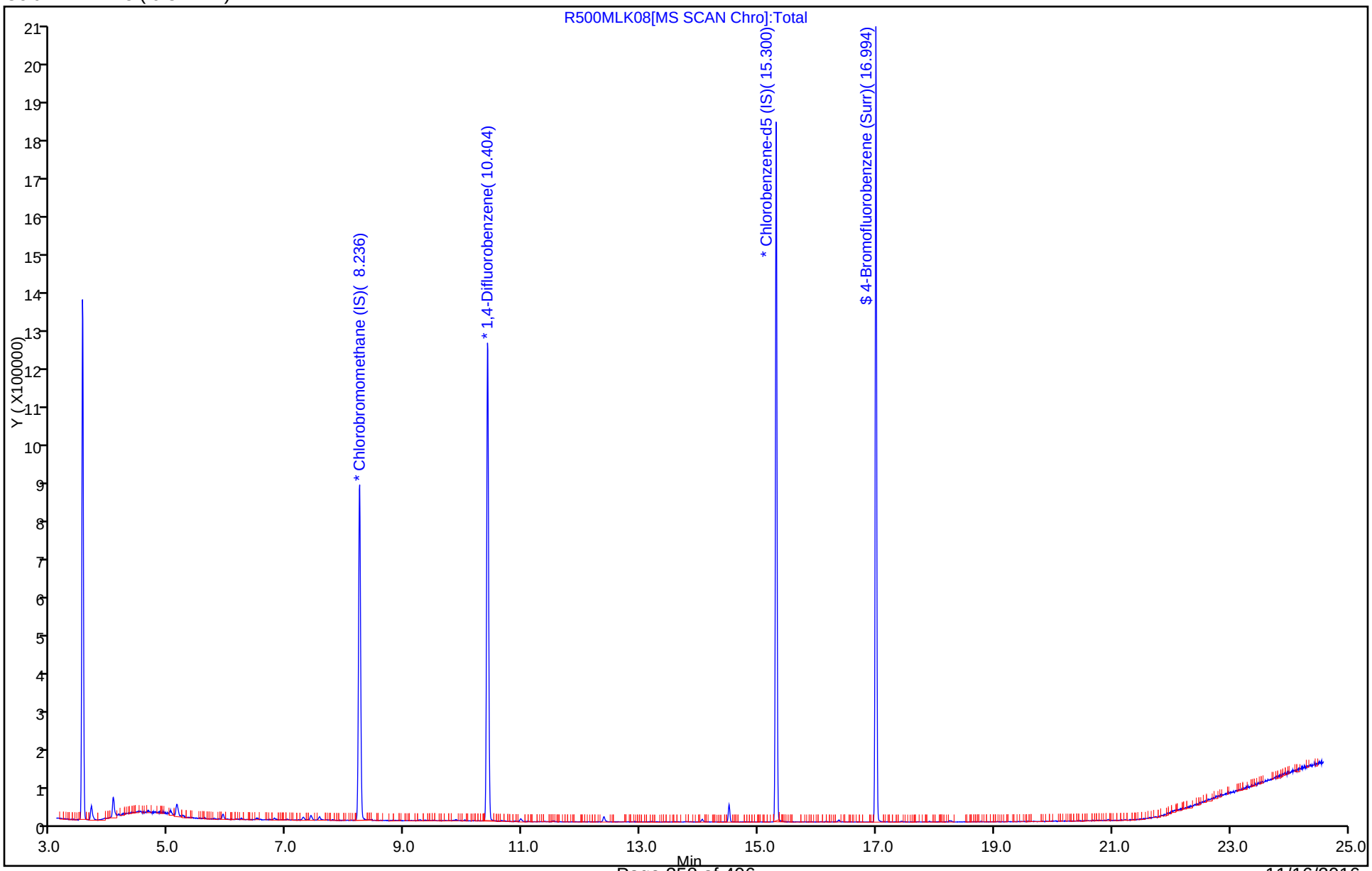
Report Date: 08-Nov-2016 15:27:57 Chrom Revision: 2.2 17-Oct-2016 09:27:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\R500MLK08.D

Injection Date:	08-Nov-2016 13:19:30	Instrument ID:	MR	Operator ID:	
Lims ID:	MB			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\R500MLK08.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	08-Nov-2016 13:19:30	ALS Bottle#:	16	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003605-004				
Misc. Info.:	500ML BLK				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	08-Nov-2016 15:27:46	Calib Date:	10-Oct-2016 00:36:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				

First Level Reviewer: tajh Date: 08-Nov-2016 13:57:55

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.41	85.23

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 140-7085/1006

Matrix: Air Lab File ID: JCCVK07A-LCS.d

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 11/07/2016 11:58

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7085 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.12		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.05		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.30		0.080	0.015
67-66-3	Chloroform	119.38	2.15		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.06		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.38		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.14		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.11		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.25		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.03		0.080	0.027
75-09-2	Methylene Chloride	84.93	2.09		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	2.16		0.40	0.068
91-20-3	Naphthalene	128.17	1.97		0.040	0.040
127-18-4	Tetrachloroethene	165.83	1.96		0.080	0.016
108-88-3	Toluene	92.14	2.02		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.22		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	2.01		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.09		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.99		0.080	0.021
79-01-6	Trichloroethene	131.39	1.88		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	1.95		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.02		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.96		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.46		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.08		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JCCVK07A-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 07-Nov-2016 11:58:30 ALS Bottle#: 15 Worklist Smp#: 1006
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003595-002
Misc. Info.: P24
Operator ID: 007126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 08-Nov-2016 10:14:16 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: tajh Date: 08-Nov-2016 10:03:59

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.290	9.290	0.000	97	267540	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.446	11.446	0.000	96	1244200	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.125	16.125	0.000	90	1055215	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.749	17.749	0.000	87	674104	4.00	4.24	
6 Chlorodifluoromethane	67	3.918	3.918	0.000	98	62754	1.99	2.30	
7 Propene	41	3.929	3.929	0.000	99	218175	1.99	2.33	
8 Dichlorodifluoromethane	85	3.983	3.983	0.000	100	626067	1.99	2.38	
9 Chloromethane	52	4.182	4.182	0.000	98	72130	1.99	2.39	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.187	4.187	0.000	93	380399	1.99	2.74	
11 Acetaldehyde	44	4.348	4.348	0.000	98	322505	9.96	11.6	
12 Vinyl chloride	62	4.364	4.364	0.000	99	223822	1.99	2.46	
14 Butadiene	54	4.461	4.461	0.000	67	169657	1.99	2.51	
13 Butane	43	4.461	4.461	0.000	86	336946	1.99	2.56	
15 Bromomethane	94	4.805	4.805	0.000	99	201420	1.99	2.45	
16 Chloroethane	64	4.961	4.961	0.000	94	97208	1.99	2.56	
17 Ethanol	31	5.058	5.058	0.000	97	298324	9.96	11.7	
18 Vinyl bromide	106	5.284	5.284	0.000	98	192550	1.99	2.25	
19 2-Methylbutane	43	5.332	5.332	0.000	92	266484	1.99	2.46	
20 Trichlorofluoromethane	101	5.569	5.569	0.000	99	527811	1.99	2.30	
21 Acrolein	56	5.580	5.580	0.000	96	46493	1.99	1.98	
22 Acetonitrile	40	5.650	5.650	0.000	97	69669	1.99	2.41	
23 Acetone	58	5.698	5.698	0.000	98	185422	5.97	6.41	
24 Isopropyl alcohol	45	5.779	5.779	0.000	96	646068	5.97	6.46	
25 Pentane	72	5.795	5.795	0.000	96	31358	1.99	2.34	
26 Ethyl ether	31	5.972	5.972	0.000	91	205387	1.99	2.44	
27 1,1-Dichloroethene	96	6.306	6.306	0.000	96	189480	1.99	2.25	
28 2-Methyl-2-propanol	59	6.408	6.408	0.000	96	265432	1.99	2.04	
29 Acrylonitrile	53	6.419	6.419	0.000	95	103183	1.99	2.14	
30 1,1,2-Trichloro-1,2,2-trif	101	6.488	6.488	0.000	93	397785	1.99	2.23	
31 Methylene Chloride	84	6.671	6.671	0.000	98	177536	1.99	2.09	
32 3-Chloro-1-propene	39	6.687	6.687	0.000	94	174590	1.99	2.18	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.843	6.843	0.000	99	596567	1.99	2.30	
34 trans-1,2-Dichloroethene	96	7.510	7.510	0.000	97	183804	1.99	2.22	
35 2-Methylpentane	43	7.521	7.521	0.000	95	422645	1.99	2.32	
36 Methyl tert-butyl ether	73	7.639	7.639	0.000	97	374130	1.99	2.16	
37 1,1-Dichloroethane	63	7.940	7.940	0.000	100	328037	1.99	2.14	
38 Vinyl acetate	43	8.043	8.043	0.000	100	364173	1.99	2.16	
39 2-Butanone (MEK)	72	8.510	8.510	0.000	96	55656	1.99	1.96	
40 Hexane	56	8.526	8.526	0.000	89	145136	1.99	2.15	
41 Isopropyl ether	45	8.682	8.682	0.000	98	522511	1.99	2.24	
42 cis-1,2-Dichloroethene	96	8.946	8.946	0.000	96	168175	1.99	2.06	
43 Ethyl acetate	43	9.129	9.129	0.000	98	270686	1.99	2.12	
44 Chloroform	83	9.295	9.295	0.000	97	361870	1.99	2.15	
45 Tert-butyl ethyl ether	59	9.371	9.371	0.000	97	410595	1.99	2.14	
46 Tetrahydrofuran	42	9.715	9.715	0.000	94	152806	1.99	2.15	
47 1,1,1-Trichloroethane	97	10.339	10.339	0.000	97	360397	1.99	2.09	
48 1,2-Dichloroethane	62	10.446	10.446	0.000	97	224530	1.99	2.11	
49 n-Butanol	31	10.871	10.871	0.000	93	59937	1.99	2.04	
50 Cyclohexane	69	10.925	10.925	0.000	87	87702	1.99	2.21	
51 Benzene	78	10.925	10.925	0.000	97	488184	1.99	2.12	
52 Carbon tetrachloride	117	10.946	10.946	0.000	96	362675	1.99	2.05	
53 2,3-Dimethylpentane	71	11.032	11.032	0.000	92	110644	1.99	2.10	
54 Thiophene	84	11.194	11.194	0.000	97	256416	1.99	2.00	
55 Tert-amyl methyl ether	73	11.382	11.382	0.000	97	347471	1.99	2.02	
56 Isooctane	57	11.656	11.656	0.000	98	794561	1.99	2.14	
57 n-Heptane	71	12.022	12.022	0.000	94	163729	1.99	2.04	
58 1,2-Dichloropropane	63	12.119	12.119	0.000	90	182807	1.99	2.08	
59 Trichloroethene	130	12.151	12.151	0.000	94	173469	1.99	1.88	
60 Dibromomethane	93	12.242	12.242	0.000	90	180557	1.99	2.01	
62 Dichlorobromomethane	83	12.382	12.382	0.000	99	330100	1.99	2.06	
61 1,4-Dioxane	88	12.398	12.398	0.000	94	49488	1.99	1.91	
63 Methyl methacrylate	41	12.463	12.463	0.000	93	144049	1.99	1.97	
64 Methylcyclohexane	83	12.909	12.909	0.000	94	355520	1.99	2.09	
65 4-Methyl-2-pentanone (MIBK	43	13.302	13.302	0.000	98	293193	1.99	2.05	
66 cis-1,3-Dichloropropene	75	13.361	13.361	0.000	96	222942	1.99	1.92	
67 trans-1,3-Dichloropropene	75	14.044	14.044	0.000	98	158170	1.99	1.71	
68 Toluene	91	14.173	14.173	0.000	93	466939	1.99	2.02	
69 1,1,2-Trichloroethane	83	14.248	14.248	0.000	97	143234	1.99	1.99	
70 2-Methylthiophene	97	14.323	14.323	0.000	98	357840	1.99	1.92	
71 3-Methylthiophene	97	14.522	14.522	0.000	99	333055	1.99	1.87	
72 2-Hexanone	58	14.619	14.619	0.000	91	127867	1.99	2.04	
73 n-Octane	85	14.834	14.834	0.000	96	156103	1.99	2.02	
74 Chlorodibromomethane	129	14.947	14.947	0.000	97	258459	1.99	1.95	
75 Ethylene Dibromide	107	15.237	15.237	0.000	98	207643	1.99	1.81	
76 Tetrachloroethene	129	15.302	15.302	0.000	93	169594	1.99	1.96	
77 2,3-Dimethylheptane	43	16.173	16.173	0.000	96	508511	1.99	2.23	
78 Chlorobenzene	112	16.173	16.173	0.000	73	311038	1.99	1.92	
79 Ethylbenzene	91	16.453	16.453	0.000	99	517451	1.99	2.03	
80 2-Ethylthiophene	97	16.560	16.560	0.000	98	357723	1.99	1.96	
81 m-Xylene & p-Xylene	91	16.614	16.614	0.000	100	779834	3.98	4.08	
82 n-Nonane	57	17.012	17.012	0.000	93	320306	1.99	2.12	
83 Bromoform	173	17.071	17.071	0.000	91	178660	1.99	1.79	
84 Styrene	104	17.076	17.076	0.000	99	250271	1.99	2.07	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	17.136	17.136	0.000	98	418652	1.99	2.00	
86 1,1,2,2-Tetrachloroethane	83	17.458	17.458	0.000	98	301473	1.99	1.98	
87 1,2,3-Trichloropropane	110	17.614	17.614	0.000	98	67286	1.99	1.93	
88 Isopropylbenzene	105	17.716	17.716	0.000	96	544083	1.99	2.04	
89 N-Propylbenzene	120	18.233	18.233	0.000	98	126988	1.99	1.93	
90 2-Chlorotoluene	126	18.286	18.286	0.000	98	123681	1.99	1.93	
91 4-Ethyltoluene	105	18.378	18.378	0.000	98	453867	1.99	2.00	
92 1,3,5-Trimethylbenzene	120	18.448	18.448	0.000	92	222272	1.99	1.96	
93 Alpha Methyl Styrene	118	18.674	18.674	0.000	86	152909	1.99	1.87	
94 n-Decane	57	18.717	18.717	0.000	90	319260	1.99	2.06	
95 tert-Butylbenzene	119	18.862	18.862	0.000	91	433288	1.99	1.97	
96 1,2,4-Trimethylbenzene	105	18.878	18.878	0.000	96	389032	1.99	2.02	
97 sec-Butylbenzene	105	19.125	19.125	0.000	98	591063	1.99	1.96	
98 1,3-Dichlorobenzene	146	19.147	19.147	0.000	98	160913	1.99	1.80	
99 Benzyl chloride	91	19.217	19.217	0.000	97	168633	1.99	1.69	
100 1,4-Dichlorobenzene	146	19.233	19.233	0.000	91	134271	1.99	1.75	
101 4-Isopropyltoluene	119	19.281	19.281	0.000	96	426446	1.99	1.95	
102 1,2,3-Trimethylbenzene	105	19.340	19.340	0.000	99	289168	1.99	1.95	
103 Butylcyclohexane	83	19.383	19.383	0.000	91	385420	1.99	1.97	
104 2,3-Dihydroindene	117	19.582	19.582	0.000	94	308985	1.99	1.96	
105 1,2-Dichlorobenzene	146	19.588	19.588	0.000	94	168250	1.99	1.82	
106 n-Butylbenzene	91	19.706	19.706	0.000	98	364627	1.99	2.02	
107 Indene	116	19.711	19.711	0.000	90	172953	1.99	1.81	
108 Undecane	57	19.996	19.996	0.000	96	254228	1.99	1.80	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.072	20.072	0.000	98	259275	1.99	1.84	
110 1,2-Dibromo-3-Chloropropan	157	20.174	20.174	0.000	89	46403	1.99	1.85	
111 1,2,4,5-Tetramethylbenzene	119	20.453	20.453	0.000	97	290004	1.99	1.76	
112 1,2,3,5-Tetramethylbenzene	119	20.507	20.507	0.000	94	179215	1.99	1.70	
113 1,2,3,4-Tetramethylbenzene	119	20.921	20.921	0.000	97	216133	1.99	1.64	
114 Dodecane	57	21.072	21.072	0.000	95	203776	1.99	1.68	
115 1,2,4-Trichlorobenzene	180	21.298	21.298	0.000	93	42424	1.99	2.01	
116 Naphthalene	128	21.448	21.448	0.000	99	121324	1.99	1.97	
117 Benzo(b)thiophene	134	21.545	21.545	0.000	99	48598	1.99	1.95	
118 Hexachlorobutadiene	225	21.631	21.631	0.000	96	156152	1.99	1.63	
119 1,2,3-Trichlorobenzene	180	21.696	21.696	0.000	95	48332	1.99	1.95	
120 2-Methylnaphthalene	142	22.249	22.249	0.000	100	17736	6.22	5.60	
121 1-Methylnaphthalene	142	22.373	22.373	0.000	99	22444	6.22	5.28	
A 124 Toluene Range	1	14.173	(14.143-14.203)		0	1130403	1.99	2.16	
A 125 C8 Range	1	14.830	(14.790-14.869)		0	1579876	1.99	2.26	
S 126 Xylenes, Total	100				0		5.97	6.08	
S 127 1,2-Dichloroethene, Total	1				0		3.98	4.28	

Reagents:

40CV101P_00024	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

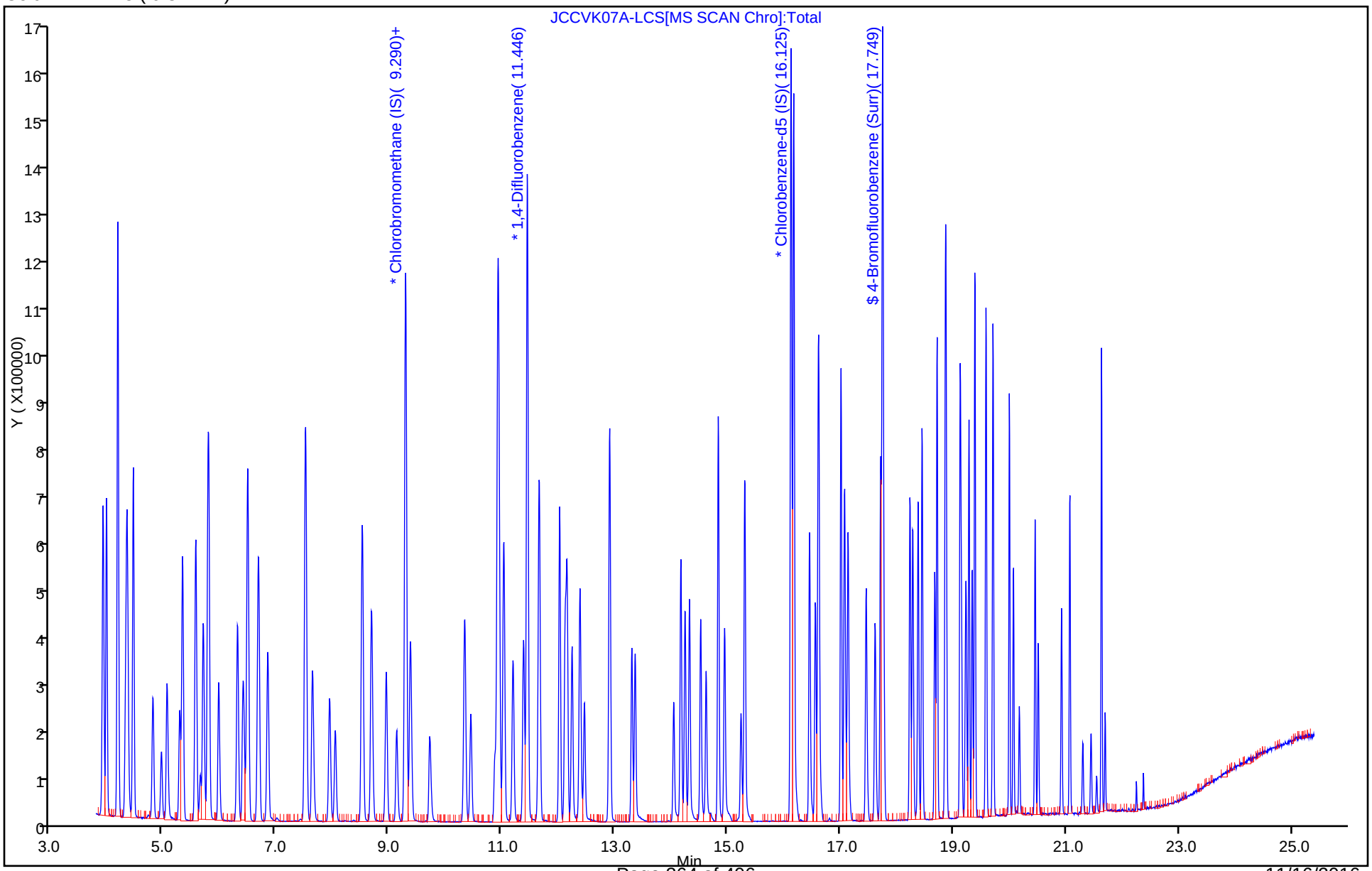
Report Date: 08-Nov-2016 10:14:20 Chrom Revision: 2.2 17-Oct-2016 09:27:18

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JCCVK07A-LCS.d

Injection Date:	07-Nov-2016 11:58:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	LCS			Worklist Smp#:	1006
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\JCCVK07A-LCS.d				
Lims ID:	LCS				
Client ID:					
Sample Type:	LCS				
Inject. Date:	07-Nov-2016 11:58:30	ALS Bottle#:	15	Worklist Smp#:	1006
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003595-002				
Misc. Info.:	P24				
Operator ID:	007126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161102-3595.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	08-Nov-2016 10:14:16	Calib Date:	09-Oct-2016 02:10:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				
First Level Reviewer: tajh		Date:	08-Nov-2016 10:03:59		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.24	105.94

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 140-7105/1002

Matrix: Air Lab File ID: RCCVK08-LCS.d

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 11/08/2016 11:18

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7105 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.05		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.00		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.23		0.080	0.015
67-66-3	Chloroform	119.38	2.05		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.04		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.06		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.11		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.03		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.02		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.95		0.080	0.027
75-09-2	Methylene Chloride	84.93	2.02		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	2.01		0.40	0.068
91-20-3	Naphthalene	128.17	1.72		0.040	0.040
127-18-4	Tetrachloroethene	165.83	1.89		0.080	0.016
108-88-3	Toluene	92.14	1.99		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.05		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.69		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	1.94		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.02		0.080	0.021
79-01-6	Trichloroethene	131.39	1.89		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	1.83		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.91		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.94		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.19		0.040	0.029
1330-20-7	Xylenes, Total	106.17	5.91		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\RCCVK08-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 08-Nov-2016 11:18:30 ALS Bottle#: 16 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003605-002
Misc. Info.: P26
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 08-Nov-2016 15:27:46 Calib Date: 10-Oct-2016 00:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: tajh Date: 08-Nov-2016 11:48:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.247	8.247	0.000	95	285301	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.415	10.415	0.000	96	1323176	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.306	15.306	0.000	89	1209335	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.994	16.994	0.000	89	850439	4.00	3.77	
7 Chlorodifluoromethane	67	3.718	3.718	0.000	97	66883	2.00	2.23	
6 Propene	41	3.723	3.723	0.000	99	266019	2.00	2.47	
8 Dichlorodifluoromethane	85	3.772	3.772	0.000	100	566808	2.00	2.06	
9 Chloromethane	52	3.917	3.917	0.000	100	73993	2.00	2.36	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.944	3.944	0.000	94	415362	2.00	2.19	
11 Acetaldehyde	44	4.063	4.063	0.000	98	378309	10.0	11.3	
12 Vinyl chloride	62	4.074	4.074	0.000	99	205662	2.00	2.19	
13 Butadiene	54	4.149	4.149	0.000	93	156537	2.00	2.11	
14 Butane	43	4.155	4.155	0.000	91	305035	2.00	2.18	
15 Bromomethane	94	4.419	4.419	0.000	98	197915	2.00	2.36	
16 Chloroethane	64	4.537	4.537	0.000	91	89583	2.00	2.17	
17 Ethanol	31	4.634	4.634	0.000	96	354391	10.0	11.9	
18 Vinyl bromide	106	4.796	4.796	0.000	97	175774	2.00	2.23	
19 2-Methylbutane	43	4.850	4.850	0.000	88	201187	2.00	2.17	
20 Acrolein	56	5.023	5.023	0.000	94	50456	2.00	1.53	
21 Trichlorofluoromethane	101	5.034	5.034	0.000	99	689039	2.00	2.86	
22 Acetonitrile	40	5.077	5.077	0.000	98	72172	2.00	1.76	
23 Acetone	58	5.125	5.125	0.000	99	276397	6.00	5.92	
24 Isopropyl alcohol	45	5.217	5.217	0.000	93	1037097	6.00	6.52	
25 Pentane	72	5.233	5.233	0.000	94	41268	2.00	2.12	
26 Ethyl ether	31	5.368	5.368	0.000	94	279339	2.00	2.17	
27 1,1-Dichloroethene	96	5.637	5.637	0.000	94	203420	2.00	2.02	
28 Acrylonitrile	53	5.708	5.708	0.000	97	190244	2.00	2.24	
29 2-Methyl-2-propanol	59	5.729	5.729	0.000	96	426070	2.00	2.01	
30 1,1,2-Trichloro-1,2,2-trif	101	5.815	5.815	0.000	93	456254	2.00	2.14	
31 Methylene Chloride	84	5.934	5.934	0.000	96	196823	2.00	2.02	
32 3-Chloro-1-propene	39	5.956	5.956	0.000	95	230338	2.00	2.29	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.074	6.074	0.000	100	637681	2.00	2.13	
34 trans-1,2-Dichloroethene	96	6.673	6.673	0.000	95	210515	2.00	2.05	
35 2-Methylpentane	43	6.721	6.721	0.000	96	555398	2.00	2.30	
36 Methyl tert-butyl ether	73	6.797	6.797	0.000	97	575353	2.00	2.01	
37 1,1-Dichloroethane	63	7.039	7.039	0.000	100	411696	2.00	2.11	
38 Vinyl acetate	43	7.147	7.147	0.000	100	702476	2.00	2.24	
39 2-Butanone (MEK)	72	7.530	7.530	0.000	98	105423	2.00	1.99	
40 Hexane	56	7.627	7.627	0.000	91	194967	2.00	2.11	
41 Isopropyl ether	45	7.762	7.762	0.000	97	918554	2.00	2.30	
42 cis-1,2-Dichloroethene	96	7.951	7.951	0.000	97	211388	2.00	2.04	
43 Ethyl acetate	43	8.129	8.129	0.000	98	601263	2.00	2.33	
44 Chloroform	83	8.280	8.280	0.000	98	423274	2.00	2.05	
45 Tert-butyl ethyl ether	59	8.398	8.398	0.000	97	656807	2.00	2.04	
46 Tetrahydrofuran	42	8.636	8.636	0.000	95	297893	2.00	2.29	
47 1,1,1-Trichloroethane	97	9.267	9.267	0.000	96	395638	2.00	1.94	
48 1,2-Dichloroethane	62	9.337	9.337	0.000	96	299098	2.00	2.03	
49 n-Butanol	31	9.822	9.822	0.000	87	102515	2.00	2.14	
50 Benzene	78	9.849	9.849	0.000	97	610269	2.00	2.05	
51 Cyclohexane	69	9.876	9.876	0.000	96	94652	2.00	1.98	
52 Carbon tetrachloride	117	9.887	9.887	0.000	96	410628	2.00	2.00	
53 2,3-Dimethylpentane	71	10.032	10.032	0.000	90	139940	2.00	1.96	
54 Thiophene	84	10.113	10.113	0.000	96	326431	2.00	1.96	
55 Tert-amyl methyl ether	73	10.361	10.361	0.000	95	568718	2.00	2.04	
56 Isooctane	57	10.695	10.695	0.000	97	1075412	2.00	2.03	
58 1,2-Dichloropropane	63	11.089	11.089	0.000	86	243622	2.00	2.01	
57 n-Heptane	71	11.095	11.095	0.000	94	210293	2.00	1.91	
59 Trichloroethene	130	11.148	11.148	0.000	94	228634	2.00	1.89	
60 Dibromomethane	93	11.197	11.197	0.000	91	229552	2.00	1.98	
62 1,4-Dioxane	88	11.364	11.364	0.000	41	85566	2.00	1.83	
61 Dichlorobromomethane	83	11.364	11.364	0.000	97	383588	2.00	1.87	
63 Methyl methacrylate	41	11.494	11.494	0.000	94	314063	2.00	1.97	
64 Methylcyclohexane	83	11.973	11.973	0.000	89	406610	2.00	1.88	
65 4-Methyl-2-pentanone (MIBK	43	12.362	12.362	0.000	97	574346	2.00	2.08	
66 cis-1,3-Dichloropropene	75	12.416	12.416	0.000	98	331782	2.00	1.93	
67 trans-1,3-Dichloropropene	75	13.138	13.138	0.000	96	283870	2.00	1.86	
68 Toluene	91	13.278	13.278	0.000	93	667655	2.00	1.99	
69 1,1,2-Trichloroethane	83	13.332	13.332	0.000	97	204211	2.00	2.02	
70 2-Methylthiophene	97	13.429	13.429	0.000	98	523598	2.00	1.94	
71 3-Methylthiophene	97	13.634	13.634	0.000	99	517857	2.00	1.94	
72 2-Hexanone	58	13.758	13.758	0.000	91	262949	2.00	2.07	
73 Chlorodibromomethane	129	14.055	14.055	0.000	96	368666	2.00	2.01	
74 n-Octane	85	14.066	14.066	0.000	97	224291	2.00	1.96	
75 Ethylene Dibromide	107	14.346	14.346	0.000	97	350238	2.00	1.96	
76 Tetrachloroethene	129	14.465	14.465	0.000	93	210831	2.00	1.89	
77 Chlorobenzene	112	15.355	15.355	0.000	92	504498	2.00	1.94	
78 2,3-Dimethylheptane	43	15.452	15.452	0.000	95	782087	2.00	2.24	
79 Ethylbenzene	91	15.673	15.673	0.000	99	874578	2.00	1.95	
80 2-Ethylthiophene	97	15.770	15.770	0.000	99	621110	2.00	1.90	
81 m-Xylene & p-Xylene	91	15.840	15.840	0.000	100	1366594	4.00	3.96	
82 Bromoform	173	16.244	16.244	0.000	92	346354	2.00	1.92	
83 Styrene	104	16.309	16.309	0.000	97	518687	2.00	2.05	
84 n-Nonane	57	16.336	16.336	0.000	96	519592	2.00	2.09	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	16.368	16.368	0.000	99	697704	2.00	1.95	
86 1,1,2,2-Tetrachloroethane	83	16.686	16.686	0.000	98	533154	2.00	2.02	
87 1,2,3-Trichloropropane	110	16.843	16.843	0.000	96	138775	2.00	1.81	
88 Isopropylbenzene	105	16.988	16.988	0.000	98	994962	2.00	2.01	
89 N-Propylbenzene	120	17.565	17.565	0.000	99	261286	2.00	1.94	
90 2-Chlorotoluene	126	17.592	17.592	0.000	98	225991	2.00	1.92	
91 4-Ethyltoluene	105	17.727	17.727	0.000	99	942776	2.00	1.90	
92 1,3,5-Trimethylbenzene	120	17.813	17.813	0.000	93	433759	2.00	1.94	
93 Alpha Methyl Styrene	118	18.051	18.051	0.000	88	375401	2.00	1.82	
94 n-Decane	57	18.175	18.175	0.000	87	647173	2.00	2.00	
95 tert-Butylbenzene	119	18.261	18.261	0.000	92	831466	2.00	1.92	
96 1,2,4-Trimethylbenzene	105	18.277	18.277	0.000	96	809079	2.00	1.91	
97 1,3-Dichlorobenzene	146	18.541	18.541	0.000	96	518861	2.00	1.91	
98 sec-Butylbenzene	105	18.552	18.552	0.000	99	1234796	2.00	2.01	
99 Benzyl chloride	91	18.622	18.622	0.000	97	715514	2.00	1.95	
100 1,4-Dichlorobenzene	146	18.638	18.638	0.000	95	526084	2.00	1.93	
101 4-Isopropyltoluene	119	18.730	18.730	0.000	97	966699	2.00	1.92	
102 1,2,3-Trimethylbenzene	105	18.773	18.773	0.000	96	600632	2.00	1.83	
103 Butylcyclohexane	83	18.860	18.860	0.000	90	670450	2.00	1.98	
104 1,2-Dichlorobenzene	146	19.016	19.016	0.000	96	507317	2.00	1.93	
105 2,3-Dihydroindene	117	19.021	19.021	0.000	94	772777	2.00	1.97	
106 Indene	116	19.156	19.156	0.000	94	547733	2.00	1.79	
107 n-Butylbenzene	91	19.194	19.194	0.000	98	1042879	2.00	1.99	
108 Undecane	57	19.571	19.571	0.000	94	774107	2.00	2.07	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.582	19.582	0.000	97	727760	2.00	1.88	
110 1,2-Dibromo-3-Chloropropan	157	19.641	19.641	0.000	91	209830	2.00	1.81	
111 1,2,4,5-Tetramethylbenzene	119	19.987	19.987	0.000	97	804972	2.00	1.77	
112 1,2,3,5-Tetramethylbenzene	119	20.040	20.040	0.000	95	483003	2.00	1.71	
113 1,2,3,4-Tetramethylbenzene	119	20.445	20.445	0.000	98	648100	2.00	1.69	
114 Dodecane	57	20.671	20.671	0.000	91	707508	2.00	1.81	
115 1,2,4-Trichlorobenzene	180	20.795	20.795	0.000	93	411614	2.00	1.69	
116 Naphthalene	128	20.930	20.930	0.000	98	977311	2.00	1.72	
117 Benzo(b)thiophene	134	21.033	21.033	0.000	99	514920	2.00	1.58	
118 Hexachlorobutadiene	225	21.184	21.184	0.000	89	318874	2.00	1.53	
119 1,2,3-Trichlorobenzene	180	21.227	21.227	0.000	94	373523	2.00	1.55	
120 2-Methylnaphthalene	142	21.939	21.939	0.000	100	357589	6.25	5.43	
121 1-Methylnaphthalene	142	22.063	22.063	0.000	100	380214	6.25	5.75	
A 122 C6 Range	1	7.625	(7.573-7.662)		0	1704305	2.00	2.28	
S 124 Xylenes, Total	100				0		6.00	5.91	
S 125 1,2-Dichloroethene, Total	1				0		4.00	4.09	

Reagents:

40CV101P_00026	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

Report Date: 08-Nov-2016 15:27:54 Chrom Revision: 2.2 17-Oct-2016 09:27:18

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\RCCVK08-LCS.d

Injection Date: 08-Nov-2016 11:18:30 Instrument ID: MR Operator ID:

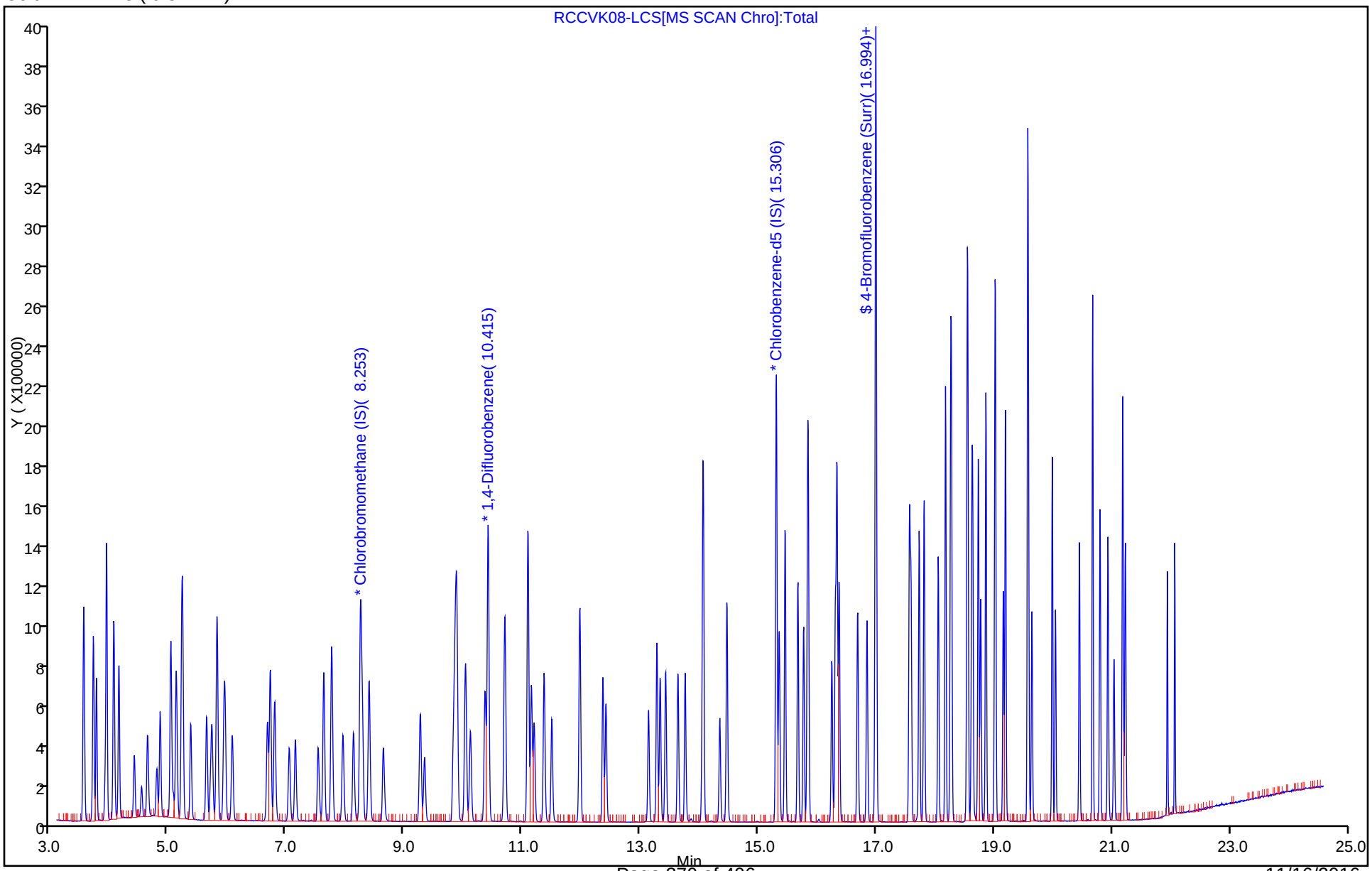
Lims ID: LCS Worklist Smp#: 1002

Client ID:

Purge Vol: 500.000 mL Dil. Factor: 1.0000 ALS Bottle#: 16

Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\RCCVK08-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 08-Nov-2016 11:18:30 ALS Bottle#: 16 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003605-002
Misc. Info.: P26
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20161107-3605.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 08-Nov-2016 15:27:46 Calib Date: 10-Oct-2016 00:36:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20161009-3513.b\RJ09IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: tajh Date: 08-Nov-2016 11:48:52

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.77	94.13

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Instrument ID: MJ Start Date: 10/08/2016 17:39

Analysis Batch Number: 6845 End Date: 10/09/2016 07:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-6845/1		10/08/2016 17:39	1	JBFBJ08.D	RTX-5 0.32(mm)
IC 140-6845/3		10/08/2016 19:01	1	JJ08ICAL01.D	RTX-5 0.32(mm)
IC 140-6845/4		10/08/2016 19:54	1	JJ08ICAL02.D	RTX-5 0.32(mm)
IC 140-6845/5		10/08/2016 20:47	1	JJ08ICAL03.D	RTX-5 0.32(mm)
IC 140-6845/6		10/08/2016 21:41	1	JJ08ICAL04.D	RTX-5 0.32(mm)
IC 140-6845/7		10/08/2016 22:36	1	JJ08ICAL05.D	RTX-5 0.32(mm)
ICIS 140-6845/8		10/08/2016 23:29	1	JJ08ICAL06.D	RTX-5 0.32(mm)
IC 140-6845/9		10/09/2016 00:23	1	JJ08ICAL07.D	RTX-5 0.32(mm)
IC 140-6845/10		10/09/2016 01:17	1	JJ08ICAL08.D	RTX-5 0.32(mm)
IC 140-6845/11		10/09/2016 02:10	1	JJ07ICAL09.D	RTX-5 0.32(mm)
ICV 140-6845/17		10/09/2016 07:04	1	JJ08LCS.D	RTX-5 0.32(mm)

161008

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 101 mL	39.3	10/8/2016	5:39:43 PM
CLEAN	16 - 201 mL	23.5	10/8/2016	6:07:34 PM
ICAL01	1 - 100 mL	35.1	10/8/2016	7:01:14 PM
ICAL02	1 - 200 mL	34.3	10/8/2016	7:54:20 PM
ICAL03	2 - 202 mL	33.2	10/8/2016	8:47:56 PM
ICAL04	3 - 200 mL	34	10/8/2016	9:41:56 PM
ICAL05	4 - 200 mL	33.3	10/8/2016	10:36:28 PM
ICAL06	5 - 202 mL	33.5	10/8/2016	11:29:40 PM
ICAL07	6 - 201 mL	31.7	10/9/2016	12:23:14 AM
ICAL08	7 - 201 mL	30.4	10/9/2016	1:17:09 AM
ICAL09	8 - 200 mL	33.5	10/9/2016	2:10:38 AM
PRIME	9 - 50 mL	34.1	10/9/2016	3:04:49 AM
ICV-DNU	9 - 101 mL	32.6	10/9/2016	3:58:42 AM
DNU	16 - 101 mL	23.5	10/9/2016	4:46:56 AM
blk	16 - 501 mL	22.7	10/9/2016	5:16:16 AM
MDL	1 - 50 mL	33.8	10/9/2016	6:10:29 AM
LCS - ICV	10 - 101 mL	29.5	10/9/2016	7:04:41 AM
CAN10818	11 - 500 mL	16.8	10/9/2016	7:59:03 AM
CAN11009	12 - 501 mL	20.3	10/9/2016	8:53:04 AM
CAN10886	13 - 501 mL	19.2	10/9/2016	9:47:15 AM
CAN11000	14 - 500 mL	19	10/9/2016	10:41:47 AM
CAN11296	15 - 501 mL	22.3	10/9/2016	11:35:09 AM

MJ ICAL WL 3509

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Analysis Date:	10/8/16	Instrument:	MJ	Chrom WL #:	3509	TALS Batch & Event #	TO14/15: 68451 771	AFCEE: 68481 774
							DOD: 68471 773	OHIO: 68461 772

Chrom/Worklist Review	1st	Comments	2nd
1. Re-read each Limit Group [method editor-limit groups]	✓		
2. Verify LODV in Chrom [method editor -> edit -> MDL]	✓		
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]	✓		✓
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]	✓		✓
5. Did BFB meet tune criteria? [F8]	✓		✓
6. Were all standards injected within 24 hr of BFB? [F7]	✓		✓
7. High point checked for saturation and point removed if so? [Chrom]	✓		✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]	NA		NA
9. RT for each IS ±20 sec avg. RT? [F6 IstdRec]	✓		✓
10. Area for each IS ± 40% avg. area? [F6 IstdRec]	✓		✓
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]	✓		✓
12. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3;5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4- and 1,2,3-trichlorobenzenes	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓	DM TPH as C6	✓

MLG Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50% [F6 Σ]	✓	✓	✓	✓	124tclbz	✓	✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]	✓	✓	✓	✓		✓	✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]	✓	✓	✓	✓		✓	✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? Note: Ohio does not allow quad [F6]	NA	→	→	→		NA	→	→	→
18. If curves were used, is correlation coefficient ≥0.990? [F6]	NA	→	→	→		NA	→	→	→
19. Is the intercept less than the RL for each curve? [F6]	NA	→	→	→		NA	→	→	→
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]	NA	→	→			NA	→	→	
21. Is the second source analysis within limits? [F8 ccv]	✓	✓	✓	✓		✓	✓	✓	✓
22. **Analyst/Date:** HRS 10/10/16	**2nd Level Reviewer/Date:** DW 10/11/16								
Comments:									

TALS Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
23. Upload ICAL		✓							
24. Graphics uploaded? [Sample List Tab]	✓	✓	✓	✓		✓	✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events –'Fix ICAL linkage' if needed]	✓	✓	✓	✓		✓	✓	✓	✓
26. Runs linked to BFB? [QC Links]	✓	✓	✓	✓		✓	✓	✓	✓
27. If criteria not met, was a NCM generated?	NA	→	→	→		NA	NA	NA	NA
28. After review in TALS, approve the method in TALS.						✓	✓	✓	✓
29. After verifying TALS is correct, lock method in Chrom <resolve any error issues>								✓	
30. Checklist & Entech report scanned, attached & assigned properly?						✓	✓	✓	✓
Analyst: HRS **Date:** 10/11/16	**2nd Level Reviewer :** DW **Date:** 10/11/16								
Comments:	**Comments:**								
UR ⇒4: 124tclbz, naph, benzo(b), # 123tclbz	# 1,2-DB-3-CLP								
UR ⇒25: 1 & 2 methyl naph.									

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Instrument ID: MR Start Date: 10/09/2016 16:53

Analysis Batch Number: 6852 End Date: 10/10/2016 05:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-6852/1		10/09/2016 16:53	1	RBFBJ09.D	RTX-5 0.32(mm)
IC 140-6852/3		10/09/2016 18:12	1	RJ09IC01.D	RTX-5 0.32(mm)
IC 140-6852/4		10/09/2016 19:00	1	RJ09IC02.D	RTX-5 0.32(mm)
IC 140-6852/5		10/09/2016 19:48	1	RJ09IC03.D	RTX-5 0.32(mm)
IC 140-6852/6		10/09/2016 20:35	1	RJ09IC04.D	RTX-5 0.32(mm)
IC 140-6852/7		10/09/2016 21:23	1	RJ09IC05.D	RTX-5 0.32(mm)
ICIS 140-6852/8		10/09/2016 22:11	1	RJ09CIS06.D	RTX-5 0.32(mm)
IC 140-6852/9		10/09/2016 22:59	1	RJ09IC07.D	RTX-5 0.32(mm)
IC 140-6852/10		10/09/2016 23:48	1	RJ09IC08.D	RTX-5 0.32(mm)
IC 140-6852/11		10/10/2016 00:36	1	RJ09IC09.D	RTX-5 0.32(mm)
ICV 140-6852/17		10/10/2016 05:03	1	RJ09LCS.D	RTX-5 0.32(mm)

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Analysis Date:	10/9/16	Instrument:	MR	Chrom WL #:	3513	TALS Batch & Event #	TO14/15: 6852 / 775	AFCEE: 6855 / 778
							DOD: 6854 / 777	OHIO: 6853 / 776

Chrom/Worklist Review	1st	Comments	2nd
1. Re-read each Limit Group [method editor-limit groups]	✓		
2. Verify LODV in Chrom [method editor -> edit -> MDL]	✓		
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]	✓		✓
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]	✓		✓
5. Did BFB meet tune criteria? [F8]	✓		✓
6. Were all standards injected within 24 hr of BFB? [F7]	✓		✓
7. High point checked for saturation and point removed if so? [Chrom]	✓		✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]	✓		✓
9. RT for each IS ±20 sec avg. RT? [F6 IstdRec]	✓		✓
10. Area for each IS ± 40% avg. area? [F6 IstdRec]	✓		✓
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]	✓		✓
12. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4- and 1,2,3-trichlorobenzenes	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓	(as CA only)	✓

MLG Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50% [F6 Σ]	✓	✓	✓	✓		✓	✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]	✓	✓	✓	✓		✓	✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]	✓	✓	✓	✓		✓	✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? Note: Ohio does not allow quad [F6]	NA	→	→	→		NA	→	→	→
18. If curves were used, is correlation coefficient ≥0.990? [F6]	NA	→	→	→		NA	→	→	→
19. Is the intercept less than the RL for each curve? [F6]	NA	→	→	→		NA	→	→	→
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]	NA	→	→			NA	→	→	
21. Is the second source analysis within limits? [F8 - ic	✓	✓	✓	✓		✓	✓	✓	✓
22. **Analyst/Date:** 10/11/16	**2nd Level Reviewer/Date:**					10/13/16			
Comments:									

TALS Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
23. Upload ICAL		✓							
24. Graphics uploaded? [Sample List Tab]	✓	✓	✓	✓		✓	✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events –'Fix ICAL linkage' if needed]	✓	✓	✓	✓		✓	✓	✓	✓
26. Runs linked to BFB? [QC Links]	✓	✓	✓	✓		✓	✓	✓	✓
27. If criteria not met, was a NCM generated?	NA	→	→	→		NA	→	→	→
28. After review in TALS, approve the method in TALS.						✓	✓	✓	✓
29. After verifying TALS is correct, lock method in Chrom <resolve any error issues>							✓		
30. Checklist & Entech report scanned, attached & assigned properly?						✓	✓	✓	✓
Analyst:	**Date:** 10/13/16				**2nd Level Reviewer :**		**Date:** 10/13/16		
Comments:					**Comments:**				

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Instrument ID: MJ Start Date: 11/07/2016 11:32

Analysis Batch Number: 7085 End Date: 11/08/2016 10:55

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-7085/5		11/07/2016 11:32	1	JBFBK07A.D	RTX-5 0.32(mm)
CCVIS 140-7085/6		11/07/2016 11:58	1	JCCVK07A.D	RTX-5 0.32(mm)
LCS 140-7085/1006		11/07/2016 11:58	1	JCCVK07A-LCS.d	RTX-5 0.32(mm)
MB 140-7085/9		11/07/2016 14:57	1	J500BK07.D	RTX-5 0.32(mm)
140-6285-1		11/07/2016 20:18	1	JK07P106D.D	RTX-5 0.32(mm)
ZZZZZ		11/07/2016 21:12	1		RTX-5 0.32(mm)
140-6285-2		11/07/2016 22:06	1	JK07P107.D	RTX-5 0.32(mm)
140-6285-3		11/07/2016 23:00	1	JK07P108.D	RTX-5 0.32(mm)
140-6285-4		11/07/2016 23:54	1	JK07P109.D	RTX-5 0.32(mm)
140-6285-5		11/08/2016 00:48	1	JK07P110.D	RTX-5 0.32(mm)
ZZZZZ		11/08/2016 06:12	1.05		RTX-5 0.32(mm)
ZZZZZ		11/08/2016 07:06	1.06		RTX-5 0.32(mm)
140-6285-6		11/08/2016 09:07	9.96	JK07P111R.D	RTX-5 0.32(mm)
ZZZZZ		11/08/2016 10:01	15.73		RTX-5 0.32(mm)
ZZZZZ		11/08/2016 10:55	14.37		RTX-5 0.32(mm)

161107

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 101 mL	19.2	11/7/2016	11:32:11 AM
CCV	15 - 101 mL	20.9	11/7/2016	11:58:44 AM
dnuflush	16 - 100 mL	19.2	11/7/2016	1:35:21 PM
mb200	16 - 201 mL	18.6	11/7/2016	2:03:21 PM
mb500	16 - 501 mL	18.3	11/7/2016	2:57:04 PM
6286-01	1 - 200 mL	6.3	11/7/2016	3:50:06 PM
6286-02	2 - 26 mL	10.6	11/7/2016	4:44:40 PM
6286-03	3 - 32 mL	13.3	11/7/2016	5:38:13 PM
6286-04	4 - 12 mL	7	11/7/2016	6:30:59 PM
6286-05	5 - 10 mL	6.9	11/7/2016	7:24:51 PM
6285-01	6 - 100 mL	7.5	11/7/2016	8:18:52 PM
6285-01	6 - 101 mL	3.1	11/7/2016	9:12:43 PM
6285-02	7 - 102 mL	6.5	11/7/2016	10:06:47 PM
6285-03	8 - 100 mL	7	11/7/2016	11:00:48 PM
6285-04	9 - 100 mL	6.2	11/7/2016	11:54:52 PM
6285-05	10 - 100 mL	6.6	11/8/2016	12:48:47 AM
6285-06	11 - 32 mL	10.6	11/8/2016	1:42:23 AM
71467-02	12 - 41 mL	13.2	11/8/2016	2:36:22 AM
71467-03	13 - 41 mL	13.3	11/8/2016	3:30:06 AM
6282-01	14 - 101 mL	11	11/8/2016	4:24:24 AM
6282-02	15 - 101 mL	11.8	11/8/2016	5:18:23 AM
6282-01	14 - 526 mL	8.9	11/8/2016	6:12:15 AM
6282-02	15 - 531 mL	9.2	11/8/2016	7:06:44 AM
6285-06	11 - 50 mL	7.9	11/8/2016	9:07:11 AM
71467-02	12 - 81 mL	9.3	11/8/2016	10:01:10 AM
71467-03	13 - 201 mL	6.1	11/8/2016	10:55:13 AM

MJ WL 3595

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Instrument/Date	MJ 11/7/16		Routine	AFCEE	DOD	OHIO
CCAL Chrom WL #	3595	CCAL Batch #	7085	X	7109	X
ICAL Chrom WL #	3509	ICAL Batch # / Event #	6845 / 771		6847, 773	

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		✓
2. Did BFB meet tune criteria? [F8]	✓	□ [Failed TO-14A, but passes TO-15] (NCM#_____)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
4. Is the %D ≤ 30% for all target analytes? 12 Dichl 1122 [≤ 40% for AFCEE non-table analytes] [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	✓	□ CCV - %D - LCS criteria met (NCM# 5401) □ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#_____)	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	ND		NA
7. Has the RT been updated to the method?			
Analyst: Date: 11/8/16		2nd Level Reviewer: Date: 11/8/16	
Comments:		Comments:	
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓		✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#_____) □ Method Blank – Report, 10X (NCM#_____)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample / Reason / Sample / Reason	✓	□ (1) Surrogate – Matrix (NCM#_____) □ (2) Surrogate – High, ND (NCM#_____) □ (3) ISTD – RA/RA Concurs (NCM#_____) □ (4) Surrogate –RX concur, Report both (NCM#_____) □ (5) ISTD – Matrix, DL required (NCM#_____)	✓
15. Samples outside calibration range scheduled for dilution? *Samples:*	✓	□ ICAL – Range Exceeded; Minimum Dilution	✓
Chrom Review	**1st**	**If No, why is data reportable?**	**2nd**
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample / Reason / Sample / Reason	✓	□ (1) Reporting Limit – Dilution, Matrix (NCM#_____) □ (2) Reporting Limit – Dilution, Non-Target (NCM#_____) □ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	ND		NA
18. Obvious non-TPH peaks excluded?	✓		NA

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

19. Individual TPH peak area < octane high point area?	NO		NA
TALS Review	**1st**	**If No, why is data reportable?**	**2nd**
20. Graphics uploaded? [Sample List Tab]	✓		✓
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	✓		
22. Sample special instructions verified?	✓		✓
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	✓	☐ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) ☐ LCS/LCSD - %R High (NCM#_____)	✓

Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed
>90	5
71 - 90	4
51 - 70	3
31 - 50	2
11 - 30	1
< 11	0

24. Suffixes assigned properly (DL/RE)? [Sample List Tab]	✓		NA
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	✓		✓
26. Analytes over calibration range set to secondary [Conditions Review Tab]	✓		✓
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	✓		✓
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*	✓		✓
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	✓	**500 mL blank ID:** 9 **200 mL blank ID:** 8 DOD only	✓
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	✓		✓
31. Correct ICV linked to each MB? [QC Links]	✓		✓
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	✓		✓
33. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
34. QC checker run and items addressed?			✓
35. Checklist & Entech report scanned, attached & assigned properly?			✓

Analyst:	**Date:** 11/8/16	**2nd Level Reviewer :**	**Date:** 11/8/16
Comments:		**Comments:**	
6286-1 est ace ncm 5399			
6282-1			
6282-1, 2 est prop ncm 5402			
6146-2 est prop			
6286-2 TC			
Example Calculation:			
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF			
6.8447 x 25mL x 40.182 = 55554.32			

MS017r41, 5/25/2016

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-6285-1

SDG No.:

Instrument ID: MR Start Date: 11/08/2016 10:46

Analysis Batch Number: 7105 End Date: 11/09/2016 01:12

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-7105/1		11/08/2016 10:46	1	RBFBK08.D	RTX-5 0.32(mm)
CCVIS 140-7105/2		11/08/2016 11:18	1	RCCVK08.D	RTX-5 0.32(mm)
LCS 140-7105/1002		11/08/2016 11:18	1	RCCVK08-LCS.d	RTX-5 0.32(mm)
MB 140-7105/4		11/08/2016 13:19	1	R500MLK08.D	RTX-5 0.32(mm)
ZZZZZ		11/08/2016 14:06	1		RTX-5 0.32(mm)
ZZZZZ		11/08/2016 14:53	5530.19		RTX-5 0.32(mm)
ZZZZZ		11/08/2016 15:40	1		RTX-5 0.32(mm)
140-6285-4 DL		11/08/2016 16:26	1	RK08P103.D	RTX-5 0.32(mm)
140-6285-5 DL		11/08/2016 17:13	1	RK08P104.D	RTX-5 0.32(mm)
ZZZZZ		11/08/2016 18:49	1		RTX-5 0.32(mm)
ZZZZZ		11/08/2016 20:24	294.86		RTX-5 0.32(mm)
ZZZZZ		11/08/2016 21:12	1		RTX-5 0.32(mm)
ZZZZZ		11/08/2016 22:01	1		RTX-5 0.32(mm)
ZZZZZ		11/08/2016 22:47	1		RTX-5 0.32(mm)
ZZZZZ		11/08/2016 23:36	1		RTX-5 0.32(mm)
ZZZZZ		11/09/2016 00:24	1		RTX-5 0.32(mm)
ZZZZZ		11/09/2016 01:12	1		RTX-5 0.32(mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Instrument/Date	MR 11/8/16	Routine	AFCEE	DOD	OHIO
CCAL Chrom WL #	3605 / CCAL Batch #	7105			
ICAL Chrom WL #	3513 / ICAL Batch # / Event #	68527775	/	/	/

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		✓
2. Did BFB meet tune criteria? [F8]	✓	□ [Failed TO-14A, but passes TO-15] (NCM#_____)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
4. Is the %D ≤ 30% for all target analytes? [≤ 40% for AFCEE non-table analytes] [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab] TCFM 42.9	✓	□ CCV - %D - LCS criteria met (NCM# 5406) □ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#_____)	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	M		MR
7. Has the RT been updated to the method?	✓		✓
Analyst: Date: 11/8/16		**2nd Level Reviewer:** Date: 11/09/16	
Comments:		**Comments:**	
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓	Checked on scan	✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#_____) □ Method Blank – Report, 10X (NCM#_____)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample / Reason / Sample / Reason	✓	□ (1) Surrogate – Matrix (NCM#_____) □ (2) Surrogate – High, ND (NCM#_____) □ (3) ISTD – RA/RA Concurs (NCM#_____) □ (4) Surrogate –RX concur, Report both (NCM#_____) □ (5) ISTD – Matrix, DL required (NCM#_____)	✓
15. Samples outside calibration range scheduled for dilution? *Samples:*	MR	□ ICAL – Range Exceeded; Minimum Dilution	MR
Chrom Review	**1st**	**If No, why is data reportable?**	**2nd**
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample / Reason / Sample / Reason: 179582-1 elev	✓	□ (1) Reporting Limit – Dilution, Matrix (NCM#_____) □ (2) Reporting Limit – Dilution, Non-Target (NCM# 5404) □ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	M		MR
18. Obvious non-TPH peaks excluded?	✓		✓

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

19. Individual TPH peak area < octane high point area?	NL		NL
TALS Review	**1st**	**If No, why is data reportable?**	**2nd**
20. Graphics uploaded? [Sample List Tab]	✓		✓
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	✓		
22. Sample special instructions verified?	✓		✓
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	✓	☐ Marginal Exceedances - Within ME Limits and Random; Report (NCM# 5406 ☐ LCS/LCSD - %R High (NCM#_____) TCFM +42.9 OK @ 36% WL 3593	✓
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]	✓		✓
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	✓		✓
26. Analytes over calibration range set to secondary [Conditions Review Tab]	✓		✓
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	✓		✓
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*	✓		✓
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	✓	**500 mL blank ID:** 4 **200 mL blank ID:** 5	✓
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	✓		✓
31. Correct ICV linked to each MB? [QC Links]	✓		✓
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	✓		✓
33. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
34. QC checker run and items addressed?			✓
35. Checklist & Entech report scanned, attached & assigned properly?			✓

Analyst:	**Date:** 11/9/16	**2nd Level Reviewer :**	**Date:** 111016
Comments:		**Comments:**	
6300.5 NCM 5399 est acc.			
Example Calculation: 119582-1 benz			
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF			
1.078 x 20 mL x 5530.19 = 149093.92 x 3.195 = 476355			

MS017r41, 5/25/2016

Summa Canister Dilution Worksheet

Client: Tetra Tech GEO

Job No.: 140-6285-1

Lab Sample ID	Canister Volume (L)	Preadjusted Pressure ("Hg)	Preadjusted Pressure (atm)	Preadjusted Volume (L)	Adjusted Pressure (psig)	Adjusted Pressure (atm)	Adjusted Volume (L)	Initial Volume (mL)	Dilution Factor	Final Dilution Factor	Date	Analyst
140-6285-6	1	0	1.00	1.00	32.2	3.19	3.19		3.19	3.19	11/07/16 10:43	Barlozhetskaya, Anna F
140-6285-6	1	0	1.00	1.00	31.2	3.12	3.12		3.12	9.96	11/07/16 10:45	Barlozhetskaya, Anna F

Formulae:

Preadjusted Volume (L) = (Preadjusted Pressure ("Hg) + 29.92 "Hg * Vol L) / 29.92 "Hg

Adjusted Volume (L) = (Adjusted Pressure (psig) + 14.7 psig * Vol L) / 14.7 psig

Dilution Factor = Adjusted Volume (L) / Preadjusted Volume (L)

Where:

29.92 "Hg = Standard atmospheric pressure in inches of Mercury (“Hg)

14.7 psig = Standard atmospheric pressure in pounds per square inch gauge (psig)

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5833-1

SDG No.:

Client Sample ID: 09833 | Lab Sample ID: 140-5833-13

Matrix: Air | Lab File ID: LOT5833.D

Analysis Method: TO-15 | Date Collected: 09/15/2016 09:50

Sample wt/vol: 200(mL) | Date Analyzed: 09/16/2016 22:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6588 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND	*	2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5833-1

SDG No.:

Client Sample ID: 09833 Lab Sample ID: 140-5833-13

Matrix: Air Lab File ID: LOT5833.D

Analysis Method: TO-15 Date Collected: 09/15/2016 09:50

Sample wt/vol: 200(mL) Date Analyzed: 09/16/2016 22:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6588 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND	*	10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND	*	0.40	
75-27-4	Bromodichloromethane	ND	*	0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND	*	0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND	*	0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5833-1

SDG No.:

Client Sample ID: 09833 | Lab Sample ID: 140-5833-13

Matrix: Air | Lab File ID: LOT5833.D

Analysis Method: TO-15 | Date Collected: 09/15/2016 09:50

Sample wt/vol: 200(mL) | Date Analyzed: 09/16/2016 22:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6588 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND	*	0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND	*	0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5833-1

SDG No.:

Client Sample ID: 09833 Lab Sample ID: 140-5833-13

Matrix: Air Lab File ID: LOT5833.D

Analysis Method: TO-15 Date Collected: 09/15/2016 09:50

Sample wt/vol: 200(mL) Date Analyzed: 09/16/2016 22:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6588 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160913-3426.b\LOT5833.D				
Lims ID:	140-5833-A-13				
Client ID:	09833				
Sample Type:	Client				
Inject. Date:	16-Sep-2016 22:57:30	ALS Bottle#:	12	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003426-018				
Misc. Info.:	09833				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20160913-3426.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	17-Sep-2016 11:10:53	Calib Date:	20-Jul-2016 20:22:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20160719-3204.b\GG20ICL9.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK031				
First Level Reviewer: tajh		Date:	17-Sep-2016 11:10:53		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.444	8.454	-0.010	90	286265	4.00	
* 2 1,4-Difluorobenzene	114	10.611	10.617	-0.006	96	1312660	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.395	15.400	-0.006	91	1199127	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.050	17.055	-0.005	91	850335	4.06	
31 Methylene Chloride	84	6.044	6.055	-0.011	88	4192	0.0602	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

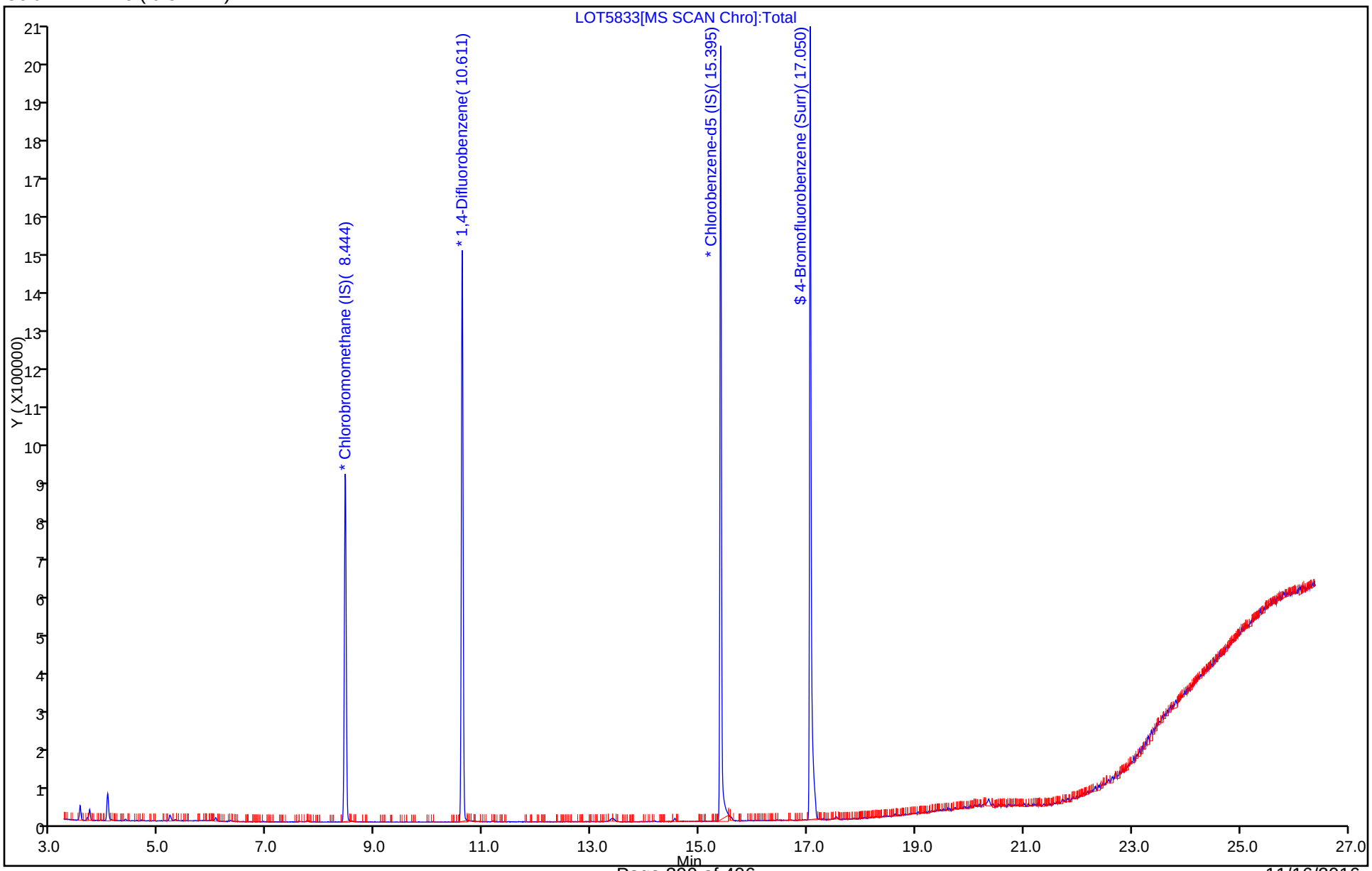
Report Date: 17-Sep-2016 11:10:54 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160913-3426.b\LOT5833.D

Injection Date:	16-Sep-2016 22:57:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-5833-A-13	Lab Sample ID:	140-5833-13	Worklist Smp#:	18
Client ID:	09833				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5872-1

SDG No.:

Client Sample ID: 11127 | Lab Sample ID: 140-5872-3

Matrix: Air | Lab File ID: LOT5872X.D

Analysis Method: TO-15 | Date Collected: 09/20/2016 16:00

Sample wt/vol: 200(mL) | Date Analyzed: 09/27/2016 17:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6688 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND	*	1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND	*	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND	*	0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5872-1

SDG No.:

Client Sample ID: 11127 | Lab Sample ID: 140-5872-3

Matrix: Air | Lab File ID: LOT5872X.D

Analysis Method: TO-15 | Date Collected: 09/20/2016 16:00

Sample wt/vol: 200(mL) | Date Analyzed: 09/27/2016 17:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6688 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND	*	0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND	*	0.40	
100-44-7	Benzyl chloride	ND	*	0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND	*	0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5872-1

SDG No.:

Client Sample ID: 11127 | Lab Sample ID: 140-5872-3

Matrix: Air | Lab File ID: LOT5872X.D

Analysis Method: TO-15 | Date Collected: 09/20/2016 16:00

Sample wt/vol: 200(mL) | Date Analyzed: 09/27/2016 17:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6688 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND	*	0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND	*	0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND	*	1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND	*	1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5872-1

SDG No.:

Client Sample ID: 11127 Lab Sample ID: 140-5872-3

Matrix: Air Lab File ID: LOT5872X.D

Analysis Method: TO-15 Date Collected: 09/20/2016 16:00

Sample wt/vol: 200(mL) Date Analyzed: 09/27/2016 17:30

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6688 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160923-3459.b\LOT5872X.D				
Lims ID:	140-5872-A-3				
Client ID:	11127				
Sample Type:	Client				
Inject. Date:	27-Sep-2016 17:30:30	ALS Bottle#:	16	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003459-004				
Misc. Info.:	140-5872-a-3				
Operator ID:	007126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20160923-3459.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	28-Sep-2016 15:06:45	Calib Date:	22-Jun-2016 23:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK035				
First Level Reviewer: barlozhetskayaa		Date:	27-Sep-2016 18:45:44		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.322	9.329	-0.007	95	269819	4.00	
* 2 1,4-Difluorobenzene	114	11.490	11.492	-0.002	96	1196741	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.175	16.172	0.003	90	998920	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.800	17.802	-0.002	87	616381	4.18	
31 Methylene Chloride	84	6.697	6.699	-0.002	97	5034	0.0679	
117 Benzo(b)thiophene	134	21.587	21.594	-0.007	1	1156	0.0464	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

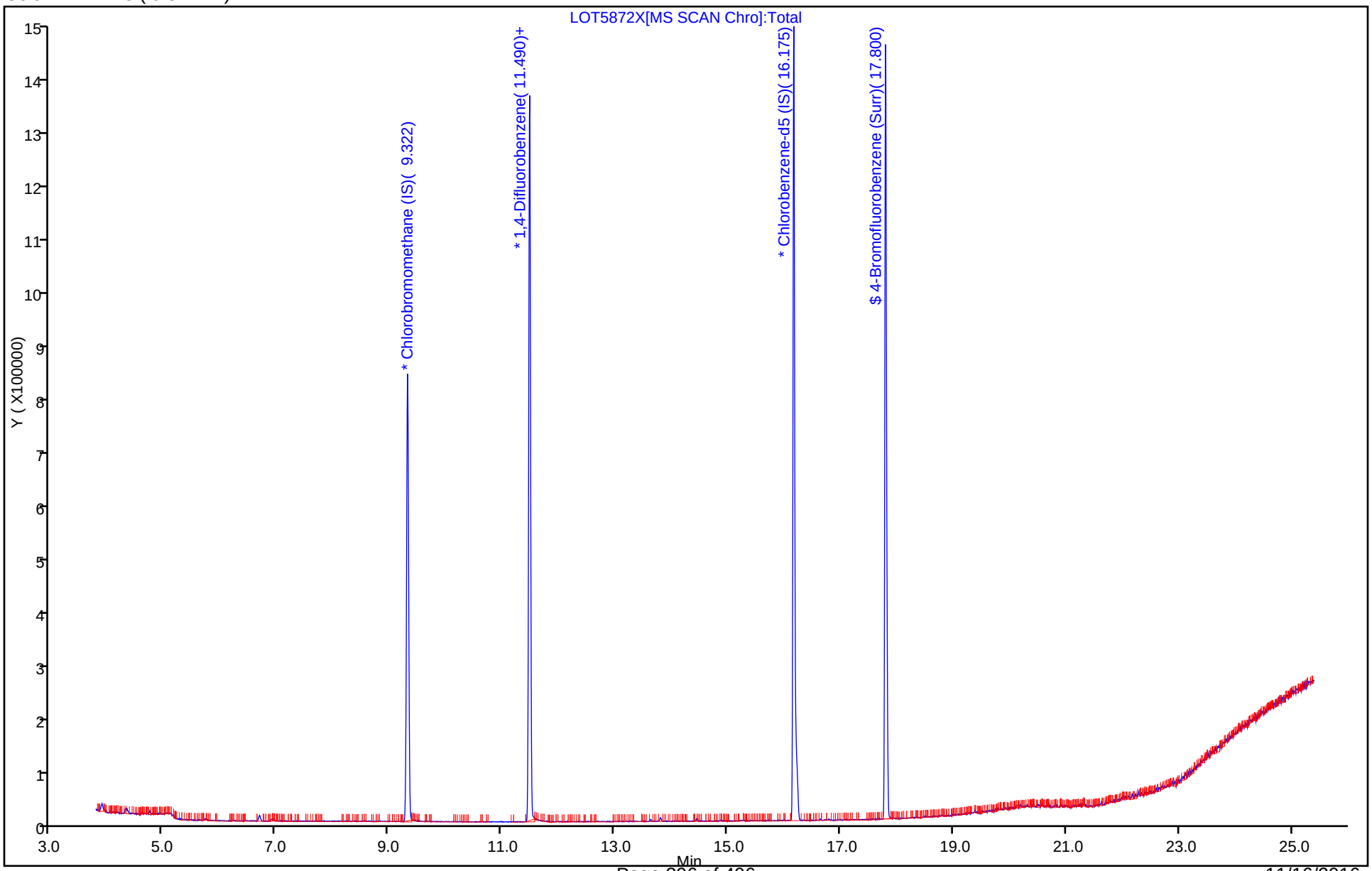
Report Date: 28-Sep-2016 15:08:38 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160923-3459.b\LOT5872X.D

Injection Date:	27-Sep-2016 17:30:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	140-5872-A-3	Lab Sample ID:	140-5872-3	Worklist Smp#:	23
Client ID:	11127				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



11/16/2016

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6078-1

SDG No.:

Client Sample ID: 10335 | Lab Sample ID: 140-6078-12

Matrix: Air | Lab File ID: LOT6078.D

Analysis Method: TO-15 | Date Collected: 10/10/2016 16:05

Sample wt/vol: 200(mL) | Date Analyzed: 10/11/2016 15:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6851 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND	*	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6078-1

SDG No.:

Client Sample ID: 10335 Lab Sample ID: 140-6078-12

Matrix: Air Lab File ID: LOT6078.D

Analysis Method: TO-15 Date Collected: 10/10/2016 16:05

Sample wt/vol: 200(mL) Date Analyzed: 10/11/2016 15:43

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6851 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND	*	0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND	*	0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6078-1

SDG No.:

Client Sample ID: 10335 Lab Sample ID: 140-6078-12

Matrix: Air Lab File ID: LOT6078.D

Analysis Method: TO-15 Date Collected: 10/10/2016 16:05

Sample wt/vol: 200(mL) Date Analyzed: 10/11/2016 15:43

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6851 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND	*	0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6078-1

SDG No.:

Client Sample ID: 10335 Lab Sample ID: 140-6078-12

Matrix: Air Lab File ID: LOT6078.D

Analysis Method: TO-15 Date Collected: 10/10/2016 16:05

Sample wt/vol: 200(mL) Date Analyzed: 10/11/2016 15:43

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6851 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161009-3512.b\LOT6078.D
Lims ID: 140-6078-A-12
Client ID: 10335
Sample Type: Client
Inject. Date: 11-Oct-2016 15:43:30 ALS Bottle#: 15 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003512-004
Misc. Info.: 10335
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20161009-3512.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Oct-2016 18:03:58 Calib Date: 09-Oct-2016 02:10:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161008-3509.b\JJ07ICAL09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK014

First Level Reviewer: barlozhetskayaa Date: 11-Oct-2016 18:10:51

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.301	9.312	-0.011	95	250417	4.00	
* 2 1,4-Difluorobenzene	114	11.458	11.463	-0.005	95	1124653	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.125	16.130	-0.005	88	865308	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.749	17.749	0.000	89	512288	3.93	
13 Butane	43	4.483	4.483	0.000	94	13778	0.1117	
19 2-Methylbutane	43	5.360	5.359	0.001	93	7963	0.0784	
31 Methylene Chloride	84	6.688	6.698	-0.010	96	8877	0.1116	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

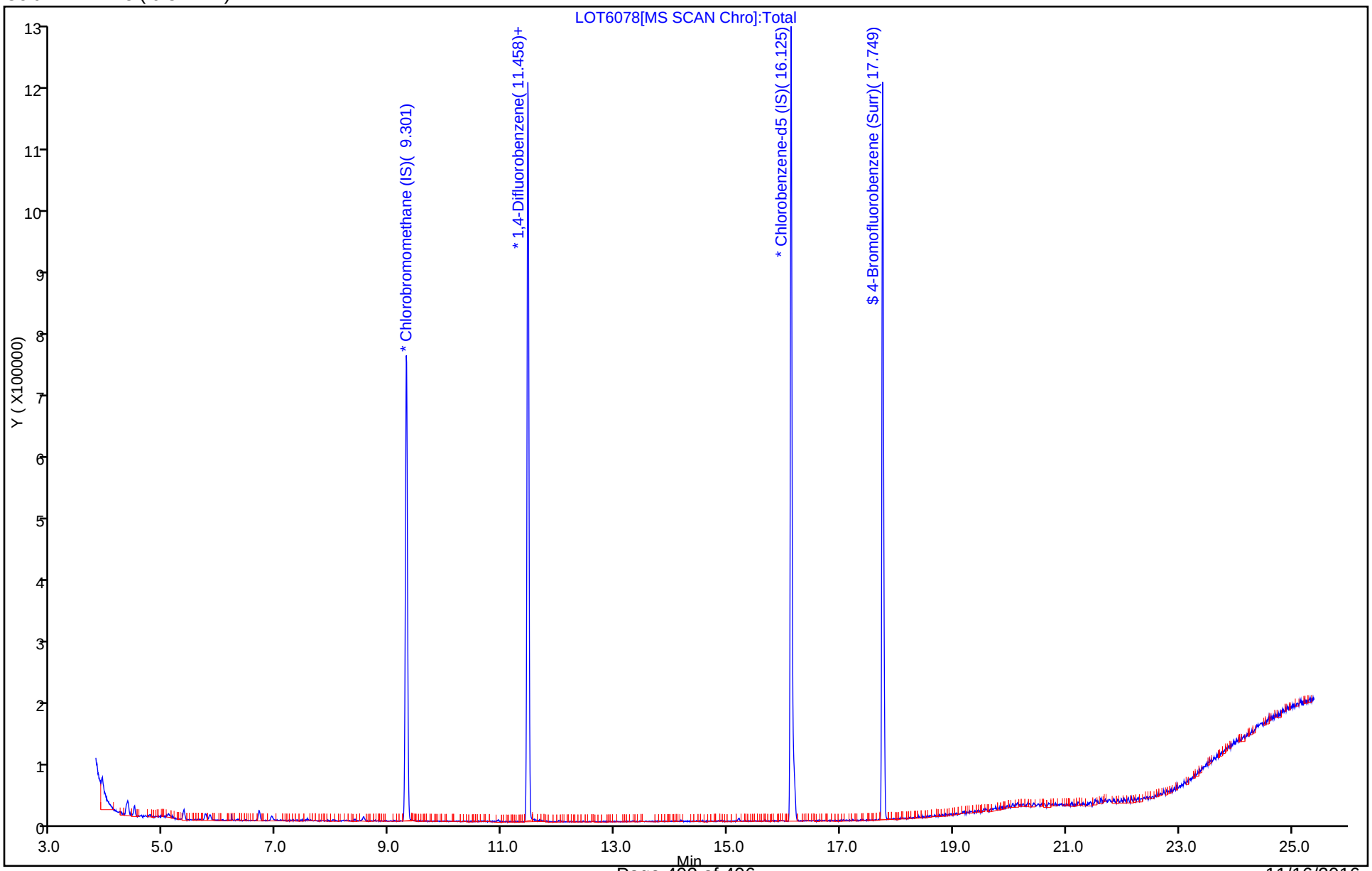
Report Date: 11-Oct-2016 18:10:52 Chrom Revision: 2.2 08-Sep-2016 14:45:52

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161009-3512.b\LOT6078.D

Injection Date:	11-Oct-2016 15:43:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-6078-A-12	Lab Sample ID:	140-6078-12	Worklist Smp#:	4
Client ID:	10335				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



Shipping and Receiving Documents

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

180325

Canister Samples Chain of Custody Record

BALTIMORE

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Manager: Peter Rich	Sampled By: DLM	___ of ___ COCs
Company: Tetra Tech Inc	Phone: 410-990-4607		
Address: 51 Franklin St	Site Contact:		
City/State/Zip Annapolis / MD / 21401	TAL Contact:		
Phone: 410-990-4607			
FAX:			
Project Name: 550 OEM	Analysis Turnaround Time		
Site/location: LMC MRC / Middle River	Standard (Specify) ✓		
PO # 117-051124	Rush (Specify)		

140-6285 Chain of Custody

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
C-EFFLUENT	11-3-16	1055	Grab	-29.5	-1.5	74	11127	✓											
C-MID-GAC	11-3-16	1057	↓	-30	0	99	11281	✓											
C-INFLUENT	11-3-16	1059	↓	-30	0	139	09666	✓											
A-EFFLUENT	11-3-16	1235	↓	-29.5	0	195	09806	✓											
A-MID-GAC	11-3-16	1237	↓	-30	0	28	09833	✓											
A-INFLUENT	11-3-16	1239	✓	-29	0	71	09647	✓											

Sampled by :

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Received @ ambient, 1 box
Fedex Sp, trk# 7776 3247 0223
Custody seal intact, KLJ 11/4/16
ambient temp is 20°C

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by: J.M. Wilks	Date/Time: 11-3-16 / 1428	Received by:
Relinquished by:	Date/Time: 11-3-2016 / 1540	Received by: 11/4/16 1015

6 cans
6 KR

Loc: 140
6285

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	/			☐ **Containers, Broken**
2. Were ambient air containers received intact?			/	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?	/			☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			/	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	/			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	/			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	/			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	/			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	/			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	/			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	/			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	/			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	/			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	/			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	/			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			/	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			/	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			/	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			/	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			/	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: 14002921 PM Instructions: _____

Sample Receiving Associate: _____ Date: 11/4/16

QA026R30.doc, 080916

140-6285

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 11/4/2016

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
AFB	140-6285-a-1	11127	5872	B	1	0	1250	
AFB	140-6285-a-2	11281	6078	B	1	0	1251	
AFB	140-6285-a-3	09666	6078	B	1	+0.6	1252	
AFB	140-6285-a-4	09806	6078	B	1	0	1253	
AFB	140-6285-a-5	09833	5833	B	1	0	1254	
AFB	140-6285-a-6	09647	6078	B	1	0	1255	

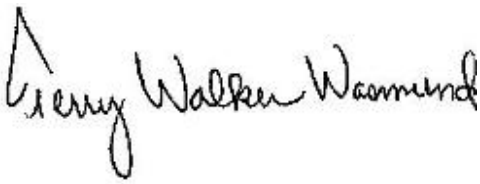
ANALYTICAL REPORT

Job Number: 140-6564-1

Job Description: LMMRC SSDS - Middle River

For:
Tetra Tech GEO
51 Franklin Street
Suite 400
Annapolis, MD 21401

Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
12/28/2016 10:16 AM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
12/28/2016

cc: Belssi Chang
Ms. Dawn Monico
Amy Thomson
Michael Wilks

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Table of Contents

Cover Title Page 1

Data Summaries 4

Definitions 4

Case Narrative 5

Detection Summary 6

Client Sample Results 8

Default Detection Limits 14

Surrogate Summary 15

QC Sample Results 16

QC Association 19

Chronicle 20

Method Summary 21

Sample Summary 22

Organic Sample Data 23

Air - GC/MS VOA 23

Method TO15 Low Level 23

Method TO15 Low Level QC Summary 24

Method TO15 Low Level Sample Data 31

Standards Data 90

Method TO15 Low Level ICAL Data 90

Method TO15 Low Level CCAL Data 163

Raw QC Data 177

Method TO15 Low Level Tune Data 177

Method TO15 Low Level Blank Data 185

Method TO15 Low Level LCS/LCSD Data 190

Method TO15 Low Level Run Logs 196

Table of Contents

Shipping and Receiving Documents 203
Client Chain of Custody 204
Sample Receipt Checklist 206

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
E	Result exceeded calibration range.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-6564-1

Receipt
The samples were received on 12/15/2016 at 10:00 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA
Method(s) D1946, TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

Method TO 15 LL: The continuing calibration verification (CCV) associated with batch 140-7415 exhibited % difference of > 30% for chlorodifluoromethane; however, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments
No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-6564-1

Client Sample ID: BLDG-A EFFLUENT — Lab Sample ID: 140-6564-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.39	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.29	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	22		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.54		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	6.3		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	30		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.2		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.37	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	120	E	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.34		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Vinyl chloride	0.18	J	0.20	0.15	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane - DL	120		1.6	0.24	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.4	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.4	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	89		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.7		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	25		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	120		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.1		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	1.5	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	660	E	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1.8		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Vinyl chloride	0.46	J	0.51	0.37	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane - DL	640		8.7	1.3	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A MIDGAC — Lab Sample ID: 140-6564-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.10	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.32	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	42		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.53		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	6.4		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,2-Dichloroethane	0.26	J	0.40	0.095	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	35		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.9		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.71		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	160	E	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	21		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Vinyl chloride	0.18	J	0.20	0.15	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane - DL	160		2.0	0.30	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.65	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.6	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	170		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.6		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	26		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,2-Dichloroethane	1.0	J	1.6	0.38	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	140		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-A MIDGAC (Continued) — Lab Sample ID: 140-6564-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	6.7		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	2.8		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	850	E	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	110		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Vinyl chloride	0.46	J	0.51	0.37	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane - DL	880		11	1.6	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A INFLUENT — Lab Sample ID: 140-6564-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	3.3		1.6	0.46	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.57	J	1.6	0.30	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	24		1.6	0.48	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.62	J	1.6	0.54	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	4.3		1.6	0.20	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	31		1.6	0.28	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.63	J	1.6	0.40	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	110		1.6	0.24	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	130		0.80	0.28	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	11		5.1	1.5	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.0	J	5.7	1.1	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	95		6.3	1.9	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	3.1	J	7.9	2.7	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	17		6.5	0.81	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	120		6.3	1.1	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	2.5	J	6.3	1.6	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	600		8.7	1.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	710		4.3	1.5	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-6564-1

Date Collected: 12/14/16 12:52

Matrix: Air

Date Received: 12/15/16 10:00

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			12/19/16 14:12	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			12/19/16 14:12	1
Chlorodifluoromethane	**0.39**	**J**	0.40	0.075	ppb v/v			12/19/16 14:12	1
Chloroform	**0.29**	**J**	0.40	0.075	ppb v/v			12/19/16 14:12	1
cis-1,2-Dichloroethene	**22**		0.40	0.12	ppb v/v			12/19/16 14:12	1
Dichlorodifluoromethane	**0.54**		0.40	0.14	ppb v/v			12/19/16 14:12	1
1,1-Dichloroethane	**6.3**		0.40	0.050	ppb v/v			12/19/16 14:12	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			12/19/16 14:12	1
1,1-Dichloroethene	**30**		0.40	0.070	ppb v/v			12/19/16 14:12	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			12/19/16 14:12	1
Methylene Chloride	**1.2**		1.0	0.65	ppb v/v			12/19/16 14:12	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			12/19/16 14:12	1
Naphthalene	ND		0.20	0.20	ppb v/v			12/19/16 14:12	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			12/19/16 14:12	1
Toluene	ND		0.60	0.60	ppb v/v			12/19/16 14:12	1
trans-1,2-Dichloroethene	**0.37**	**J**	0.40	0.10	ppb v/v			12/19/16 14:12	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			12/19/16 14:12	1
1,1,1-Trichloroethane	**120**	**E**	0.40	0.060	ppb v/v			12/19/16 14:12	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			12/19/16 14:12	1
Trichloroethene	**0.34**		0.20	0.070	ppb v/v			12/19/16 14:12	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			12/19/16 14:12	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			12/19/16 14:12	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			12/19/16 14:12	1
Vinyl chloride	**0.18**	**J**	0.20	0.15	ppb v/v			12/19/16 14:12	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			12/19/16 14:12	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			12/19/16 14:12	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			12/19/16 14:12	1
Chlorodifluoromethane	**1.4**	**J**	1.4	0.27	ug/m3			12/19/16 14:12	1
Chloroform	**1.4**	**J**	2.0	0.37	ug/m3			12/19/16 14:12	1
cis-1,2-Dichloroethene	**89**		1.6	0.48	ug/m3			12/19/16 14:12	1
Dichlorodifluoromethane	**2.7**		2.0	0.67	ug/m3			12/19/16 14:12	1
1,1-Dichloroethane	**25**		1.6	0.20	ug/m3			12/19/16 14:12	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			12/19/16 14:12	1
1,1-Dichloroethene	**120**		1.6	0.28	ug/m3			12/19/16 14:12	1
Ethylbenzene	ND		1.7	0.59	ug/m3			12/19/16 14:12	1
Methylene Chloride	**4.1**		3.5	2.3	ug/m3			12/19/16 14:12	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			12/19/16 14:12	1
Naphthalene	ND		1.0	1.0	ug/m3			12/19/16 14:12	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			12/19/16 14:12	1
Toluene	ND		2.3	2.3	ug/m3			12/19/16 14:12	1
trans-1,2-Dichloroethene	**1.5**	**J**	1.6	0.40	ug/m3			12/19/16 14:12	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			12/19/16 14:12	1
1,1,1-Trichloroethane	**660**	**E**	2.2	0.33	ug/m3			12/19/16 14:12	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			12/19/16 14:12	1
Trichloroethene	**1.8**		1.1	0.38	ug/m3			12/19/16 14:12	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			12/19/16 14:12	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			12/19/16 14:12	1

Client Sample ID: BLDG-A EFFLUENT
Lab Sample ID: 140-6564-1

Date Collected: 12/14/16 12:52
Matrix: Air
Date Received: 12/15/16 10:00
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			12/19/16 14:12	1
Vinyl chloride	**0.46**	**J**	0.51	0.37	ug/m3			12/19/16 14:12	1
Xylenes, Total	ND		3.5	0.52	ug/m3			12/19/16 14:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*		*12/19/16 14:12*	*1*

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**120**		1.6	0.24	ppb v/v			12/20/16 04:09	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**640**		8.7	1.3	ug/m3			12/20/16 04:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*		*12/20/16 04:09*	*1*

Client Sample ID: BLDG-A MIDGAC

Lab Sample ID: 140-6564-2

Date Collected: 12/14/16 12:56

Matrix: Air

Date Received: 12/15/16 10:00

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			12/19/16 14:56	1
Carbon tetrachloride	**0.10**	**J**	0.40	0.075	ppb v/v			12/19/16 14:56	1
Chlorodifluoromethane	ND		0.40	0.075	ppb v/v			12/19/16 14:56	1
Chloroform	**0.32**	**J**	0.40	0.075	ppb v/v			12/19/16 14:56	1
cis-1,2-Dichloroethene	**42**		0.40	0.12	ppb v/v			12/19/16 14:56	1
Dichlorodifluoromethane	**0.53**		0.40	0.14	ppb v/v			12/19/16 14:56	1
1,1-Dichloroethane	**6.4**		0.40	0.050	ppb v/v			12/19/16 14:56	1
1,2-Dichloroethane	**0.26**	**J**	0.40	0.095	ppb v/v			12/19/16 14:56	1
1,1-Dichloroethene	**35**		0.40	0.070	ppb v/v			12/19/16 14:56	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			12/19/16 14:56	1
Methylene Chloride	**1.9**		1.0	0.65	ppb v/v			12/19/16 14:56	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			12/19/16 14:56	1
Naphthalene	ND		0.20	0.20	ppb v/v			12/19/16 14:56	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			12/19/16 14:56	1
Toluene	ND		0.60	0.60	ppb v/v			12/19/16 14:56	1
trans-1,2-Dichloroethene	**0.71**		0.40	0.10	ppb v/v			12/19/16 14:56	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			12/19/16 14:56	1
1,1,1-Trichloroethane	**160**	**E**	0.40	0.060	ppb v/v			12/19/16 14:56	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			12/19/16 14:56	1
Trichloroethene	**21**		0.20	0.070	ppb v/v			12/19/16 14:56	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			12/19/16 14:56	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			12/19/16 14:56	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			12/19/16 14:56	1
Vinyl chloride	**0.18**	**J**	0.20	0.15	ppb v/v			12/19/16 14:56	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			12/19/16 14:56	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			12/19/16 14:56	1
Carbon tetrachloride	**0.65**	**J**	2.5	0.47	ug/m3			12/19/16 14:56	1
Chlorodifluoromethane	ND		1.4	0.27	ug/m3			12/19/16 14:56	1
Chloroform	**1.6**	**J**	2.0	0.37	ug/m3			12/19/16 14:56	1
cis-1,2-Dichloroethene	**170**		1.6	0.48	ug/m3			12/19/16 14:56	1
Dichlorodifluoromethane	**2.6**		2.0	0.67	ug/m3			12/19/16 14:56	1
1,1-Dichloroethane	**26**		1.6	0.20	ug/m3			12/19/16 14:56	1
1,2-Dichloroethane	**1.0**	**J**	1.6	0.38	ug/m3			12/19/16 14:56	1
1,1-Dichloroethene	**140**		1.6	0.28	ug/m3			12/19/16 14:56	1
Ethylbenzene	ND		1.7	0.59	ug/m3			12/19/16 14:56	1
Methylene Chloride	**6.7**		3.5	2.3	ug/m3			12/19/16 14:56	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			12/19/16 14:56	1
Naphthalene	ND		1.0	1.0	ug/m3			12/19/16 14:56	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			12/19/16 14:56	1
Toluene	ND		2.3	2.3	ug/m3			12/19/16 14:56	1
trans-1,2-Dichloroethene	**2.8**		1.6	0.40	ug/m3			12/19/16 14:56	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			12/19/16 14:56	1
1,1,1-Trichloroethane	**850**	**E**	2.2	0.33	ug/m3			12/19/16 14:56	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			12/19/16 14:56	1
Trichloroethene	**110**		1.1	0.38	ug/m3			12/19/16 14:56	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			12/19/16 14:56	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			12/19/16 14:56	1

Client Sample ID: BLDG-A MIDGAC
Lab Sample ID: 140-6564-2

Date Collected: 12/14/16 12:56
Matrix: Air
Date Received: 12/15/16 10:00
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			12/19/16 14:56	1
Vinyl chloride	**0.46**	**J**	0.51	0.37	ug/m3			12/19/16 14:56	1
Xylenes, Total	ND		3.5	0.52	ug/m3			12/19/16 14:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*		*12/19/16 14:56*	*1*

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**160**		2.0	0.30	ppb v/v			12/20/16 03:26	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**880**		11	1.6	ug/m3			12/20/16 03:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*		*12/20/16 03:26*	*1*

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-6564-3

Date Collected: 12/14/16 13:00

Matrix: Air

Date Received: 12/15/16 10:00

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**3.3**		1.6	0.46	ppb v/v			12/19/16 13:29	1
Carbon tetrachloride	ND		1.6	0.30	ppb v/v			12/19/16 13:29	1
Chlorodifluoromethane	**0.57**	**J**	1.6	0.30	ppb v/v			12/19/16 13:29	1
Chloroform	ND		1.6	0.30	ppb v/v			12/19/16 13:29	1
cis-1,2-Dichloroethene	**24**		1.6	0.48	ppb v/v			12/19/16 13:29	1
Dichlorodifluoromethane	**0.62**	**J**	1.6	0.54	ppb v/v			12/19/16 13:29	1
1,1-Dichloroethane	**4.3**		1.6	0.20	ppb v/v			12/19/16 13:29	1
1,2-Dichloroethane	ND		1.6	0.38	ppb v/v			12/19/16 13:29	1
1,1-Dichloroethene	**31**		1.6	0.28	ppb v/v			12/19/16 13:29	1
Ethylbenzene	ND		1.6	0.54	ppb v/v			12/19/16 13:29	1
Methylene Chloride	ND		4.0	2.6	ppb v/v			12/19/16 13:29	1
Methyl tert-butyl ether	ND		8.0	1.4	ppb v/v			12/19/16 13:29	1
Naphthalene	ND		0.80	0.80	ppb v/v			12/19/16 13:29	1
Tetrachloroethene	ND		1.6	0.32	ppb v/v			12/19/16 13:29	1
Toluene	ND		2.4	2.4	ppb v/v			12/19/16 13:29	1
trans-1,2-Dichloroethene	**0.63**	**J**	1.6	0.40	ppb v/v			12/19/16 13:29	1
1,2,4-Trichlorobenzene	ND		1.6	0.78	ppb v/v			12/19/16 13:29	1
1,1,1-Trichloroethane	**110**		1.6	0.24	ppb v/v			12/19/16 13:29	1
1,1,2-Trichloroethane	ND		1.6	0.42	ppb v/v			12/19/16 13:29	1
Trichloroethene	**130**		0.80	0.28	ppb v/v			12/19/16 13:29	1
1,2,3-Trimethylbenzene	ND		1.6	0.68	ppb v/v			12/19/16 13:29	1
1,2,4-Trimethylbenzene	ND		1.6	0.50	ppb v/v			12/19/16 13:29	1
1,3,5-Trimethylbenzene	ND		1.6	0.52	ppb v/v			12/19/16 13:29	1
Vinyl chloride	ND		0.80	0.58	ppb v/v			12/19/16 13:29	1
Xylenes, Total	ND		3.2	0.48	ppb v/v			12/19/16 13:29	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**11**		5.1	1.5	ug/m3			12/19/16 13:29	1
Carbon tetrachloride	ND		10	1.9	ug/m3			12/19/16 13:29	1
Chlorodifluoromethane	**2.0**	**J**	5.7	1.1	ug/m3			12/19/16 13:29	1
Chloroform	ND		7.8	1.5	ug/m3			12/19/16 13:29	1
cis-1,2-Dichloroethene	**95**		6.3	1.9	ug/m3			12/19/16 13:29	1
Dichlorodifluoromethane	**3.1**	**J**	7.9	2.7	ug/m3			12/19/16 13:29	1
1,1-Dichloroethane	**17**		6.5	0.81	ug/m3			12/19/16 13:29	1
1,2-Dichloroethane	ND		6.5	1.5	ug/m3			12/19/16 13:29	1
1,1-Dichloroethene	**120**		6.3	1.1	ug/m3			12/19/16 13:29	1
Ethylbenzene	ND		6.9	2.3	ug/m3			12/19/16 13:29	1
Methylene Chloride	ND		14	9.0	ug/m3			12/19/16 13:29	1
Methyl tert-butyl ether	ND		29	4.9	ug/m3			12/19/16 13:29	1
Naphthalene	ND		4.2	4.2	ug/m3			12/19/16 13:29	1
Tetrachloroethene	ND		11	2.2	ug/m3			12/19/16 13:29	1
Toluene	ND		9.0	9.0	ug/m3			12/19/16 13:29	1
trans-1,2-Dichloroethene	**2.5**	**J**	6.3	1.6	ug/m3			12/19/16 13:29	1
1,2,4-Trichlorobenzene	ND		12	5.8	ug/m3			12/19/16 13:29	1
1,1,1-Trichloroethane	**600**		8.7	1.3	ug/m3			12/19/16 13:29	1
1,1,2-Trichloroethane	ND		8.7	2.3	ug/m3			12/19/16 13:29	1
Trichloroethene	**710**		4.3	1.5	ug/m3			12/19/16 13:29	1
1,2,3-Trimethylbenzene	ND		7.9	3.3	ug/m3			12/19/16 13:29	1
1,2,4-Trimethylbenzene	ND		7.9	2.5	ug/m3			12/19/16 13:29	1

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-6564-3

Date Collected: 12/14/16 13:00

Matrix: Air

Date Received: 12/15/16 10:00

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		7.9	2.6	ug/m3			12/19/16 13:29	1
Vinyl chloride	ND		2.0	1.5	ug/m3			12/19/16 13:29	1
Xylenes, Total	ND		14	2.1	ug/m3			12/19/16 13:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*60 - 140*		*12/19/16 13:29*	*1*

Default Detection Limits

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-6564-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.20	0.13	ppb v/v	TO 15 LL
Methylene Chloride	0.69	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-6564-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	BFB (60-140)
140-6564-1 - DL	BLDG-A EFFLUENT	103
140-6564-1	BLDG-A EFFLUENT	104
140-6564-2 - DL	BLDG-A MIDGAC	104
140-6564-2	BLDG-A MIDGAC	103
140-6564-3	BLDG-A INFLUENT	105
LCS 140-7415/1002	Lab Control Sample	107
MB 140-7415/4	Method Blank	105

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-7415/4
Matrix: Air
Analysis Batch: 7415

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			12/19/16 12:46	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			12/19/16 12:46	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			12/19/16 12:46	1
Chloroform	ND		0.080	0.015	ppb v/v			12/19/16 12:46	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			12/19/16 12:46	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			12/19/16 12:46	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			12/19/16 12:46	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			12/19/16 12:46	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			12/19/16 12:46	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			12/19/16 12:46	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			12/19/16 12:46	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			12/19/16 12:46	1
Naphthalene	ND		0.040	0.040	ppb v/v			12/19/16 12:46	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			12/19/16 12:46	1
Toluene	ND		0.12	0.12	ppb v/v			12/19/16 12:46	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			12/19/16 12:46	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			12/19/16 12:46	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			12/19/16 12:46	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			12/19/16 12:46	1
Trichloroethene	ND		0.040	0.014	ppb v/v			12/19/16 12:46	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			12/19/16 12:46	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			12/19/16 12:46	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			12/19/16 12:46	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			12/19/16 12:46	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			12/19/16 12:46	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			12/19/16 12:46	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			12/19/16 12:46	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			12/19/16 12:46	1
Chloroform	ND		0.39	0.073	ug/m3			12/19/16 12:46	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			12/19/16 12:46	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			12/19/16 12:46	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			12/19/16 12:46	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			12/19/16 12:46	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			12/19/16 12:46	1
Ethylbenzene	ND		0.35	0.12	ug/m3			12/19/16 12:46	1
Methylene Chloride	ND		0.69	0.45	ug/m3			12/19/16 12:46	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			12/19/16 12:46	1
Naphthalene	ND		0.21	0.21	ug/m3			12/19/16 12:46	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			12/19/16 12:46	1
Toluene	ND		0.45	0.45	ug/m3			12/19/16 12:46	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			12/19/16 12:46	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			12/19/16 12:46	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			12/19/16 12:46	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			12/19/16 12:46	1
Trichloroethene	ND		0.21	0.075	ug/m3			12/19/16 12:46	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			12/19/16 12:46	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-7415/4
Matrix: Air
Analysis Batch: 7415

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			12/19/16 12:46	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			12/19/16 12:46	1
Vinyl chloride	ND		0.10	0.074	ug/m3			12/19/16 12:46	1
Xylenes, Total	ND		0.69	0.10	ug/m3			12/19/16 12:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*60 - 140*		*12/19/16 12:46*	*1*

Lab Sample ID: LCS 140-7415/1002
Matrix: Air
Analysis Batch: 7415

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	2.08		ppb v/v		104	70 - 130
Carbon tetrachloride	2.00	2.21		ppb v/v		111	70 - 130
Chlorodifluoromethane	2.00	2.66		ppb v/v		133	60 - 140
Chloroform	2.00	2.39		ppb v/v		120	70 - 130
cis-1,2-Dichloroethene	2.00	2.27		ppb v/v		113	70 - 130
Dichlorodifluoromethane	2.00	2.59		ppb v/v		129	60 - 140
1,1-Dichloroethane	2.00	2.44		ppb v/v		122	70 - 130
1,2-Dichloroethane	2.00	2.32		ppb v/v		116	70 - 130
1,1-Dichloroethene	2.00	2.17		ppb v/v		108	70 - 130
Ethylbenzene	2.00	2.26		ppb v/v		113	70 - 130
Methylene Chloride	2.00	2.03		ppb v/v		101	70 - 130
Methyl tert-butyl ether	2.00	2.53		ppb v/v		127	60 - 140
Naphthalene	2.00	2.20		ppb v/v		110	60 - 140
Tetrachloroethene	2.00	1.93		ppb v/v		97	70 - 130
Toluene	2.00	2.15		ppb v/v		107	70 - 130
trans-1,2-Dichloroethene	2.00	2.17		ppb v/v		109	70 - 130
1,2,4-Trichlorobenzene	2.00	2.12		ppb v/v		106	60 - 140
1,1,1-Trichloroethane	2.00	2.45		ppb v/v		123	70 - 130
1,1,2-Trichloroethane	2.00	2.13		ppb v/v		107	70 - 130
Trichloroethene	2.00	1.80		ppb v/v		90	70 - 130
1,2,3-Trimethylbenzene	2.02	2.22		ppb v/v		110	70 - 130
1,2,4-Trimethylbenzene	2.00	2.22		ppb v/v		111	70 - 130
1,3,5-Trimethylbenzene	2.00	2.11		ppb v/v		105	70 - 130
Vinyl chloride	2.00	2.45		ppb v/v		122	70 - 130
Xylenes, Total	6.00	6.77		ppb v/v		113	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	6.63		ug/m3		104	70 - 130
Carbon tetrachloride	13	13.9		ug/m3		111	70 - 130
Chlorodifluoromethane	7.1	9.40		ug/m3		133	60 - 140
Chloroform	9.8	11.7		ug/m3		120	70 - 130
cis-1,2-Dichloroethene	7.9	8.99		ug/m3		113	70 - 130
Dichlorodifluoromethane	9.9	12.8		ug/m3		129	60 - 140
1,1-Dichloroethane	8.1	9.87		ug/m3		122	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-7415/1002
Matrix: Air
Analysis Batch: 7415

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2-Dichloroethane			8.1	9.40		ug/m3		116	70 - 130		
1,1-Dichloroethene			7.9	8.60		ug/m3		108	70 - 130		
Ethylbenzene			8.7	9.82		ug/m3		113	70 - 130		
Methylene Chloride			7.0	7.04		ug/m3		101	70 - 130		
Methyl tert-butyl ether			7.2	9.14		ug/m3		127	60 - 140		
Naphthalene			10	11.5		ug/m3		110	60 - 140		
Tetrachloroethene			14	13.1		ug/m3		97	70 - 130		
Toluene			7.5	8.09		ug/m3		107	70 - 130		
trans-1,2-Dichloroethene			7.9	8.62		ug/m3		109	70 - 130		
1,2,4-Trichlorobenzene			15	15.7		ug/m3		106	60 - 140		
1,1,1-Trichloroethane			11	13.4		ug/m3		123	70 - 130		
1,1,2-Trichloroethane			11	11.6		ug/m3		107	70 - 130		
Trichloroethene			11	9.69		ug/m3		90	70 - 130		
1,2,3-Trimethylbenzene			9.9	10.9		ug/m3		110	70 - 130		
1,2,4-Trimethylbenzene			9.8	10.9		ug/m3		111	70 - 130		
1,3,5-Trimethylbenzene			9.8	10.4		ug/m3		105	70 - 130		
Vinyl chloride			5.1	6.26		ug/m3		122	70 - 130		
Xylenes, Total			26	29.4		ug/m3		113	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*60 - 140*

QC Association Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-6564-1

Air - GC/MS VOA

Analysis Batch: 7415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-6564-1	BLDG-A EFFLUENT	Total/NA	Air	TO 15 LL	
140-6564-1 - DL	BLDG-A EFFLUENT	Total/NA	Air	TO 15 LL	
140-6564-2	BLDG-A MIDGAC	Total/NA	Air	TO 15 LL	
140-6564-2 - DL	BLDG-A MIDGAC	Total/NA	Air	TO 15 LL	
140-6564-3	BLDG-A INFLUENT	Total/NA	Air	TO 15 LL	
MB 140-7415/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-7415/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-6564-1

Client Sample ID: BLDG-A EFFLUENT
Lab Sample ID: 140-6564-1
Date Collected: 12/14/16 12:52
Matrix: Air
Date Received: 12/15/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	7415	12/19/16 14:12	HMT	TAL KNX
	Instrument ID: MG									
Total/NA	Analysis	TO 15 LL	DL	1	25 mL	500 mL	7415	12/20/16 04:09	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: BLDG-A MIDGAC
Lab Sample ID: 140-6564-2
Date Collected: 12/14/16 12:56
Matrix: Air
Date Received: 12/15/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	7415	12/19/16 14:56	HMT	TAL KNX
	Instrument ID: MG									
Total/NA	Analysis	TO 15 LL	DL	1	20 mL	500 mL	7415	12/20/16 03:26	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: BLDG-A INFLUENT
Lab Sample ID: 140-6564-3
Date Collected: 12/14/16 13:00
Matrix: Air
Date Received: 12/15/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	25 mL	500 mL	7415	12/19/16 13:29	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-7415/4
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	7415	12/19/16 12:46	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-7415/1002
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	7415	12/19/16 10:19	HMT	TAL KNX
	Instrument ID: MG									

Laboratory References:
TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-6564-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-6564-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-6564-1	BLDG-A EFFLUENT	Air	12/14/16 12:52	12/15/16 10:00
140-6564-2	BLDG-A MIDGAC	Air	12/14/16 12:56	12/15/16 10:00
140-6564-3	BLDG-A INFLUENT	Air	12/14/16 13:00	12/15/16 10:00

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
BLDG-A EFFLUENT	140-6564-1	104
BLDG-A EFFLUENT DL	140-6564-1 DL	103
BLDG-A MIDGAC	140-6564-2	103
BLDG-A MIDGAC DL	140-6564-2 DL	104
BLDG-A INFLUENT	140-6564-3	105
	MB 140-7415/4	105
	LCS 140-7415/1002	107

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1

SDG No.:

Matrix: Air Level: Low Lab File ID: GCCVL19-LCS.d

Lab ID: LCS 140-7415/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.08	104	70-130	
Carbon tetrachloride	2.00	2.21	111	70-130	
Chlorodifluoromethane	2.00	2.66	133	60-140	
Chloroform	2.00	2.39	120	70-130	
cis-1,2-Dichloroethene	2.00	2.27	113	70-130	
Dichlorodifluoromethane	2.00	2.59	129	60-140	
1,1-Dichloroethane	2.00	2.44	122	70-130	
1,2-Dichloroethane	2.00	2.32	116	70-130	
1,1-Dichloroethene	2.00	2.17	108	70-130	
Ethylbenzene	2.00	2.26	113	70-130	
Methylene Chloride	2.00	2.03	101	70-130	
Methyl tert-butyl ether	2.00	2.53	127	60-140	
Naphthalene	2.00	2.20	110	60-140	
Tetrachloroethene	2.00	1.93	97	70-130	
Toluene	2.00	2.15	107	70-130	
trans-1,2-Dichloroethene	2.00	2.17	109	70-130	
1,2,4-Trichlorobenzene	2.00	2.12	106	60-140	
1,1,1-Trichloroethane	2.00	2.45	123	70-130	
1,1,2-Trichloroethane	2.00	2.13	107	70-130	
Trichloroethene	2.00	1.80	90	70-130	
1,2,3-Trimethylbenzene	2.02	2.22	110	70-130	
1,2,4-Trimethylbenzene	2.00	2.22	111	70-130	
1,3,5-Trimethylbenzene	2.00	2.11	105	70-130	
Vinyl chloride	2.00	2.45	122	70-130	
Xylenes, Total	6.00	6.77	113	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1

SDG No.:

Lab File ID: GMB500L19.D Lab Sample ID: MB 140-7415/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MG Date Analyzed: 12/19/2016 12:46

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-7415/1002	GCCVL19-LCS.d	12/19/2016 10:19
BLDG-A INFLUENT	140-6564-3	GL19P101.D	12/19/2016 13:29
BLDG-A EFFLUENT	140-6564-1	GL19P102.D	12/19/2016 14:12
BLDG-A MIDGAC	140-6564-2	GL19P103.D	12/19/2016 14:56
BLDG-A MIDGAC DL	140-6564-2 DL	GL19P103DL.D	12/20/2016 03:26
BLDG-A EFFLUENT DL	140-6564-1 DL	GL19P204DL.D	12/20/2016 04:09

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1

SDG No.:

Lab File ID: GxBFBL08.D BFB Injection Date: 12/08/2016

Instrument ID: MG BFB Injection Time: 19:26

Analysis Batch No.: 7384

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.7	
75	30.0 - 60.0 % of mass 95	52.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	92.3	
175	5.0 - 9.0 % of mass 174	6.4	(6.9) 1
176	95.0 - 101.0 % of mass 174	89.0	(96.4) 1
177	5.0 - 9.0 % of mass 176	5.7	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-7384/3	GxL08IC01.D	12/08/2016	19:58
	IC 140-7384/4	GxL08IC02.D	12/08/2016	20:42
	IC 140-7384/5	GxL08IC03.D	12/08/2016	21:25
	IC 140-7384/6	GxL08IC04.D	12/08/2016	22:07
	IC 140-7384/7	GxL08IC05.D	12/08/2016	22:50
	ICIS 140-7384/8	GxL08IC06.D	12/08/2016	23:31
	IC 140-7384/9	GxL08IC07.D	12/09/2016	00:14
	IC 140-7384/10	GxL08IC08.D	12/09/2016	00:56
	IC 140-7384/11	GxL08IC09.D	12/09/2016	01:38
	ICV 140-7384/13	GxL08ICV.D	12/09/2016	03:01

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1

SDG No.:

Lab File ID: GBFBL19.D BFB Injection Date: 12/19/2016

Instrument ID: MG BFB Injection Time: 09:48

Analysis Batch No.: 7415

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.8	
75	30.0 - 60.0 % of mass 95	52.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.3	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	89.3	
175	5.0 - 9.0 % of mass 174	6.3	(7.0) 1
176	95.0 - 101.0 % of mass 174	85.6	(95.8) 1
177	5.0 - 9.0 % of mass 176	5.4	(6.3) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-7415/2	GCCVL19.D	12/19/2016	10:19
	LCS 140-7415/1002	GCCVL19-LCS.d	12/19/2016	10:19
	MB 140-7415/4	GMB500L19.D	12/19/2016	12:46
BLDG-A INFLUENT	140-6564-3	GL19P101.D	12/19/2016	13:29
BLDG-A EFFLUENT	140-6564-1	GL19P102.D	12/19/2016	14:12
BLDG-A MIDGAC	140-6564-2	GL19P103.D	12/19/2016	14:56
BLDG-A MIDGAC DL	140-6564-2 DL	GL19P103DL.D	12/20/2016	03:26
BLDG-A EFFLUENT DL	140-6564-1 DL	GL19P204DL.D	12/20/2016	04:09

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1

SDG No.:

Sample No.: ICIS 140-7384/8 Date Analyzed: 12/08/2016 23:31

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): GxL08IC06.D Heated Purge: (Y/N) N

Calibration ID: 798

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		436534	8.06	1631243	10.23	1662474	15.09
UPPER LIMIT		611148	8.39	2283740	10.56	2327464	15.42
LOWER LIMIT		261920	7.73	978746	9.90	997484	14.76
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-7384/13		455645	8.07	2097795	10.23	2138644	15.09

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1

SDG No.:

Sample No.: CCVIS 140-7415/2 Date Analyzed: 12/19/2016 10:19

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): GCCVL19.D Heated Purge: (Y/N) N

Calibration ID: 802

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		342576	8.06	1699783	10.23	1743044	15.08
UPPER LIMIT		479606	8.39	2379696	10.56	2440262	15.41
LOWER LIMIT		205546	7.73	1019870	9.90	1045826	14.75
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-7415/1002		342576	8.06	1699783	10.23	1743044	15.08
MB 140-7415/4		333718	8.05	1516833	10.22	1534759	15.08
140-6564-3	BLDG-A INFLUENT	351042	8.05	1710226	10.22	1698244	15.08
140-6564-1	BLDG-A EFFLUENT	362910	8.05	1840010	10.22	1841153	15.08
140-6564-2	BLDG-A MIDGAC	358928	8.05	1584331	10.22	1653299	15.08
140-6564-2 DL	BLDG-A MIDGAC DL	378173	8.04	1801821	10.22	1795578	15.08
140-6564-1 DL	BLDG-A EFFLUENT DL	378657	8.05	1817715	10.22	1809217	15.08

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6564-1

SDG No.:

Client Sample ID: BLDG-A EFFLUENT | Lab Sample ID: 140-6564-1

Matrix: Air | Lab File ID: GL19P102.D

Analysis Method: TO 15 LL | Date Collected: 12/14/2016 12:52

Sample wt/vol: 100(mL) | Date Analyzed: 12/19/2016 14:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7415 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.39	J	0.40	0.075
67-66-3	Chloroform	119.38	0.29	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	22		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	6.3		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	30		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.37	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	*1,1,1-Trichloroethane*	*133.41*	*120*	*E*	*0.40*	*0.060*
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.34		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	0.18	J	0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6564-1

SDG No.:

Client Sample ID: BLDG-A EFFLUENT | Lab Sample ID: 140-6564-1

Matrix: Air | Lab File ID: GL19P102.D

Analysis Method: TO 15 LL | Date Collected: 12/14/2016 12:52

Sample wt/vol: 100(mL) | Date Analyzed: 12/19/2016 14:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7415 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4	J	1.4	0.27
67-66-3	Chloroform	119.38	1.4	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	89		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	25		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	120		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.5	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	*1,1,1-Trichloroethane*	*133.41*	*660*	*E*	*2.2*	*0.33*
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.8		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	0.46	J	0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P102.D				
Lims ID:	140-6564-A-1				
Client ID:	BLDG-A EFFLUENT				
Sample Type:	Client				
Inject. Date:	19-Dec-2016 14:12:30	ALS Bottle#:	2	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003721-006				
Misc. Info.:	140-6564-a-1				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	19-Dec-2016 13:29:59	Calib Date:	09-Dec-2016 12:54:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK004				
First Level Reviewer: tajh		Date:	19-Dec-2016 14:57:02		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.050	8.055	-0.005	98	362910	4.00	
* 2 1,4-Difluorobenzene	114	10.223	10.229	-0.006	96	1840010	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.082	15.082	0.000	87	1841153	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.748	16.753	-0.005	96	1270704	4.17	
6 Chlorodifluoromethane	67	3.477	3.477	0.000	96	2297	0.0772	
8 Dichlorodifluoromethane	85	3.531	3.531	0.000	100	33606	0.1082	
12 Vinyl chloride	62	3.828	3.828	0.000	97	3938	0.0360	
27 1,1-Dichloroethene	96	5.392	5.397	-0.005	96	540207	6.09	
31 Methylene Chloride	84	5.699	5.704	-0.005	96	18231	0.2362	
34 trans-1,2-Dichloroethene	96	6.432	6.443	-0.011	94	7731	0.0741	
37 1,1-Dichloroethane	63	6.821	6.826	-0.005	100	245865	1.26	
42 cis-1,2-Dichloroethene	96	7.748	7.748	0.000	97	474400	4.48	
44 Chloroform	83	8.072	8.077	-0.005	94	13324	0.0585	
47 1,1,1-Trichloroethane	97	9.053	9.058	-0.005	94	6000988	24.2	E
59 Trichloroethene	130	10.956	10.957	-0.001	94	13047	0.0678	
68 Toluene	91	13.076	13.076	0.000	94	36353	0.0987	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

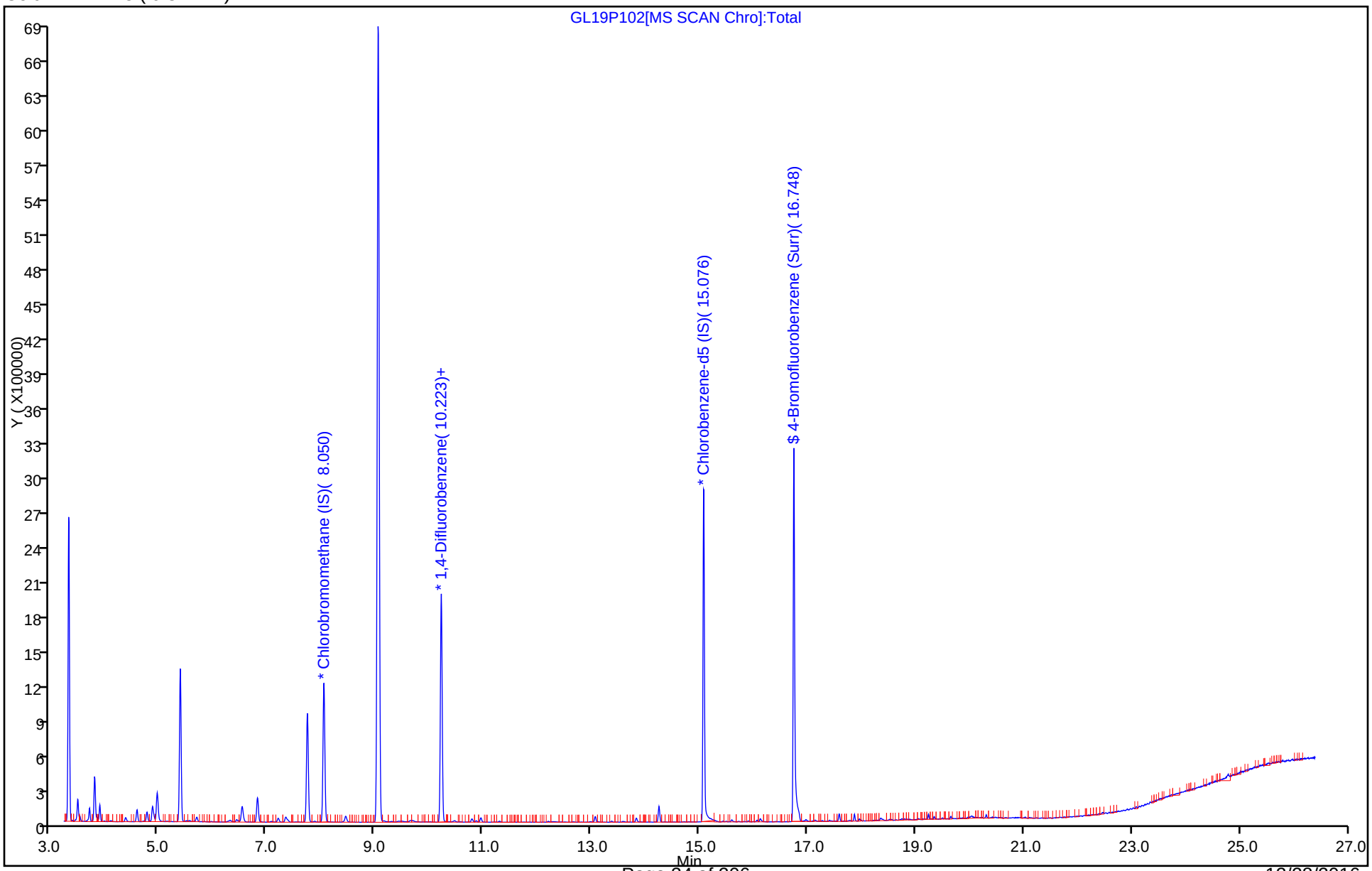
Report Date: 19-Dec-2016 15:30:09 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P102.D

Injection Date:	19-Dec-2016 14:12:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-6564-A-1	Lab Sample ID:	140-6564-1	Worklist Smp#:	6
Client ID:	BLDG-A EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P102.D				
Lims ID:	140-6564-A-1				
Client ID:	BLDG-A EFFLUENT				
Sample Type:	Client				
Inject. Date:	19-Dec-2016 14:12:30	ALS Bottle#:	2	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003721-006				
Misc. Info.:	140-6564-a-1				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	19-Dec-2016 13:29:59	Calib Date:	09-Dec-2016 12:54:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK004				

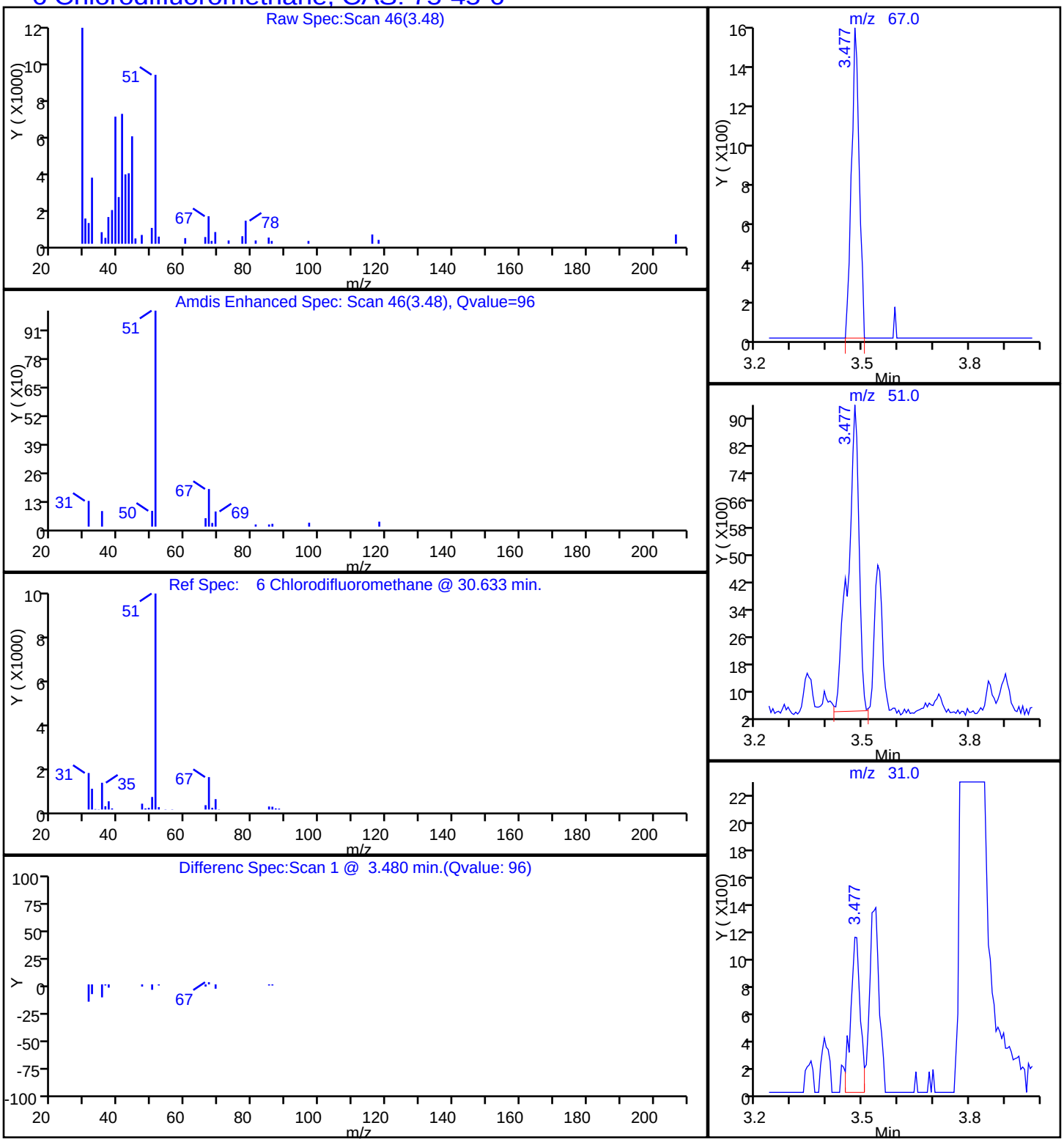
First Level Reviewer: tajh Date: 19-Dec-2016 14:57:02

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.17	104.33

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P102.D				
Injection Date:	19-Dec-2016 14:12:30	Instrument ID:	MG		
Lims ID:	140-6564-A-1	Lab Sample ID:	140-6564-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	2	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

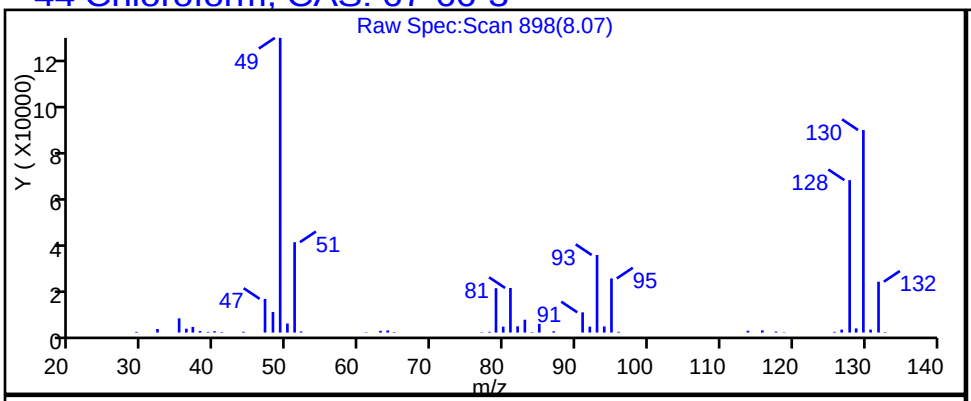
6 Chlorodifluoromethane, CAS: 75-45-6

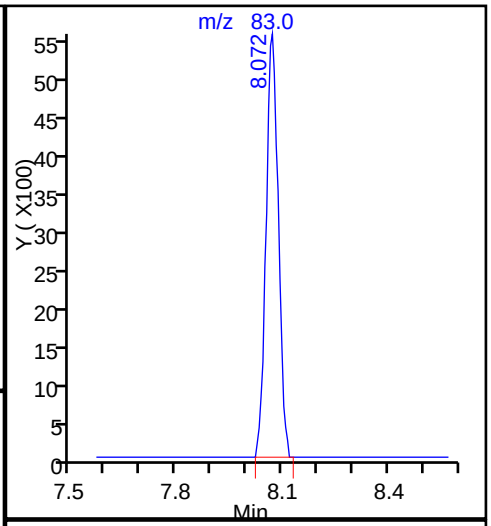


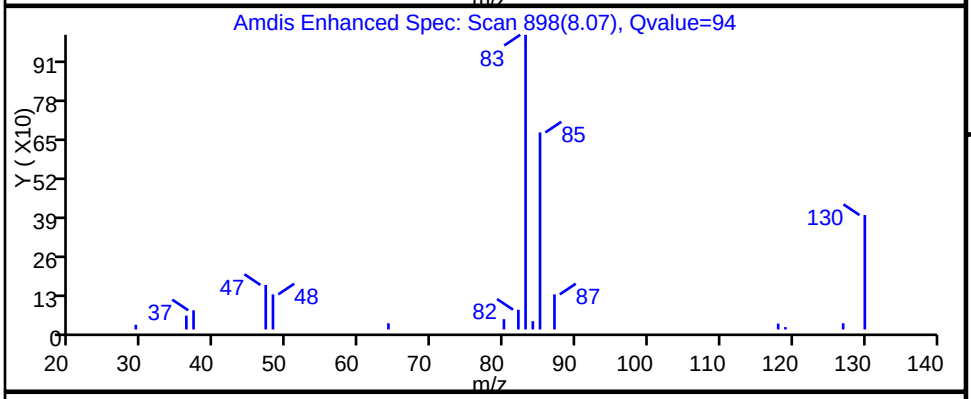
TestAmerica Knoxville

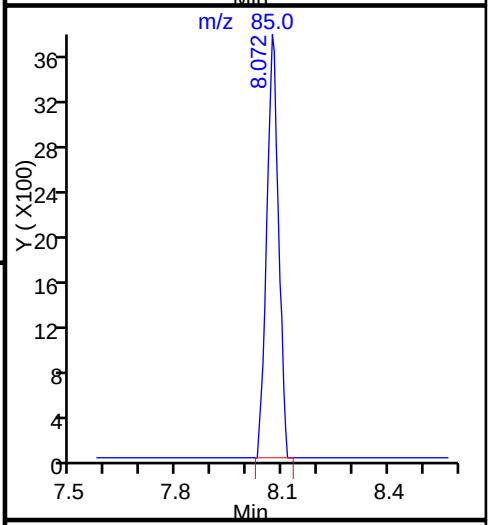
Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P102.D				
Injection Date:	19-Dec-2016 14:12:30	Instrument ID:	MG		
Lims ID:	140-6564-A-1	Lab Sample ID:	140-6564-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	2	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

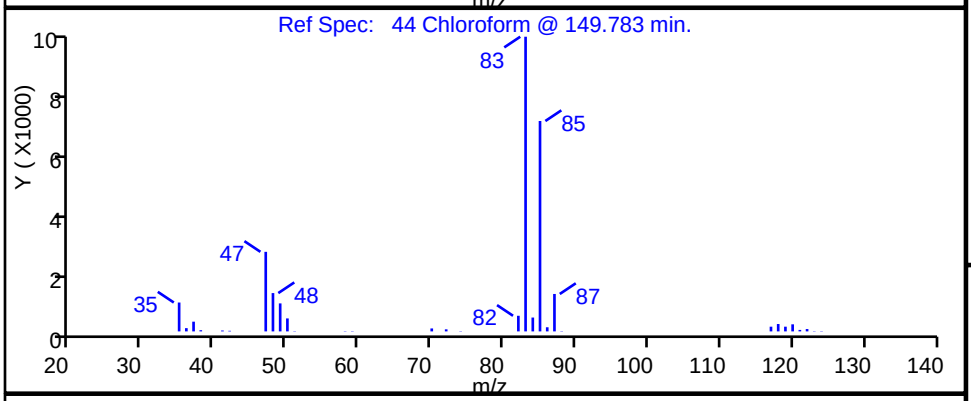
44 Chloroform, CAS: 67-66-3

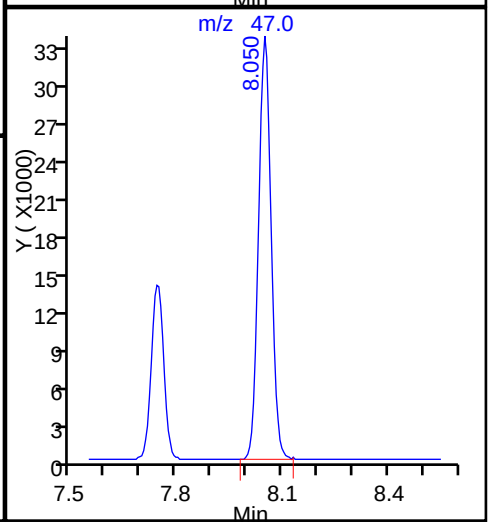


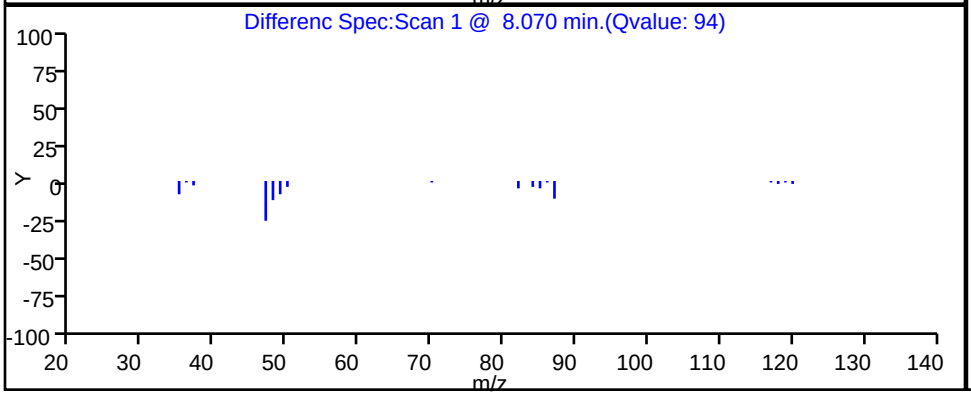








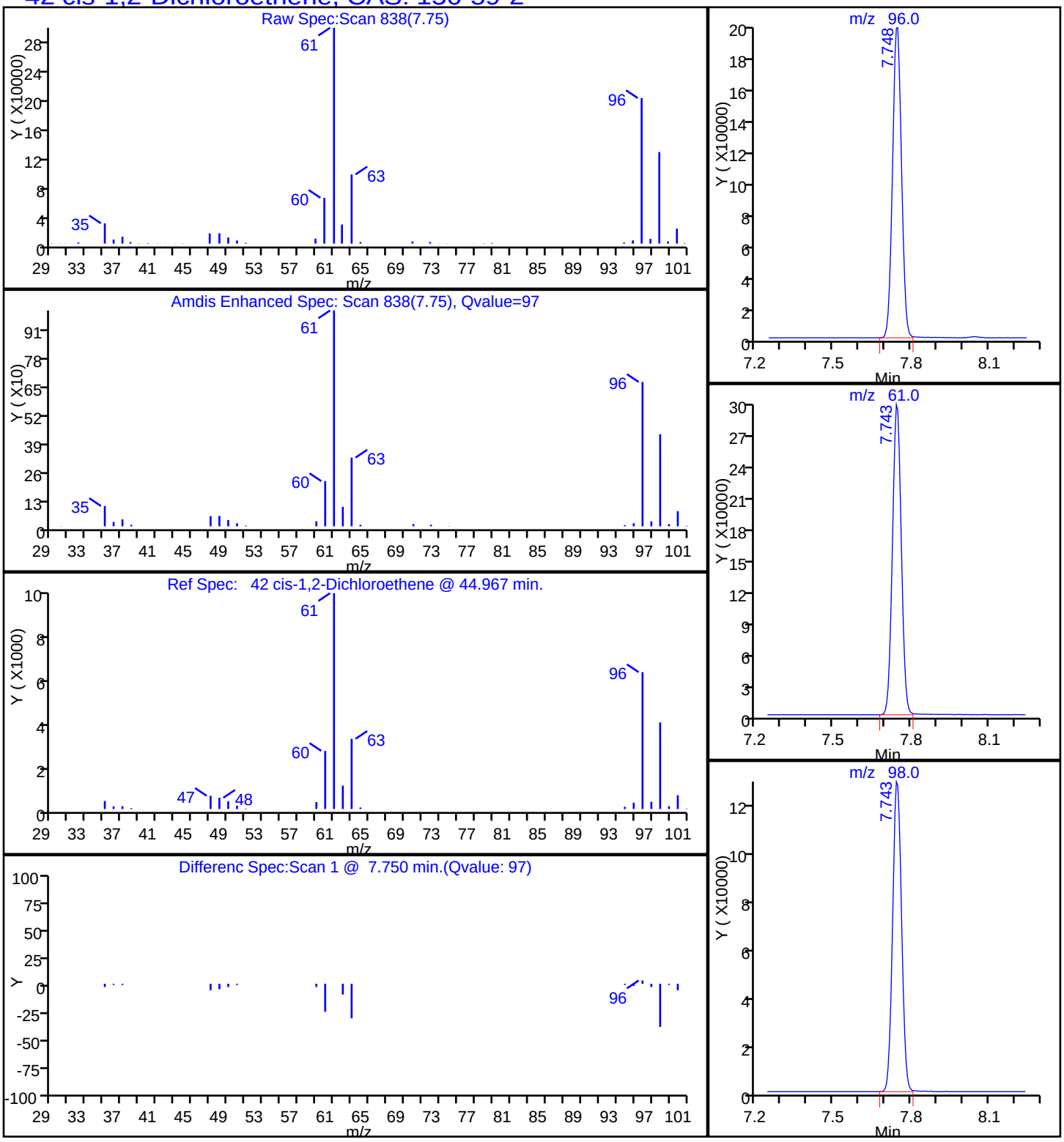




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P102.D				
Injection Date:	19-Dec-2016 14:12:30	Instrument ID:	MG		
Lims ID:	140-6564-A-1	Lab Sample ID:	140-6564-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	2	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

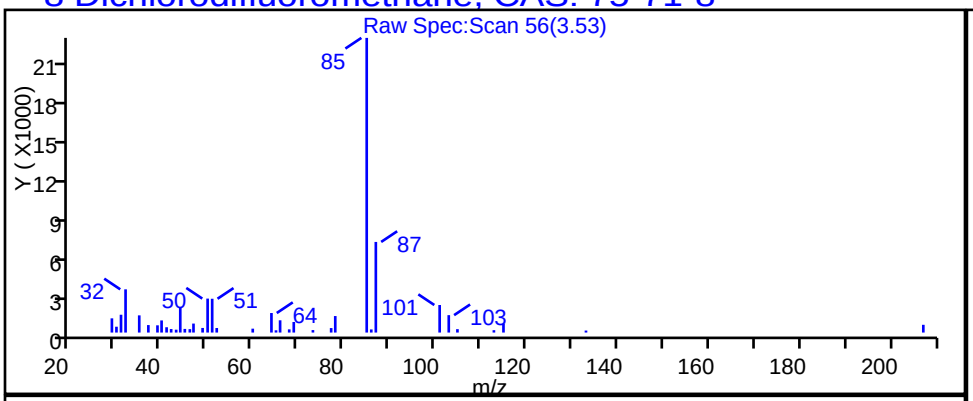
42 cis-1,2-Dichloroethene, CAS: 156-59-2

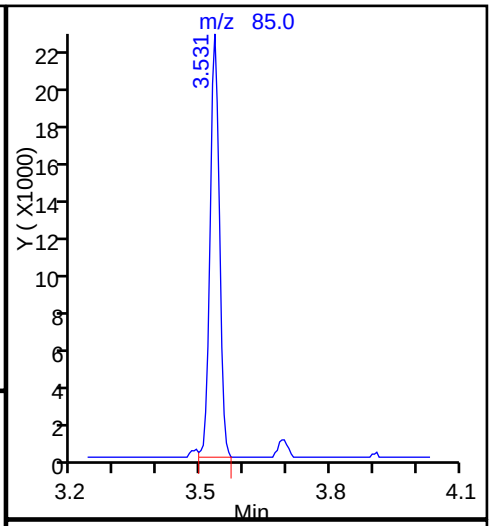


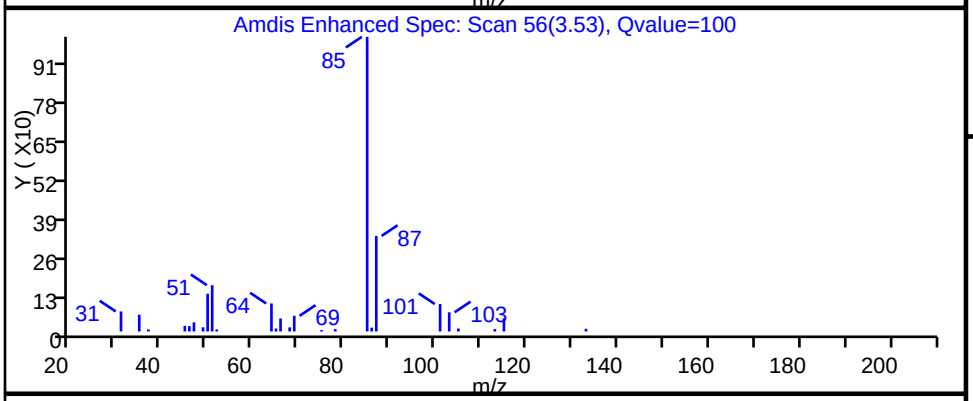
TestAmerica Knoxville

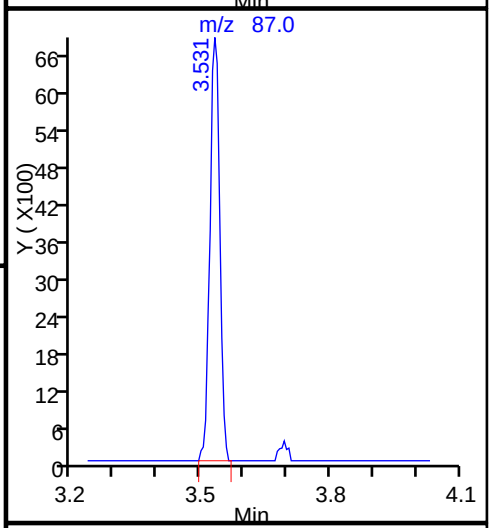
Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P102.D				
Injection Date:	19-Dec-2016 14:12:30	Instrument ID:	MG		
Lims ID:	140-6564-A-1	Lab Sample ID:	140-6564-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	2	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

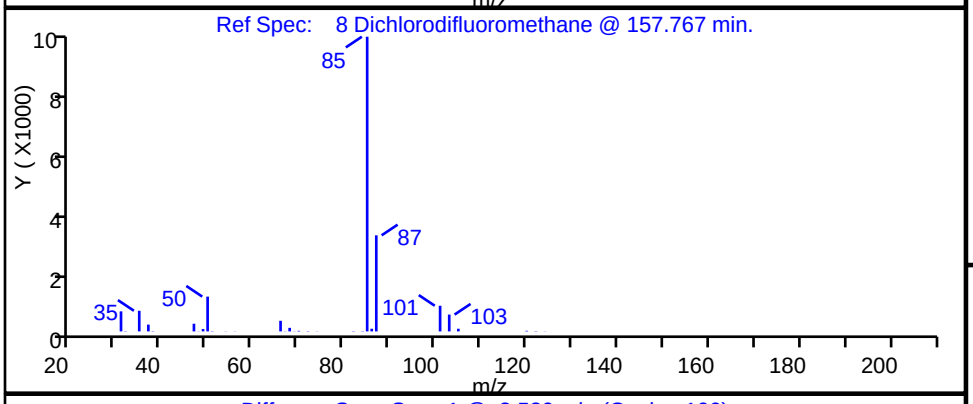
8 Dichlorodifluoromethane, CAS: 75-71-8

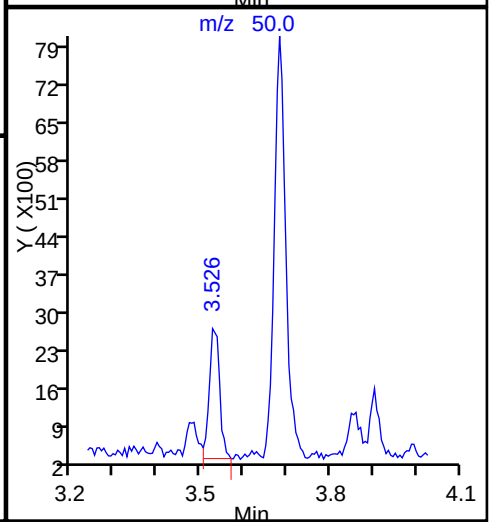


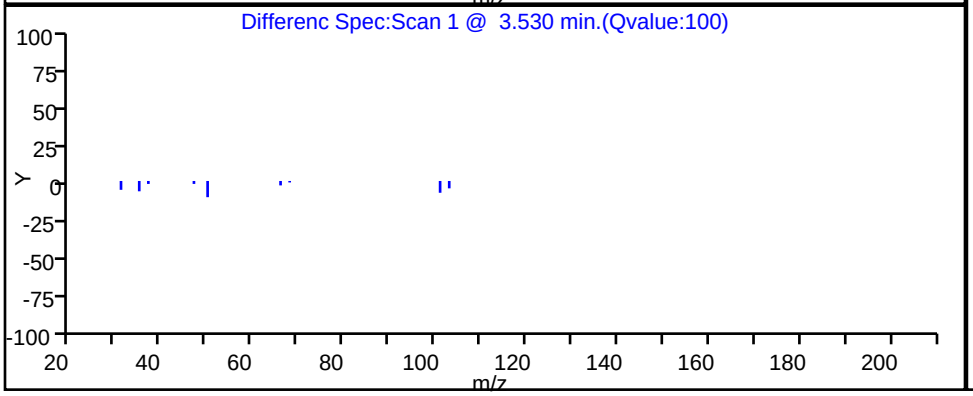








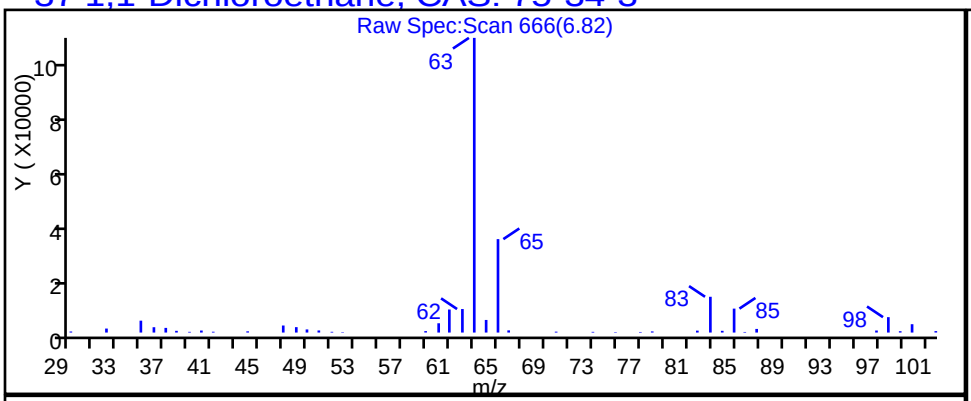


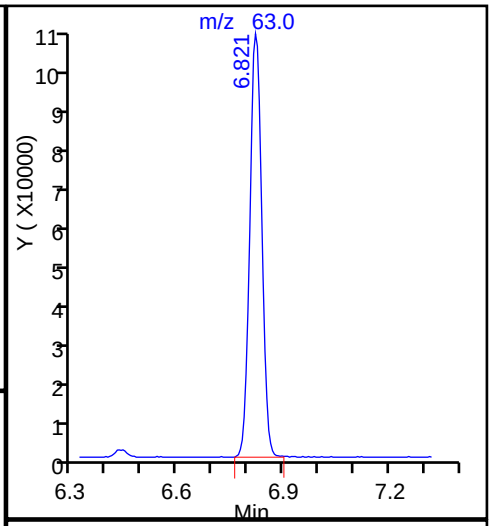


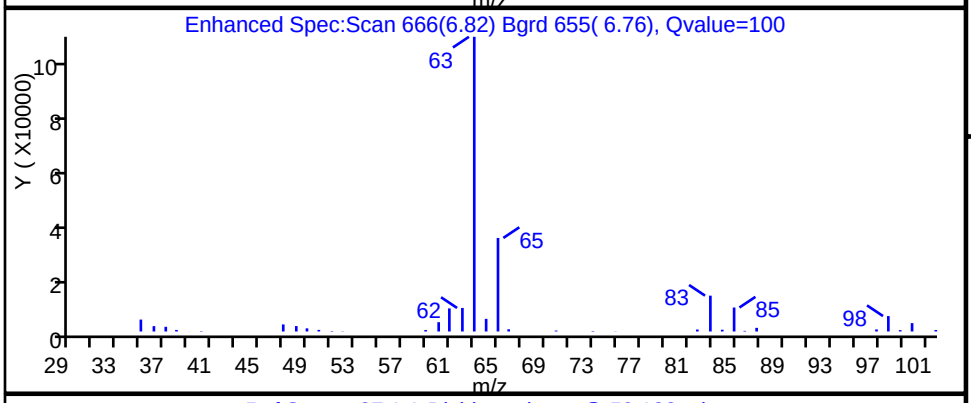
TestAmerica Knoxville

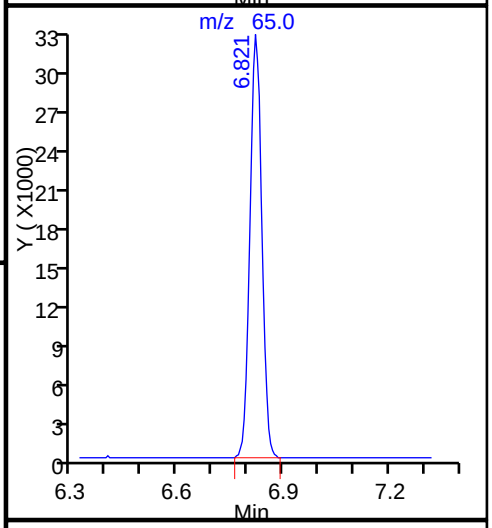
Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P102.D		
Injection Date:	19-Dec-2016 14:12:30	Instrument ID:	MG
Lims ID:	140-6564-A-1	Lab Sample ID:	140-6564-1
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	2 Worklist Smp#: 6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

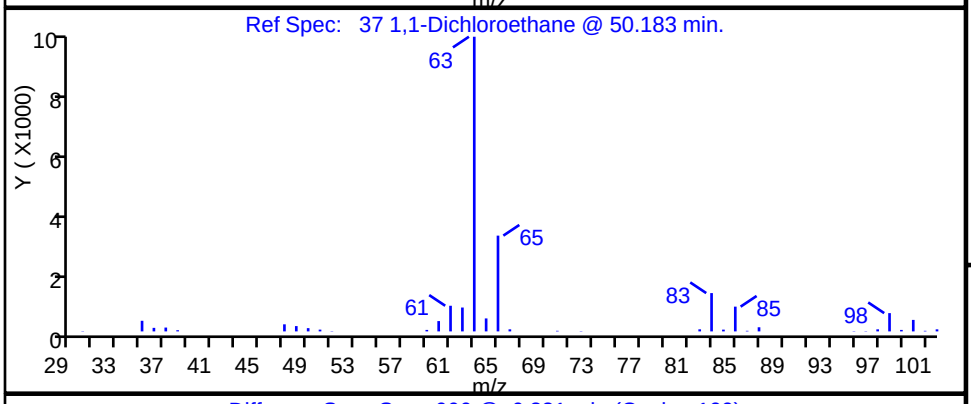
37 1,1-Dichloroethane, CAS: 75-34-3

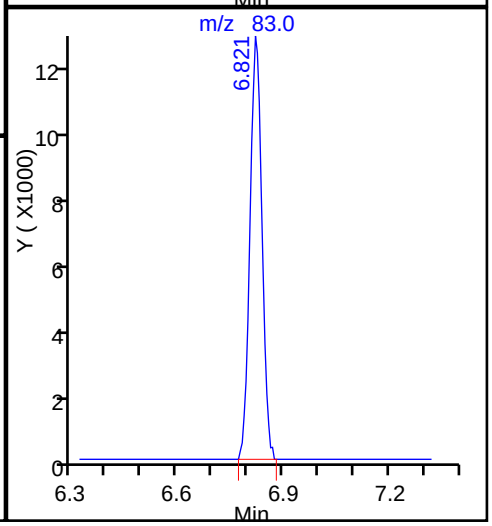


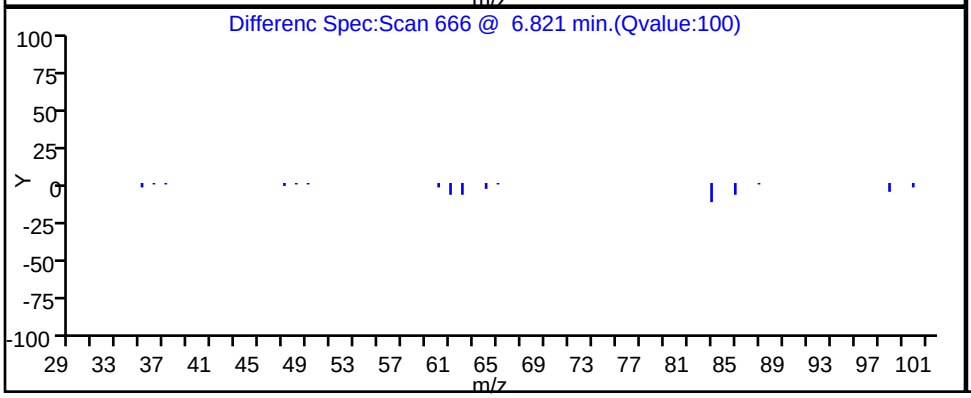








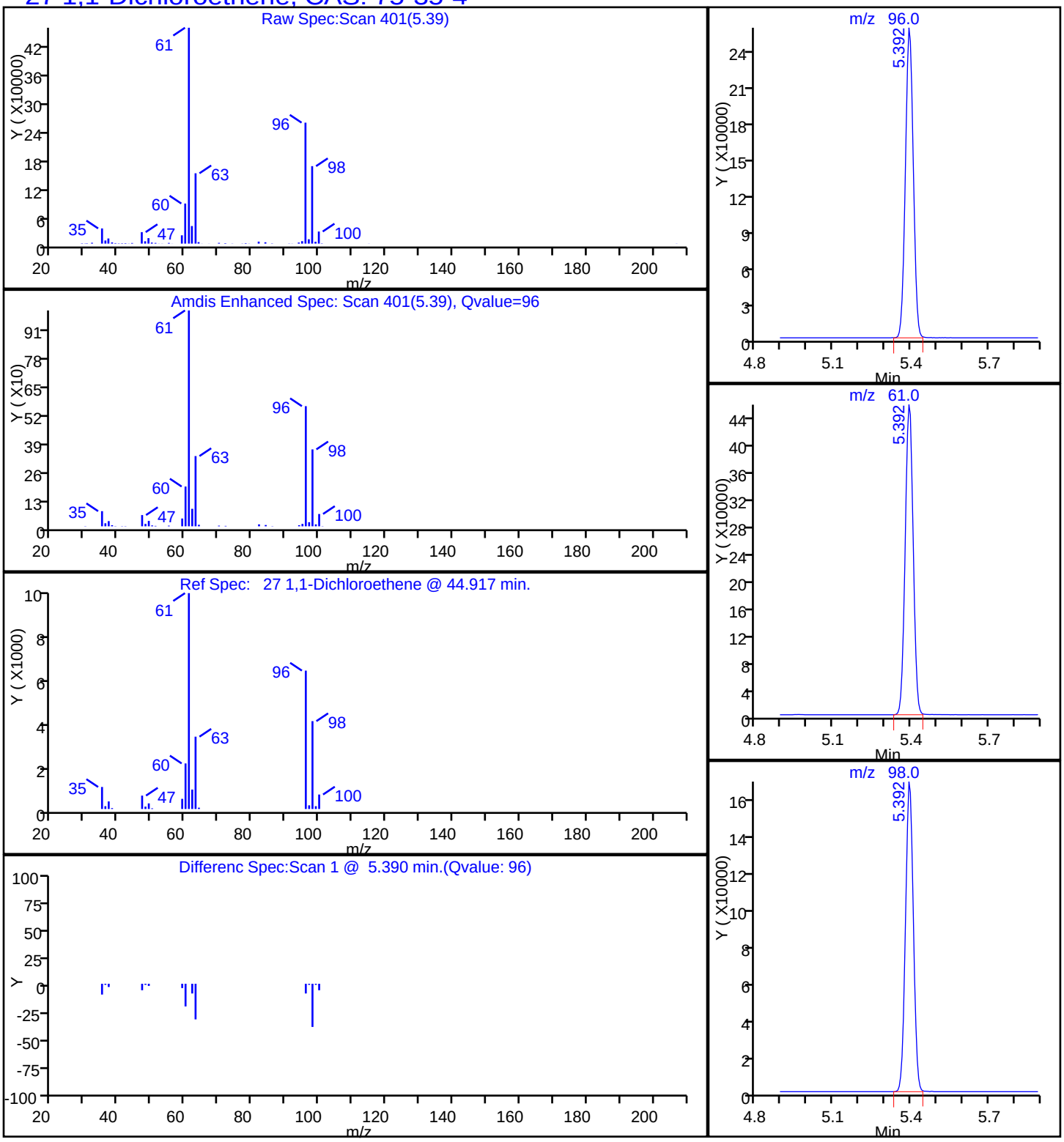




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P102.D				
Injection Date:	19-Dec-2016 14:12:30	Instrument ID:	MG		
Lims ID:	140-6564-A-1	Lab Sample ID:	140-6564-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	2	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

27 1,1-Dichloroethene, CAS: 75-35-4

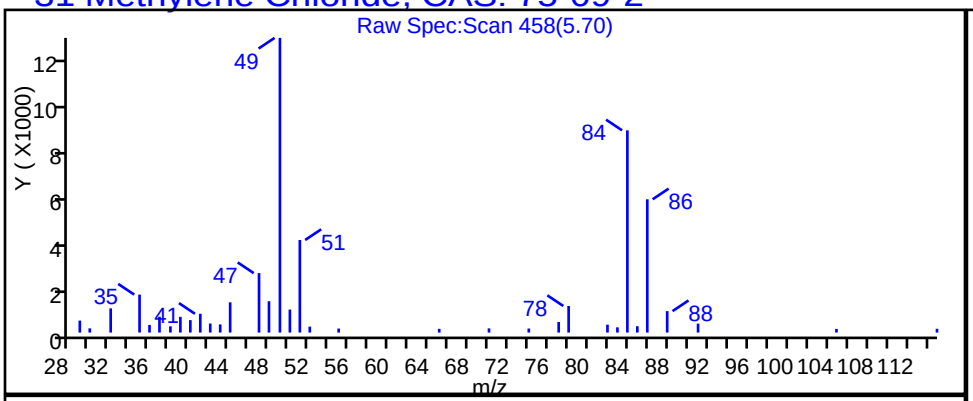


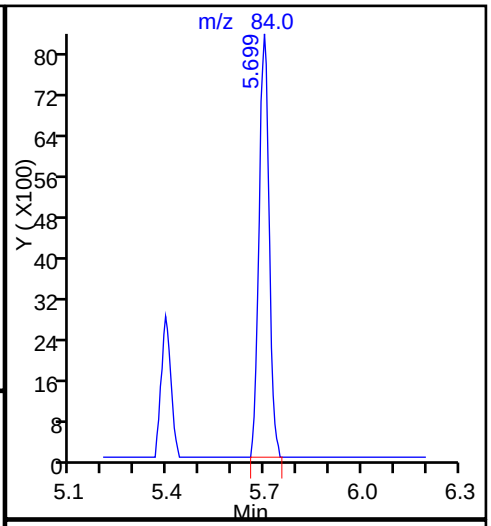
Report Date: 19-Dec-2016 15:30:09 Chrom Revision: 2.2 05-Dec-2016 12:37:22

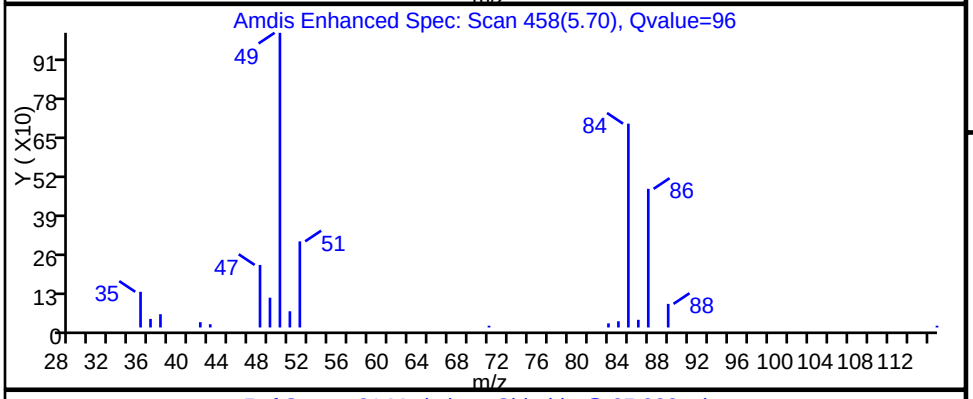
TestAmerica Knoxville

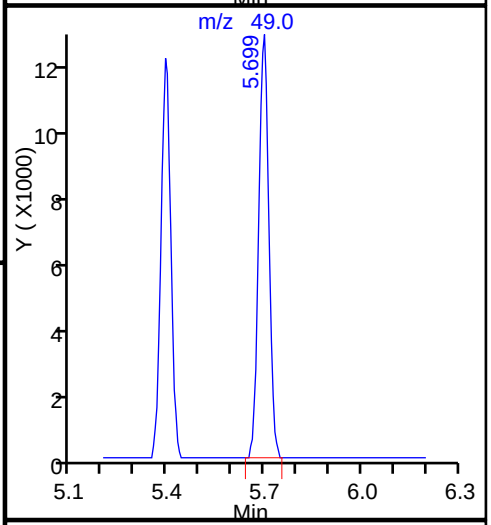
Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P102.D				
Injection Date:	19-Dec-2016 14:12:30	Instrument ID:	MG		
Lims ID:	140-6564-A-1	Lab Sample ID:	140-6564-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	2	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

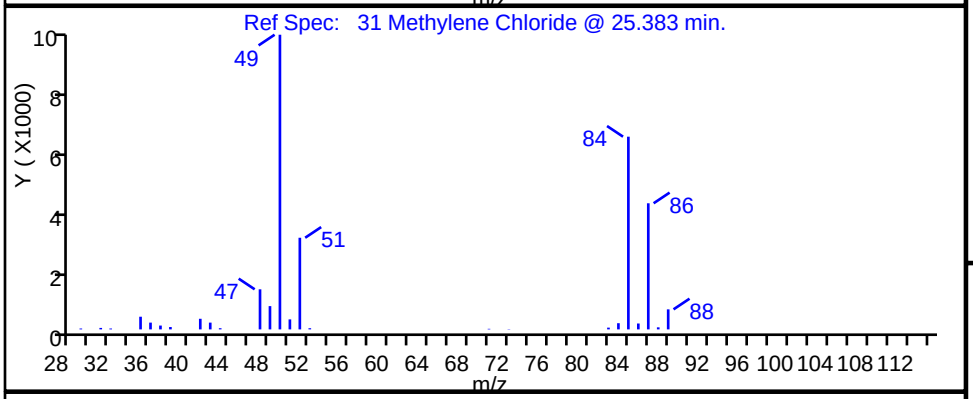
31 Methylene Chloride, CAS: 75-09-2

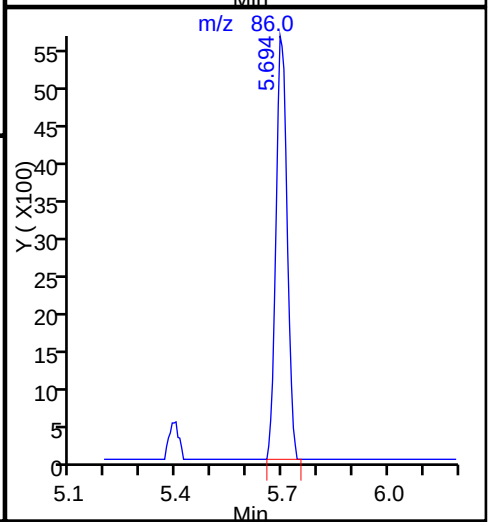


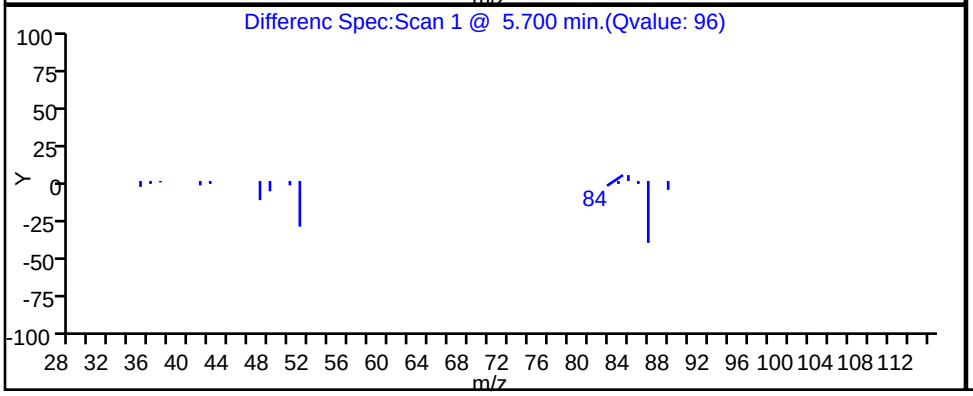












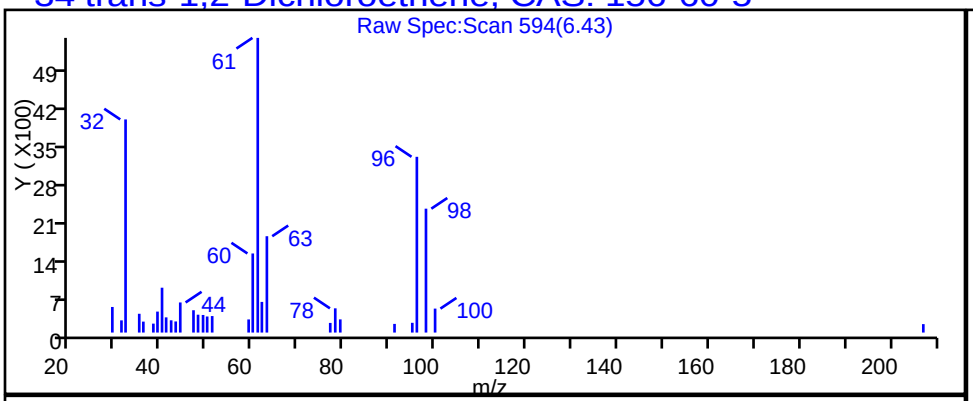
Report Date: 19-Dec-2016 15:30:09 Chrom Revision: 2.2 05-Dec-2016 12:37:22

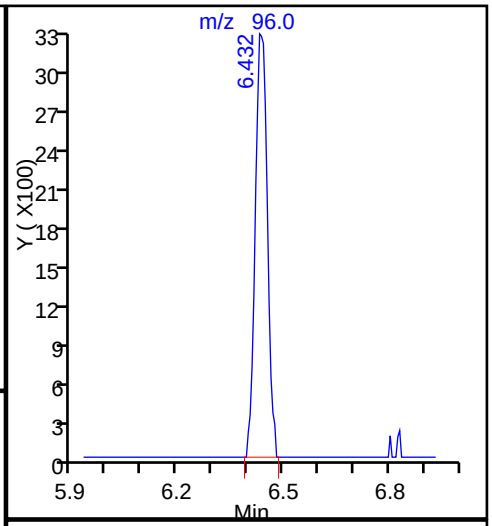
TestAmerica Knoxville

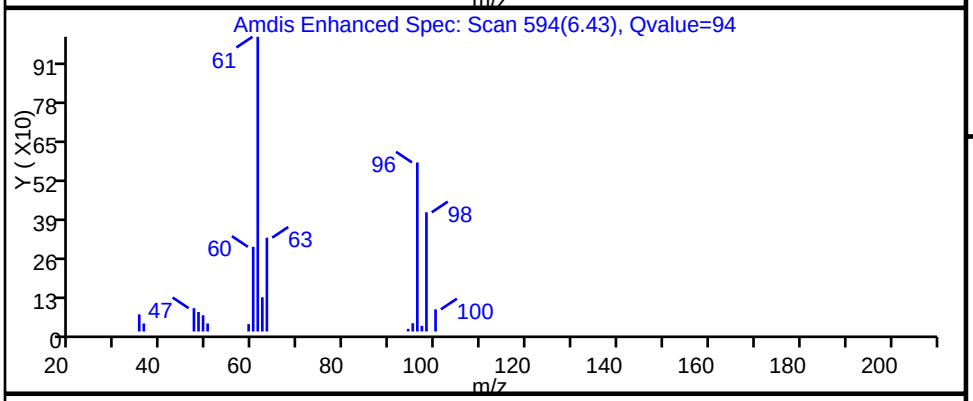
Data File: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P102.D

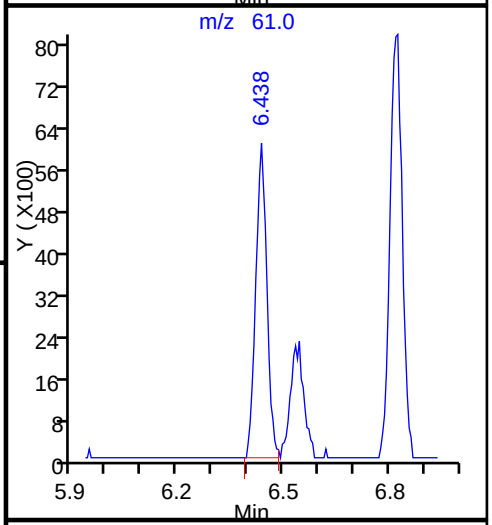
Injection Date:	19-Dec-2016 14:12:30	Instrument ID:	MG		
Lims ID:	140-6564-A-1	Lab Sample ID:	140-6564-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	2	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

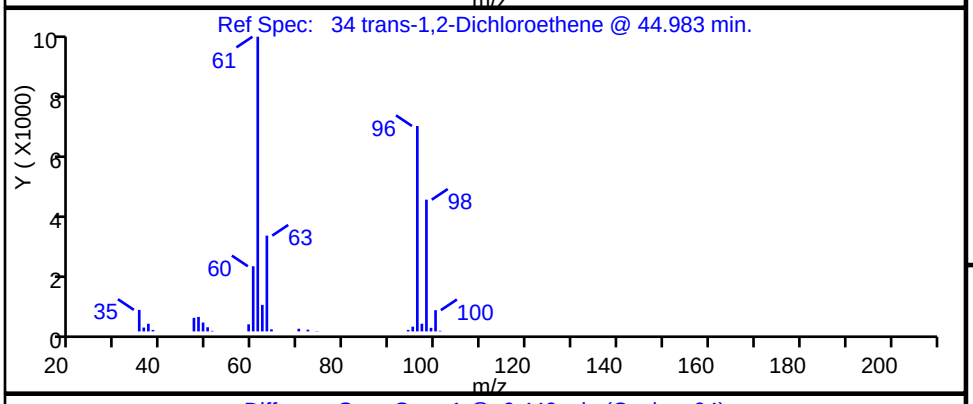
34 trans-1,2-Dichloroethene, CAS: 156-60-5

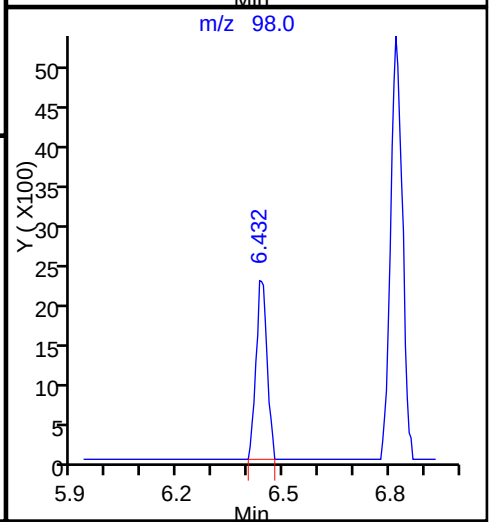


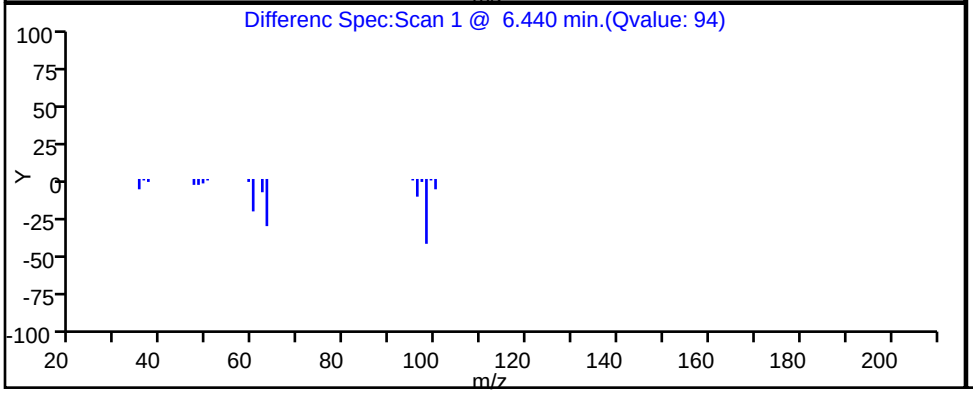








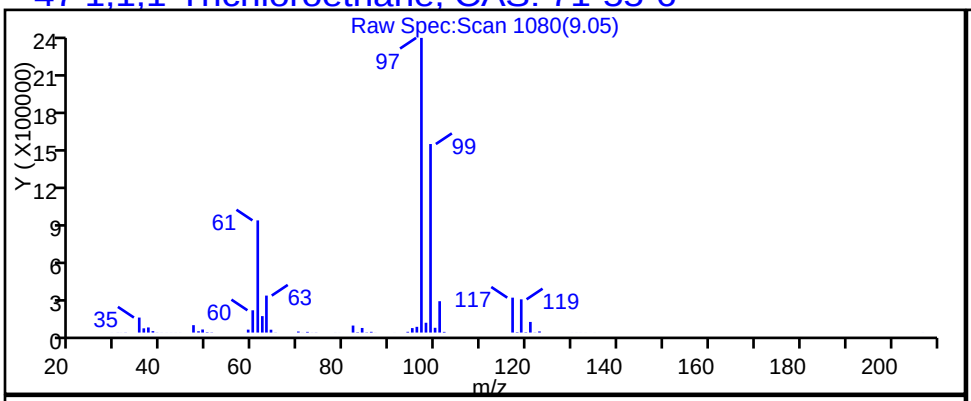


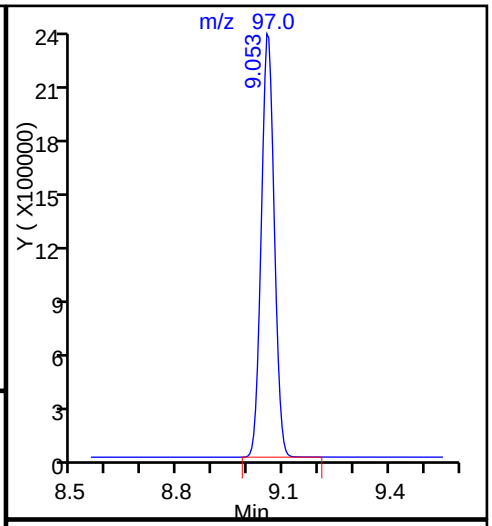


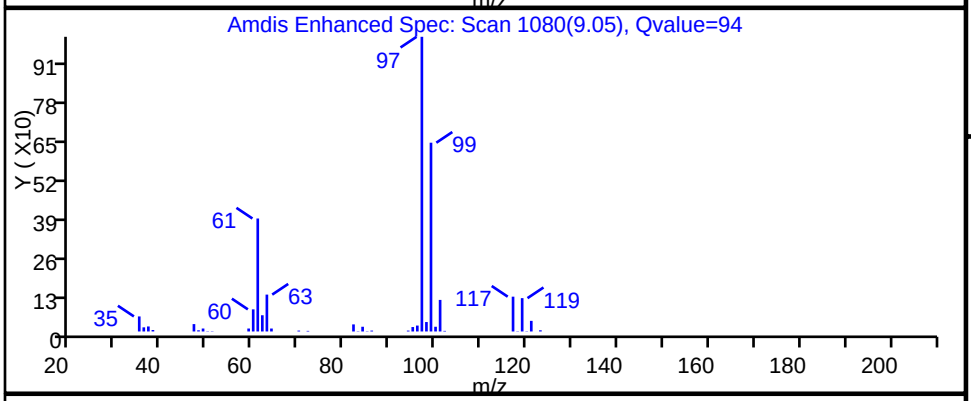
TestAmerica Knoxville

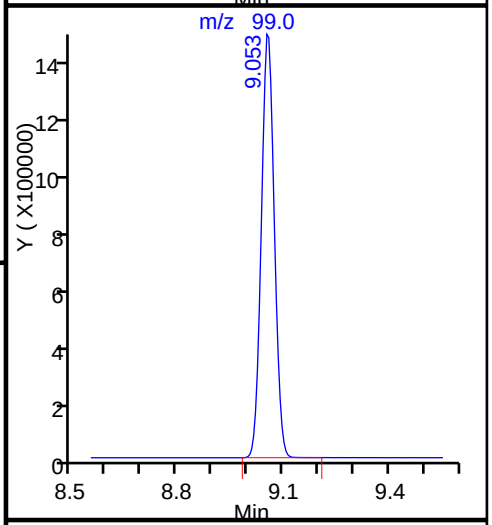
Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P102.D				
Injection Date:	19-Dec-2016 14:12:30	Instrument ID:	MG		
Lims ID:	140-6564-A-1	Lab Sample ID:	140-6564-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	2	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

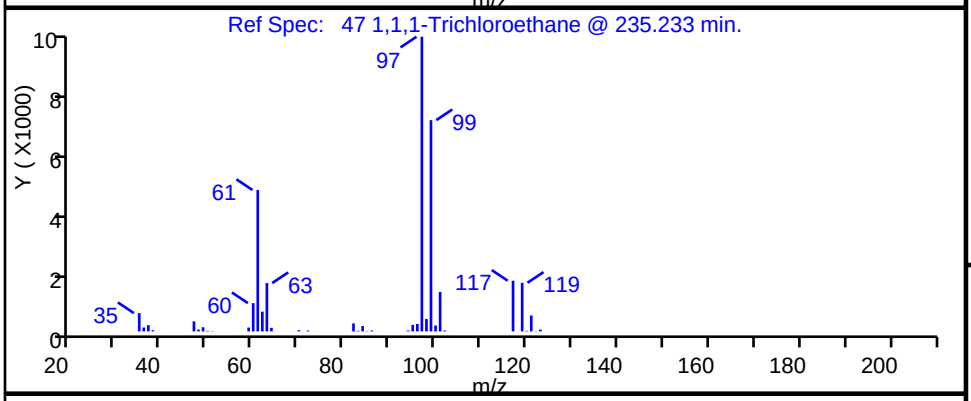
47 1,1,1-Trichloroethane, CAS: 71-55-6

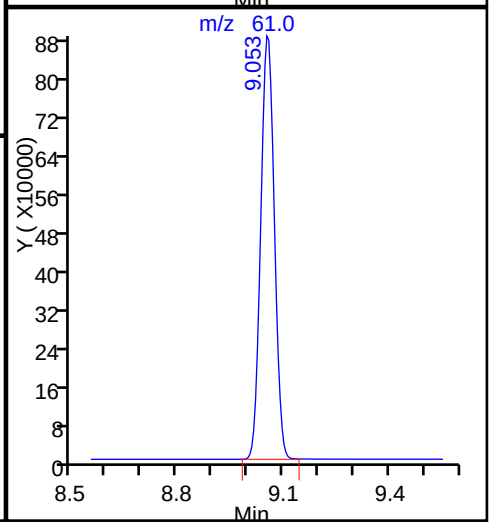


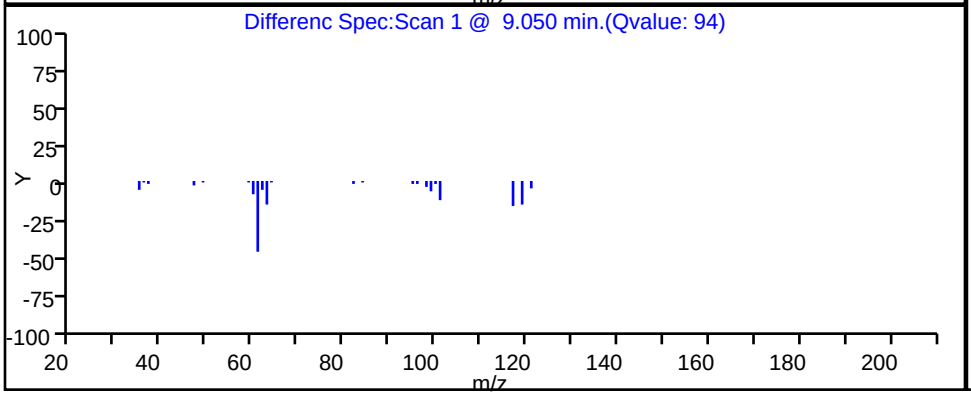








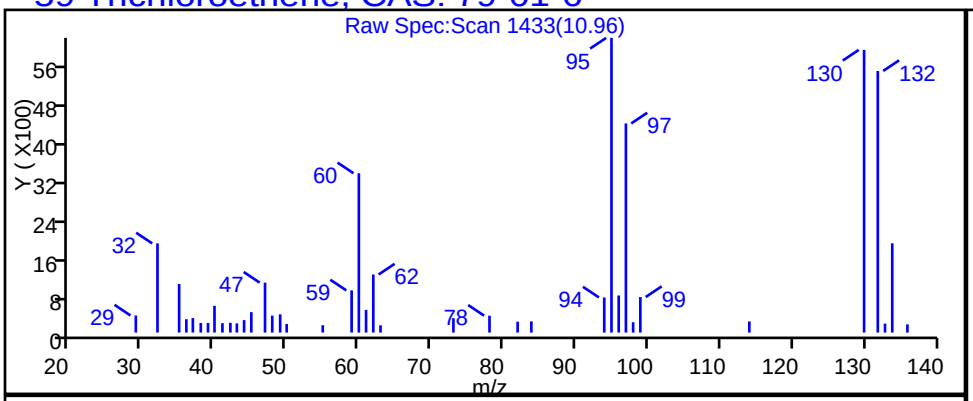


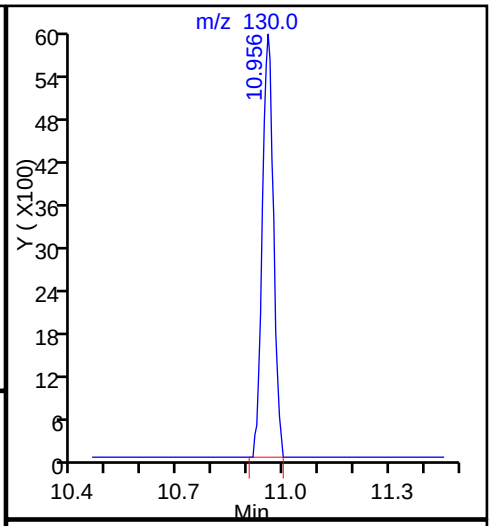


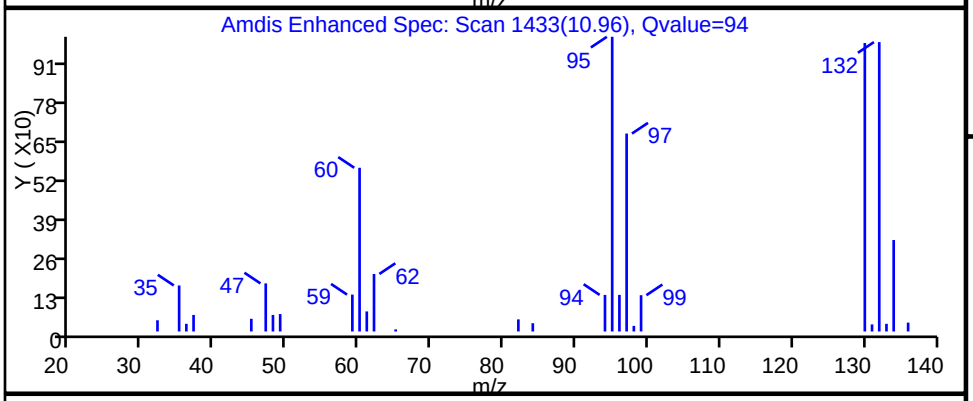
TestAmerica Knoxville

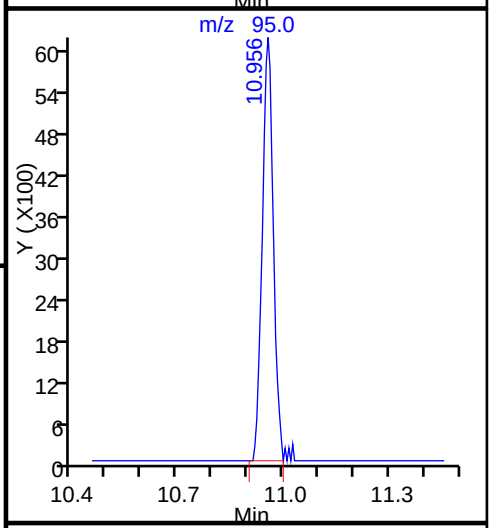
Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P102.D				
Injection Date:	19-Dec-2016 14:12:30	Instrument ID:	MG		
Lims ID:	140-6564-A-1	Lab Sample ID:	140-6564-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	2	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

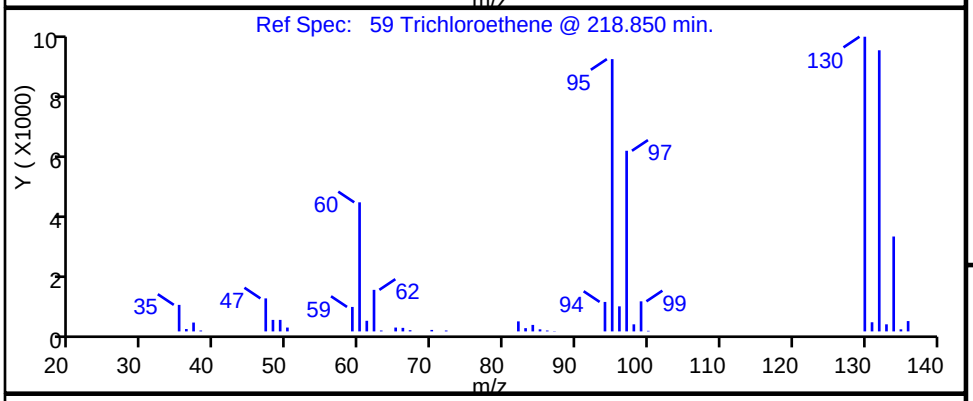
59 Trichloroethene, CAS: 79-01-6

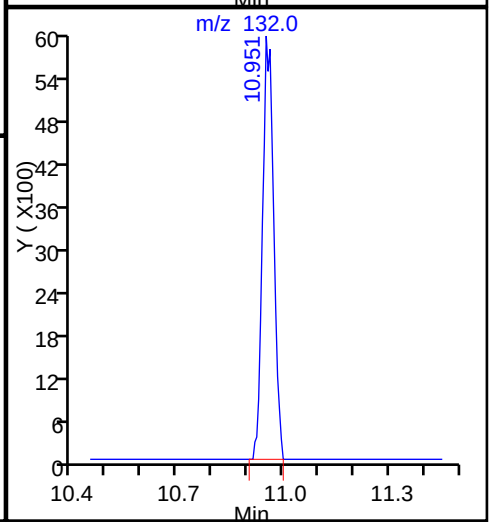


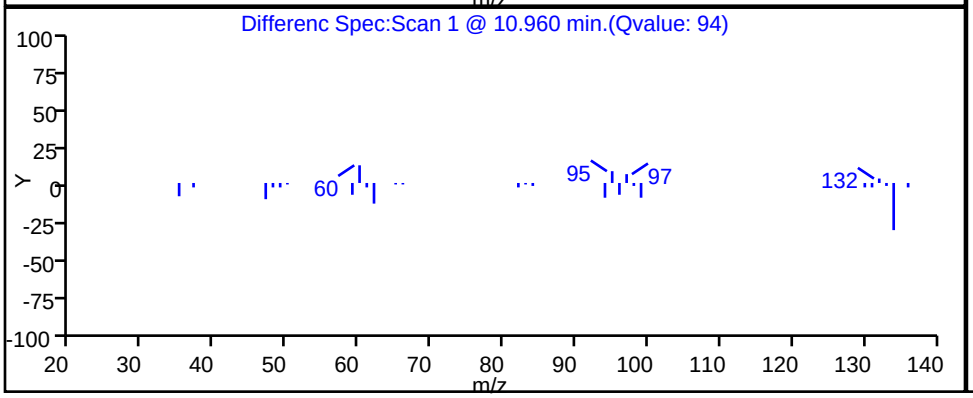








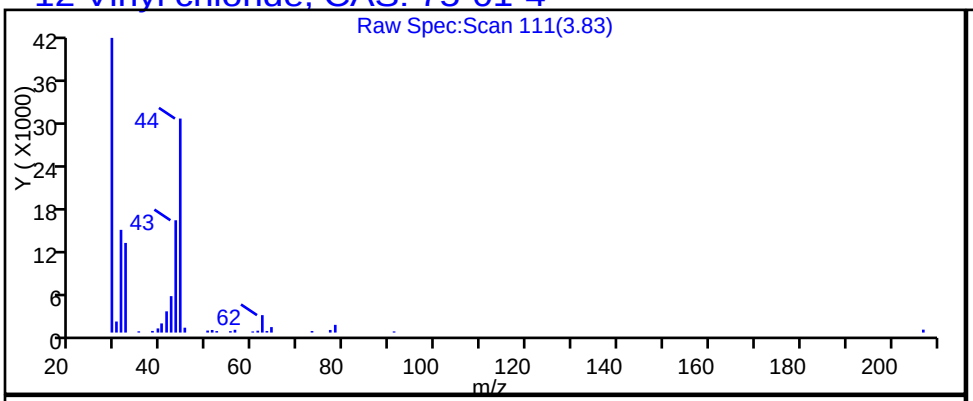


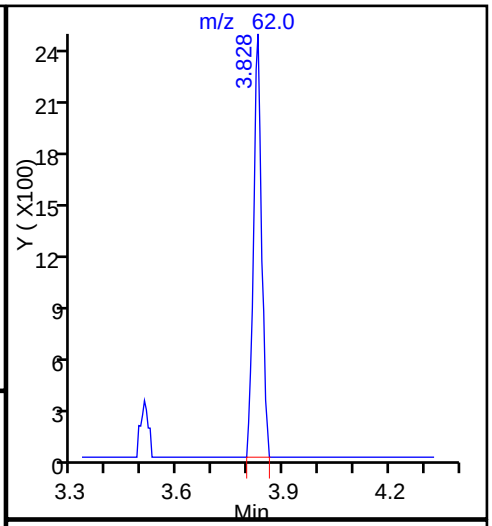


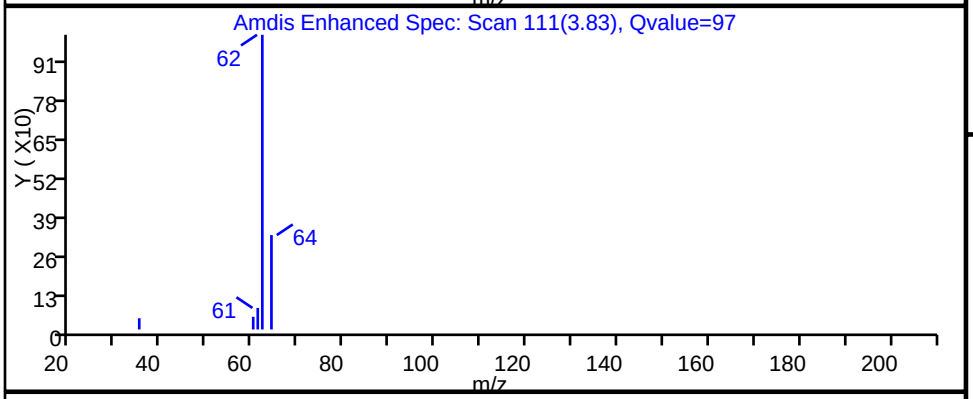
TestAmerica Knoxville

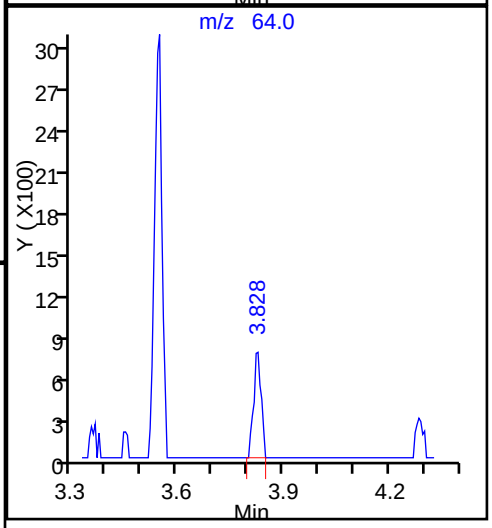
Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P102.D		
Injection Date:	19-Dec-2016 14:12:30	Instrument ID:	MG
Lims ID:	140-6564-A-1	Lab Sample ID:	140-6564-1
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	2 Worklist Smp#: 6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

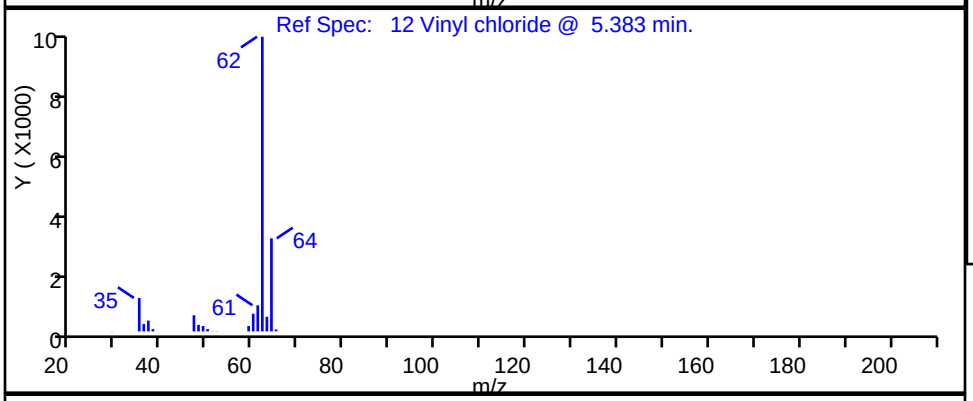
12 Vinyl chloride, CAS: 75-01-4

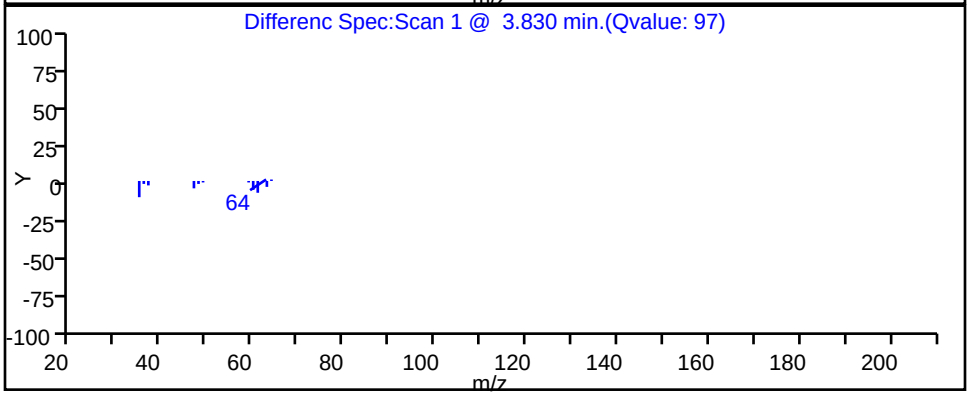












FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1

SDG No.:

Client Sample ID: BLDG-A EFFLUENT DL Lab Sample ID: 140-6564-1 DL

Matrix: Air Lab File ID: GL19P204DL.D

Analysis Method: TO 15 LL Date Collected: 12/14/2016 12:52

Sample wt/vol: 25(mL) Date Analyzed: 12/20/2016 04:09

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7415 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	133.41	120		1.6	0.24

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1

SDG No.:

Client Sample ID: BLDG-A EFFLUENT DL Lab Sample ID: 140-6564-1 DL

Matrix: Air Lab File ID: GL19P204DL.D

Analysis Method: TO 15 LL Date Collected: 12/14/2016 12:52

Sample wt/vol: 25(mL) Date Analyzed: 12/20/2016 04:09

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7415 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	133.41	640		8.7	1.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P204DL.D				
Lims ID:	140-6564-A-1				
Client ID:	BLDG-A EFFLUENT				
Sample Type:	Client				
Inject. Date:	20-Dec-2016 04:09:30	ALS Bottle#:	2	Worklist Smp#:	24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003721-024				
Misc. Info.:	140-6564-a-1				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Dec-2016 10:06:46	Calib Date:	09-Dec-2016 12:54:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK032				
First Level Reviewer: tajh		Date:	20-Dec-2016 10:06:20		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.050	8.055	-0.005	98	378657	4.00	
* 2 1,4-Difluorobenzene	114	10.218	10.229	-0.011	96	1817715	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.076	15.082	-0.006	88	1809217	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.748	16.753	-0.005	93	1235333	4.13	
6 Chlorodifluoromethane	67	3.477	3.477	0.000	96	709	0.0228	
8 Dichlorodifluoromethane	85	3.531	3.531	0.000	98	9022	0.0278	
27 1,1-Dichloroethene	96	5.392	5.397	-0.005	96	149940	1.62	
31 Methylene Chloride	84	5.699	5.704	-0.005	97	9876	0.1226	
37 1,1-Dichloroethane	63	6.821	6.826	-0.005	100	56371	0.2758	
42 cis-1,2-Dichloroethene	96	7.743	7.748	-0.005	97	108411	0.9818	
47 1,1,1-Trichloroethane	97	9.053	9.058	-0.005	95	1510637	5.83	
48 1,2-Dichloroethane	62	9.053	9.150	-0.097	41	91387	0.5393	
59 Trichloroethene	130	10.957	10.957	-0.001	93	3066	0.0161	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

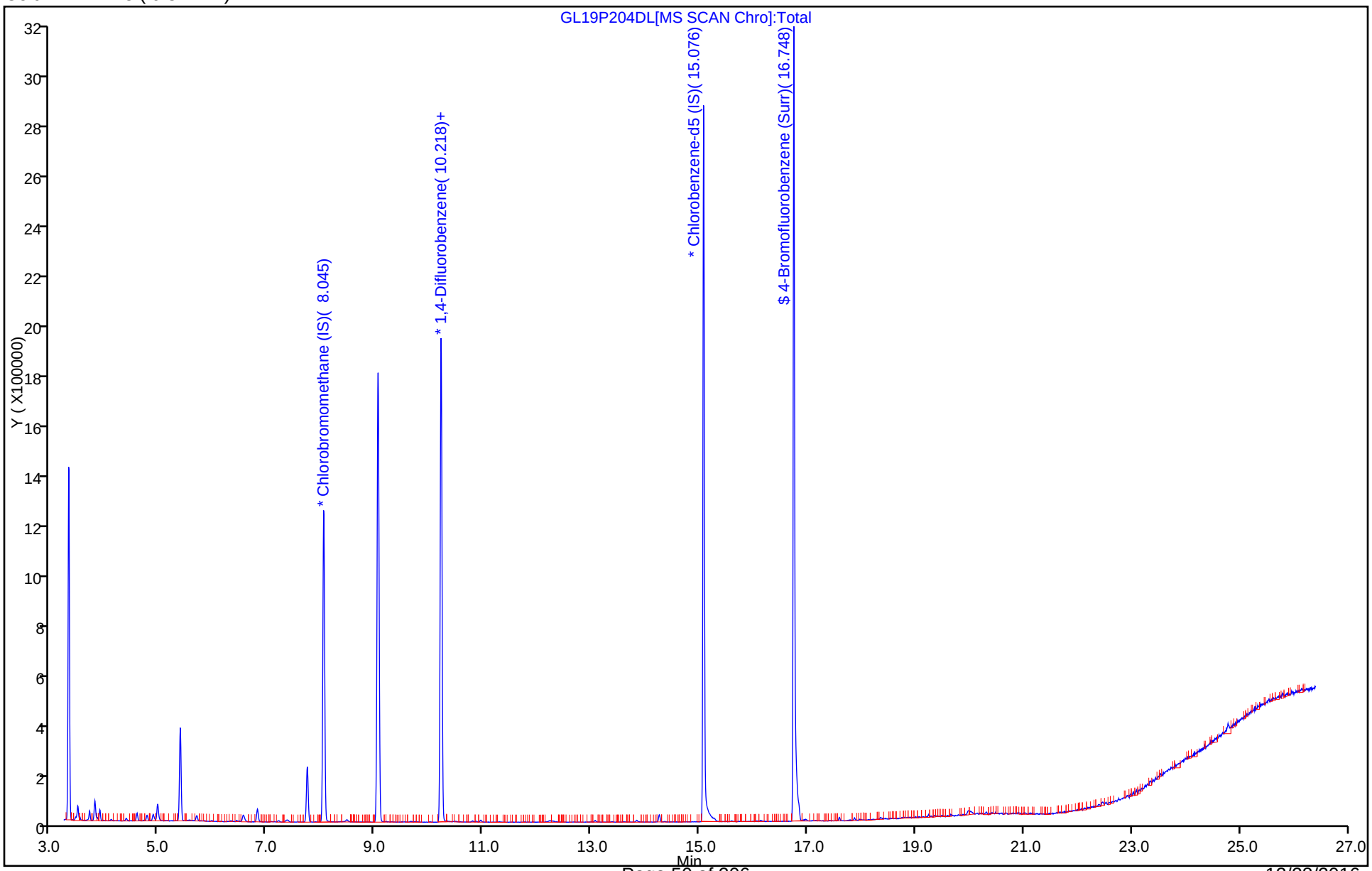
Report Date: 20-Dec-2016 10:07:50 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P204DL.D

Injection Date:	20-Dec-2016 04:09:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-6564-A-1	Lab Sample ID:	140-6564-1	Worklist Smp#:	24
Client ID:	BLDG-A EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

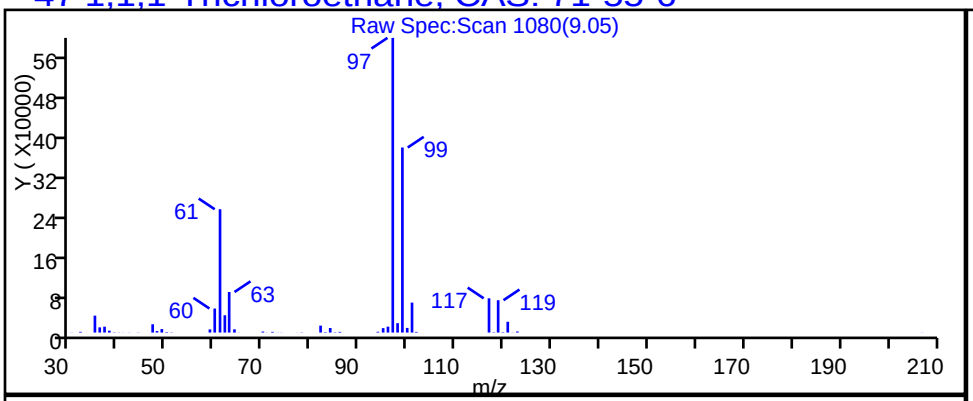
Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P204DL.D				
Lims ID:	140-6564-A-1				
Client ID:	BLDG-A EFFLUENT				
Sample Type:	Client				
Inject. Date:	20-Dec-2016 04:09:30	ALS Bottle#:	2	Worklist Smp#:	24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003721-024				
Misc. Info.:	140-6564-a-1				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Dec-2016 10:06:46	Calib Date:	09-Dec-2016 12:54:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK032				
First Level Reviewer: tajh		Date:	20-Dec-2016 10:06:20		

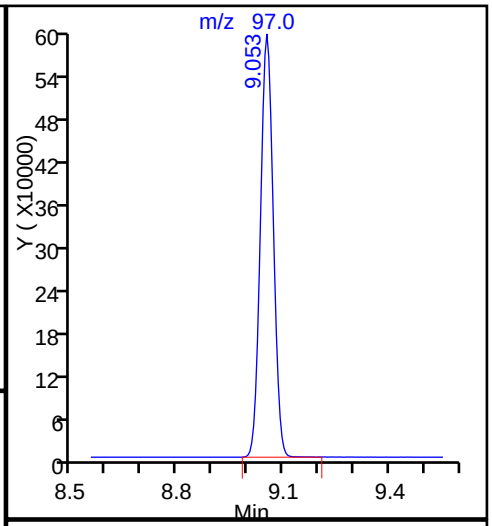
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.13	103.22

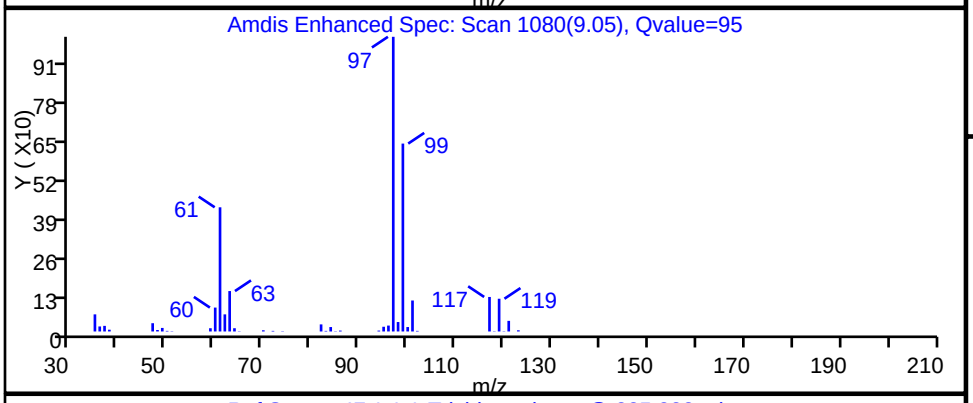
TestAmerica Knoxville

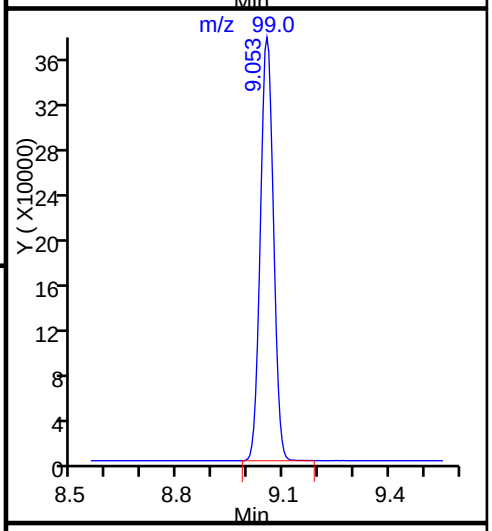
Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P204DL.D				
Injection Date:	20-Dec-2016 04:09:30	Instrument ID:	MG		
Lims ID:	140-6564-A-1	Lab Sample ID:	140-6564-1		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	2	Worklist Smp#:	24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

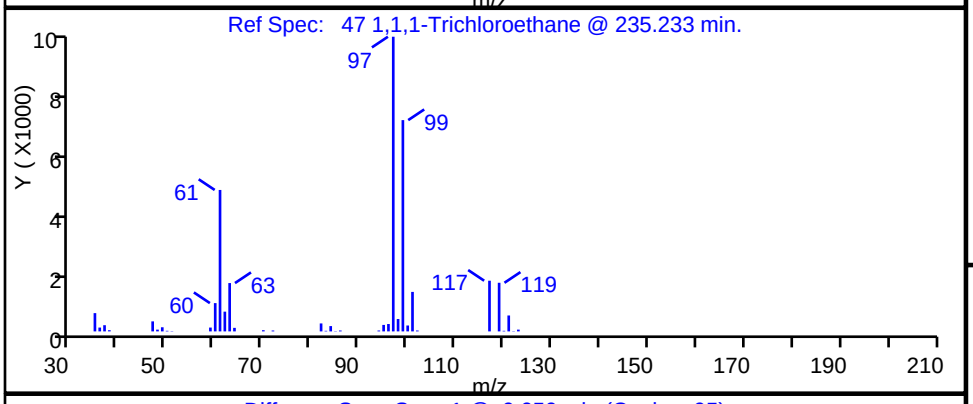
47 1,1,1-Trichloroethane, CAS: 71-55-6

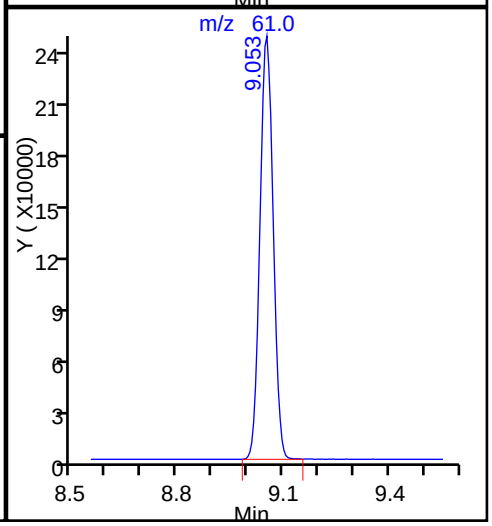


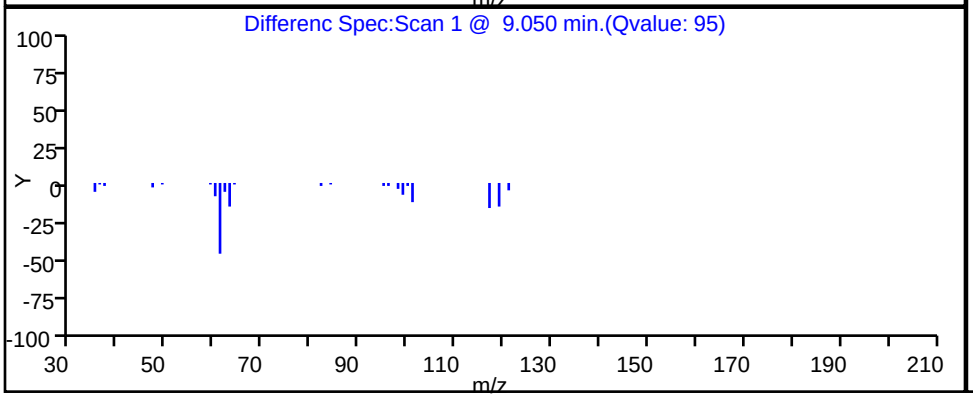












FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6564-1

SDG No.:

Client Sample ID: BLDG-A MIDGAC | Lab Sample ID: 140-6564-2

Matrix: Air | Lab File ID: GL19P103.D

Analysis Method: TO 15 LL | Date Collected: 12/14/2016 12:56

Sample wt/vol: 100(mL) | Date Analyzed: 12/19/2016 14:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7415 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.10	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	ND		0.40	0.075
67-66-3	Chloroform	119.38	0.32	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	42		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.53		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	6.4		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	0.26	J	0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	35		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.9		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.71		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	*1,1,1-Trichloroethane*	*133.41*	*160*	*E*	*0.40*	*0.060*
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	21		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	0.18	J	0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6564-1

SDG No.:

Client Sample ID: BLDG-A MIDGAC | Lab Sample ID: 140-6564-2

Matrix: Air | Lab File ID: GL19P103.D

Analysis Method: TO 15 LL | Date Collected: 12/14/2016 12:56

Sample wt/vol: 100(mL) | Date Analyzed: 12/19/2016 14:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7415 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.65	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	ND		1.4	0.27
67-66-3	Chloroform	119.38	1.6	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	170		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	26		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	1.0	J	1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	140		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	6.7		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	2.8		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	*1,1,1-Trichloroethane*	*133.41*	*850*	*E*	*2.2*	*0.33*
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	110		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	0.46	J	0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P103.D
Lims ID: 140-6564-A-2
Client ID: BLDG-A MIDGAC
Sample Type: Client
Inject. Date: 19-Dec-2016 14:56:30 ALS Bottle#: 3 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003721-007
Misc. Info.: 140-6564-a-2
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Dec-2016 15:32:32 Calib Date: 09-Dec-2016 12:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: tajh Date: 19-Dec-2016 15:32:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.050	8.055	-0.005	98	358928	4.00	
* 2 1,4-Difluorobenzene	114	10.223	10.229	-0.006	96	1584331	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.081	15.082	-0.001	88	1653299	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.748	16.753	-0.005	92	1122145	4.10	
8 Dichlorodifluoromethane	85	3.531	3.531	0.000	100	32260	0.1050	
12 Vinyl chloride	62	3.828	3.828	0.000	95	3904	0.0361	
27 1,1-Dichloroethene	96	5.391	5.397	-0.006	96	621578	7.08	
31 Methylene Chloride	84	5.699	5.704	-0.005	97	29597	0.3877	
34 trans-1,2-Dichloroethene	96	6.438	6.443	-0.005	95	14683	0.1424	
37 1,1-Dichloroethane	63	6.820	6.826	-0.006	99	248879	1.28	
42 cis-1,2-Dichloroethene	96	7.748	7.748	0.000	97	880234	8.41	
44 Chloroform	83	8.071	8.077	-0.006	97	14321	0.0636	
47 1,1,1-Trichloroethane	97	9.058	9.058	0.000	94	7695340	31.3	E
48 1,2-Dichloroethane	62	9.150	9.150	0.000	93	7595	0.0514	
52 Carbon tetrachloride	117	9.673	9.679	-0.006	98	5259	0.0207	
59 Trichloroethene	130	10.956	10.957	-0.001	96	688508	4.15	
68 Toluene	91	13.076	13.076	0.000	93	33979	0.1028	

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

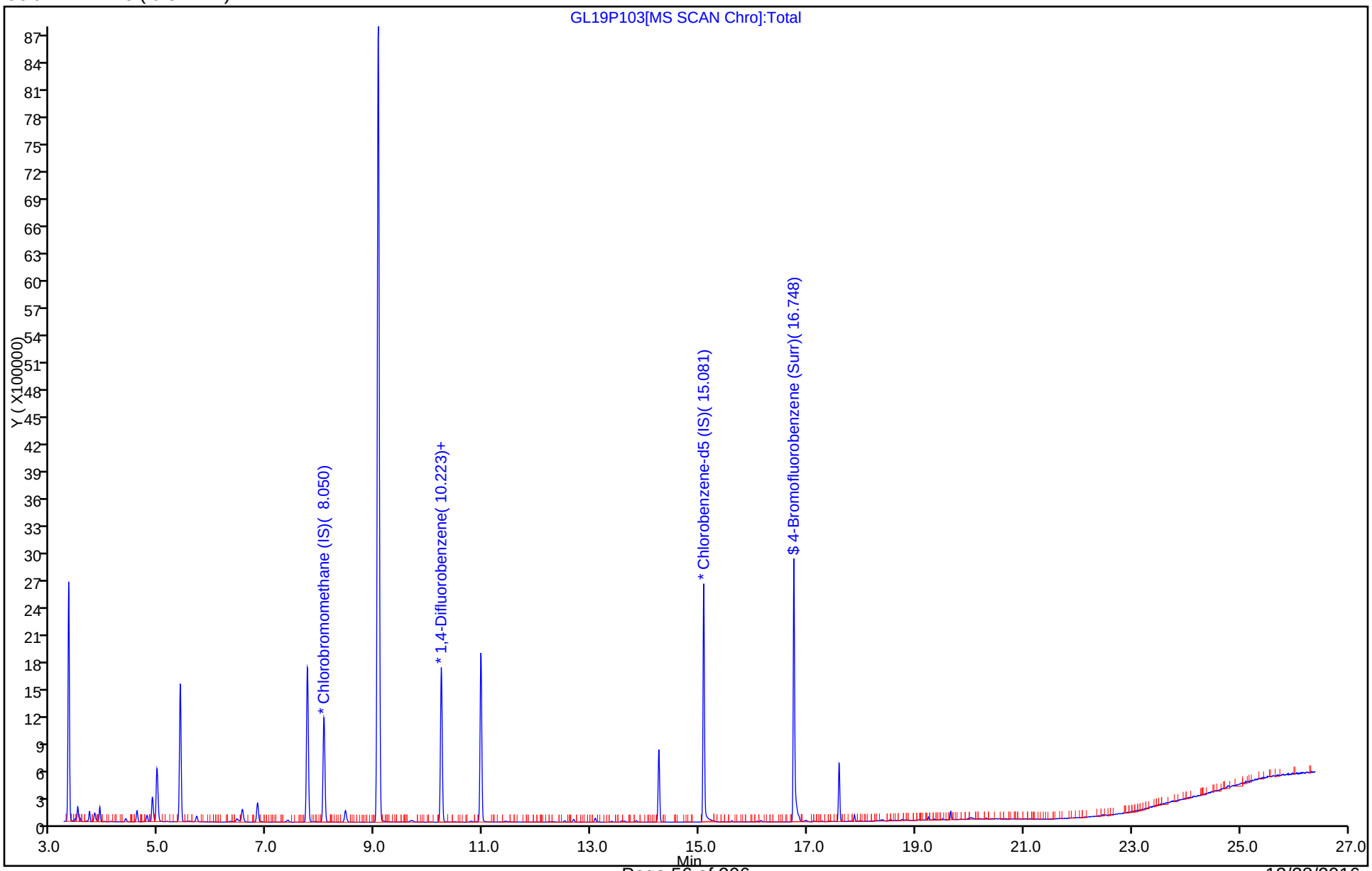
Report Date: 19-Dec-2016 15:32:33 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P103.D

Injection Date:	19-Dec-2016 14:56:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-6564-A-2	Lab Sample ID:	140-6564-2	Worklist Smp#:	7
Client ID:	BLDG-A MIDGAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P103.D				
Lims ID:	140-6564-A-2				
Client ID:	BLDG-A MIDGAC				
Sample Type:	Client				
Inject. Date:	19-Dec-2016 14:56:30	ALS Bottle#:	3	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003721-007				
Misc. Info.:	140-6564-a-2				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	19-Dec-2016 15:32:32	Calib Date:	09-Dec-2016 12:54:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK004				

First Level Reviewer: tajh Date: 19-Dec-2016 15:32:32

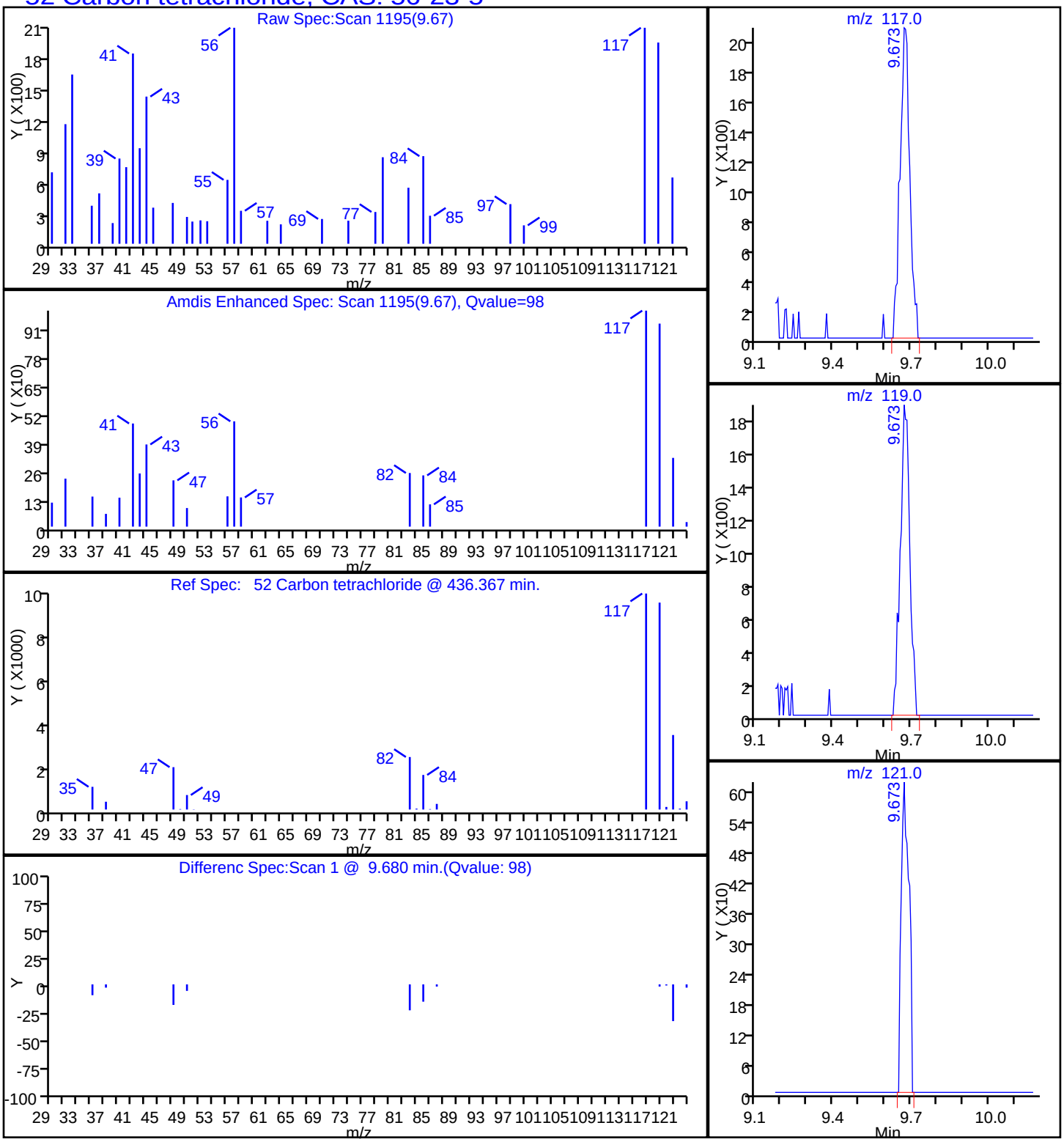
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.10	102.60

Report Date: 19-Dec-2016 15:32:33 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P103.D				
Injection Date:	19-Dec-2016 14:56:30	Instrument ID:	MG		
Lims ID:	140-6564-A-2	Lab Sample ID:	140-6564-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	3	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

52 Carbon tetrachloride, CAS: 56-23-5

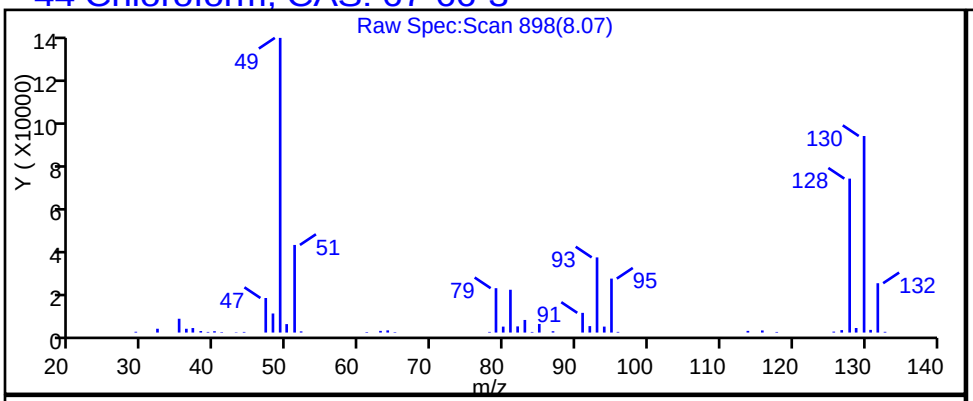


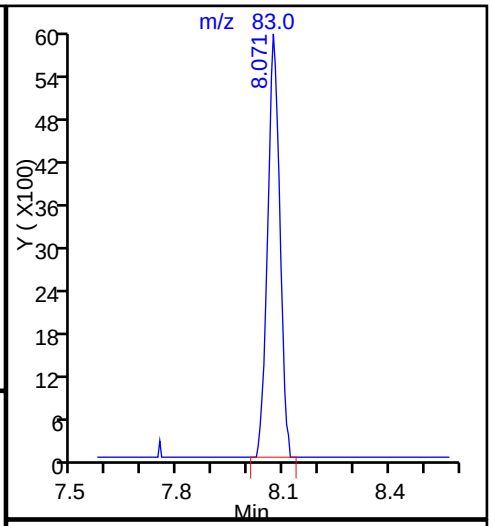
TestAmerica Knoxville

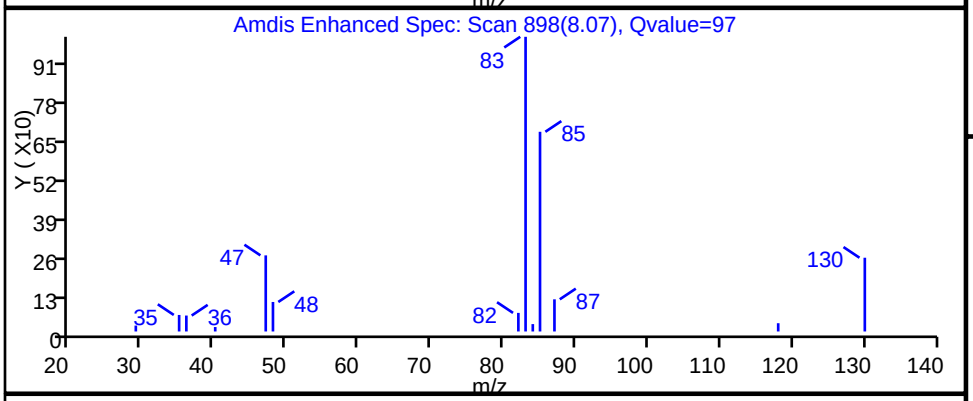
Data File: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P103.D

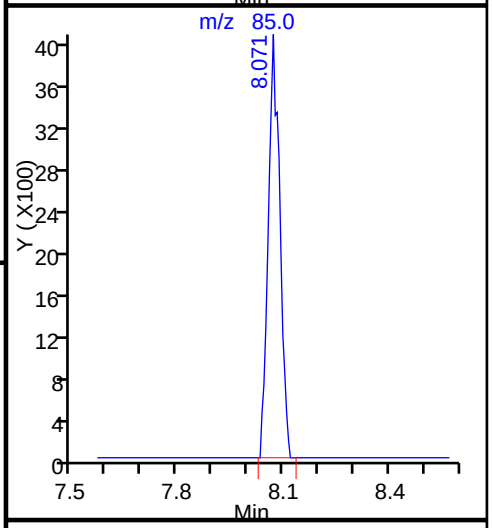
Injection Date:	19-Dec-2016 14:56:30	Instrument ID:	MG
Lims ID:	140-6564-A-2	Lab Sample ID:	140-6564-2
Client ID:	BLDG-A MIDGAC		
Operator ID:	7126	ALS Bottle#:	3 Worklist Smp#: 7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

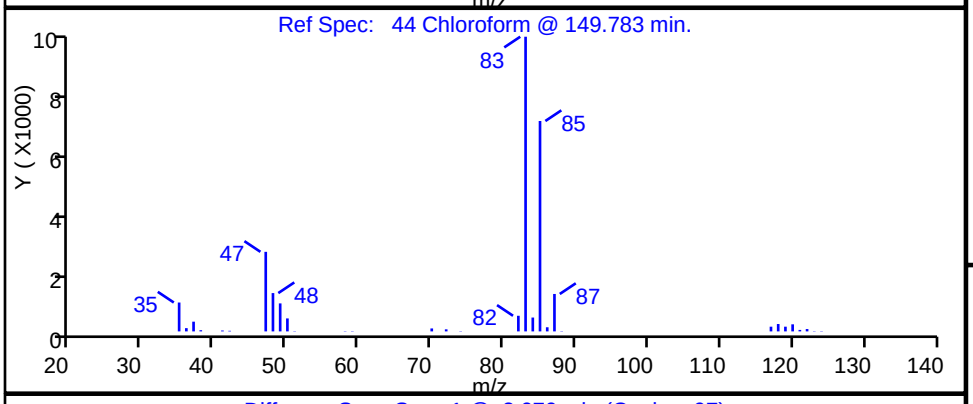
44 Chloroform, CAS: 67-66-3

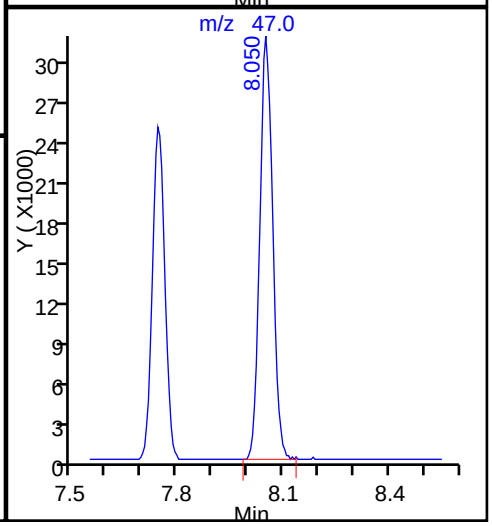


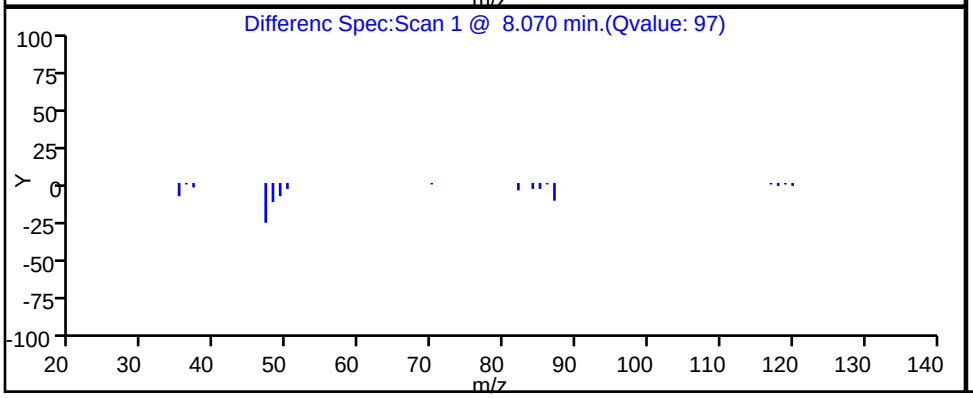








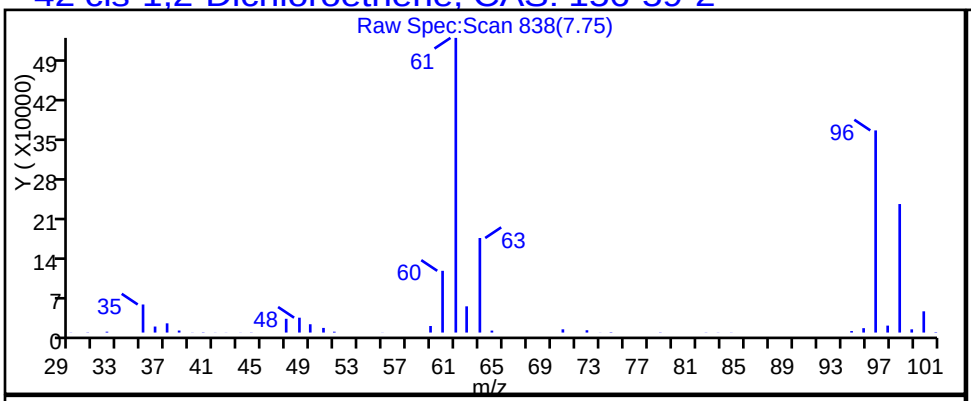


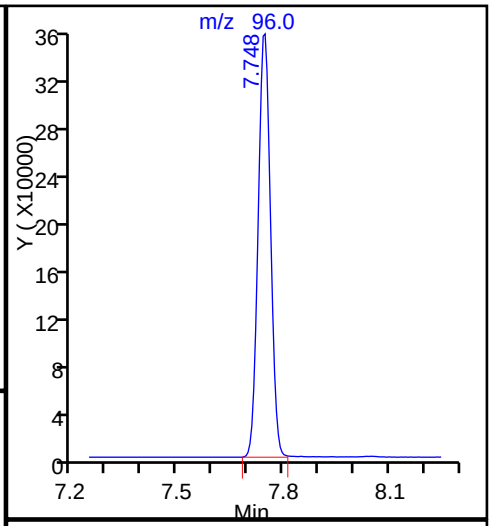


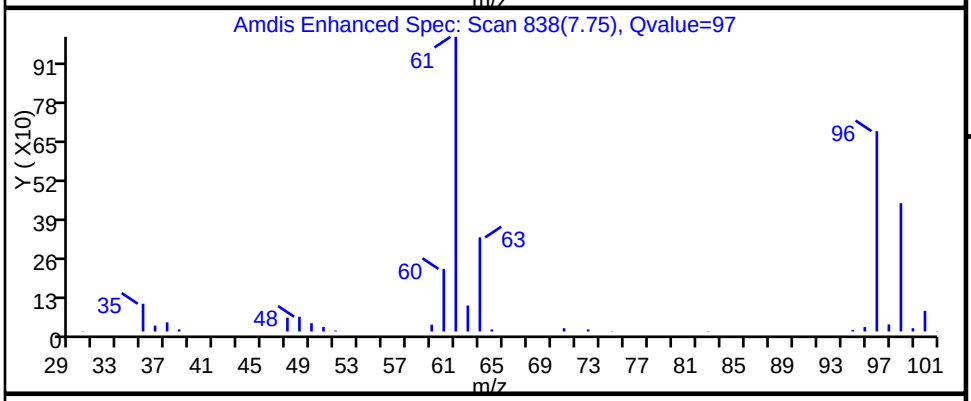
TestAmerica Knoxville

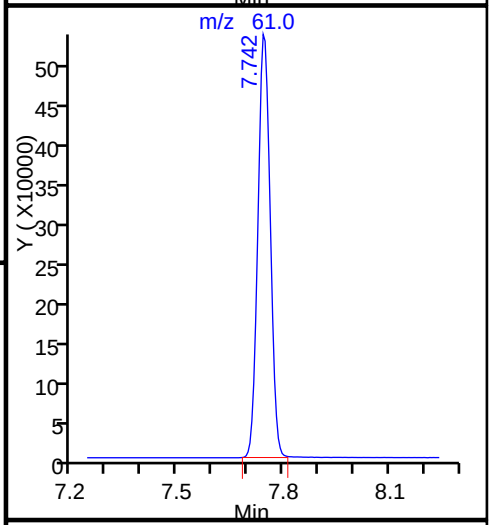
Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P103.D				
Injection Date:	19-Dec-2016 14:56:30	Instrument ID:	MG		
Lims ID:	140-6564-A-2	Lab Sample ID:	140-6564-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	3	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

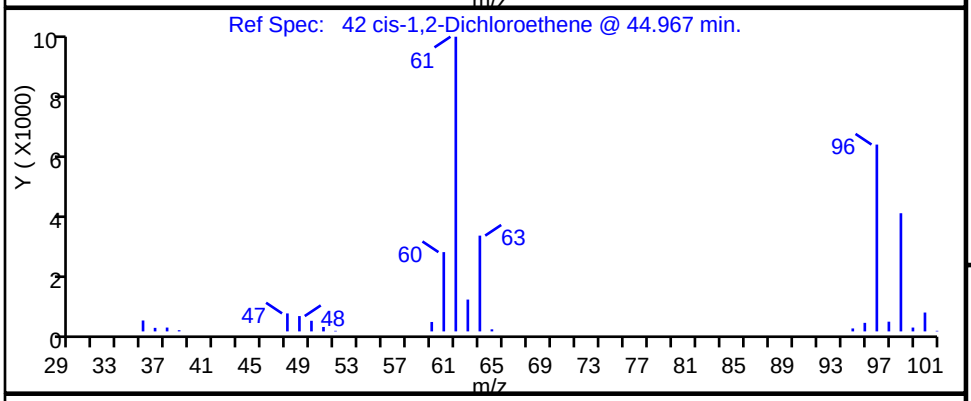
42 cis-1,2-Dichloroethene, CAS: 156-59-2

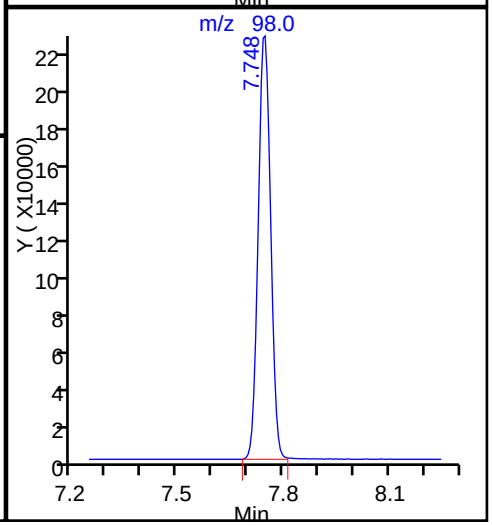


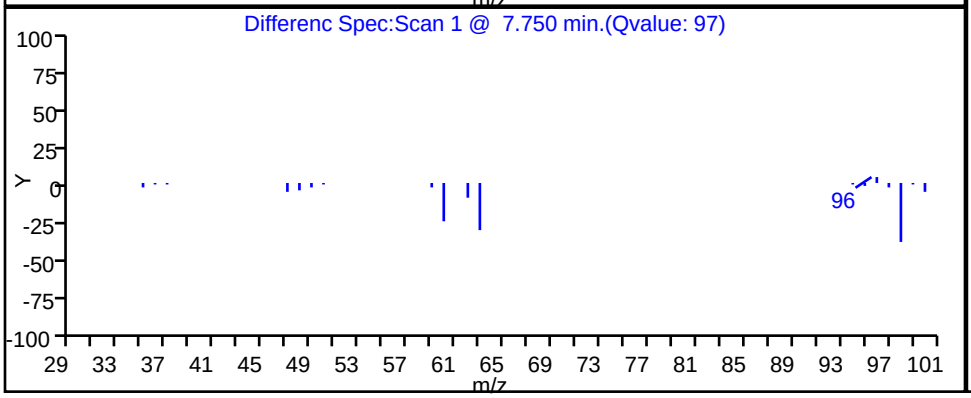










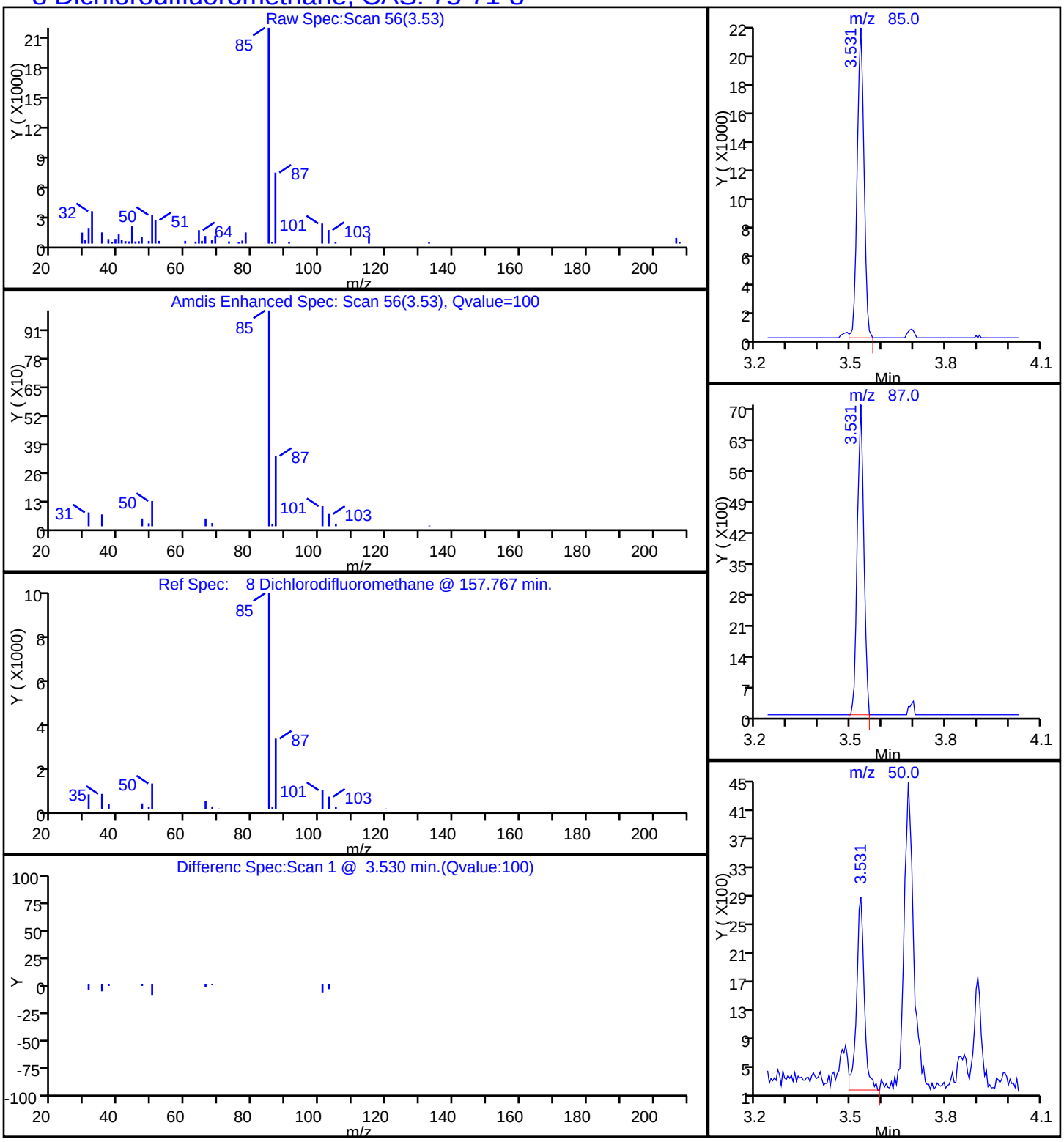


Report Date: 19-Dec-2016 15:32:33 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P103.D				
Injection Date:	19-Dec-2016 14:56:30	Instrument ID:	MG		
Lims ID:	140-6564-A-2	Lab Sample ID:	140-6564-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	3	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

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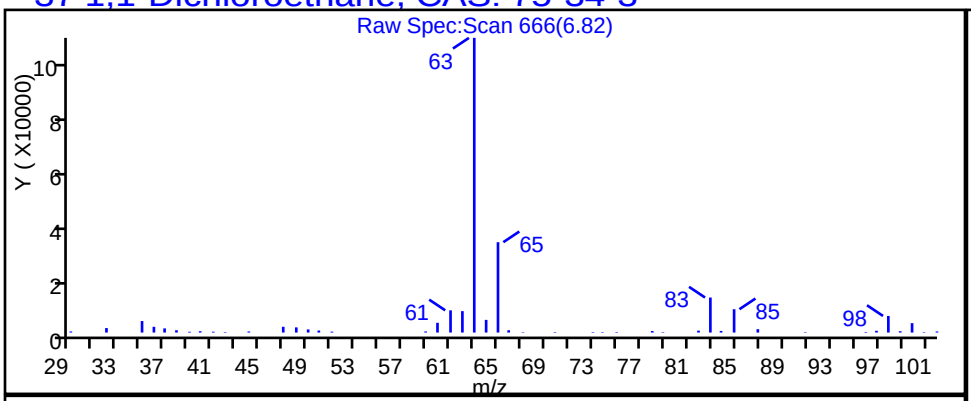
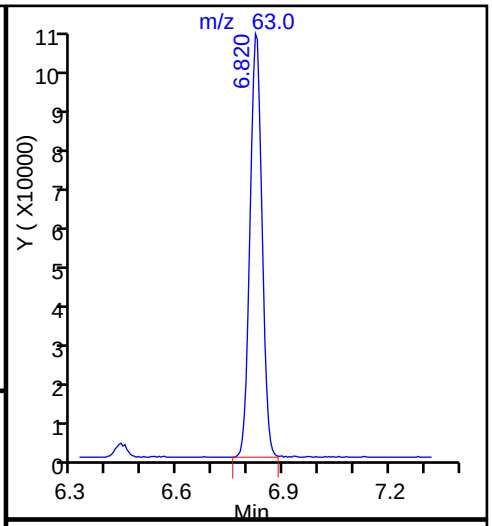
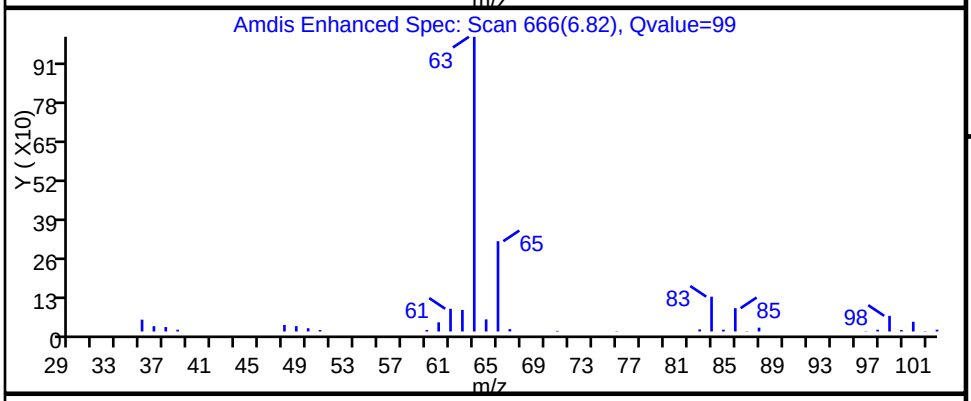
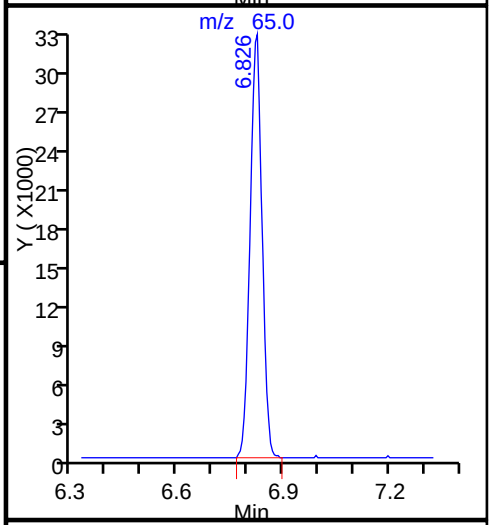
Lims ID:	140-6564-A-2	Lab Sample ID:	140-6564-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	3	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

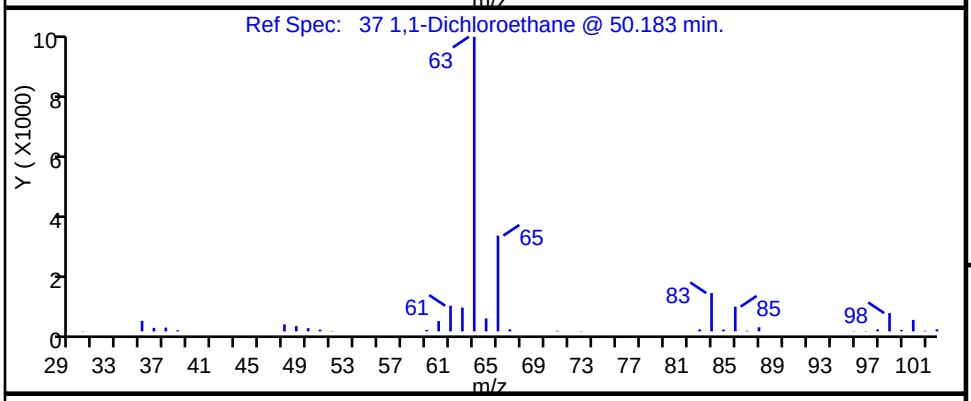
37 1,1-Dichloroethane, CAS: 75-34-3

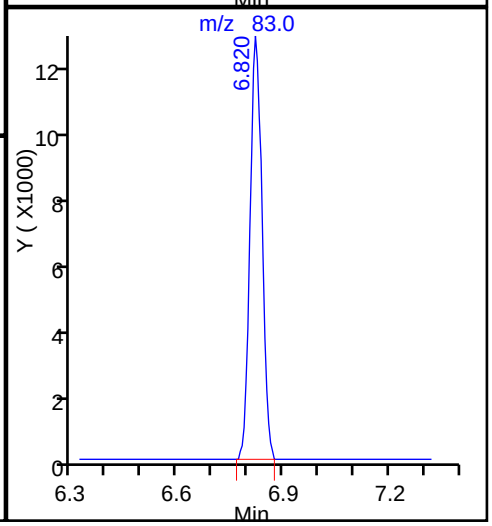


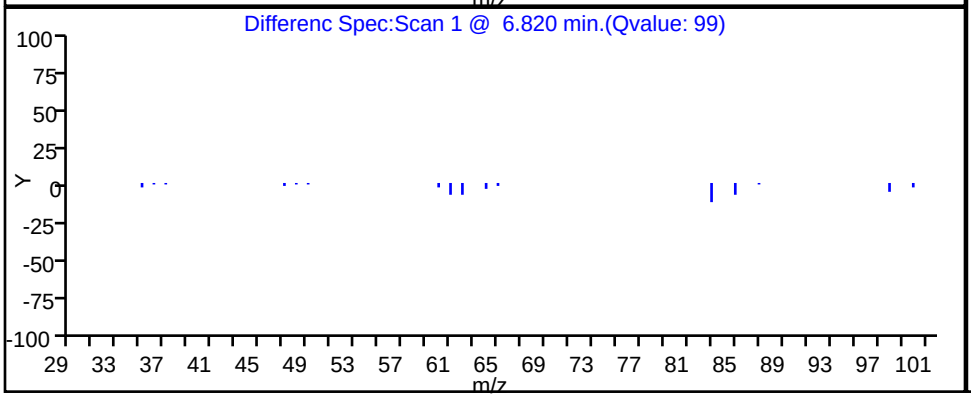








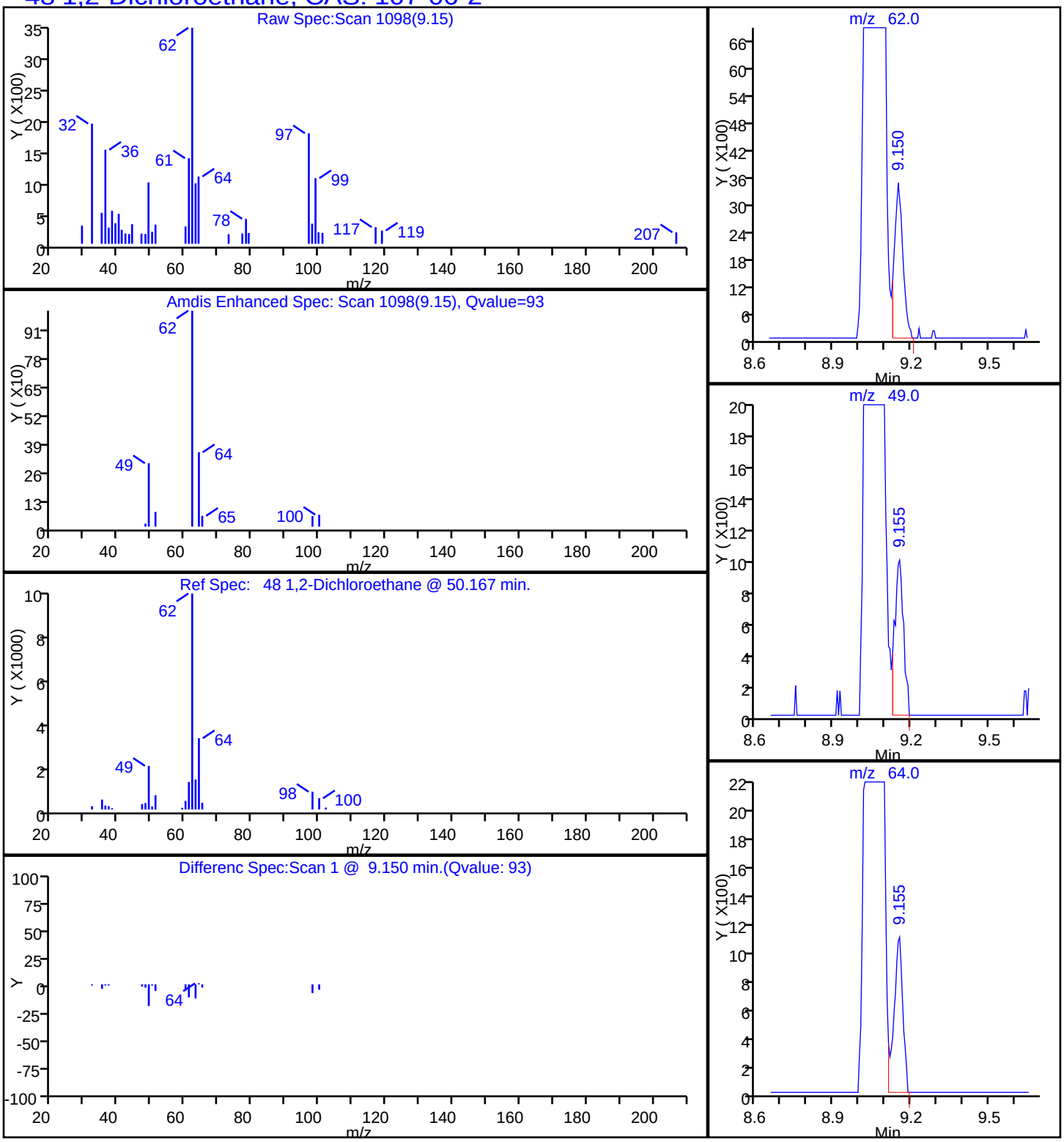




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P103.D				
Injection Date:	19-Dec-2016 14:56:30	Instrument ID:	MG		
Lims ID:	140-6564-A-2	Lab Sample ID:	140-6564-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	3	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

48 1,2-Dichloroethane, CAS: 107-06-2



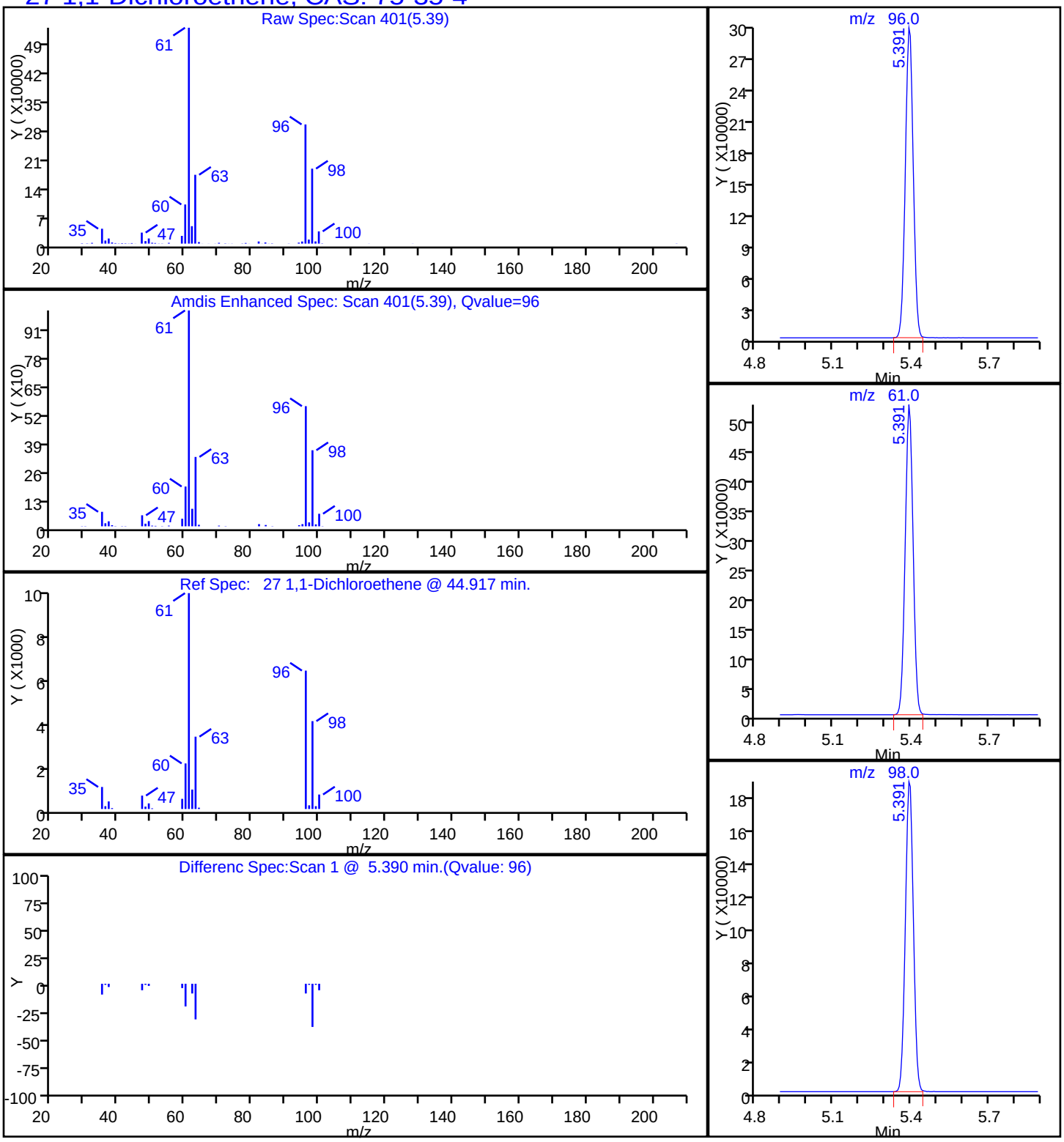
Report Date: 19-Dec-2016 15:32:33 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P103.D

Injection Date:	19-Dec-2016 14:56:30	Instrument ID:	MG		
Lims ID:	140-6564-A-2	Lab Sample ID:	140-6564-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	3	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

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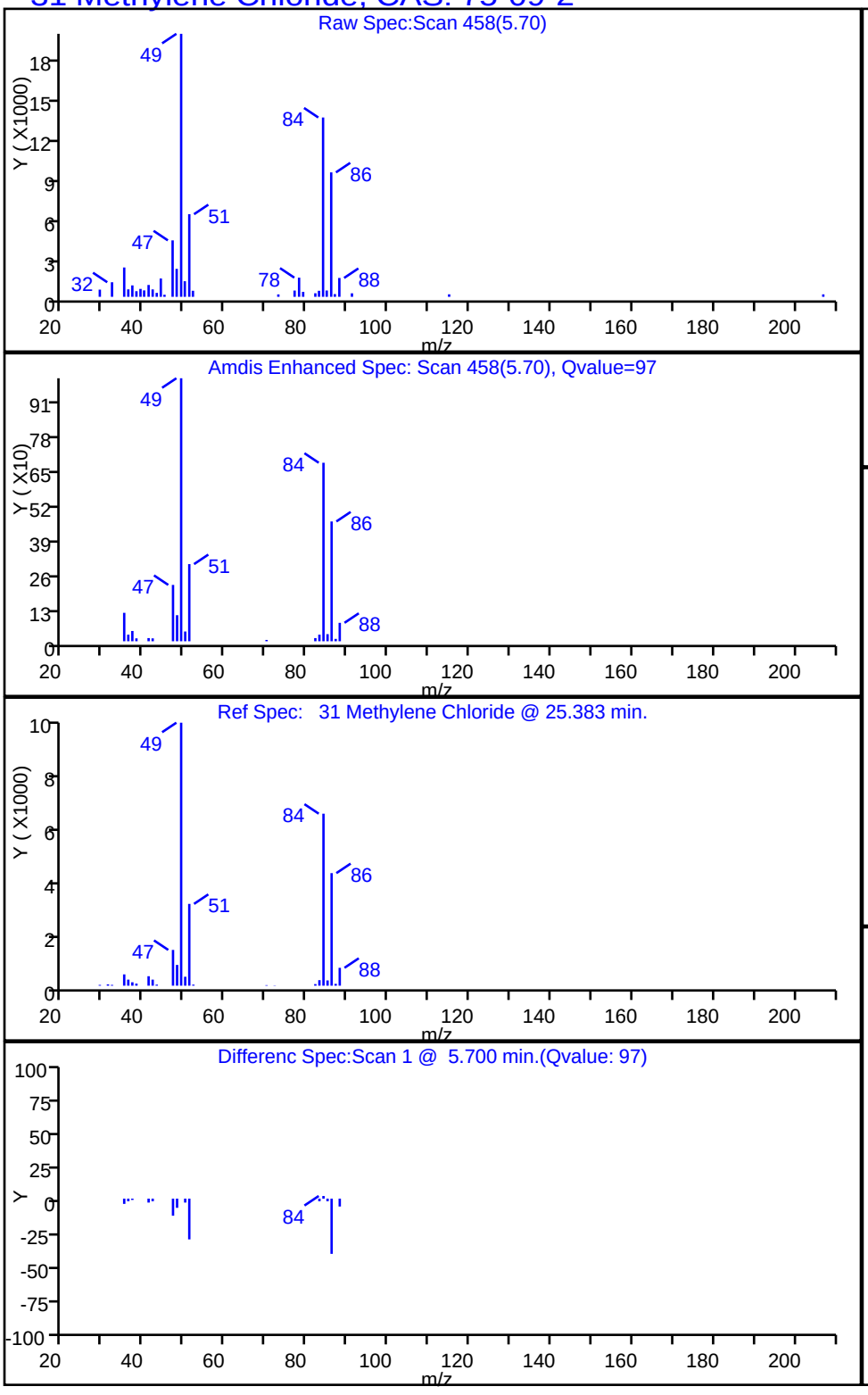
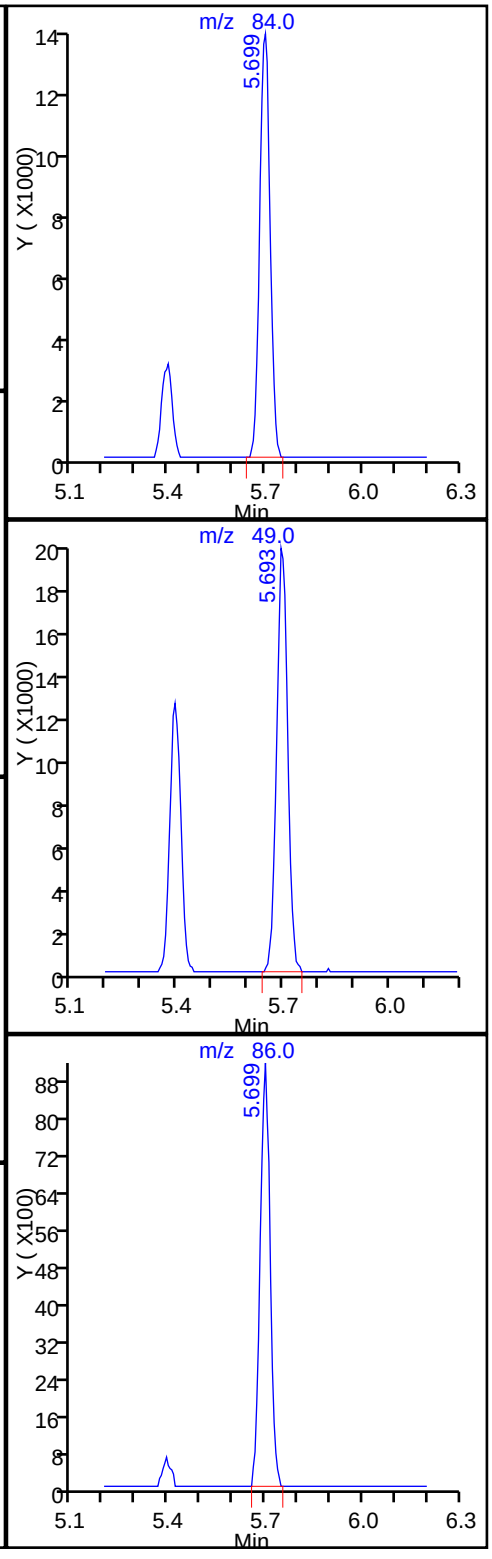
Lims ID:	140-6564-A-2	Lab Sample ID:	140-6564-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	3	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

31 Methylene Chloride, CAS: 75-09-2





TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P103.D				
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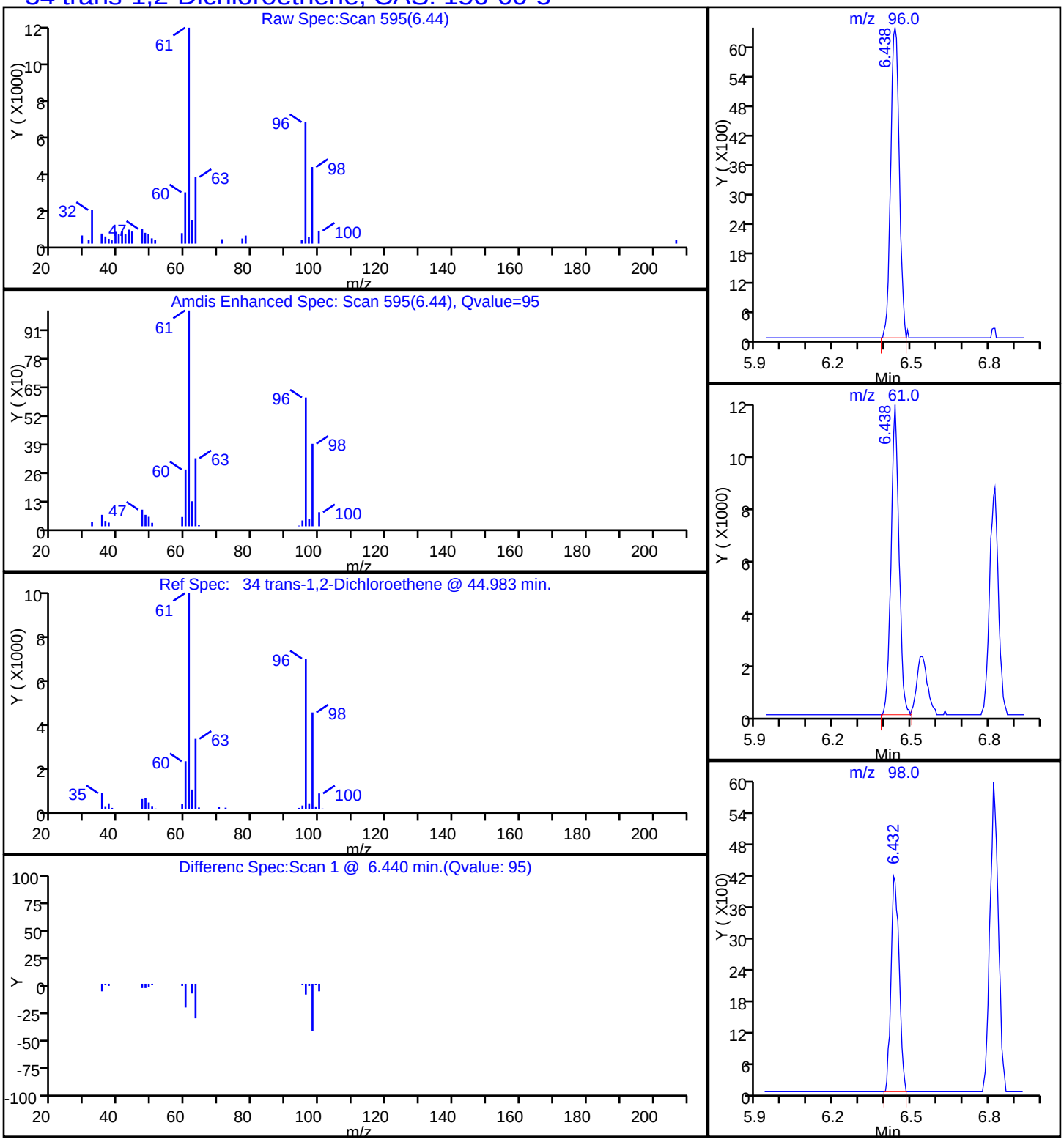
Lims ID:	140-6564-A-2	Lab Sample ID:	140-6564-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	3	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

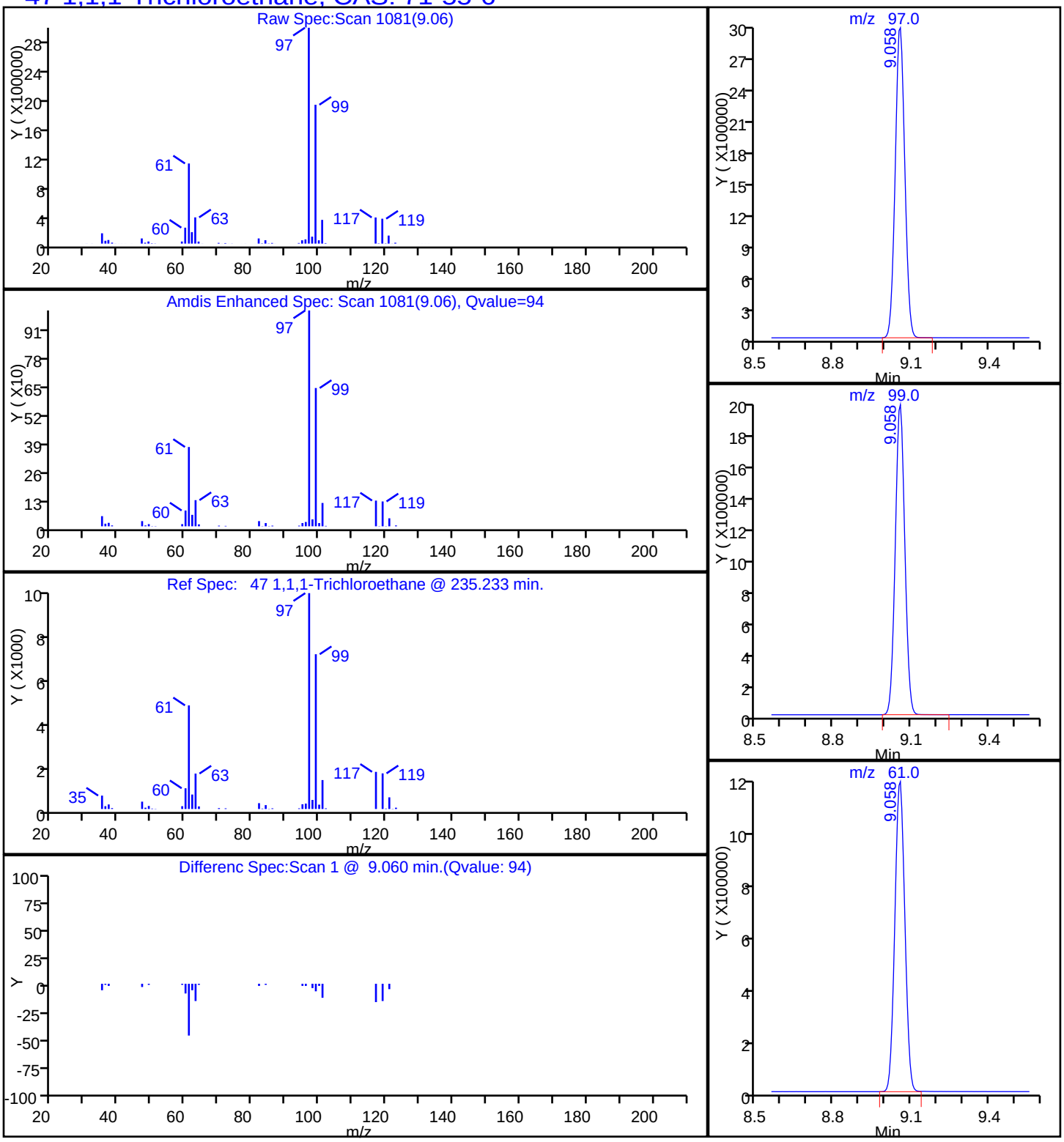
34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P103.D				
Injection Date:	19-Dec-2016 14:56:30	Instrument ID:	MG		
Lims ID:	140-6564-A-2	Lab Sample ID:	140-6564-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	3	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

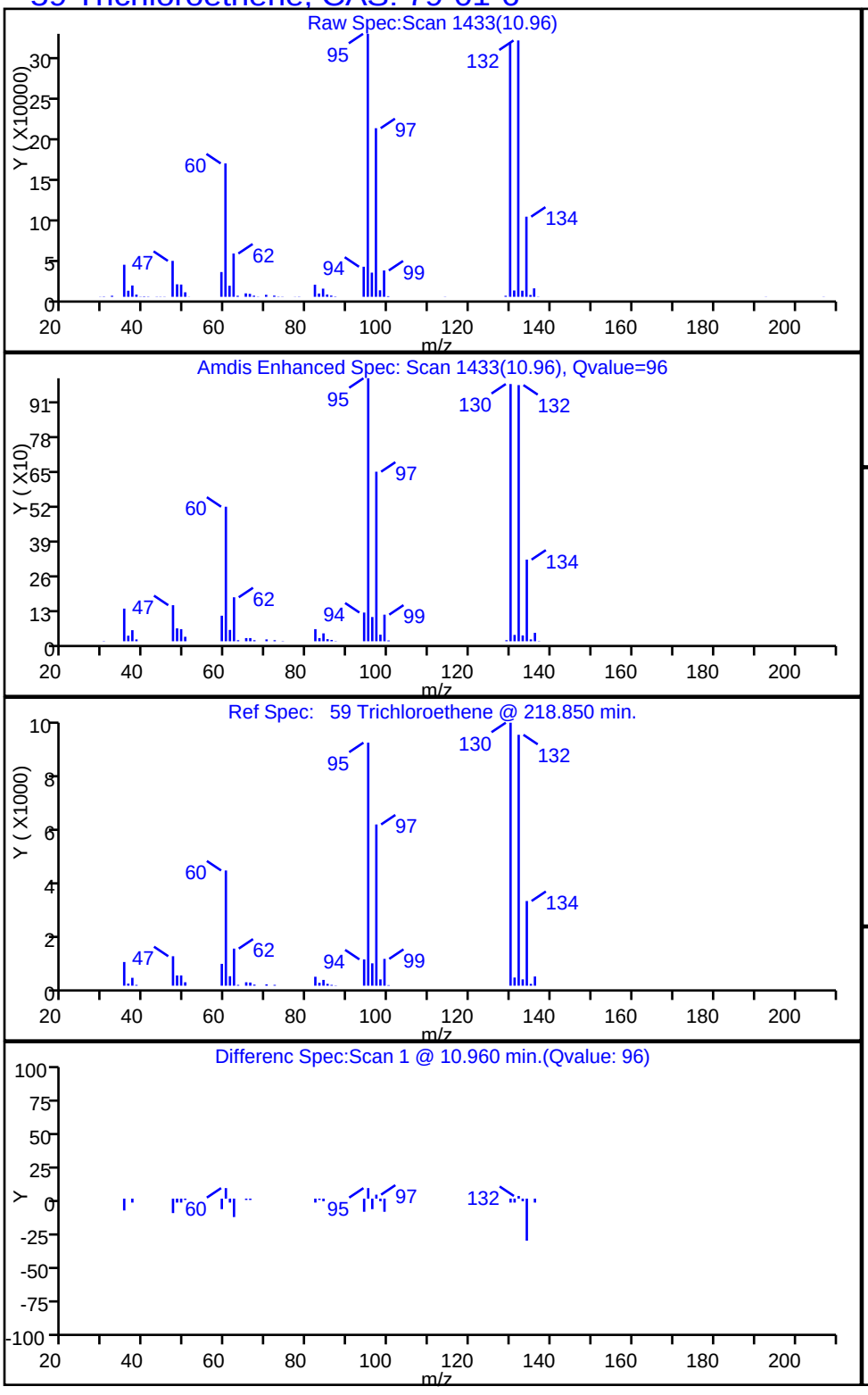
47 1,1,1-Trichloroethane, CAS: 71-55-6

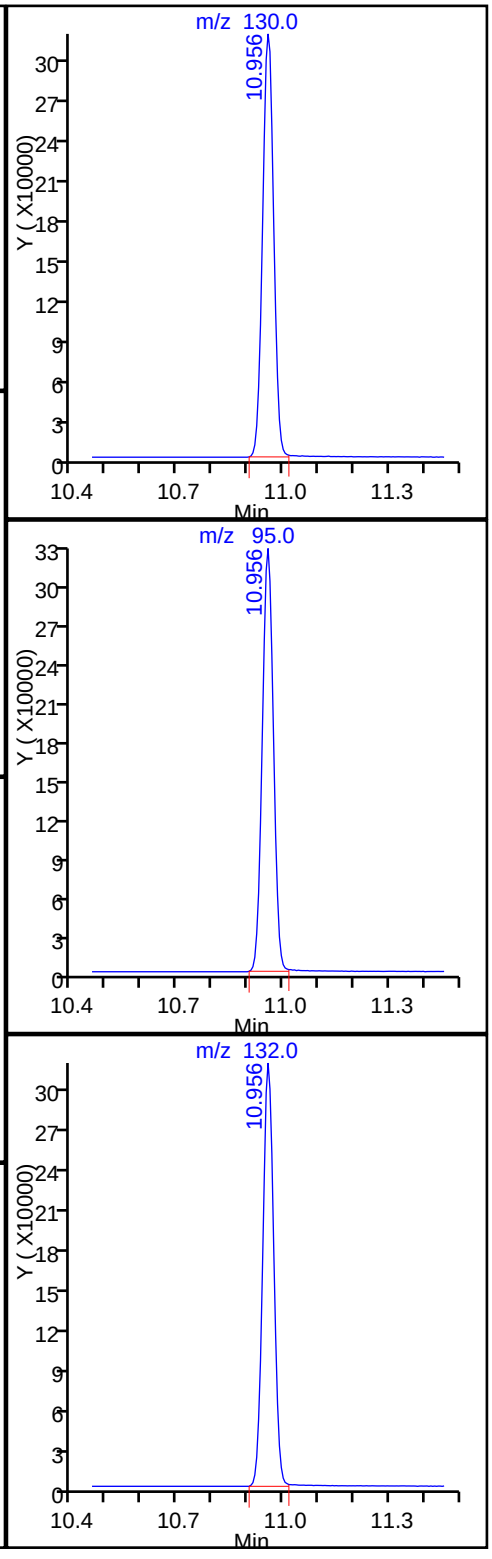


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P103.D				
Injection Date:	19-Dec-2016 14:56:30	Instrument ID:	MG		
Lims ID:	140-6564-A-2	Lab Sample ID:	140-6564-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	3	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

59 Trichloroethene, CAS: 79-01-6

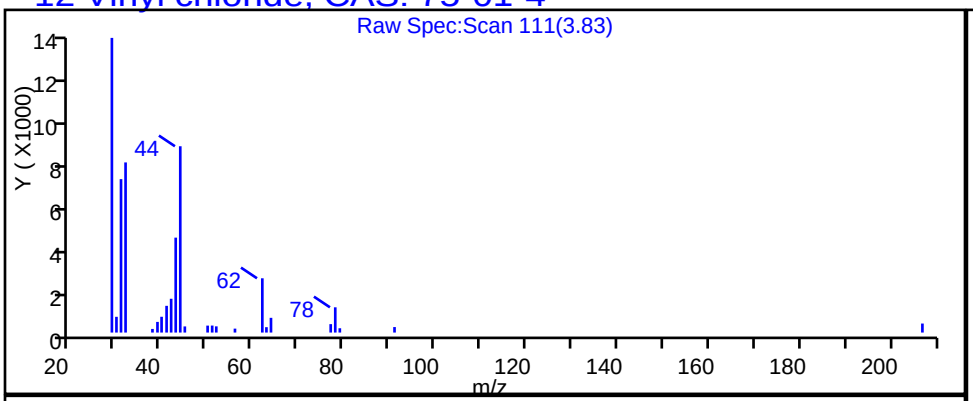


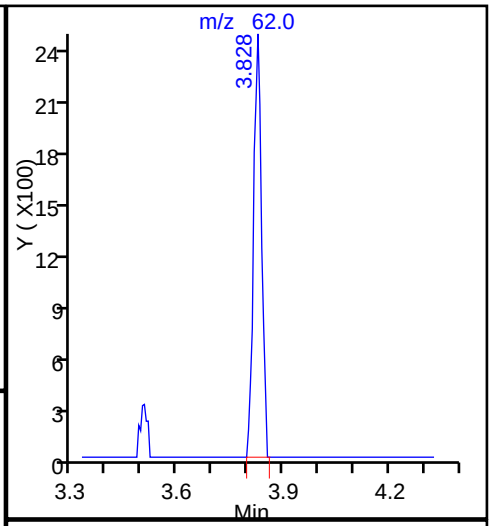


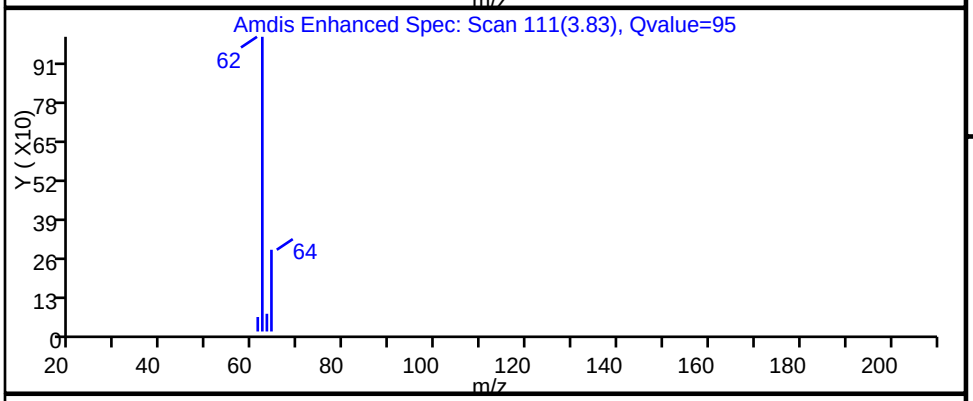
TestAmerica Knoxville

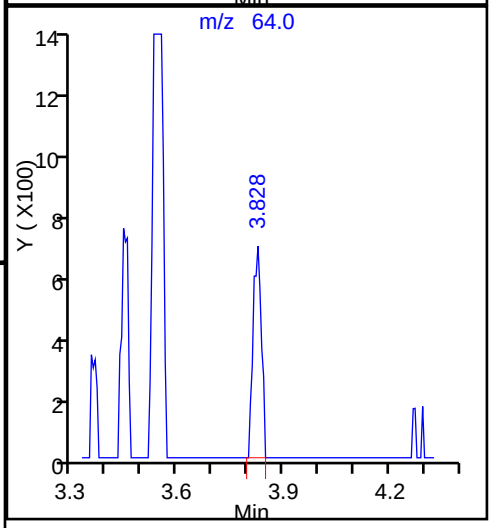
Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P103.D		
Injection Date:	19-Dec-2016 14:56:30	Instrument ID:	MG
Lims ID:	140-6564-A-2	Lab Sample ID:	140-6564-2
Client ID:	BLDG-A MIDGAC		
Operator ID:	7126	ALS Bottle#:	3 Worklist Smp#: 7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

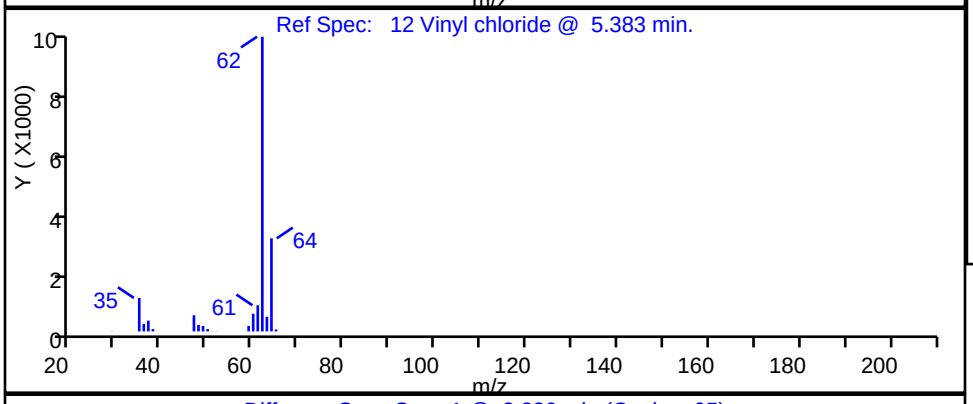
12 Vinyl chloride, CAS: 75-01-4

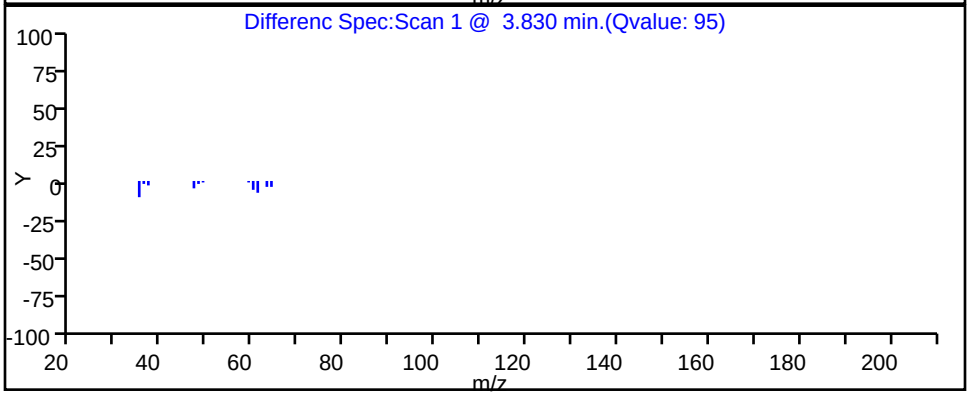












FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1

SDG No.:

Client Sample ID: BLDG-A MIDGAC DL Lab Sample ID: 140-6564-2 DL

Matrix: Air Lab File ID: GL19P103DL.D

Analysis Method: TO 15 LL Date Collected: 12/14/2016 12:56

Sample wt/vol: 20(mL) Date Analyzed: 12/20/2016 03:26

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7415 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	133.41	160		2.0	0.30

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1

SDG No.:

Client Sample ID: BLDG-A MIDGAC DL Lab Sample ID: 140-6564-2 DL

Matrix: Air Lab File ID: GL19P103DL.D

Analysis Method: TO 15 LL Date Collected: 12/14/2016 12:56

Sample wt/vol: 20(mL) Date Analyzed: 12/20/2016 03:26

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7415 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	133.41	880		11	1.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P103DL.D				
Lims ID:	140-6564-A-2				
Client ID:	BLDG-A MIDGAC				
Sample Type:	Client				
Inject. Date:	20-Dec-2016 03:26:30	ALS Bottle#:	3	Worklist Smp#:	25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003721-025				
Misc. Info.:	140-6564-a-2				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Dec-2016 10:06:46	Calib Date:	09-Dec-2016 12:54:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK032				

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.044	8.055	-0.011	97	378173	4.00	
* 2 1,4-Difluorobenzene	114	10.218	10.229	-0.011	96	1801821	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.076	15.082	-0.006	87	1795578	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.748	16.753	-0.005	94	1231098	4.15	
6 Chlorodifluoromethane	67	3.483	3.477	0.006	5	862	0.0278	
27 1,1-Dichloroethene	96	5.391	5.397	-0.006	96	132247	1.43	
31 Methylene Chloride	84	5.693	5.704	-0.011	96	22840	0.2839	
34 trans-1,2-Dichloroethene	96	6.438	6.443	-0.005	95	3051	0.0281	
37 1,1-Dichloroethane	63	6.820	6.826	-0.006	100	49780	0.2439	
42 cis-1,2-Dichloroethene	96	7.742	7.748	-0.006	97	174009	1.58	
47 1,1,1-Trichloroethane	97	9.053	9.058	-0.005	95	1664319	6.43	
48 1,2-Dichloroethane	62	9.047	9.150	-0.103	46	100434	0.5979	
59 Trichloroethene	130	10.951	10.957	-0.006	96	134367	0.7126	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

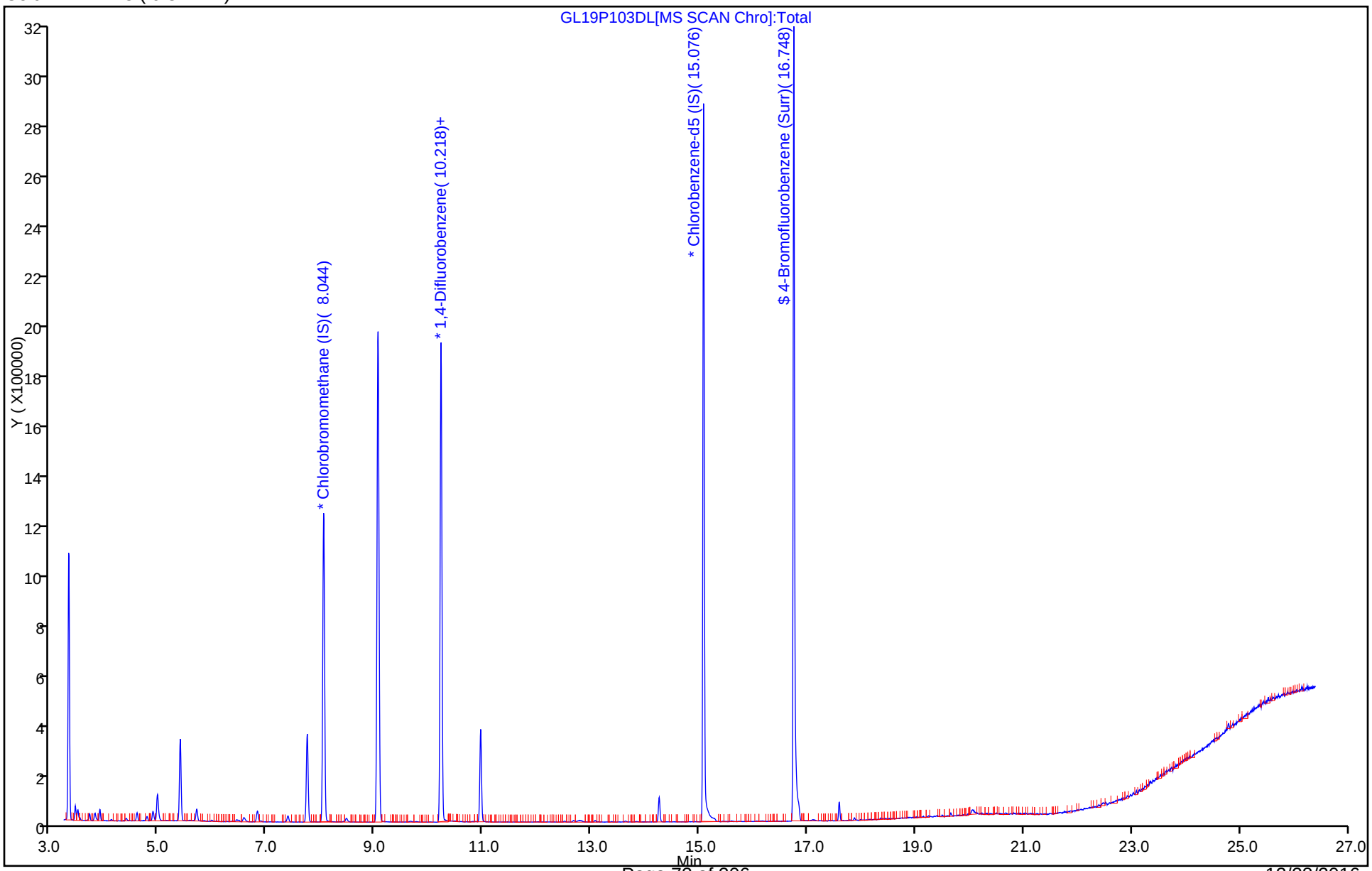
Report Date: 20-Dec-2016 10:07:48 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P103DL.D

Injection Date:	20-Dec-2016 03:26:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-6564-A-2	Lab Sample ID:	140-6564-2	Worklist Smp#:	25
Client ID:	BLDG-A MIDGAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

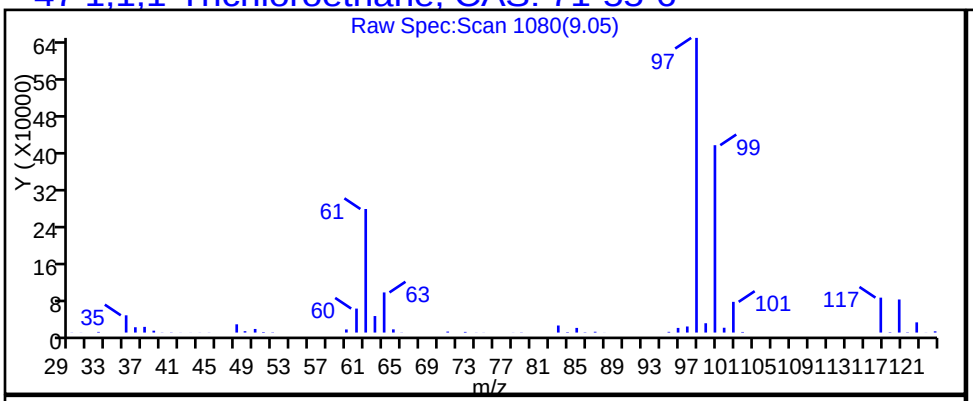
Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P103DL.D				
Lims ID:	140-6564-A-2				
Client ID:	BLDG-A MIDGAC				
Sample Type:	Client				
Inject. Date:	20-Dec-2016 03:26:30	ALS Bottle#:	3	Worklist Smp#:	25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003721-025				
Misc. Info.:	140-6564-a-2				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Dec-2016 10:06:46	Calib Date:	09-Dec-2016 12:54:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK032				

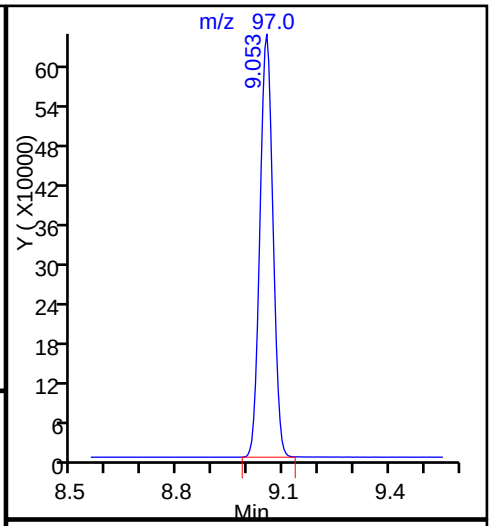
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.15	103.64

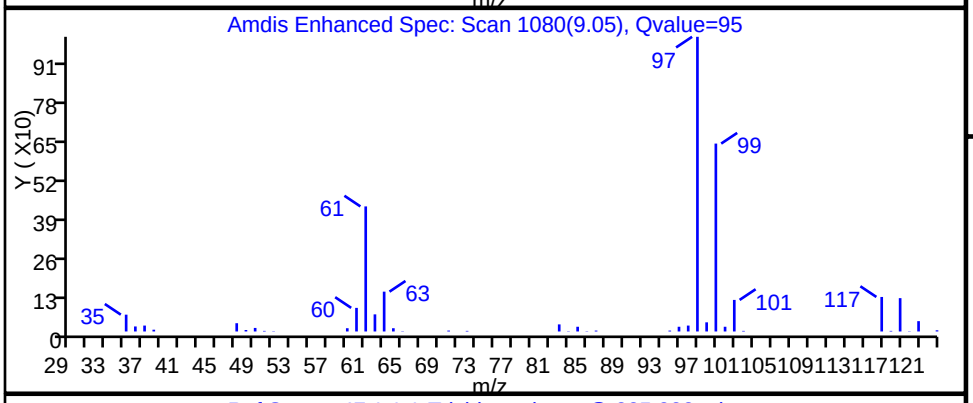
TestAmerica Knoxville

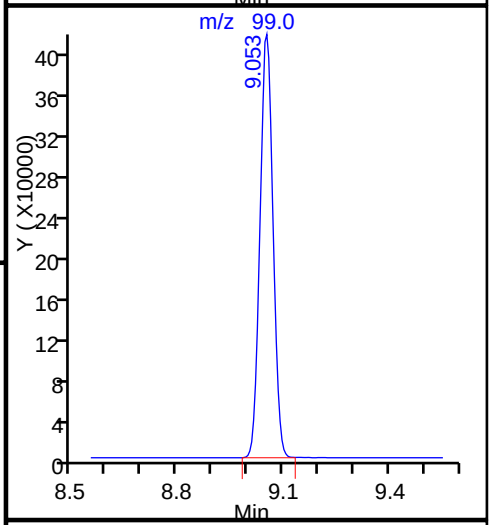
Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P103DL.D				
Injection Date:	20-Dec-2016 03:26:30	Instrument ID:	MG		
Lims ID:	140-6564-A-2	Lab Sample ID:	140-6564-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	3	Worklist Smp#:	25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

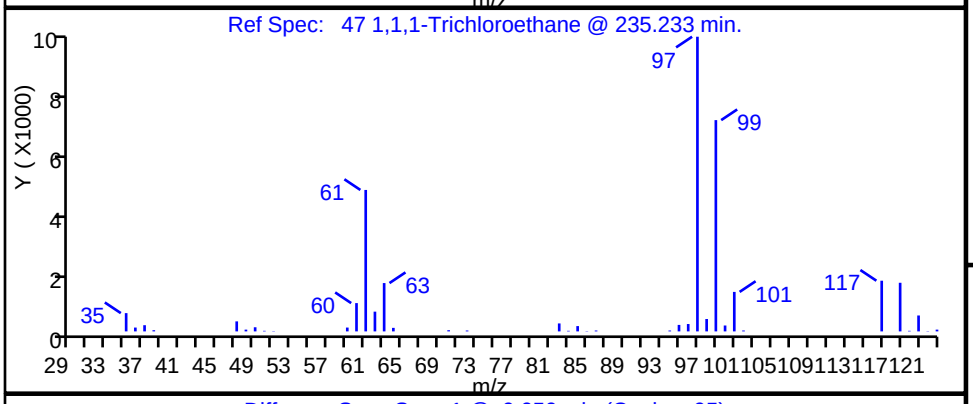
47 1,1,1-Trichloroethane, CAS: 71-55-6

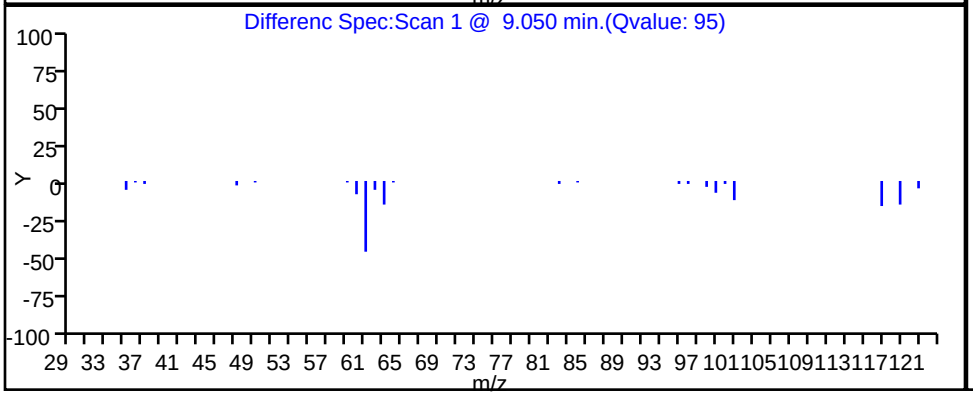


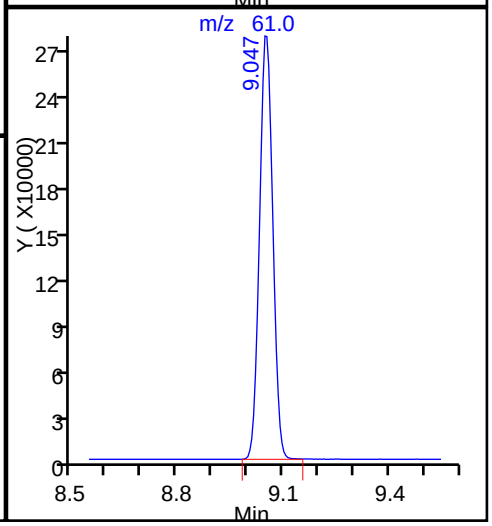












FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6564-1

SDG No.:

Client Sample ID: BLDG-A INFLUENT | Lab Sample ID: 140-6564-3

Matrix: Air | Lab File ID: GL19P101.D

Analysis Method: TO 15 LL | Date Collected: 12/14/2016 13:00

Sample wt/vol: 25(mL) | Date Analyzed: 12/19/2016 13:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7415 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	3.3		1.6	0.46
56-23-5	Carbon tetrachloride	153.81	ND		1.6	0.30
75-45-6	Chlorodifluoromethane	86.47	0.57	J	1.6	0.30
67-66-3	Chloroform	119.38	ND		1.6	0.30
156-59-2	cis-1,2-Dichloroethene	96.94	24		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	0.62	J	1.6	0.54
75-34-3	1,1-Dichloroethane	98.96	4.3		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	31		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.6	0.54
75-09-2	Methylene Chloride	84.93	ND		4.0	2.6
1634-04-4	Methyl tert-butyl ether	88.15	ND		8.0	1.4
91-20-3	Naphthalene	128.17	ND		0.80	0.80
127-18-4	Tetrachloroethene	165.83	ND		1.6	0.32
108-88-3	Toluene	92.14	ND		2.4	2.4
156-60-5	trans-1,2-Dichloroethene	96.94	0.63	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		1.6	0.78
71-55-6	1,1,1-Trichloroethane	133.41	110		1.6	0.24
79-00-5	1,1,2-Trichloroethane	133.41	ND		1.6	0.42
79-01-6	Trichloroethene	131.39	130		0.80	0.28
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		1.6	0.68
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		1.6	0.50
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		1.6	0.52
75-01-4	Vinyl chloride	62.50	ND		0.80	0.58
1330-20-7	Xylenes, Total	106.17	ND		3.2	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1

SDG No.:

Client Sample ID: BLDG-A INFLUENT Lab Sample ID: 140-6564-3

Matrix: Air Lab File ID: GL19P101.D

Analysis Method: TO 15 LL Date Collected: 12/14/2016 13:00

Sample wt/vol: 25(mL) Date Analyzed: 12/19/2016 13:29

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7415 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	11		5.1	1.5
56-23-5	Carbon tetrachloride	153.81	ND		10	1.9
75-45-6	Chlorodifluoromethane	86.47	2.0	J	5.7	1.1
67-66-3	Chloroform	119.38	ND		7.8	1.5
156-59-2	cis-1,2-Dichloroethene	96.94	95		6.3	1.9
75-71-8	Dichlorodifluoromethane	120.91	3.1	J	7.9	2.7
75-34-3	1,1-Dichloroethane	98.96	17		6.5	0.81
107-06-2	1,2-Dichloroethane	98.96	ND		6.5	1.5
75-35-4	1,1-Dichloroethene	96.94	120		6.3	1.1
100-41-4	Ethylbenzene	106.17	ND		6.9	2.3
75-09-2	Methylene Chloride	84.93	ND		14	9.0
1634-04-4	Methyl tert-butyl ether	88.15	ND		29	4.9
91-20-3	Naphthalene	128.17	ND		4.2	4.2
127-18-4	Tetrachloroethene	165.83	ND		11	2.2
108-88-3	Toluene	92.14	ND		9.0	9.0
156-60-5	trans-1,2-Dichloroethene	96.94	2.5	J	6.3	1.6
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		12	5.8
71-55-6	1,1,1-Trichloroethane	133.41	600		8.7	1.3
79-00-5	1,1,2-Trichloroethane	133.41	ND		8.7	2.3
79-01-6	Trichloroethene	131.39	710		4.3	1.5
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		7.9	3.3
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		7.9	2.5
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		7.9	2.6
75-01-4	Vinyl chloride	62.50	ND		2.0	1.5
1330-20-7	Xylenes, Total	106.17	ND		14	2.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P101.D
Lims ID: 140-6564-A-3
Client ID: BLDG-A INFLUENT
Sample Type: Client
Inject. Date: 19-Dec-2016 13:29:30 ALS Bottle#: 1 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003721-005
Misc. Info.: 140-6564-a-3
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Dec-2016 13:29:59 Calib Date: 09-Dec-2016 12:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: tajh Date: 19-Dec-2016 14:22:38

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.050	8.055	-0.005	98	351042	4.00	
* 2 1,4-Difluorobenzene	114	10.223	10.229	-0.006	96	1710226	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.076	15.082	-0.006	88	1698244	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.748	16.753	-0.005	94	1176713	4.19	
6 Chlorodifluoromethane	67	3.477	3.477	0.000	91	820	0.0285	
8 Dichlorodifluoromethane	85	3.531	3.531	0.000	99	9376	0.0312	
27 1,1-Dichloroethene	96	5.391	5.397	-0.006	95	131610	1.53	
31 Methylene Chloride	84	5.699	5.704	-0.005	96	8984	0.1203	
34 trans-1,2-Dichloroethene	96	6.438	6.443	-0.005	96	3163	0.0314	
37 1,1-Dichloroethane	63	6.815	6.826	-0.011	99	40434	0.2134	
42 cis-1,2-Dichloroethene	96	7.742	7.748	-0.006	98	123154	1.20	
47 1,1,1-Trichloroethane	97	9.053	9.058	-0.005	95	1318614	5.49	
49 Benzene	78	9.646	9.646	0.000	98	50998	0.1658	
59 Trichloroethene	130	10.951	10.957	-0.006	97	1179667	6.59	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

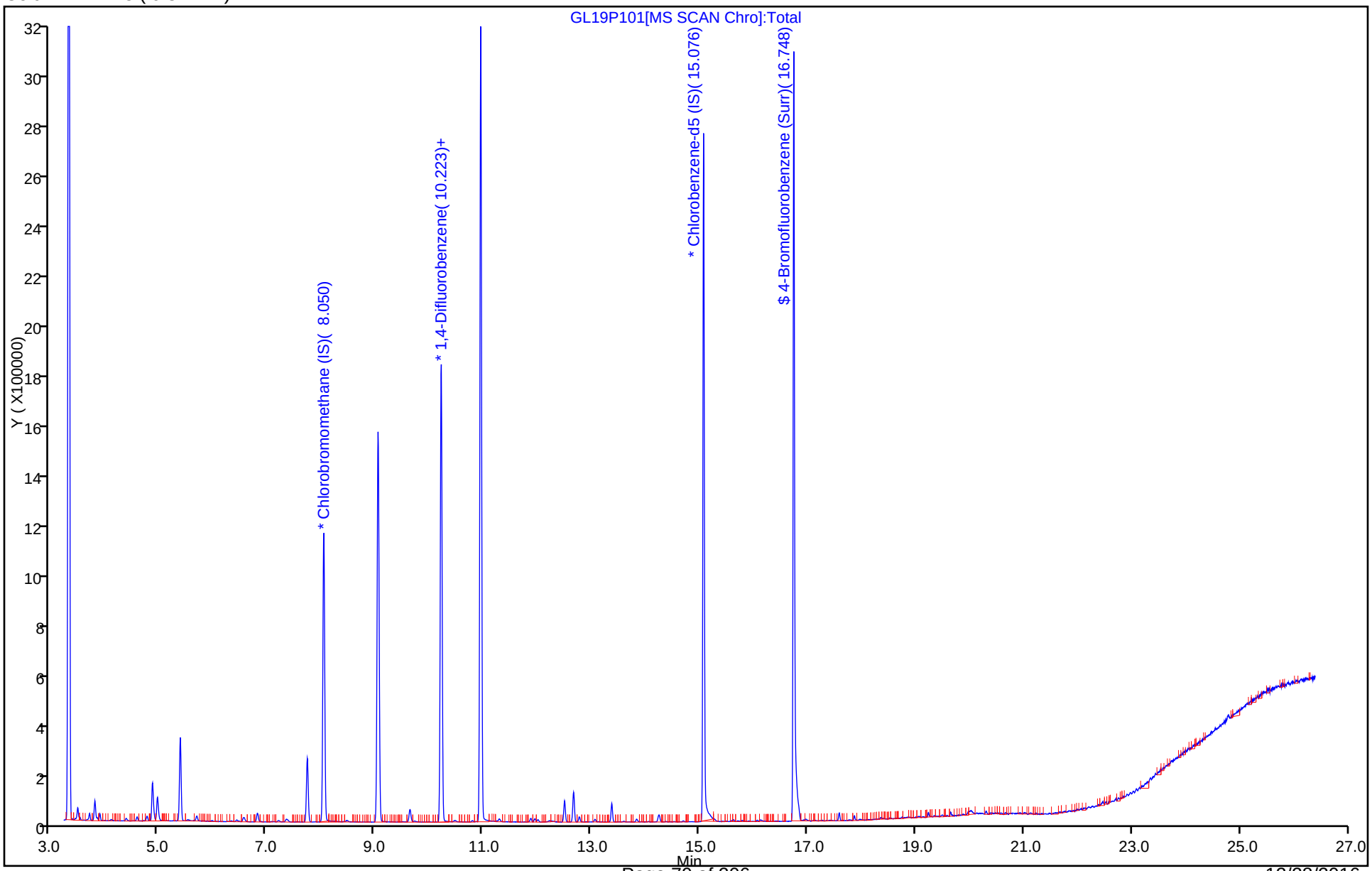
Report Date: 19-Dec-2016 15:30:02 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P101.D

Injection Date:	19-Dec-2016 13:29:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-6564-A-3	Lab Sample ID:	140-6564-3	Worklist Smp#:	5
Client ID:	BLDG-A INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P101.D				
Lims ID:	140-6564-A-3				
Client ID:	BLDG-A INFLUENT				
Sample Type:	Client				
Inject. Date:	19-Dec-2016 13:29:30	ALS Bottle#:	1	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003721-005				
Misc. Info.:	140-6564-a-3				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	19-Dec-2016 13:29:59	Calib Date:	09-Dec-2016 12:54:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK004				

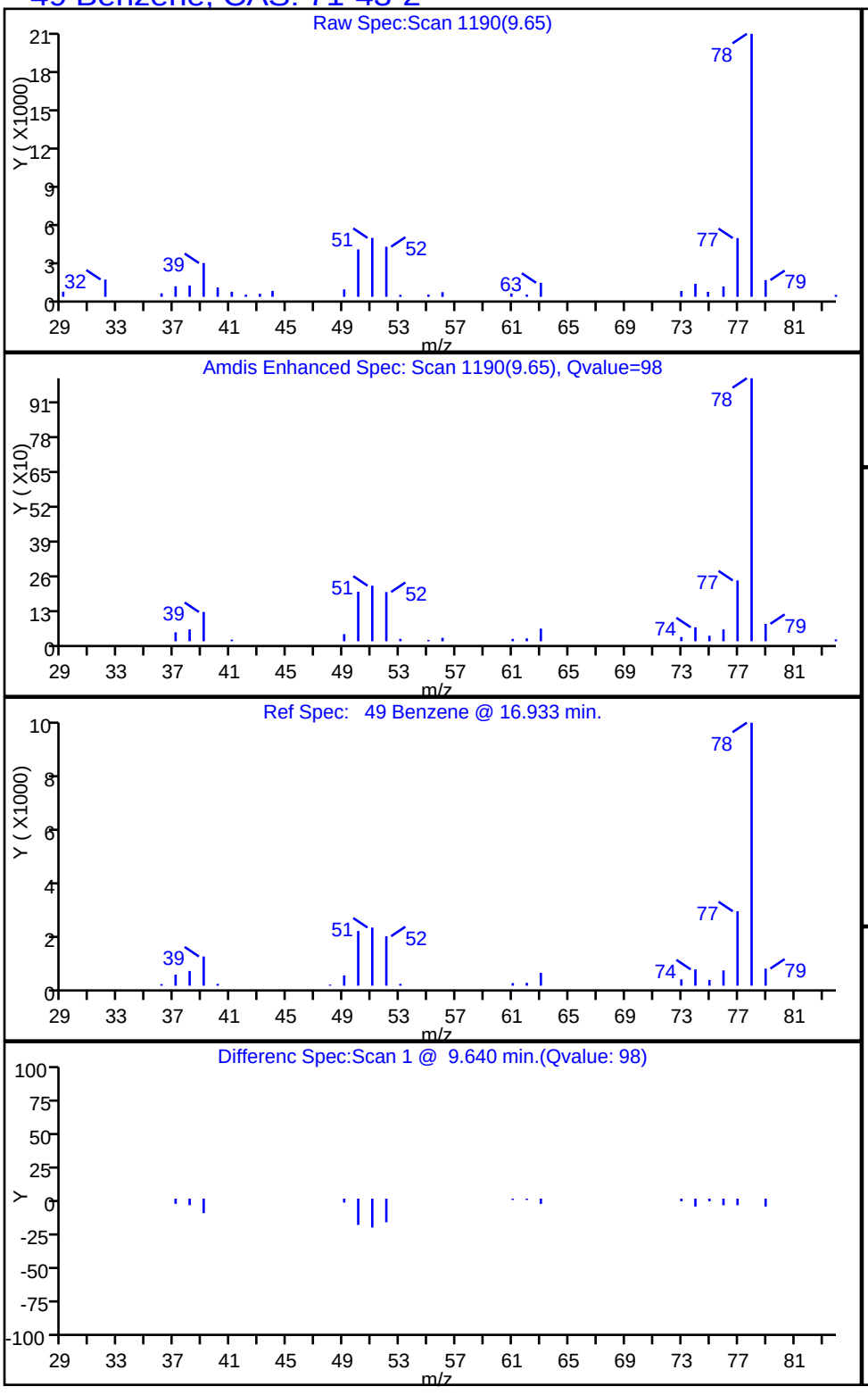
First Level Reviewer: tajh Date: 19-Dec-2016 14:22:38

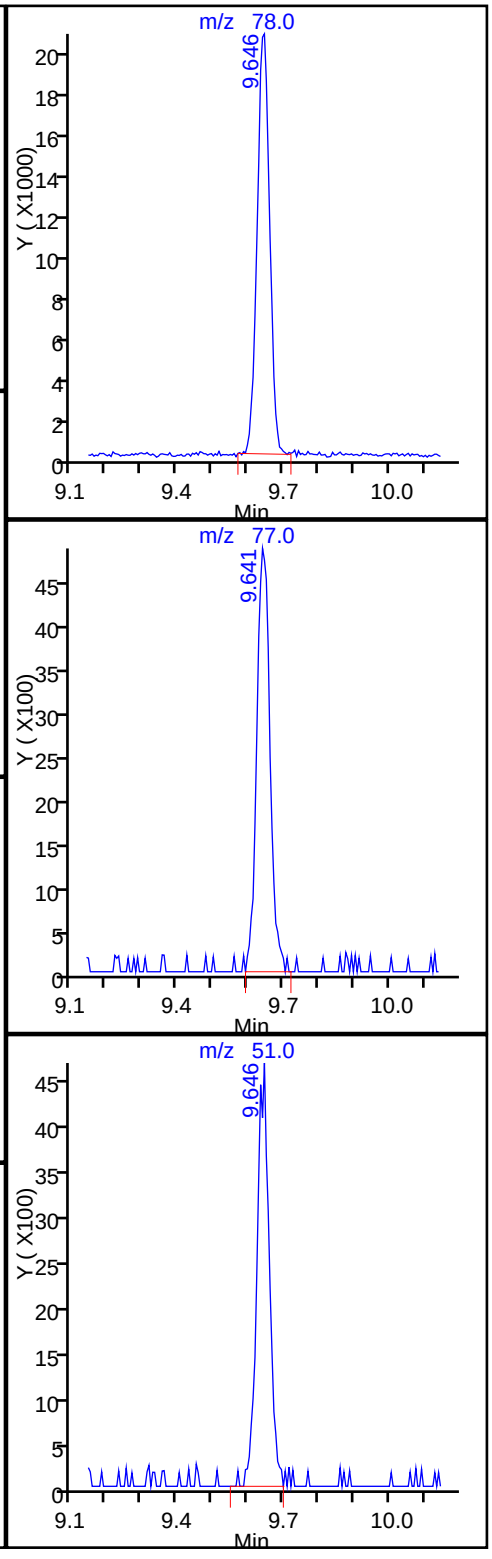
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.19	104.74

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P101.D		
Injection Date:	19-Dec-2016 13:29:30	Instrument ID:	MG
Lims ID:	140-6564-A-3	Lab Sample ID:	140-6564-3
Client ID:	BLDG-A INFLUENT		
Operator ID:	7126	ALS Bottle#:	1 Worklist Smp#: 5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

49 Benzene, CAS: 71-43-2

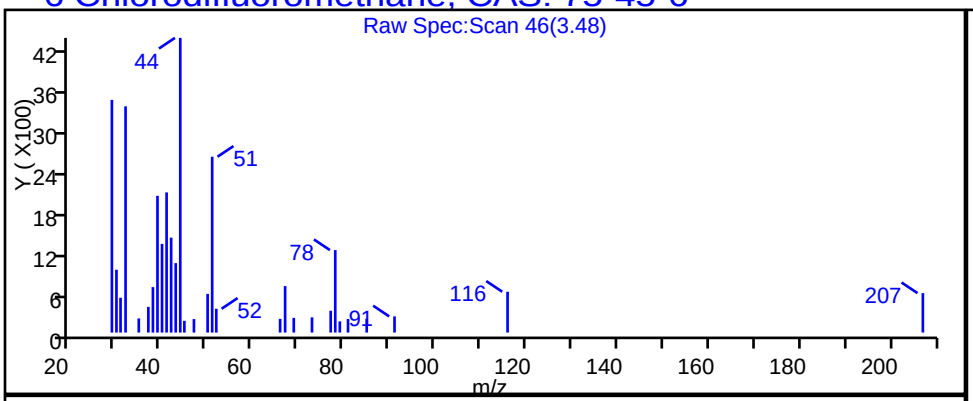


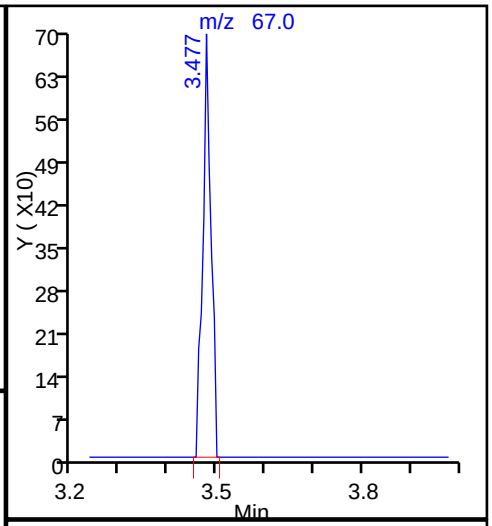


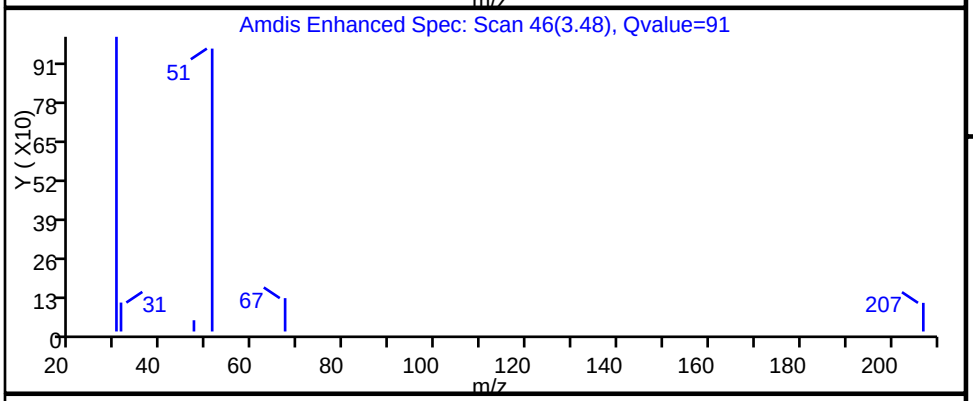
TestAmerica Knoxville

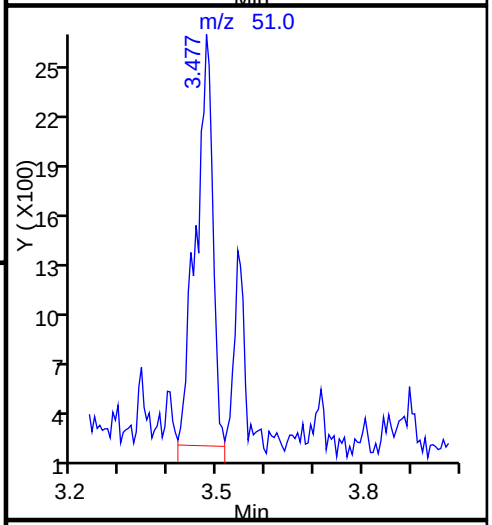
Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P101.D				
Injection Date:	19-Dec-2016 13:29:30	Instrument ID:	MG		
Lims ID:	140-6564-A-3	Lab Sample ID:	140-6564-3		
Client ID:	BLDG-A INFLUENT				
Operator ID:	7126	ALS Bottle#:	1	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

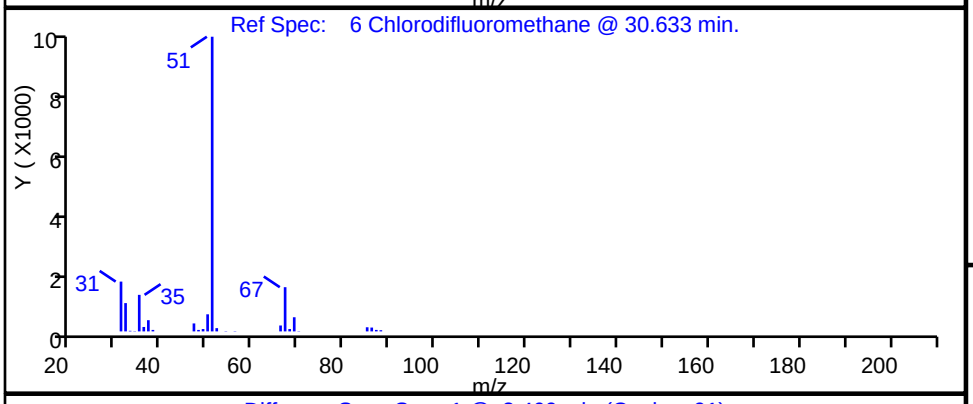
6 Chlorodifluoromethane, CAS: 75-45-6

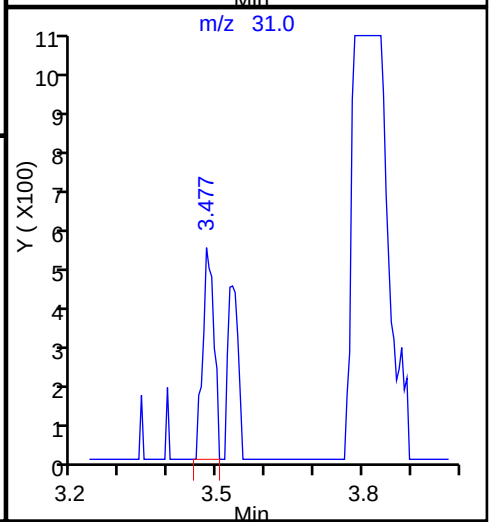


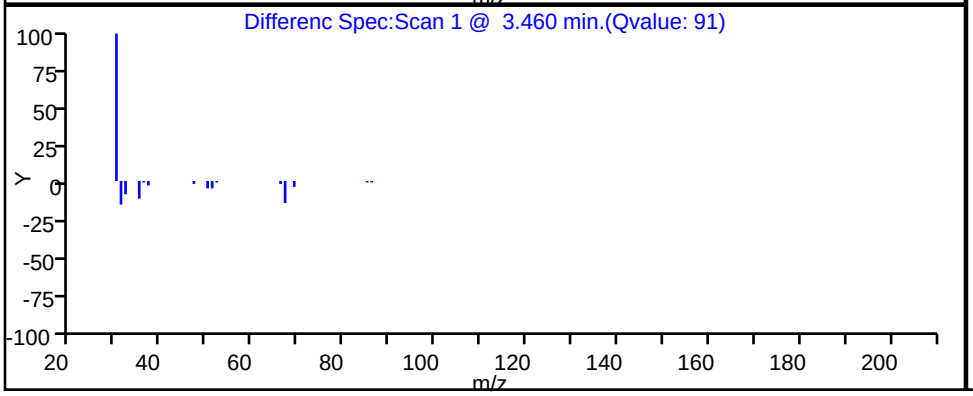








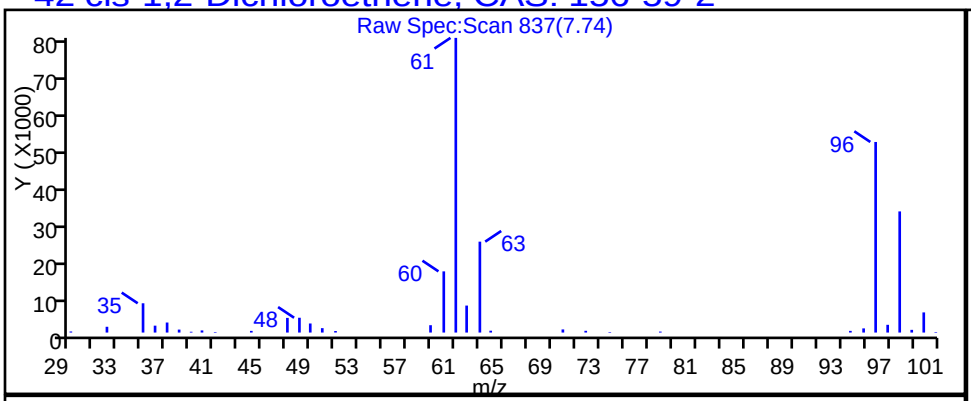


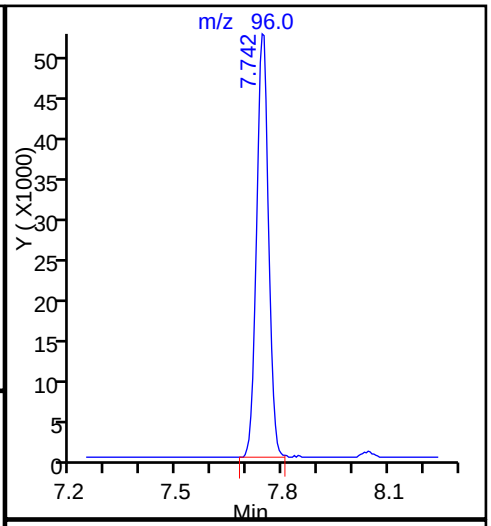


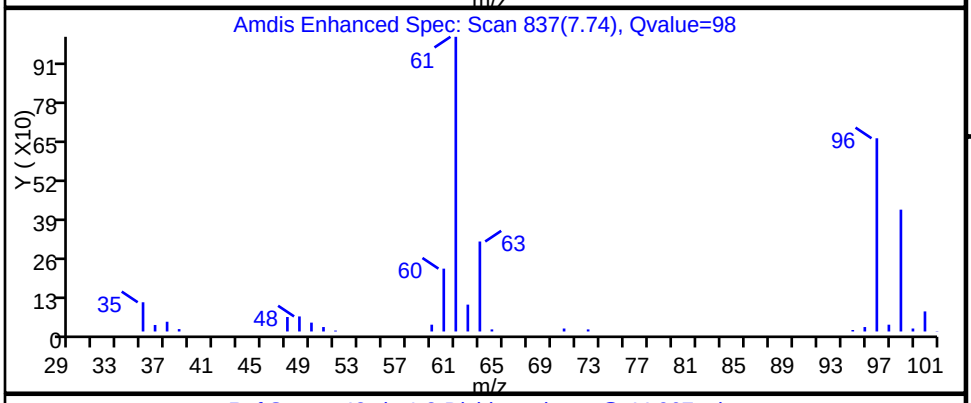
TestAmerica Knoxville

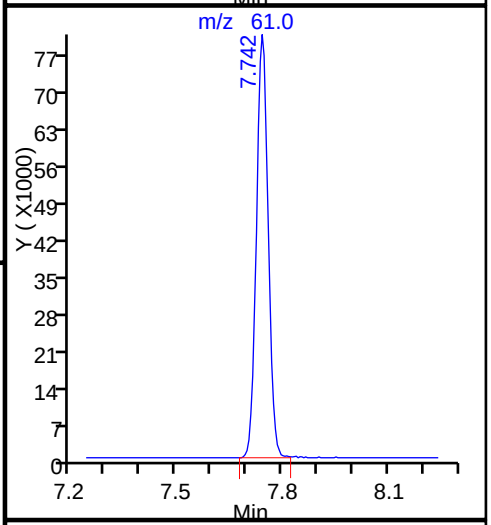
Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P101.D				
Injection Date:	19-Dec-2016 13:29:30	Instrument ID:	MG		
Lims ID:	140-6564-A-3	Lab Sample ID:	140-6564-3		
Client ID:	BLDG-A INFLUENT				
Operator ID:	7126	ALS Bottle#:	1	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

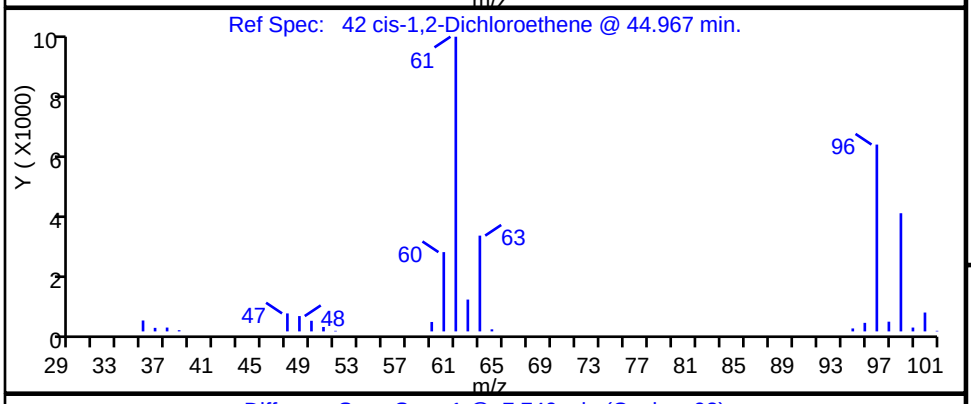
42 cis-1,2-Dichloroethene, CAS: 156-59-2

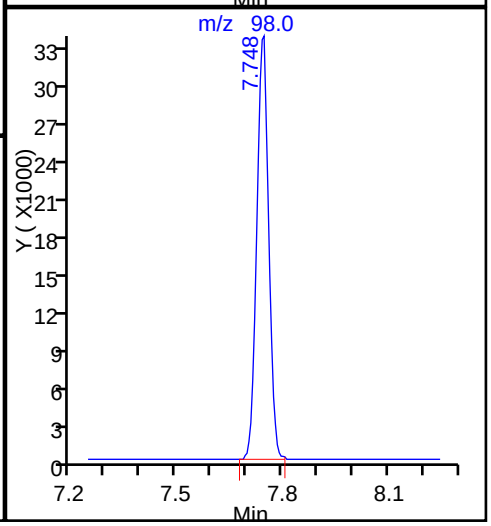


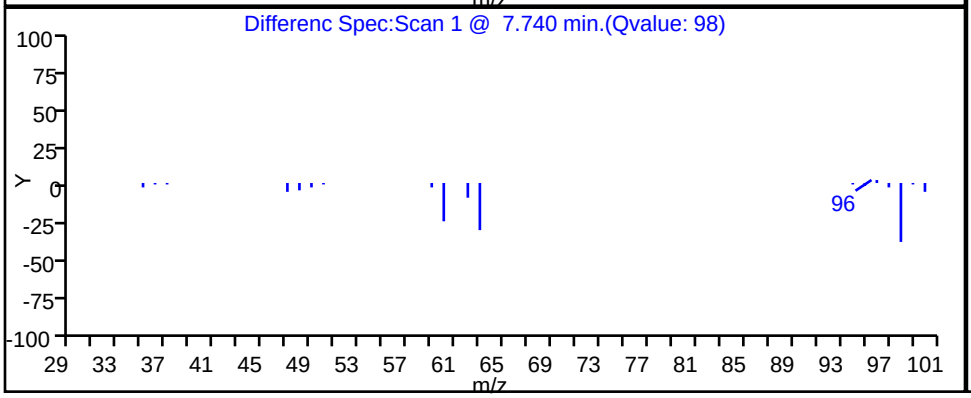








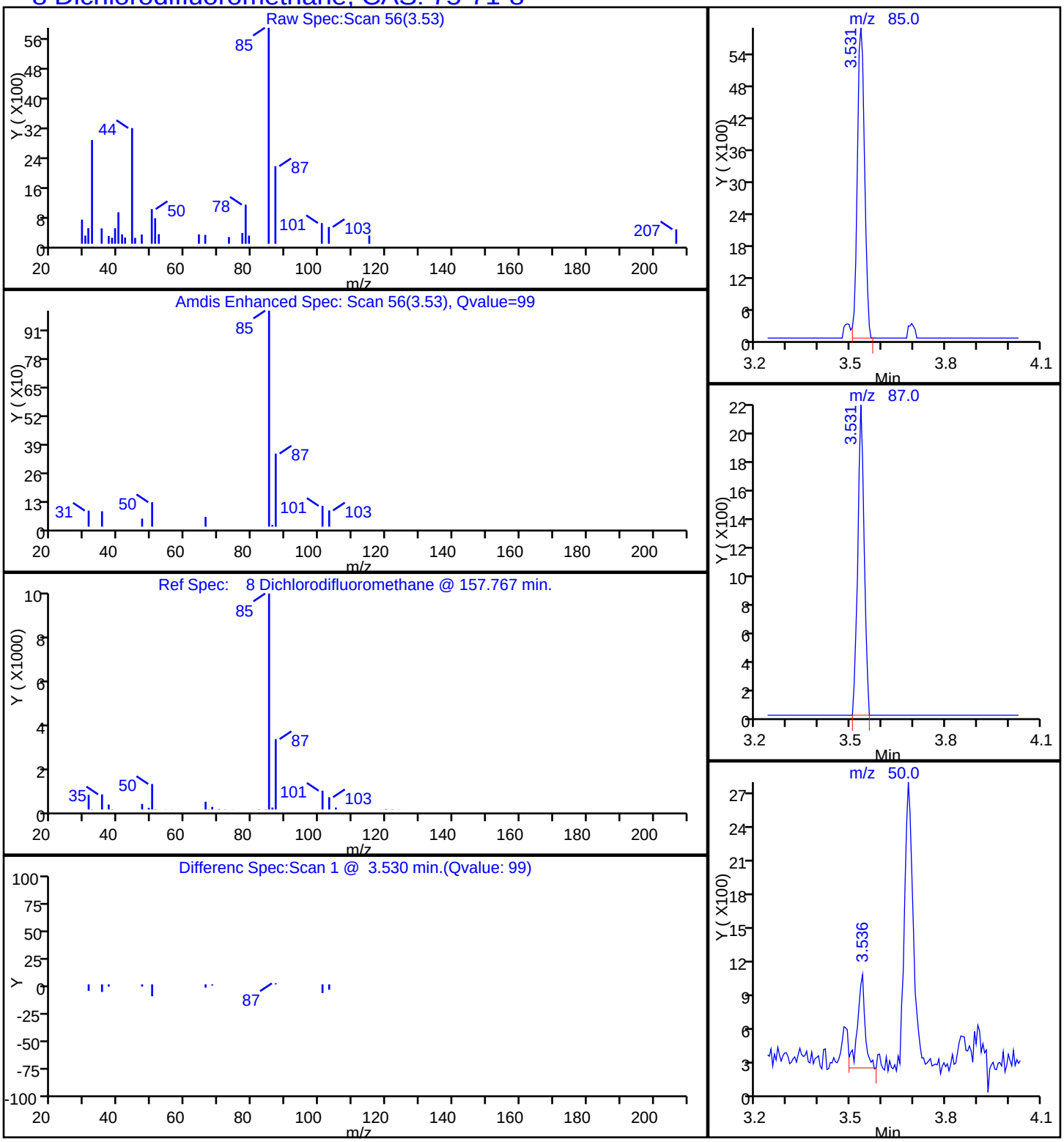




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P101.D		
Injection Date:	19-Dec-2016 13:29:30	Instrument ID:	MG
Lims ID:	140-6564-A-3	Lab Sample ID:	140-6564-3
Client ID:	BLDG-A INFLUENT		
Operator ID:	7126	ALS Bottle#:	1 Worklist Smp#: 5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

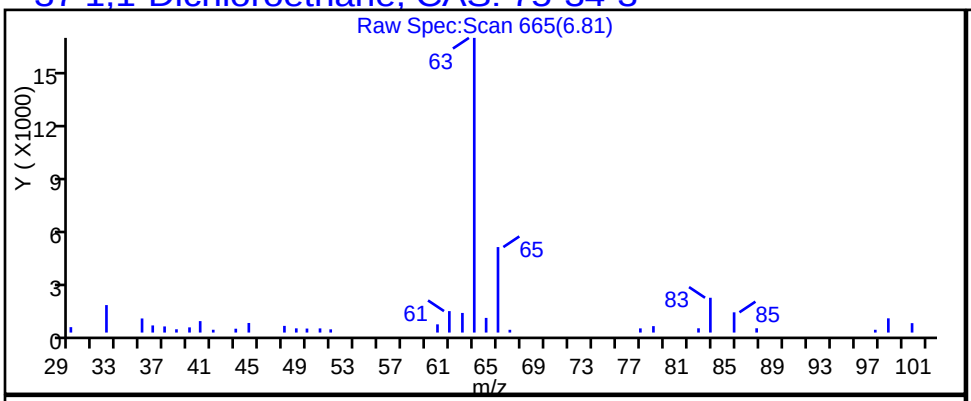
8 Dichlorodifluoromethane, CAS: 75-71-8

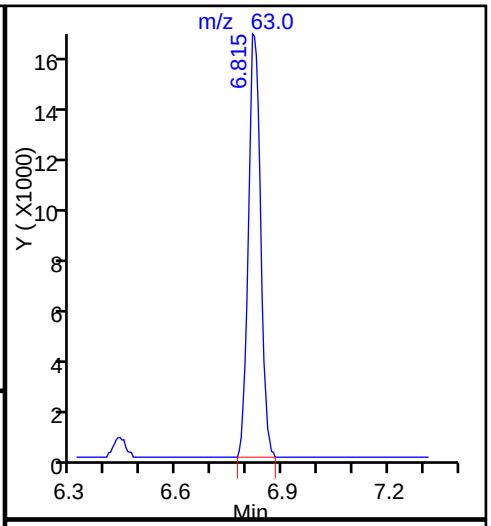


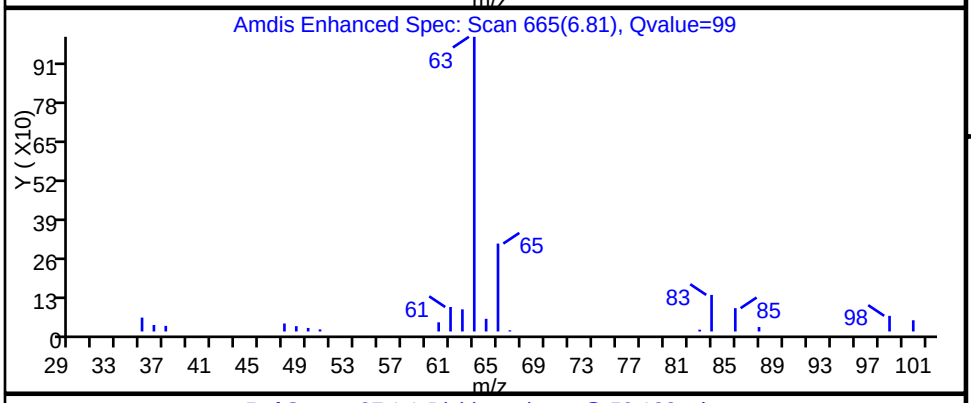
TestAmerica Knoxville

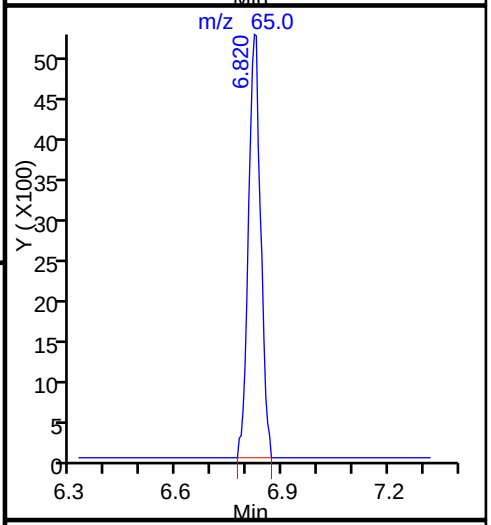
Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P101.D		
Injection Date:	19-Dec-2016 13:29:30	Instrument ID:	MG
Lims ID:	140-6564-A-3	Lab Sample ID:	140-6564-3
Client ID:	BLDG-A INFLUENT		
Operator ID:	7126	ALS Bottle#:	1 Worklist Smp#: 5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

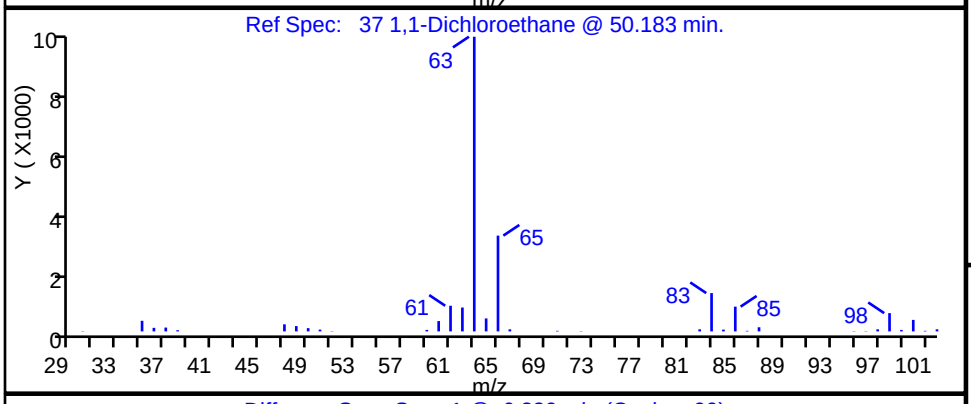
37 1,1-Dichloroethane, CAS: 75-34-3

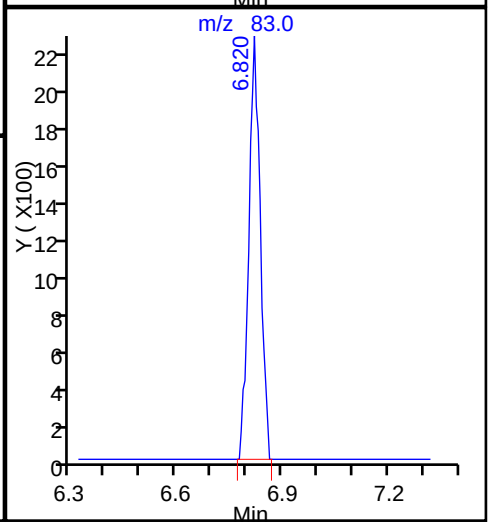


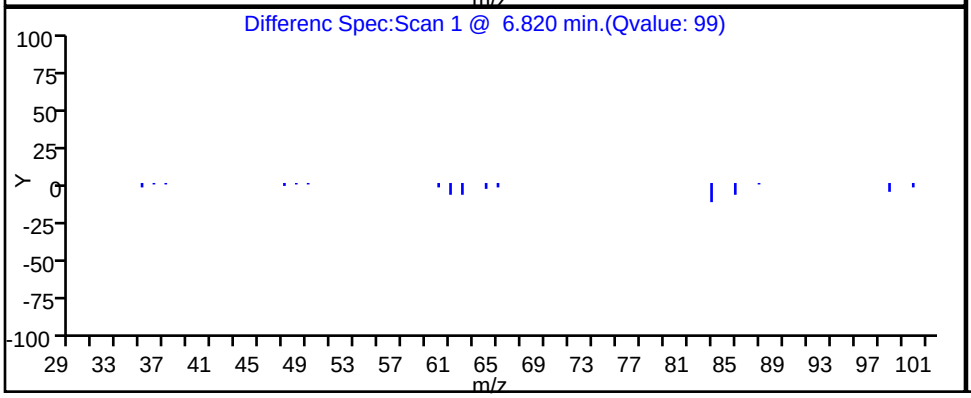












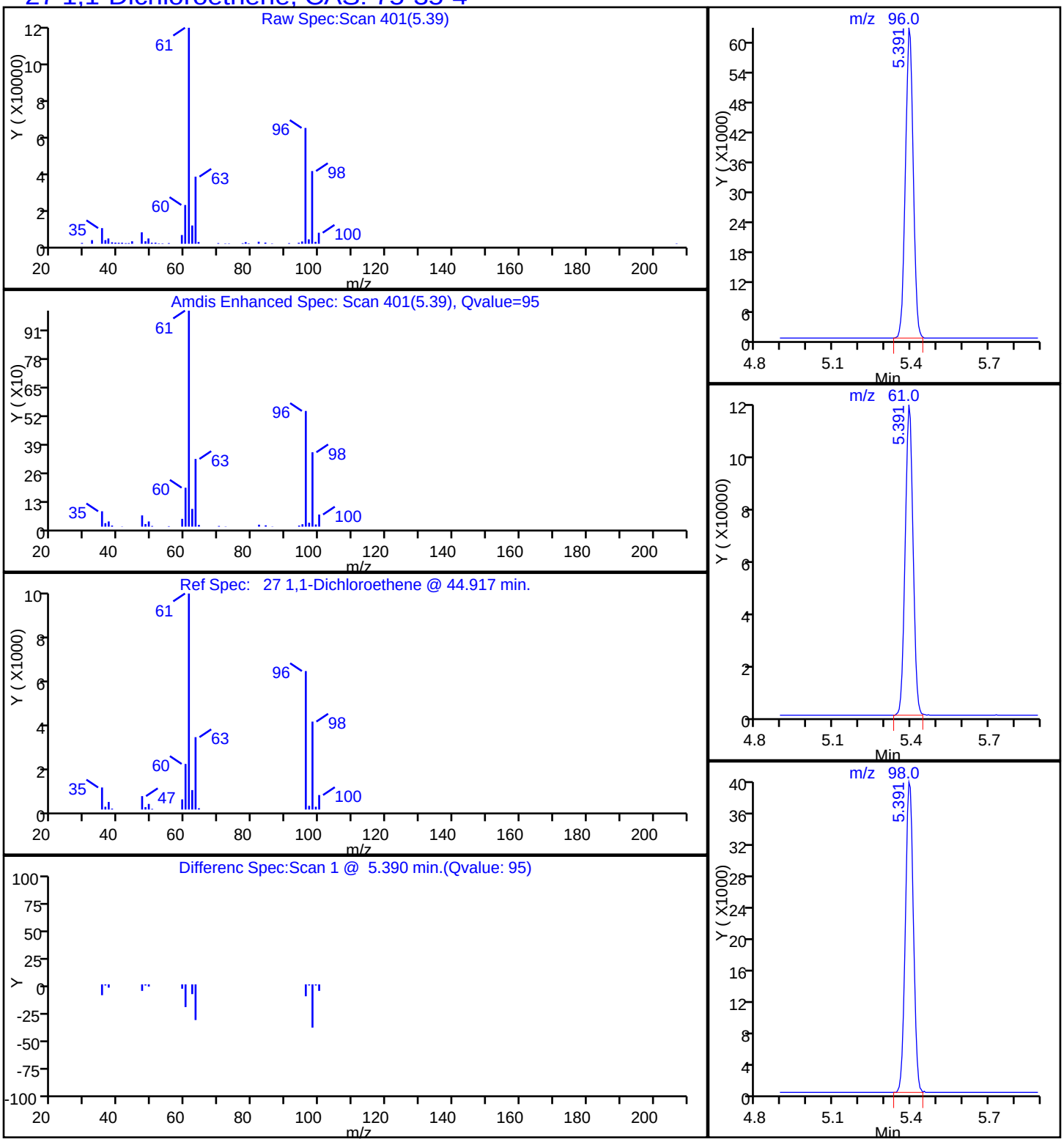
Report Date: 19-Dec-2016 15:30:03 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P101.D

Injection Date:	19-Dec-2016 13:29:30	Instrument ID:	MG		
Lims ID:	140-6564-A-3	Lab Sample ID:	140-6564-3		
Client ID:	BLDG-A INFLUENT				
Operator ID:	7126	ALS Bottle#:	1	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

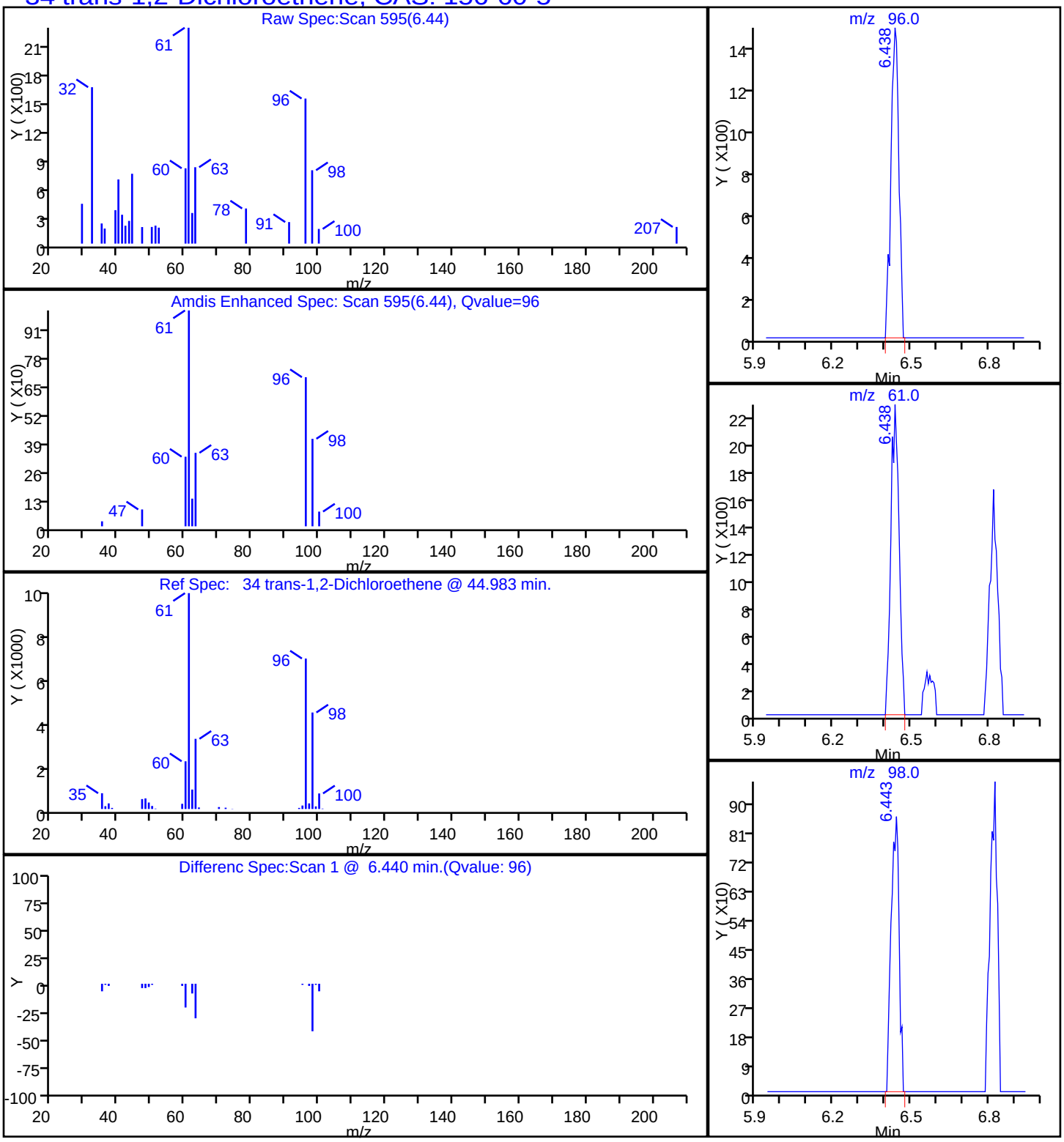
27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P101.D				
Injection Date:	19-Dec-2016 13:29:30	Instrument ID:	MG		
Lims ID:	140-6564-A-3	Lab Sample ID:	140-6564-3		
Client ID:	BLDG-A INFLUENT				
Operator ID:	7126	ALS Bottle#:	1	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

34 trans-1,2-Dichloroethene, CAS: 156-60-5

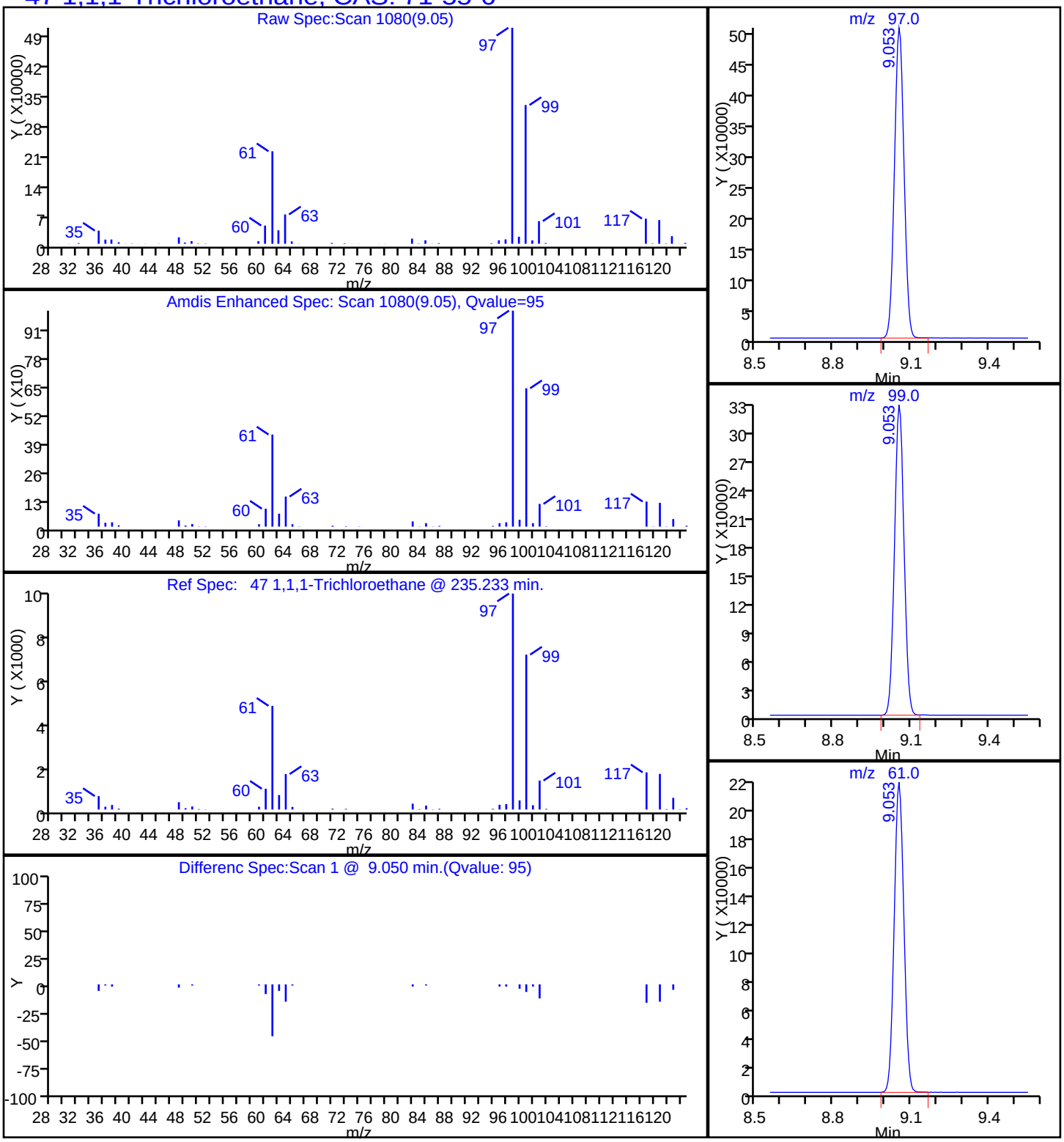


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P101.D

Injection Date:	19-Dec-2016 13:29:30	Instrument ID:	MG
Lims ID:	140-6564-A-3	Lab Sample ID:	140-6564-3
Client ID:	BLDG-A INFLUENT		
Operator ID:	7126	ALS Bottle#:	1 Worklist Smp#: 5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

47 1,1,1-Trichloroethane, CAS: 71-55-6



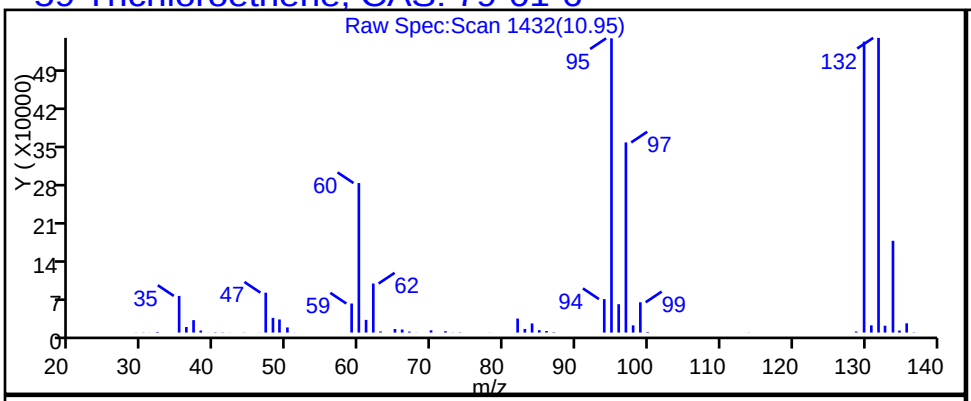
Report Date: 19-Dec-2016 15:30:03 Chrom Revision: 2.2 05-Dec-2016 12:37:22

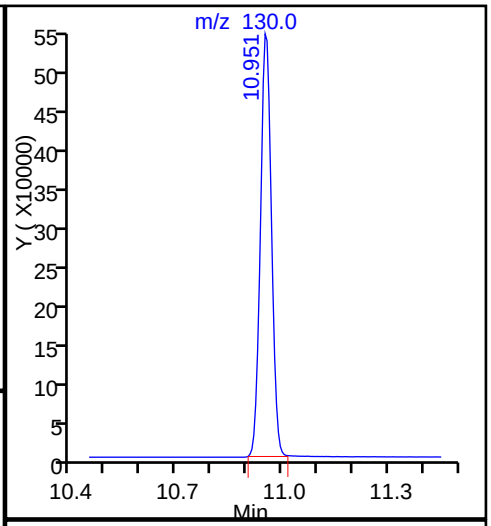
TestAmerica Knoxville

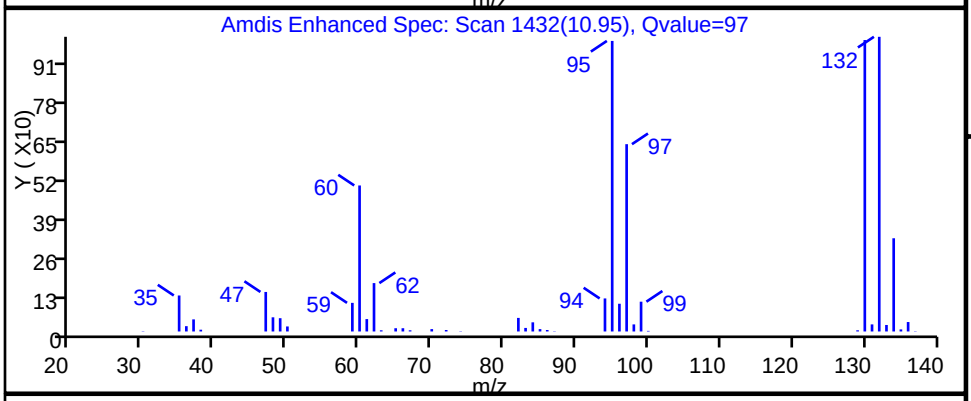
Data File: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GL19P101.D

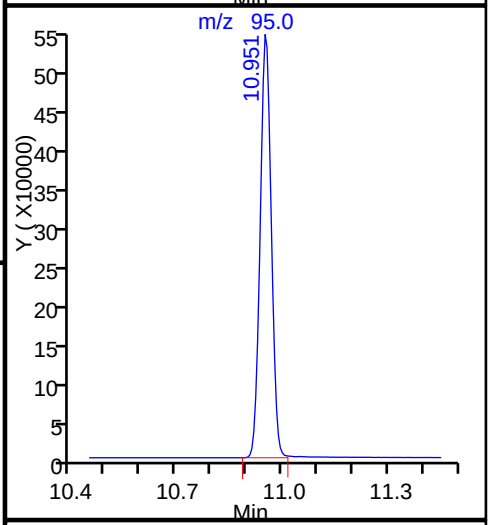
Injection Date:	19-Dec-2016 13:29:30	Instrument ID:	MG		
Lims ID:	140-6564-A-3	Lab Sample ID:	140-6564-3		
Client ID:	BLDG-A INFLUENT				
Operator ID:	7126	ALS Bottle#:	1	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

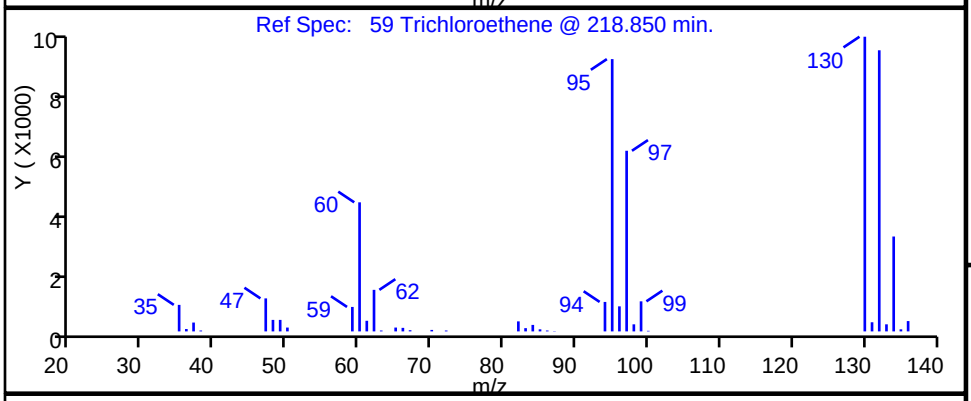
59 Trichloroethene, CAS: 79-01-6

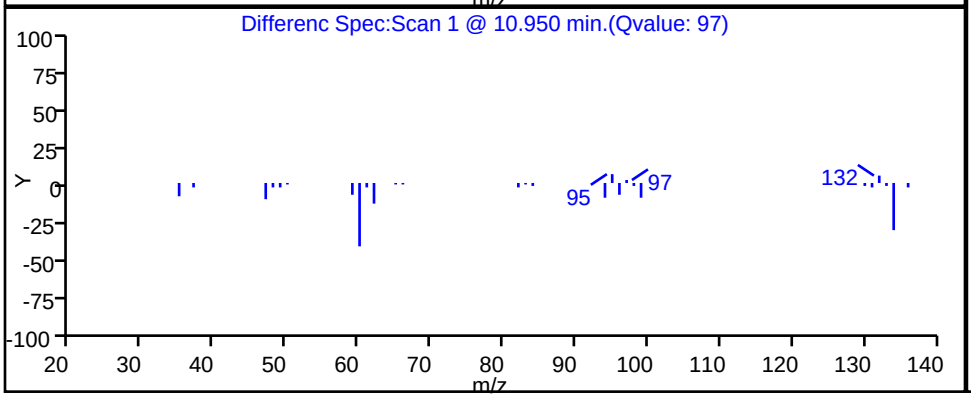


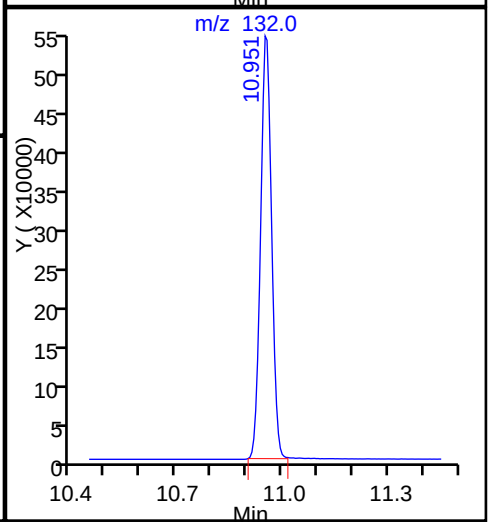












FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1 Analy Batch No.: 7384

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/08/2016 19:58 Calibration End Date: 12/09/2016 01:38 Calibration ID: 798

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-7384/3	GxL08IC01.D
Level 2	IC 140-7384/4	GxL08IC02.D
Level 3	IC 140-7384/5	GxL08IC03.D
Level 4	IC 140-7384/6	GxL08IC04.D
Level 5	IC 140-7384/7	GxL08IC05.D
Level 6	ICIS 140-7384/8	GxL08IC06.D
Level 7	IC 140-7384/9	GxL08IC07.D
Level 8	IC 140-7384/10	GxL08IC08.D
Level 9	IC 140-7384/11	GxL08IC09.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.3338	0.3549 0.3328	0.3159 0.3273	0.3020 0.3307	0.3270	Ave		0.3281				4.6		30.0			
Propene	1.2860 1.0804	1.1416 1.0379	1.1371 1.0519	1.0563 0.9734	1.0793	Ave		1.0938				8.1		30.0			
Dichlorodifluoromethane	3.5519 3.5420	3.2652 3.5274	3.3991 3.3976	3.1949 3.3711	3.5614	Ave		3.4234				3.9		30.0			
Chloromethane	0.4642 0.3785	0.3502 0.3686	0.4124 0.3215	0.3696 0.2816	0.3627	Ave		0.3677				14.0		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.2681 2.4009	2.1889 2.3241	2.2548 2.1971	2.0996 2.2948	2.3833	Ave		2.2679				4.3		30.0			
Acetaldehyde	+++++ 0.3575	+++++ 0.4076	0.5646 0.3521	0.4816 0.3144	0.3640	Ave		0.4060				21.6		30.0			
Vinyl chloride	1.2352 1.3504	1.1289 1.3032	1.2170 1.1616	1.1270 1.0433	1.2922	Ave		1.2065				8.3		30.0			
1,3-Butadiene	1.0799 1.0580	0.9526 1.0238	0.9911 0.8986	0.9061 0.8042	1.0507	Ave		0.9739				9.4		30.0			
Butane	2.0162 2.1057	1.8907 2.0272	1.9252 1.7380	1.7981 1.5045	2.1121	Ave		1.9020				10.4		30.0			
Bromomethane	1.2300 1.1902	1.1372 1.1693	1.1764 1.1123	1.0754 1.0923	1.1843	Ave		1.1519				4.4		30.0			
Chloroethane	0.6827 0.6648	0.6301 0.6570	0.6426 0.6188	0.6039 0.6101	0.6608	Ave		0.6412				4.2		30.0			
Ethanol	0.4632 0.3935	0.4508 0.3994	0.4105 0.3500	0.3911 0.3540	0.3846	Ave		0.3997				9.6		30.0			
Vinyl bromide	1.1201 1.1240	1.0611 1.1048	1.0843 1.0697	1.0215 1.0777	1.1262	Ave		1.0877				3.2		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1 Analy Batch No.: 7384

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/08/2016 19:58 Calibration End Date: 12/09/2016 01:38 Calibration ID: 798

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	1.6287 1.4313	1.3884 1.3874	1.4670 1.2605	1.3095 1.1548	1.4767	Ave		1.3894				9.9		30.0			
Acrolein	0.4901 0.2366	0.4360 0.2850	0.3176 0.2404	0.2661 0.2673	0.2638	Ave		0.3114				29.0		30.0			
Trichlorofluoromethane	3.3655 3.4720	3.1181 3.3885	3.3067 3.2629	3.0936 3.4188	3.4342	Ave		3.3178				4.1		30.0			
Acetonitrile	+++++ 0.3472	+++++ 0.3982	0.3570 0.3461	0.3885 0.3845	0.3624	Ave		0.3691				5.7		30.0			
Acetone	+++++ 0.4106	+++++ 0.4310	+++++ 0.3643	0.5157 0.3900	0.4174	Ave		0.4215				12.3		30.0			
Pentane	+++++ 0.2080	+++++ 0.2016	0.2135 0.1880	0.2029 0.1993	0.2119	Ave		0.2036				4.3		30.0			
Isopropyl alcohol	1.5310 1.4991	1.4716 1.4952	1.4150 1.2414	1.4097 1.3387	1.4318	Ave		1.4259				6.3		30.0			
Ethyl ether	0.9311 0.7873	0.9543 0.8900	0.7717 0.7765	0.8221 0.8369	0.7922	Ave		0.8402				8.2		30.0			
1,1-Dichloroethene	+++++ 1.0245	0.9453 0.9956	1.0023 0.9515	0.9046 0.9955	1.0043	Ave		0.9780				4.1		30.0			
Acrylonitrile	+++++ 0.4527	0.6271 0.5522	0.5612 0.4923	0.4969 0.5774	0.4676	Ave		0.5284				11.4		30.0			
tert-Butyl alcohol	1.3992 1.6383	1.4977 1.6364	1.4347 1.4716	1.4123 1.4970	1.5027	Ave		1.4989				5.8		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	2.2525 2.1037	2.0113 2.1372	2.0917 2.0319	1.9628 2.1889	2.0970	Ave		2.0974				4.3		30.0			
Methylene Chloride	+++++ 0.8104	+++++ 0.7861	1.1795 0.7336	0.8593 0.7645	0.8223	Ave		0.8508				17.7		30.0			
3-Chloropropene	+++++ 0.8454	0.9298 0.8445	0.8789 0.7578	0.8154 0.7846	0.8810	Ave		0.8422				6.6		30.0			
Carbon disulfide	3.1962 3.3493	2.9586 3.3443	3.2582 3.1210	3.0541 3.1717	3.3143	Ave		3.1964				4.2		30.0			
trans-1,2-Dichloroethene	1.2095 1.1840	1.1122 1.2104	1.1533 1.1267	1.0720 1.1183	1.1569	Ave		1.1493				4.1		30.0			
2-Methylpentane	2.6087 2.5424	2.3638 2.7079	2.5060 2.4671	2.3560 2.2074	2.5248	Ave		2.4760				6.0		30.0			
Methyl tert-butyl ether	2.9720 2.5613	2.8703 2.9618	2.3122 2.7718	2.5070 3.1078	2.5023	Ave		2.7296				9.9		30.0			
1,1-Dichloroethane	2.3404 2.1332	2.0906 2.2606	2.0615 2.1913	2.0008 2.2460	2.1042	Ave		2.1587				5.0		30.0			
Vinyl acetate	2.9307 2.4017	2.8215 2.9126	2.1645 2.8518	2.4824 3.2385	2.3517	Ave		2.6840				13.0		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1 Analy Batch No.: 7384

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/08/2016 19:58 Calibration End Date: 12/09/2016 01:38 Calibration ID: 798

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	0.4922 0.4381	0.5130 0.5011	0.4615 0.4635	0.4677 0.5091	0.4170	Ave		0.4737				6.9		30.0			
Hexane	+++++ 0.9349	1.0515 0.9857	1.0034 0.9194	0.9087 0.8655	0.9371	Ave		0.9508				6.2		30.0			
Isopropyl ether	3.6385 3.2521	3.5918 3.8494	2.8822 3.4934	3.1928 3.6458	3.1568	Ave		3.4114				9.0		30.0			
cis-1,2-Dichloroethene	1.1808 1.1866	1.1264 1.2421	1.1288 1.1663	1.1069 1.2041	1.1563	Ave		1.1665				3.6		30.0			
Ethyl acetate	+++++ 1.9841	2.3762 2.3590	1.6829 2.1967	1.9349 2.5285	1.8625	Ave		2.1156				13.9		30.0			
Chloroform	2.7445 2.4932	2.4677 2.6082	2.4462 2.4420	2.3597 2.5302	2.4907	Ave		2.5092				4.4		30.0			
Tert-butyl ethyl ether	3.1089 2.8510	3.0927 3.3589	2.4522 3.0495	2.7295 3.3330	2.7203	Ave		2.9662				10.2		30.0			
Tetrahydrofuran	+++++ 1.0133	1.2244 1.1796	0.9443 1.1231	1.0049 1.2635	0.9847	Ave		1.0922				11.1		30.0			
1,1,1-Trichloroethane	2.8646 2.7270	2.6636 2.8877	2.6517 2.7208	2.5679 2.8512	2.6959	Ave		2.7367				4.0		30.0			
1,2-Dichloroethane	0.3530 0.3840	0.3341 0.4140	0.3734 0.3709	0.3352 0.4164	0.3754	Ave		0.3729				8.0		30.0			
Benzene	0.7199 0.7857	0.6720 0.7833	0.7520 0.6448	0.6879 0.6669	0.7631	Ave		0.7195				7.5		30.0			
Cyclohexane	+++++ 0.1599	0.1191 0.1382	0.1518 0.1112	0.1255 0.1123	0.1430	Ave		0.1326				13.8		30.0			
Carbon tetrachloride	0.5841 0.7981	0.5511 0.7296	0.6608 0.4256	0.5781 0.7543	0.6997	Ave		0.6424				18.3		30.0			
1-Butanol	0.0816 0.1131	0.0817 0.0985	0.0943 0.0738	0.0738 0.0787	0.0917	Ave		0.0875				14.9		30.0			
2,3-Dimethylpentane	0.1701 0.2181	0.1635 0.2048	0.1997 0.1735	0.1678 0.1822	0.1936	Ave		0.1859				10.2		30.0			
Thiophene	0.4033 0.4904	0.3656 0.4775	0.4326 0.4144	0.3889 0.4535	0.4495	Ave		0.4306				9.6		30.0			
Tert-amyl methyl ether	+++++ 0.7246	0.5422 0.7657	0.5885 0.6251	0.5528 0.7334	0.6168	Ave		0.6436				13.4		30.0			
2,2,4-Trimethylpentane	1.2559 1.5774	1.1480 1.4297	1.3694 1.1835	1.1880 1.2127	1.3776	Ave		1.3047				10.9		30.0			
Heptane	+++++ 0.3469	0.2548 0.3154	0.3019 0.2596	0.2588 0.2705	0.3035	Ave		0.2889				11.5		30.0			
1,2-Dichloropropane	0.2906 0.2837	0.2676 0.3088	0.2584 0.2567	0.2529 0.2703	0.2644	Ave		0.2726				6.7		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1 Analy Batch No.: 7384

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/08/2016 19:58 Calibration End Date: 12/09/2016 01:38 Calibration ID: 798

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.3688 0.5033	0.3440 0.4316	0.5123 0.3780	0.3593 0.4151	0.4551	Ave		0.4186				14.8		30.0			
Dibromomethane	+++++ 0.3889	0.2900 0.3594	0.3299 0.3041	0.2976 0.3375	0.3454	Ave		0.3316				10.1		30.0			
Bromodichloromethane	0.5174 0.6936	0.4743 0.6569	0.5538 0.5626	0.5007 0.6303	0.5963	Ave		0.5762				12.8		30.0			
1,4-Dioxane	0.0817 0.1219	0.0851 0.1140	0.0928 0.0904	0.0829 0.1034	0.0967	Ave		0.0965				14.6		30.0			
Methyl methacrylate	0.2938 0.3203	0.2764 0.3675	0.2381 0.2963	0.2499 0.3421	0.2672	Ave		0.2946				14.5		30.0			
Methylcyclohexane	0.5798 0.7090	0.5275 0.6371	0.6323 0.5277	0.5432 0.5612	0.6402	Ave		0.5953				10.5		30.0			
4-Methyl-2-pentanone (MIBK)	0.4023 0.5929	0.4101 0.5966	0.4735 0.4754	0.4187 0.5284	0.5089	Ave		0.4897				15.0		30.0			
cis-1,3-Dichloropropene	0.4002 0.4569	0.3982 0.4973	0.4013 0.4303	0.3994 0.4690	0.4235	Ave		0.4307				8.4		30.0			
trans-1,3-Dichloropropene	0.3658 0.4061	0.3540 0.4491	0.3426 0.4020	0.3354 0.4498	0.3686	Ave		0.3859				11.2		30.0			
Toluene Range	+++++ 2.0836	+++++ 2.2682	+++++ 1.9120	1.8759 2.1660	1.8779	Ave		2.0306				8.2		30.0			
Toluene	0.8254 0.8322	0.7743 0.8957	0.7328 0.7761	0.7273 0.8596	0.7761	Ave		0.7999				7.1		30.0			
1,1,2-Trichloroethane	0.2336 0.2534	0.2227 0.2680	0.2207 0.2294	0.2124 0.2492	0.2336	Ave		0.2359				7.5		30.0			
2-Methylthiophene	0.6613 0.7027	0.6575 0.7544	0.6376 0.6612	0.6096 0.7240	0.6640	Ave		0.6747				6.6		30.0			
3-Methylthiophene	0.6737 0.6801	0.6274 0.7378	0.6026 0.6464	0.5887 0.7136	0.6452	Ave		0.6573				7.5		30.0			
2-Hexanone	+++++ 0.2915	0.1900 0.2710	0.2213 0.2338	0.1764 0.2631	0.2313	Ave		0.2348				16.8		30.0			
Octane	+++++ 0.3727	0.2881 0.3343	0.3227 0.2834	0.2768 0.2924	0.3462	Ave		0.3146				11.0		30.0			
C8 Range	+++++ 3.9288	+++++ 3.5290	+++++ 2.7837	2.8399 2.2545	3.5748	Ave		3.1518				19.9		30.0			
Dibromochloromethane	0.4510 0.6078	0.4328 0.6378	0.4973 0.5733	0.4548 0.6752	0.5555	Ave		0.5428				16.2		30.0			
1,2-Dibromoethane (EDB)	0.4272 0.5036	0.4148 0.5296	0.4331 0.4740	0.3963 0.5288	0.4689	Ave		0.4640				10.6		30.0			
Tetrachloroethene	0.3393 0.3979	0.3144 0.3644	0.3519 0.3344	0.3031 0.3796	0.3738	Ave		0.3510				8.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1 Analy Batch No.: 7384

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/08/2016 19:58 Calibration End Date: 12/09/2016 01:38 Calibration ID: 798

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorobenzene	0.6294 0.7178	0.6279 0.7389	0.6200 0.6505	0.5900 0.7362	0.6651	Ave		0.6640				8.2		30.0			
2,3-Dimethylheptane	0.8109 0.9418	0.7539 0.8768	0.8388 0.6840	0.7385 0.6154	0.8750	Ave		0.7928				13.1		30.0			
Ethylbenzene	1.0036 1.1526	1.0133 1.1923	0.9508 1.0222	0.9310 1.1519	1.0198	Ave		1.0486				8.9		30.0			
2-Ethylthiophene	0.7321 0.8577	0.7363 0.9084	0.6843 0.7890	0.6841 0.8999	0.7684	Ave		0.7845				11.0		30.0			
m-Xylene & p-Xylene	0.7983 0.9029	0.7794 0.9012	0.7339 0.7616	0.7175 0.8713	0.8098	Ave		0.8084				8.6		30.0			
Bromoform	+++++ 0.5811	0.3397 0.6513	0.4073 0.6476	0.4101 +++++	0.4599	Ave		0.4996				25.2		30.0			
Nonane	0.5140 0.6372	0.5365 0.5614	0.5472 0.4343	0.4988 0.3895	0.5982	Ave		0.5241				14.7		30.0			
Styrene	0.5025 0.6687	0.5069 0.6733	0.4719 0.5858	0.4870 0.6908	0.5821	Ave		0.5743				15.1		30.0			
o-Xylene	0.8448 0.9402	0.8143 0.9607	0.7706 0.8183	0.7503 0.9298	0.8397	Ave		0.8521				8.8		30.0			
1,1,2,2-Tetrachloroethane	0.5467 0.6672	0.5314 0.6754	0.3873 0.5632	0.4923 0.6232	0.5771	Ave		0.5626				16.0		30.0			
1,2,3-Trichloropropane	0.1698 0.2072	0.1776 0.2127	0.1592 0.1836	0.1595 0.2171	0.1811	Ave		0.1853				11.9		30.0			
Isopropylbenzene	1.2213 1.3188	1.2143 1.3047	1.0675 1.1252	1.0400 1.3154	1.1807	Ave		1.1987				8.8		30.0			
Propylbenzene	0.3083 0.3741	0.3035 0.3706	0.2942 0.3183	0.2692 0.3791	0.3203	Ave		0.3264				12.0		30.0			
2-Chlorotoluene	0.2803 0.3401	0.2908 0.3361	0.2713 0.2938	0.2596 0.3435	0.2980	Ave		0.3015				10.3		30.0			
4-Ethyltoluene	1.0725 1.3245	1.0762 1.3261	1.0167 1.1334	0.9755 1.3366	1.1448	Ave		1.1563				12.1		30.0			
1,3,5-Trimethylbenzene	0.5114 0.6375	0.5316 0.6202	0.4943 0.5337	0.4675 0.6484	0.5604	Ave		0.5561				11.7		30.0			
Alpha Methyl Styrene	0.3588 0.5521	0.3762 0.5659	0.3674 0.4999	0.3490 0.5992	0.4597	Ave		0.4587				21.6		30.0			
Decane	0.5871 0.7749	0.5831 0.6868	0.6267 0.5492	0.5632 0.5302	0.6657	Ave		0.6186				12.7		30.0			
tert-Butylbenzene	1.0198 1.2271	1.0123 1.1883	0.9710 1.0325	0.9055 1.2566	1.0851	Ave		1.0776				11.2		30.0			
1,2,4-Trimethylbenzene	0.8612 1.1298	0.8911 1.0825	0.8780 0.9378	0.8224 1.1204	0.9973	Ave		0.9689				12.2		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1 Analy Batch No.: 7384

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/08/2016 19:58 Calibration End Date: 12/09/2016 01:38 Calibration ID: 798

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,3-Dichlorobenzene	0.6141 0.7899	0.6013 0.7691	0.6150 0.7360	0.5662 0.9169	0.6918	Ave		0.7000				16.2		30.0			
sec-Butylbenzene	1.3032 1.6296	1.3128 1.5477	1.3058 1.3412	1.1931 1.5425	1.4403	Ave		1.4018				10.4		30.0			
Benzyl chloride	0.6148 0.9678	0.6350 0.9569	0.6408 0.8508	0.5951 0.9807	0.7219	Ave		0.7737				21.3		30.0			
1,4-Dichlorobenzene	0.6036 0.7841	0.5931 0.7519	0.6005 0.7111	0.5563 0.8865	0.6711	Ave		0.6842				15.9		30.0			
4-Isopropyltoluene	1.0603 1.3938	1.0612 1.3544	1.0692 1.1734	0.9923 1.4119	1.2263	Ave		1.1936				13.5		30.0			
1,2,3-Trimethylbenzene	0.6714 0.8522	0.6994 0.8473	0.6784 0.7260	0.6250 0.8489	0.7562	Ave		0.7450				11.6		30.0			
Butylcyclohexane	0.7330 0.8802	0.7198 0.7920	0.7649 0.6757	0.6877 0.7014	0.7915	Ave		0.7496				8.7		30.0			
1,2-Dichlorobenzene	0.5841 0.7718	0.5719 0.7333	0.5959 0.6864	0.5354 0.8615	0.6801	Ave		0.6689				16.0		30.0			
Indane	0.8027 1.0536	0.8227 1.0032	0.8131 0.8882	0.7463 1.0683	0.9208	Ave		0.9021				13.0		30.0			
Indene	+++++ 0.7925	+++++ 0.7841	0.5682 0.6876	0.5181 0.8297	0.6730	Lin1	-0.062	0.7892							0.9930		0.9900
Butylbenzene	0.8919 1.2730	0.9217 1.1984	0.9649 0.9995	0.8698 1.1339	1.0888	Ave		1.0380				13.7		30.0			
Undecane	0.6021 0.8423	0.6055 0.7396	0.6714 0.5739	0.5764 0.5367	0.7308	Ave		0.6532				15.3		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 1.0231	0.7153 0.9883	0.7844 0.8445	0.6729 1.0112	0.8866	Ave		0.8658				15.6		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.3428	0.1955 0.3390	0.2062 0.3139	0.1926 0.4055	0.2526	Ave		0.2810				28.6		30.0			
1,2,4,5-Tetramethylbenzene	0.8105 1.2627	0.8397 1.1843	0.9470 1.0243	0.8035 1.2216	1.0664	Ave		1.0178				17.6		30.0			
1,2,3,5-Tetramethylbenzene	0.5153 0.7560	0.5255 0.7179	0.5723 0.6194	0.4969 0.7358	0.6589	Ave		0.6220				16.1		30.0			
1,2,3,4-Tetramethylbenzene	0.6713 1.0417	0.6881 0.9783	0.7946 0.8420	0.6480 0.9968	0.9053	Ave		0.8407				17.8		30.0			
Dodecane	0.4776 0.7387	0.4838 0.6800	0.6528 0.5350	0.4608 0.5001	0.6724	Ave		0.5779				18.5		30.0			
1,2,4-Trichlorobenzene	0.2836 0.5853	0.3012 0.5779	0.3547 0.5740	0.2992 0.7434	0.4654	Ave		0.4650				35.3	*	30.0			
Naphthalene	0.6545 1.2900	0.6877 1.2421	0.8457 1.1172	0.6647 1.3186	1.0568	Ave		0.9864				28.1		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1 Analy Batch No.: 7384

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/08/2016 19:58 Calibration End Date: 12/09/2016 01:38 Calibration ID: 798

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	+++++ 0.6697	0.3568 0.6621	0.4044 0.6235	0.3280 0.7552	0.5262	Ave		0.5407				29.8		30.0			
Hexachlorobutadiene	0.6234 0.8147	0.5709 0.7703	0.6554 0.7981	0.5172 0.9331	0.7444	Ave		0.7142				18.5		30.0			
1,2,3-Trichlorobenzene	0.3108 0.5783	0.3138 0.5460	0.3999 0.5209	0.2901 0.6336	0.4883	Ave		0.4535				28.3		30.0			
2-Methylnaphthalene	+++++ 0.2002	+++++ 0.1790	0.1300 0.1732	0.0618 0.1093	0.1529	Ave		0.1438				33.0		50.0			
1-Methylnaphthalene	+++++ 0.2051	+++++ 0.1772	0.1609 0.1640	0.0678 0.0845	0.1661	Ave		0.1465				34.5		50.0			
4-Bromofluorobenzene (Surr)	0.6532 0.6804	0.6564 0.6665	0.6386 0.6726	0.6628 0.6636	0.6595	Ave		0.6615				1.8		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1 Analy Batch No.: 7384

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/08/2016 19:58 Calibration End Date: 12/09/2016 01:38 Calibration ID: 798

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-7384/3	GxL08IC01.D
Level 2	IC 140-7384/4	GxL08IC02.D
Level 3	IC 140-7384/5	GxL08IC03.D
Level 4	IC 140-7384/6	GxL08IC04.D
Level 5	IC 140-7384/7	GxL08IC05.D
Level 6	ICIS 140-7384/8	GxL08IC06.D
Level 7	IC 140-7384/9	GxL08IC07.D
Level 8	IC 140-7384/10	GxL08IC08.D
Level 9	IC 140-7384/11	GxL08IC09.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 72767	3430 147523	5647 292311	14013 570750	36626	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propene	CBM	Ave	5954 235491	11034 460046	20326 939449	49008 1680175	120900	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	16445 772063	31559 1563438	60760 3034352	148238 5818805	398936	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	2149 82499	3385 163356	7372 287150	17148 486023	40624	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	10501 523333	21156 1030111	40305 1962149	97416 3960934	266972	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 389664	+++++ 903339	50465 1572354	111731 2713131	203897	+++++ 9.99	+++++ 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl chloride	CBM	Ave	5719 294355	10911 577610	21755 1037365	52292 1800793	144743	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	5000 230625	9207 453774	17716 802516	42040 1388093	117692	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butane	CBM	Ave	9335 458987	18274 898506	34413 1552213	83428 2596919	236594	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	5695 259428	10991 518278	21028 993397	49897 1885484	132665	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	3161 144914	6090 291201	11486 552656	28019 1053045	74023	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	10722 428898	21784 885156	36685 1562780	90742 3054812	215410	0.196 9.99	0.392 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl bromide	CBM	Ave	5186 245002	10256 489664	19383 955316	47395 1860265	126157	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	7541 311988	13419 614930	26223 1125727	60759 1993361	165413	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1 Analy Batch No.: 7384

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/08/2016 19:58 Calibration End Date: 12/09/2016 01:38 Calibration ID: 798

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Acrolein	CBM	Ave	2269 51584	4214 126307	5678 214693	12347 461450	29554	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Trichlorofluoromethane	CBM	Ave	15582 756823	30137 1501894	59109 2914069	143536 5901125	384683	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 75671	+++++ 176495	6381 309105	18027 663618	40598	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 268511	+++++ 573107	+++++ 976001	71784 2019556	140276	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.01
Pentane	CBM	Ave	+++++ 45337	+++++ 89358	3817 167888	9414 343931	23731	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Isopropyl alcohol	CBM	Ave	21267 980401	42673 1988338	75884 3326202	196241 6932486	481177	0.118 5.99	0.235 12.0	0.476 24.0	1.20 48.0	3.01
Ethyl ether	CBM	Ave	4311 171608	9224 394490	13794 693477	38146 1444630	88736	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	+++++ 223308	9137 441297	17917 849769	41972 1718361	112496	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	+++++ 98680	6061 244751	10031 439702	23057 996643	52384	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butyl alcohol	CBM	Ave	6478 357104	14476 725277	25645 1314289	65529 2583882	168323	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroetha ne	CBM	Ave	10429 458554	19440 947278	37390 1814621	91069 3778238	234900	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 176649	+++++ 348409	21084 655205	39868 1319618	92116	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	+++++ 184286	8987 374322	15711 676808	37831 1354242	98686	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	14798 730062	28596 1482267	58242 2787285	141704 5474536	371252	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	5600 258077	10750 536489	20615 1006280	49737 1930221	129589	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylpentane	CBM	Ave	12078 554181	22847 1200210	44795 2203279	109315 3810096	282816	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	13760 558292	27742 1312740	41332 2475436	116320 5364390	280300	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	10836 464990	20206 1001975	36850 1957037	92833 3876835	235707	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	13569 523514	27271 1290955	38691 2546899	115180 5589948	263434	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Butanone (MEK)	CBM	Ave	2279 95501	4958 222106	8249 413943	21700 878803	46710	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Hexane	CBM	Ave	+++++ 203795	10163 436872	17936 821099	42161 1493982	104967	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1 Analy Batch No.: 7384

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/08/2016 19:58 Calibration End Date: 12/09/2016 01:38 Calibration ID: 798

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isopropyl ether	CBM	Ave	16846 708886	34716 1706140	51520 3119866	148142 6292986	353610	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	5467 258646	10887 550542	20178 1041594	51356 2078366	129520	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	+++++ 432491	22967 1045560	30082 1961789	89774 4364408	208629	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroform	CBM	Ave	12707 543452	23851 1156020	43727 2180906	109487 4367350	278997	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	14394 621453	29892 1488774	43833 2723491	126645 5753046	304722	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	+++++ 220876	11834 522810	16880 1002984	46626 2180844	110305	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	13263 594430	25744 1279894	47399 2429887	119146 4921388	301989	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFBZ	Ave	7958 312783	15561 768059	27221 1498236	70665 3034051	172759	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzene	DFBZ	Ave	16231 639987	31296 1453265	54815 2604625	145030 4859184	351164	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Cyclohexane	DFBZ	Ave	+++++ 130219	5547 256435	11068 449383	26449 818029	65816	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFBZ	Ave	13169 650072	25667 1353700	48171 1719063	121879 5495740	321989	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1-Butanol	DFBZ	Ave	1840 92138	3804 182779	6873 297985	15567 573494	42204	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylpentane	DFBZ	Ave	3834 177632	7617 379931	14554 701048	35370 1327614	89073	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Thiophene	DFBZ	Ave	9092 399453	17029 886036	31533 1674022	81985 3303884	206846	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-amyl methyl ether	DFBZ	Ave	+++++ 590187	25252 1420675	42901 2525168	116541 5343717	283852	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFBZ	Ave	28315 1284826	53468 2652622	99827 4780993	250466 8835628	633974	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Heptane	DFBZ	Ave	+++++ 282575	11865 585125	22004 1048692	54557 1970974	139658	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFBZ	Ave	6551 231049	12462 573027	18837 1037078	53314 1969395	121683	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Trichloroethene	DFBZ	Ave	8316 409949	16022 800842	37343 1527011	75756 3024239	209417	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromomethane	DFBZ	Ave	+++++ 316778	13508 666745	24045 1228541	62732 2458883	158962	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromodichloromethane	DFBZ	Ave	11665 564938	22090 1218893	40369 2272827	105567 4592413	274425	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1 Analy Batch No.: 7384

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/08/2016 19:58 Calibration End Date: 12/09/2016 01:38 Calibration ID: 798

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DFBZ	Ave	1842 99307	3963 211493	6766 365186	17470 753201	44488	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl methacrylate	DFBZ	Ave	6623 260860	12871 681937	17354 1196974	52693 2492814	122959	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylcyclohexane	DFBZ	Ave	13072 577507	24568 1182033	46095 2131544	114511 4088614	294616	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	9071 482907	19102 1106976	34513 1920348	88279 3849816	234208	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFBZ	Ave	9023 372121	18544 922671	29255 1738337	84196 3417073	194871	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZd 5	Ave	8154 337087	16090 854993	24864 1632235	72970 3420157	167829	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene Range	DFBZ	Ave	+++++ 1697187	+++++ 4208350	+++++ 7723720	395488 15781323	864195	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Toluene	CBZd 5	Ave	18400 690854	35196 1705333	53183 3151028	158232 6535309	353389	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZd 5	Ave	5207 210396	10122 510325	16016 931501	46210 1894431	106377	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylthiophene	CBZd 5	Ave	14742 583362	29885 1436338	46273 2684721	132638 5504671	302331	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
3-Methylthiophene	CBZd 5	Ave	15017 564583	28520 1404632	43735 2624633	128096 5425286	293803	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Hexanone	CBZd 5	Ave	+++++ 241991	8635 515917	16057 949384	38378 2000620	105315	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Octane	CBZd 5	Ave	+++++ 309364	13095 636410	23418 1150679	60225 2222803	157625	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
C8 Range	DFBZ	Ave	+++++ 3200146	+++++ 6547717	+++++ 11244888	598729 16425810	1645102	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZd 5	Ave	10054 504583	19673 1214365	36091 2327802	98960 5133377	252927	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	9522 418094	18853 1008301	31431 1924671	86235 4020392	213500	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZd 5	Ave	7563 330273	14290 693825	25535 1357814	65941 2885902	170189	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chlorobenzene	CBZd 5	Ave	14030 595827	28541 1406777	44998 2641230	128374 5597166	302836	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylheptane	CBZd 5	Ave	18076 781836	34268 1669310	60872 2777262	160682 4679067	398405	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethylbenzene	CBZd 5	Ave	22371 956791	46059 2269899	69003 4150248	202566 8758179	464337	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Ethylthiophene	CBZd 5	Ave	16319 711981	33470 1729533	49663 3203327	148846 6841807	349903	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1 Analy Batch No.: 7384

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/08/2016 19:58 Calibration End Date: 12/09/2016 01:38 Calibration ID: 798

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m-Xylene & p-Xylene	CBZd 5	Ave	35593 1499037	70859 3431351	106515 6184279	312199 13248413	737471	0.0784 3.99	0.157 8.00	0.317 16.0	0.800 32.0	2.00
Bromoform	CBZd 5	Ave	+++++ 482422	15443 1239966	29557 2629265	89222 +++++	209416	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
Nonane	CBZd 5	Ave	11459 528980	24385 1068900	39709 1763559	108527 2961409	272373	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Styrene	CBZd 5	Ave	11201 555108	23040 1281806	34245 2378609	105962 5251876	265036	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
o-Xylene	CBZd 5	Ave	18832 780466	37013 1829078	55923 3322495	163242 7069465	382333	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	12186 553887	24155 1285895	28104 2286622	107105 4738085	262784	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZd 5	Ave	3786 171965	8073 404993	11556 745283	34699 1650297	82463	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Isopropylbenzene	CBZd 5	Ave	27225 1094815	55196 2484064	77471 4568570	226287 10000909	537636	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propylbenzene	CBZd 5	Ave	6872 310526	13794 705553	21354 1292302	58580 2882014	145833	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZd 5	Ave	6249 282300	13217 639799	19691 1192871	56487 2611501	135683	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZd 5	Ave	23908 1099531	48918 2524681	73785 4602017	212251 10162010	521274	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZd 5	Ave	11399 529246	24162 1180801	35870 2166860	101711 4929710	255158	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZd 5	Ave	7999 458316	17099 1077457	26661 2029631	75940 4555512	209327	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Decane	CBZd 5	Ave	13088 643304	26505 1307633	45478 2230034	122535 4031286	303112	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butylbenzene	CBZd 5	Ave	22733 1018631	46016 2262282	70467 4192051	197002 9554102	494103	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZd 5	Ave	19197 937912	40505 2060865	63716 3807592	178941 8518690	454094	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Dichlorobenzene	CBZd 5	Ave	13689 655726	27331 1464206	44633 2988285	123184 6970912	314991	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZd 5	Ave	29050 1352819	59671 2946631	94767 5445613	259583 11727632	655811	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzyl chloride	CBZd 5	Ave	13705 803407	28862 1821777	46504 3454376	129478 7456385	328706	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,4-Dichlorobenzene	CBZd 5	Ave	13455 650905	26961 1431445	43579 2887306	121046 6739732	305569	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Isopropyltoluene	CBZd 5	Ave	23637 1157019	48237 2578526	77592 4764104	215898 10734531	558404	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1 Analy Batch No.: 7384

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/08/2016 19:58 Calibration End Date: 12/09/2016 01:38 Calibration ID: 798

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZd 5	Ave	14966 707435	31790 1613155	49232 2947828	135985 6454183	344310	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylcyclohexane	CBZd 5	Ave	16339 730710	32718 1507917	55512 2743371	149636 5332453	360384	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorobenzene	CBZd 5	Ave	13020 640659	25995 1396045	43248 2786845	116482 6549763	309696	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indane	CBZd 5	Ave	17893 874588	37395 1909882	59010 3606458	162369 8122275	419286	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indene	CBZd 5	Lin1	+++++ 657876	+++++ 1492896	41234 2791759	112729 6308476	306444	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Butylbenzene	CBZd 5	Ave	19881 1056764	41896 2281578	70024 4058346	189235 8621259	495756	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Undecane	CBZd 5	Ave	13423 699188	27524 1408070	48725 2329972	125419 4080761	332785	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	Ave	+++++ 849288	32514 1881502	56926 3428964	146402 7688453	403699	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	+++++ 284562	8887 645406	14967 1274571	41895 3083243	114997	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	18067 1048174	38169 2254750	68727 4158725	174813 9287987	485595	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	11487 627559	23885 1366732	41533 2514994	108120 5594149	300031	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	14964 864752	31277 1862467	57669 3418581	140998 7579036	412238	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dodecane	CBZd 5	Ave	10646 613207	21993 1294655	47372 2172344	100259 3802595	306173	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZd 5	Ave	6322 485907	13692 1100159	25744 2330633	65094 5651953	211936	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Naphthalene	CBZd 5	Ave	14591 1070871	31260 2364720	61374 4535967	144616 10025298	481190	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzo(b)thiophene	CBZd 5	Ave	+++++ 555961	16219 1260466	29349 2531375	71357 5741539	239611	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Hexachlorobutadiene	CBZd 5	Ave	13896 676266	25952 1466454	47564 3240488	112530 7094731	338964	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZd 5	Ave	6929 480029	14265 1039517	29020 2115119	63109 4817115	222349	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylnaphthalene	CBZd 5	Ave	+++++ 519281	+++++ 1064971	29488 2197530	42003 2595825	217545	+++++ 6.24	+++++ 12.5	0.496 25.0	1.25 50.0	3.13
1-Methylnaphthalene	CBZd 5	Ave	+++++ 532152	+++++ 1054061	36495 2081286	46064 2006398	236387	+++++ 6.24	+++++ 12.5	0.496 25.0	1.25 50.0	3.13
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1485890 1131193	1522231 1268973	1168369 1365365	1442147 1261386	1199357	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1 Analy Batch No.: 7384

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/08/2016 19:58 Calibration End Date: 12/09/2016 01:38 Calibration ID: 798

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC01.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 08-Dec-2016 19:58:30 ALS Bottle#: 1 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003696-003
Misc. Info.: 067941
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Dec-2016 14:27:52 Calib Date: 09-Dec-2016 12:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK009

First Level Reviewer: barlozhetskayaa Date: 09-Dec-2016 10:15:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.055	8.063	-0.008	95	472443	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.228	10.234	-0.006	95	2300638	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.087	15.090	-0.003	86	2274673	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.753	16.758	-0.005	96	1485890	4.00	3.95	
6 Chlorodifluoromethane	67	3.483	3.481	0.002	96	1701	0.0392	0.0439	
7 Propene	41	3.493	3.489	0.004	99	5954	0.0392	0.0461	
8 Dichlorodifluoromethane	85	3.536	3.533	0.003	100	16445	0.0392	0.0407	
9 Chloromethane	52	3.687	3.685	0.002	57	2149	0.0392	0.0495	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.698	3.696	0.002	89	10501	0.0392	0.0392	
11 Acetaldehyde	44	3.822	3.816	0.006	91	19638	0.1960	0.4095	
12 Vinyl chloride	62	3.828	3.830	-0.002	31	5719	0.0392	0.0401	
13 Butadiene	54	3.909	3.906	0.003	67	5000	0.0392	0.0435	
14 Butane	43	3.909	3.907	0.002	85	9335	0.0392	0.0416	
15 Bromomethane	94	4.178	4.174	0.004	97	5695	0.0392	0.0419	
16 Chloroethane	64	4.286	4.292	-0.006	97	3161	0.0392	0.0417	
17 Ethanol	31	4.399	4.393	0.006	94	10722	0.1960	0.2271	
18 Vinyl bromide	106	4.550	4.550	0.000	97	5186	0.0392	0.0404	
19 2-Methylbutane	43	4.599	4.598	0.001	94	7541	0.0392	0.0460	
21 Acrolein	56	4.782	4.783	-0.001	32	2269	0.0392	0.0617	
20 Trichlorofluoromethane	101	4.787	4.785	0.002	99	15582	0.0392	0.0398	
22 Acetonitrile	40	4.847	4.838	0.009	97	2777	0.0392	0.0637	
23 Acetone	58	4.895	4.882	0.013	98	8449	0.1176	0.1697	
24 Pentane	72	4.976	4.978	-0.002	97	961	0.0392	0.0400	
25 Isopropyl alcohol	45	4.998	4.987	0.011	94	21267	0.1176	0.1263	
26 Ethyl ether	31	5.143	5.124	0.019	92	4311	0.0392	0.0434	
27 1,1-Dichloroethene	96	5.397	5.400	-0.003	96	5003	0.0392	0.0433	
28 Acrylonitrile	53	5.488	5.487	0.001	97	3614	0.0392	0.0579	
29 2-Methyl-2-propanol	59	5.553	5.526	0.027	90	6478	0.0392	0.0366	
30 1,1,2-Trichloro-1,2,2-trif	101	5.569	5.572	-0.003	96	10429	0.0392	0.0421	
31 Methylene Chloride	84	5.704	5.708	-0.004	95	10526	0.0392	0.1047	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.720	5.725	-0.005	98	5945	0.0392	0.0598	
33 Carbon disulfide	76	5.850	5.849	0.001	99	14798	0.0392	0.0392	
34 trans-1,2-Dichloroethene	96	6.443	6.448	-0.005	98	5600	0.0392	0.0413	
35 2-Methylpentane	43	6.481	6.481	0.000	95	12078	0.0392	0.0413	
36 Methyl tert-butyl ether	73	6.594	6.575	0.019	95	13760	0.0392	0.0427	
37 1,1-Dichloroethane	63	6.826	6.832	-0.006	99	10836	0.0392	0.0425	
38 Vinyl acetate	43	6.950	6.942	0.008	100	13569	0.0392	0.0428	
39 2-Butanone (MEK)	72	7.365	7.349	0.016	98	2279	0.0392	0.0407	
40 Hexane	56	7.397	7.397	0.000	90	5695	0.0392	0.0507	
41 Isopropyl ether	45	7.559	7.547	0.012	96	16846	0.0392	0.0418	
42 cis-1,2-Dichloroethene	96	7.753	7.759	-0.006	95	5467	0.0392	0.0397	
43 Ethyl acetate	43	7.958	7.946	0.012	98	10226	0.0392	0.0409	
44 Chloroform	83	8.082	8.085	-0.003	90	12707	0.0392	0.0429	
45 Tert-butyl ethyl ether	59	8.212	8.191	0.021	94	14394	0.0392	0.0411	
46 Tetrahydrofuran	42	8.487	8.460	0.027	90	6976	0.0392	0.0541	
47 1,1,1-Trichloroethane	97	9.064	9.068	-0.004	96	13263	0.0392	0.0410	
48 1,2-Dichloroethane	62	9.155	9.160	-0.005	97	7958	0.0392	0.0371	
49 Benzene	78	9.651	9.654	-0.003	97	16231	0.0392	0.0392	
50 Cyclohexane	69	9.657	9.659	-0.002	79	3093	0.0392	0.0405	
52 Carbon tetrachloride	117	9.678	9.684	-0.006	97	13169	0.0392	0.0356	
51 n-Butanol	31	9.738	9.685	0.053	1	1840	0.0392	0.0366	
53 2,3-Dimethylpentane	71	9.802	9.808	-0.006	92	3834	0.0392	0.0359	
54 Thiophene	84	9.921	9.930	-0.009	96	9092	0.0392	0.0367	
56 Isooctane	57	10.476	10.479	-0.003	98	28315	0.0392	0.0377	
57 n-Heptane	71	10.881	10.881	0.000	89	6398	0.0392	0.0385	
58 1,2-Dichloropropane	63	10.908	10.916	-0.008	89	6551	0.0392	0.0418	
59 Trichloroethene	130	10.962	10.966	-0.004	96	8316	0.0392	0.0345	
60 Dibromomethane	93	11.026	11.033	-0.007	93	7413	0.0392	0.0389	
61 Dichlorobromomethane	83	11.183	11.194	-0.011	99	11665	0.0392	0.0352	
62 1,4-Dioxane	88	11.248	11.222	0.026	51	1842	0.0392	0.0332	
63 Methyl methacrylate	41	11.334	11.327	0.007	94	6623	0.0392	0.0391	
64 Methylcyclohexane	83	11.765	11.766	-0.001	93	13072	0.0392	0.0382	
65 4-Methyl-2-pentanone (MIBK	43	12.213	12.198	0.015	98	9071	0.0392	0.0322	
66 cis-1,3-Dichloropropene	75	12.234	12.240	-0.006	97	9023	0.0392	0.0364	
67 trans-1,3-Dichloropropene	75	12.952	12.958	-0.006	98	8154	0.0392	0.0372	
68 Toluene	91	13.081	13.083	-0.002	95	18400	0.0392	0.0404	
69 1,1,2-Trichloroethane	83	13.151	13.154	-0.003	98	5207	0.0392	0.0388	
70 2-Methylthiophene	97	13.232	13.233	-0.001	97	14742	0.0392	0.0384	
71 3-Methylthiophene	97	13.437	13.439	-0.002	99	15017	0.0392	0.0402	
72 2-Hexanone	58	13.593	13.578	0.015	92	3835	0.0392	0.0287	
73 n-Octane	85	13.830	13.833	-0.003	92	6548	0.0392	0.0366	
74 Chlorodibromomethane	129	13.852	13.862	-0.010	97	10054	0.0392	0.0326	
75 Ethylene Dibromide	107	14.149	14.152	-0.003	96	9522	0.0392	0.0361	
76 Tetrachloroethene	129	14.246	14.251	-0.005	96	7563	0.0392	0.0379	
77 Chlorobenzene	112	15.135	15.138	-0.003	94	14030	0.0392	0.0372	
78 2,3-Dimethylheptane	43	15.200	15.203	-0.003	95	18076	0.0392	0.0401	
79 Ethylbenzene	91	15.443	15.445	-0.002	99	22371	0.0392	0.0375	
80 2-Ethylthiophene	97	15.540	15.544	-0.004	97	16319	0.0392	0.0366	
81 m-Xylene & p-Xylene	91	15.610	15.612	-0.002	98	35593	0.0784	0.0774	
83 Bromoform	173	16.025	16.034	-0.009	97	7407	0.0392	0.0261	
82 n-Nonane	57	16.074	16.076	-0.002	91	11459	0.0392	0.0384	
84 Styrene	104	16.074	16.079	-0.005	80	11201	0.0392	0.0343	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	16.138	16.140	-0.002	98	18832	0.0392	0.0389	
86 1,1,2,2-Tetrachloroethane	83	16.457	16.462	-0.005	98	12186	0.0392	0.0381	
87 1,2,3-Trichloropropane	110	16.613	16.619	-0.006	97	3786	0.0392	0.0359	
88 Isopropylbenzene	105	16.737	16.740	-0.003	92	27225	0.0392	0.0399	
89 N-Propylbenzene	120	17.292	17.295	-0.003	99	6872	0.0392	0.0370	
90 2-Chlorotoluene	126	17.319	17.327	-0.008	97	6249	0.0392	0.0364	
91 4-Ethyltoluene	105	17.454	17.457	-0.003	99	23908	0.0392	0.0364	
92 1,3,5-Trimethylbenzene	120	17.535	17.539	-0.004	94	11399	0.0392	0.0360	
93 Alpha Methyl Styrene	118	17.778	17.781	-0.003	88	7999	0.0392	0.0307	
94 n-Decane	57	17.875	17.878	-0.003	91	13088	0.0392	0.0372	
95 tert-Butylbenzene	119	17.983	17.985	-0.002	94	22733	0.0392	0.0371	
96 1,2,4-Trimethylbenzene	105	17.999	18.000	-0.001	95	19197	0.0392	0.0348	
98 1,3-Dichlorobenzene	146	18.263	18.270	-0.007	61	13689	0.0392	0.0344	
97 sec-Butylbenzene	105	18.263	18.270	-0.007	98	29050	0.0392	0.0364	
99 Benzyl chloride	91	18.349	18.349	0.000	98	13705	0.0392	0.0311	
100 1,4-Dichlorobenzene	146	18.360	18.363	-0.003	94	13455	0.0392	0.0346	
101 4-Isopropyltoluene	119	18.441	18.444	-0.003	97	23637	0.0392	0.0348	
102 1,2,3-Trimethylbenzene	105	18.484	18.488	-0.004	97	14966	0.0392	0.0353	
103 Butylcyclohexane	83	18.554	18.561	-0.007	93	16339	0.0392	0.0383	
104 1,2-Dichlorobenzene	146	18.732	18.735	-0.003	85	13020	0.0392	0.0342	
105 2,3-Dihydroindene	117	18.732	18.736	-0.004	93	17893	0.0392	0.0349	
106 Indene	116	18.867	18.869	-0.002	91	11402	0.0392	0.1046	
107 n-Butylbenzene	91	18.894	18.896	-0.002	99	19881	0.0392	0.0337	
108 Undecane	57	19.244	19.247	-0.003	96	13423	0.0392	0.0361	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.277	19.279	-0.002	98	15729	0.0392	0.0319	
110 1,2-Dibromo-3-Chloropropan	157	19.347	19.352	-0.005	94	3661	0.0392	0.0229	
111 1,2,4,5-Tetramethylbenzene	119	19.670	19.673	-0.003	97	18067	0.0392	0.0312	
112 1,2,3,5-Tetramethylbenzene	119	19.724	19.727	-0.003	95	11487	0.0392	0.0325	
113 1,2,3,4-Tetramethylbenzene	119	20.118	20.121	-0.003	97	14964	0.0392	0.0313	
114 Dodecane	57	20.312	20.313	-0.001	98	10646	0.0392	0.0324	
115 1,2,4-Trichlorobenzene	180	20.458	20.458	0.000	93	6322	0.0392	0.0239	
116 Naphthalene	128	20.587	20.588	-0.001	99	14591	0.0392	0.0260	
117 Benzo(b)thiophene	134	20.690	20.688	0.002	99	6923	0.0392	0.0225	
118 Hexachlorobutadiene	225	20.814	20.814	0.000	95	13896	0.0392	0.0342	
119 1,2,3-Trichlorobenzene	180	20.862	20.865	-0.003	93	6929	0.0392	0.0269	
120 2-Methylnaphthalene	142	21.660	21.661	-0.001	98	5309	0.1225	0.0649	
121 1-Methylnaphthalene	142	21.844	21.841	0.003	99	6381	0.1225	0.0766	
A 124 Toluene Range	1	13.076	(13.041-13.111)		0	42514	0.0392	0.0364	
A 125 C8 Range	1	13.835	(13.820-13.850)		0	95281	0.0392	0.0526	
S 126 Xylenes, Total	100				0		0.1176	0.1163	
S 127 1,2-Dichloroethene, Total	1				0		0.0784	0.0809	

Reagents:

40L12DNP_00008	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

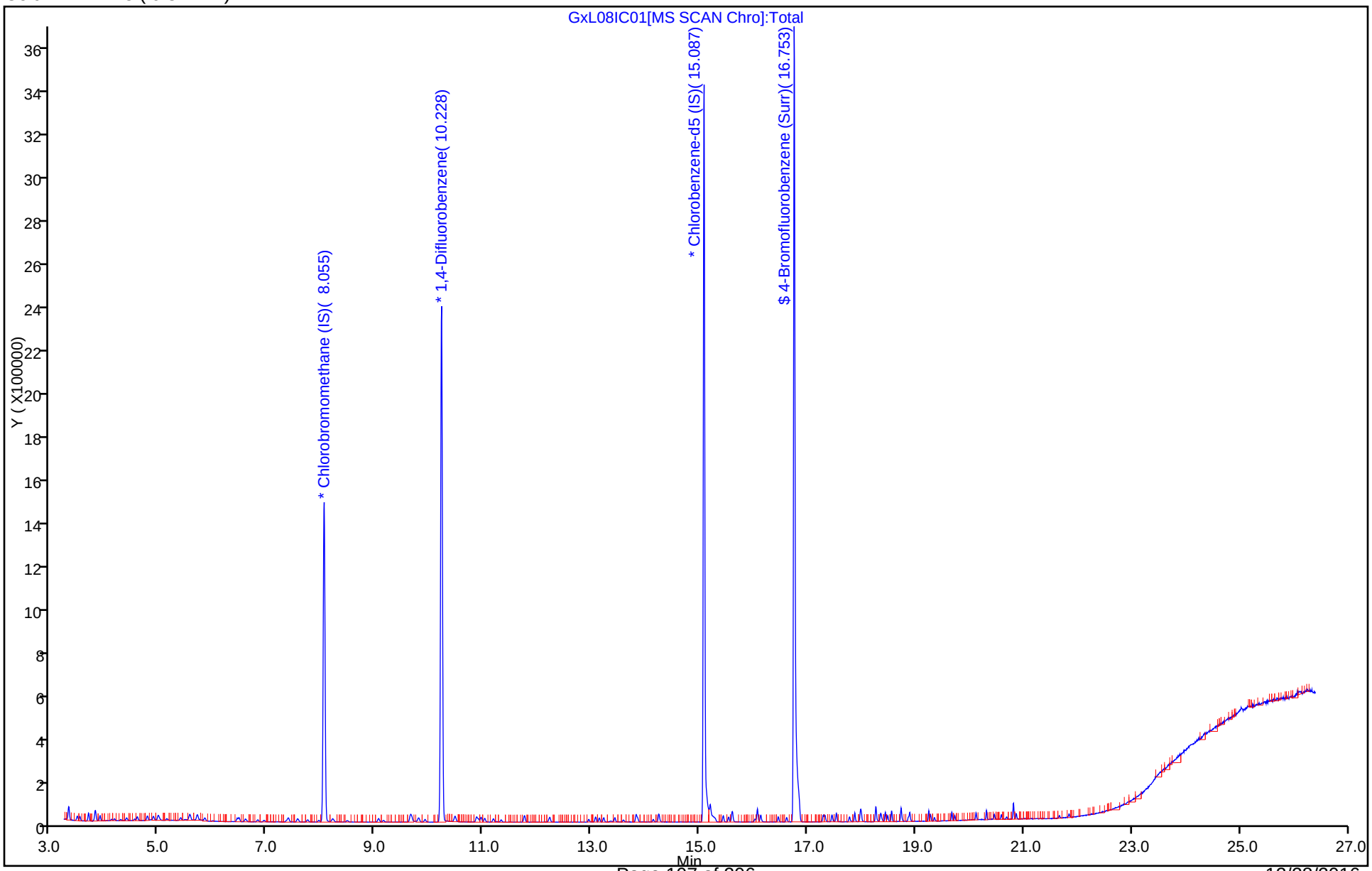
Report Date: 13-Dec-2016 14:27:54 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC01.D

Injection Date:	08-Dec-2016 19:58:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	IC L1			Worklist Smp#:	3
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

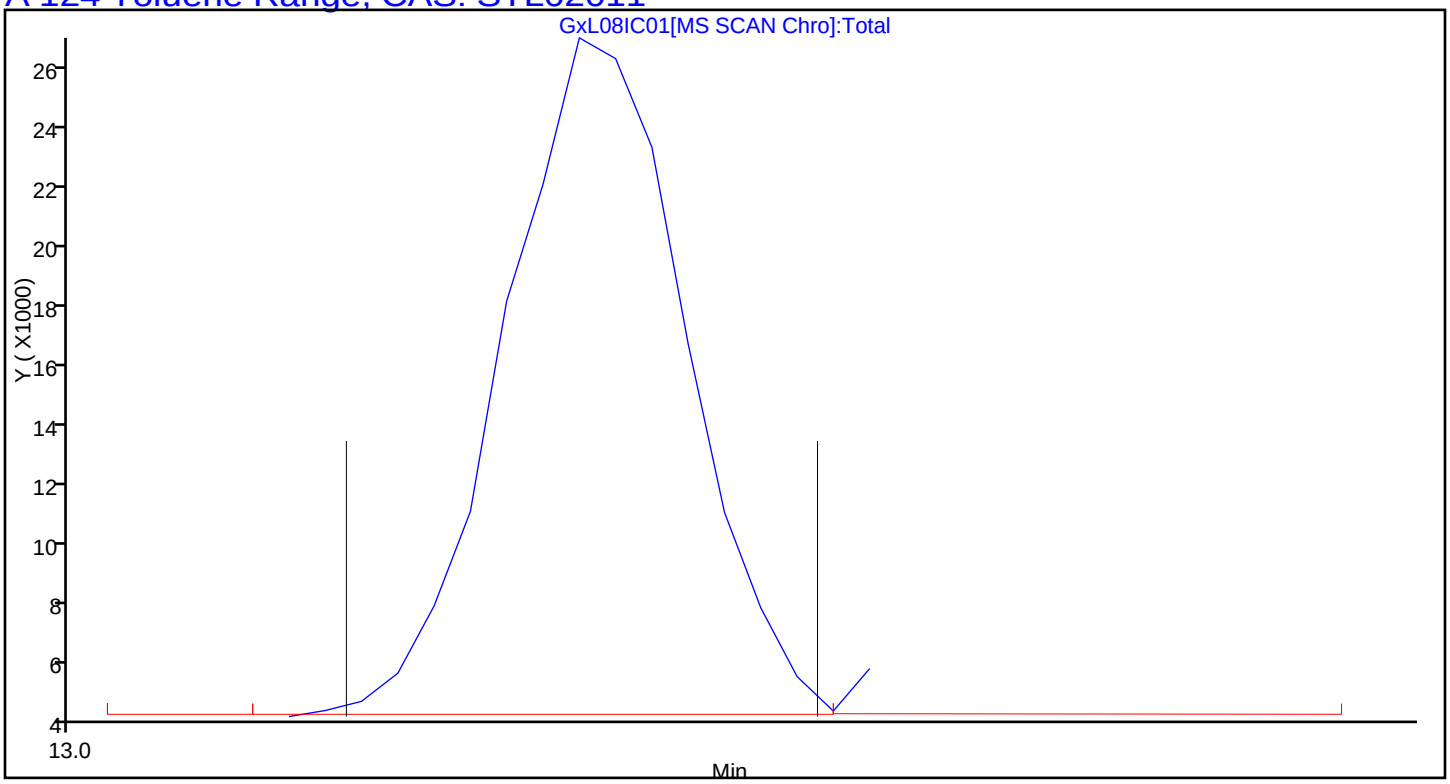


Report Date: 13-Dec-2016 14:27:54 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC01.D				
Injection Date:	08-Dec-2016 19:58:30	Instrument ID:	MG		
Lims ID:	IC L1				
Client ID:					
Operator ID:	403648	ALS Bottle#:	1	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

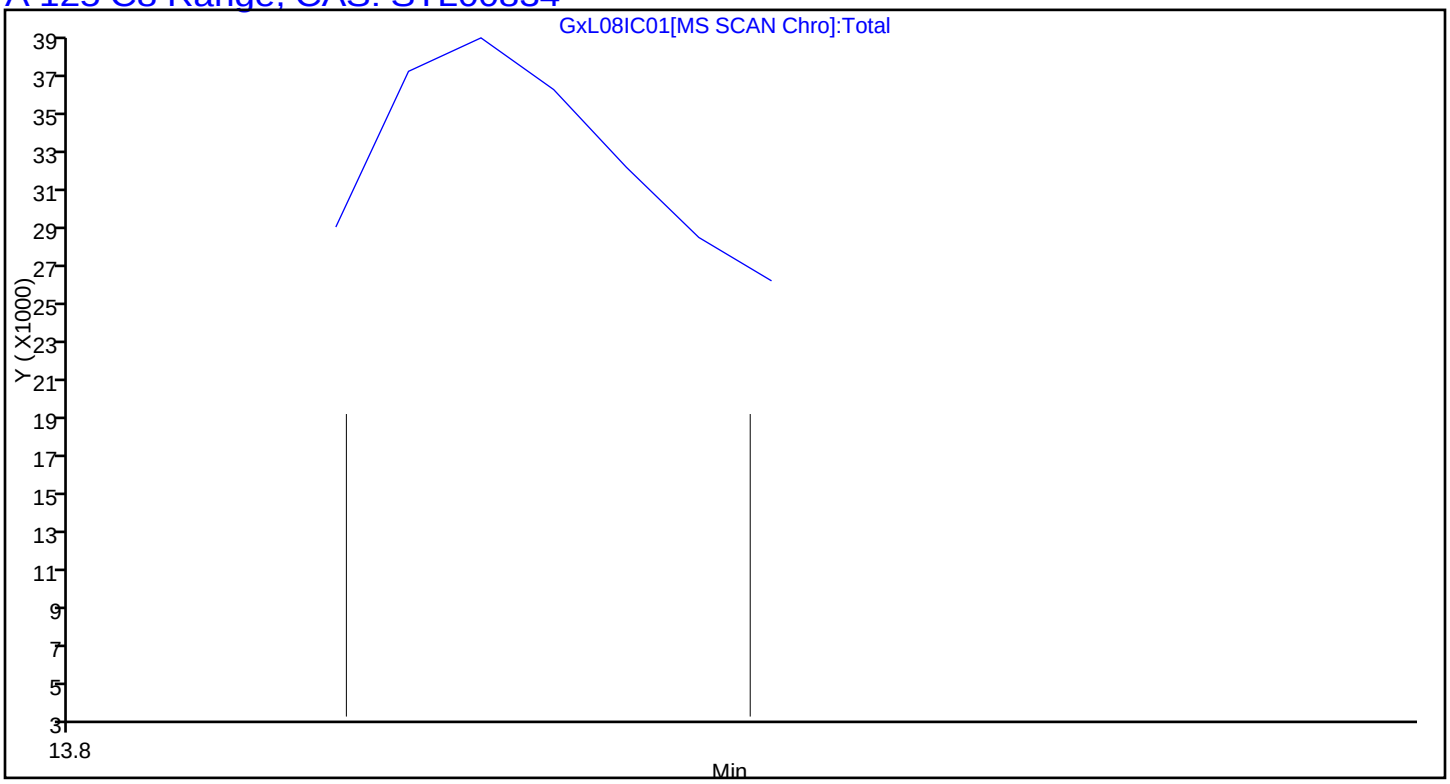


Report Date: 13-Dec-2016 14:27:54 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC01.D				
Injection Date:	08-Dec-2016 19:58:30	Instrument ID:	MG		
Lims ID:	IC L1				
Client ID:					
Operator ID:	403648	ALS Bottle#:	1	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC02.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 08-Dec-2016 20:42:30 ALS Bottle#: 1 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003696-004
Misc. Info.: 067941
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Dec-2016 14:27:57 Calib Date: 09-Dec-2016 12:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK009

First Level Reviewer: barlozhetskayaa Date: 09-Dec-2016 10:42:08

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.055	8.063	-0.008	95	493126	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.228	10.234	-0.006	95	2376200	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.087	15.090	-0.003	86	2319128	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.753	16.758	-0.005	96	1522231	4.00	3.97	
6 Chlorodifluoromethane	67	3.482	3.481	0.001	96	3430	0.0784	0.0848	
7 Propene	41	3.488	3.489	-0.001	98	11034	0.0784	0.0818	
8 Dichlorodifluoromethane	85	3.531	3.533	-0.002	99	31559	0.0784	0.0748	
9 Chloromethane	52	3.682	3.685	-0.003	71	3385	0.0784	0.0747	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.693	3.696	-0.003	90	21156	0.0784	0.0757	
11 Acetaldehyde	44	3.817	3.816	0.001	94	35860	0.3920	0.7165	
12 Vinyl chloride	62	3.828	3.830	-0.002	98	10911	0.0784	0.0734	
13 Butadiene	54	3.908	3.906	0.002	66	9207	0.0784	0.0767	
14 Butane	43	3.903	3.907	-0.004	85	18274	0.0784	0.0779	
15 Bromomethane	94	4.173	4.174	-0.001	98	10991	0.0784	0.0774	
16 Chloroethane	64	4.291	4.292	-0.001	99	6090	0.0784	0.0770	
17 Ethanol	31	4.383	4.393	-0.010	95	21784	0.3920	0.4421	
18 Vinyl bromide	106	4.550	4.550	0.000	98	10256	0.0784	0.0765	
19 2-Methylbutane	43	4.593	4.598	-0.005	91	13419	0.0784	0.0783	
21 Acrolein	56	4.782	4.783	-0.001	34	4214	0.0784	0.1098	
20 Trichlorofluoromethane	101	4.782	4.785	-0.003	100	30137	0.0784	0.0737	
22 Acetonitrile	40	4.836	4.838	-0.002	95	5381	0.0784	0.1182	
23 Acetone	58	4.884	4.882	0.002	98	16050	0.2352	0.3089	
24 Pentane	72	4.976	4.978	-0.002	75	2067	0.0784	0.0824	
25 Isopropyl alcohol	45	4.976	4.987	-0.011	82	42673	0.2352	0.2427	
26 Ethyl ether	31	5.133	5.124	0.009	94	9224	0.0784	0.0890	
27 1,1-Dichloroethene	96	5.397	5.400	-0.003	97	9137	0.0784	0.0758	
28 Acrylonitrile	53	5.488	5.487	0.001	92	6061	0.0784	0.0930	
29 2-Methyl-2-propanol	59	5.526	5.526	0.000	92	14476	0.0784	0.0783	
30 1,1,2-Trichloro-1,2,2-trif	101	5.569	5.572	-0.003	97	19440	0.0784	0.0752	
31 Methylene Chloride	84	5.704	5.708	-0.004	96	14718	0.0784	0.1403	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.720	5.725	-0.005	98	8987	0.0784	0.0866	
33 Carbon disulfide	76	5.844	5.849	-0.005	100	28596	0.0784	0.0726	
34 trans-1,2-Dichloroethene	96	6.443	6.448	-0.005	98	10750	0.0784	0.0759	
35 2-Methylpentane	43	6.481	6.481	0.000	93	22847	0.0784	0.0748	
36 Methyl tert-butyl ether	73	6.583	6.575	0.008	96	27742	0.0784	0.0824	
37 1,1-Dichloroethane	63	6.826	6.832	-0.006	100	20206	0.0784	0.0759	
38 Vinyl acetate	43	6.939	6.942	-0.003	100	27271	0.0784	0.0824	
39 2-Butanone (MEK)	72	7.354	7.349	0.005	99	4958	0.0784	0.0849	
40 Hexane	56	7.392	7.397	-0.005	87	10163	0.0784	0.0867	
41 Isopropyl ether	45	7.554	7.547	0.007	98	34716	0.0784	0.0825	
42 cis-1,2-Dichloroethene	96	7.753	7.759	-0.006	94	10887	0.0784	0.0757	
43 Ethyl acetate	43	7.947	7.946	0.001	99	22967	0.0784	0.0881	
44 Chloroform	83	8.071	8.085	-0.014	95	23851	0.0784	0.0771	
45 Tert-butyl ethyl ether	59	8.201	8.191	0.010	95	29892	0.0784	0.0817	
46 Tetrahydrofuran	42	8.476	8.460	0.016	93	11834	0.0784	0.0879	
47 1,1,1-Trichloroethane	97	9.064	9.068	-0.004	97	25744	0.0784	0.0763	
48 1,2-Dichloroethane	62	9.150	9.160	-0.010	98	15561	0.0784	0.0702	
49 Benzene	78	9.646	9.654	-0.008	96	31296	0.0784	0.0732	
50 Cyclohexane	69	9.657	9.659	-0.002	80	5547	0.0784	0.0704	
52 Carbon tetrachloride	117	9.678	9.684	-0.006	97	25667	0.0784	0.0673	
51 n-Butanol	31	9.700	9.685	0.015	49	3804	0.0784	0.0732	
53 2,3-Dimethylpentane	71	9.802	9.808	-0.006	90	7617	0.0784	0.0690	
54 Thiophene	84	9.921	9.930	-0.009	97	17029	0.0784	0.0666	
55 Tert-amyl methyl ether	73	10.196	10.181	0.015	96	25252	0.0784	0.0660	M
56 Isooctane	57	10.471	10.479	-0.008	98	53468	0.0784	0.0690	
57 n-Heptane	71	10.875	10.881	-0.006	88	11865	0.0784	0.0691	
58 1,2-Dichloropropane	63	10.908	10.916	-0.008	90	12462	0.0784	0.0770	
59 Trichloroethene	130	10.962	10.966	-0.004	97	16022	0.0784	0.0644	
60 Dibromomethane	93	11.026	11.033	-0.007	94	13508	0.0784	0.0686	
61 Dichlorobromomethane	83	11.183	11.194	-0.011	100	22090	0.0784	0.0645	
62 1,4-Dioxane	88	11.231	11.222	0.009	92	3963	0.0784	0.0691	
63 Methyl methacrylate	41	11.323	11.327	-0.004	90	12871	0.0784	0.0735	
64 Methylcyclohexane	83	11.760	11.766	-0.006	95	24568	0.0784	0.0695	
65 4-Methyl-2-pentanone (MIBK	43	12.202	12.198	0.004	96	19102	0.0784	0.0657	
66 cis-1,3-Dichloropropene	75	12.234	12.240	-0.006	96	18544	0.0784	0.0725	
67 trans-1,3-Dichloropropene	75	12.951	12.958	-0.007	98	16090	0.0784	0.0719	
68 Toluene	91	13.081	13.083	-0.002	94	35196	0.0784	0.0759	
69 1,1,2-Trichloroethane	83	13.146	13.154	-0.008	98	10122	0.0784	0.0740	
70 2-Methylthiophene	97	13.226	13.233	-0.007	97	29885	0.0784	0.0764	
71 3-Methylthiophene	97	13.431	13.439	-0.008	99	28520	0.0784	0.0748	
72 2-Hexanone	58	13.582	13.578	0.004	93	8635	0.0784	0.0634	
73 n-Octane	85	13.830	13.833	-0.003	92	13095	0.0784	0.0718	
74 Chlorodibromomethane	129	13.857	13.862	-0.005	97	19673	0.0784	0.0625	
75 Ethylene Dibromide	107	14.143	14.152	-0.009	99	18853	0.0784	0.0701	
76 Tetrachloroethene	129	14.246	14.251	-0.005	95	14290	0.0784	0.0702	
77 Chlorobenzene	112	15.135	15.138	-0.003	95	28541	0.0784	0.0741	
78 2,3-Dimethylheptane	43	15.200	15.203	-0.003	96	34268	0.0784	0.0746	
79 Ethylbenzene	91	15.437	15.445	-0.008	98	46059	0.0784	0.0758	
80 2-Ethylthiophene	97	15.540	15.544	-0.004	98	33470	0.0784	0.0736	
81 m-Xylene & p-Xylene	91	15.610	15.612	-0.002	98	70859	0.1568	0.1512	
83 Bromoform	173	16.031	16.034	-0.003	96	15443	0.0784	0.0533	
82 n-Nonane	57	16.074	16.076	-0.002	92	24385	0.0784	0.0802	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.074	16.079	-0.005	95	23040	0.0784	0.0692	
85 o-Xylene	91	16.133	16.140	-0.007	99	37013	0.0784	0.0749	
86 1,1,2,2-Tetrachloroethane	83	16.457	16.462	-0.005	98	24155	0.0784	0.0740	
87 1,2,3-Trichloropropane	110	16.613	16.619	-0.006	96	8073	0.0784	0.0751	
88 Isopropylbenzene	105	16.737	16.740	-0.003	96	55196	0.0784	0.0794	
89 N-Propylbenzene	120	17.292	17.295	-0.003	99	13794	0.0784	0.0729	
90 2-Chlorotoluene	126	17.319	17.327	-0.008	97	13217	0.0784	0.0756	
91 4-Ethyltoluene	105	17.454	17.457	-0.003	98	48918	0.0784	0.0730	
92 1,3,5-Trimethylbenzene	120	17.535	17.539	-0.004	93	24162	0.0784	0.0749	
93 Alpha Methyl Styrene	118	17.778	17.781	-0.003	89	17099	0.0784	0.0643	
94 n-Decane	57	17.875	17.878	-0.003	91	26505	0.0784	0.0739	
95 tert-Butylbenzene	119	17.977	17.985	-0.008	92	46016	0.0784	0.0737	
96 1,2,4-Trimethylbenzene	105	17.993	18.000	-0.007	95	40505	0.0784	0.0721	
98 1,3-Dichlorobenzene	146	18.263	18.270	-0.007	61	27331	0.0784	0.0673	
97 sec-Butylbenzene	105	18.263	18.270	-0.007	98	59671	0.0784	0.0734	
99 Benzyl chloride	91	18.344	18.349	-0.005	98	28862	0.0784	0.0643	
100 1,4-Dichlorobenzene	146	18.360	18.363	-0.003	94	26961	0.0784	0.0680	
101 4-Isopropyltoluene	119	18.441	18.444	-0.003	97	48237	0.0784	0.0697	
102 1,2,3-Trimethylbenzene	105	18.484	18.488	-0.004	97	31790	0.0784	0.0736	
103 Butylcyclohexane	83	18.554	18.561	-0.007	93	32718	0.0784	0.0753	
104 1,2-Dichlorobenzene	146	18.732	18.735	-0.003	93	25995	0.0784	0.0670	
105 2,3-Dihydroindene	117	18.732	18.736	-0.004	95	37395	0.0784	0.0715	
106 Indene	116	18.867	18.869	-0.002	92	25482	0.0784	0.1349	
107 n-Butylbenzene	91	18.894	18.896	-0.002	98	41896	0.0784	0.0696	
108 Undecane	57	19.244	19.247	-0.003	95	27524	0.0784	0.0727	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.277	19.279	-0.002	98	32514	0.0784	0.0648	
110 1,2-Dibromo-3-Chloropropan	157	19.347	19.352	-0.005	95	8887	0.0784	0.0545	
111 1,2,4,5-Tetramethylbenzene	119	19.670	19.673	-0.003	97	38169	0.0784	0.0647	
112 1,2,3,5-Tetramethylbenzene	119	19.724	19.727	-0.003	96	23885	0.0784	0.0662	
113 1,2,3,4-Tetramethylbenzene	119	20.118	20.121	-0.003	97	31277	0.0784	0.0642	
114 Dodecane	57	20.312	20.313	-0.001	96	21993	0.0784	0.0656	
115 1,2,4-Trichlorobenzene	180	20.458	20.458	0.000	95	13692	0.0784	0.0508	
116 Naphthalene	128	20.587	20.588	-0.001	99	31260	0.0784	0.0547	
117 Benzo(b)thiophene	134	20.684	20.688	-0.004	99	16219	0.0784	0.0517	
118 Hexachlorobutadiene	225	20.814	20.814	0.000	95	25952	0.0784	0.0627	
119 1,2,3-Trichlorobenzene	180	20.867	20.865	0.002	93	14265	0.0784	0.0543	
120 2-Methylnaphthalene	142	21.660	21.661	-0.001	98	10271	0.2450	0.1232	
121 1-Methylnaphthalene	142	21.838	21.841	-0.003	99	11657	0.2450	0.1372	
A 124 Toluene Range	1	13.076	(13.041-13.111)		0	87037	0.0784	0.0722	
A 125 C8 Range	1	13.835	(13.820-13.850)		0	183246	0.0784	0.0979	
S 126 Xylenes, Total	100				0		0.2352	0.2261	
S 127 1,2-Dichloroethene, Total	1				0		0.1568	0.1516	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L12DNP_00008	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

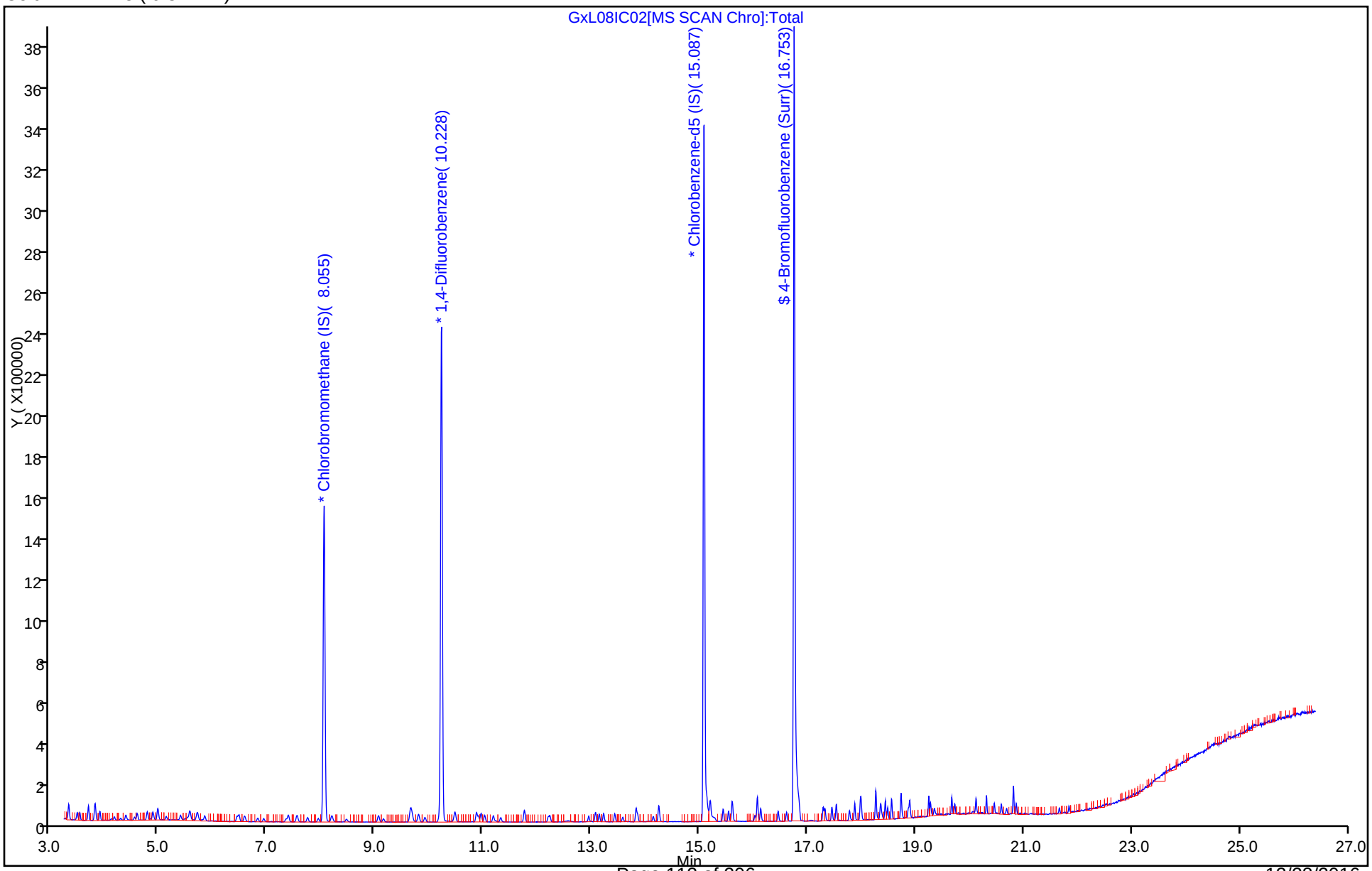
Report Date: 13-Dec-2016 14:27:58 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC02.D

Injection Date:	08-Dec-2016 20:42:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	IC L2			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

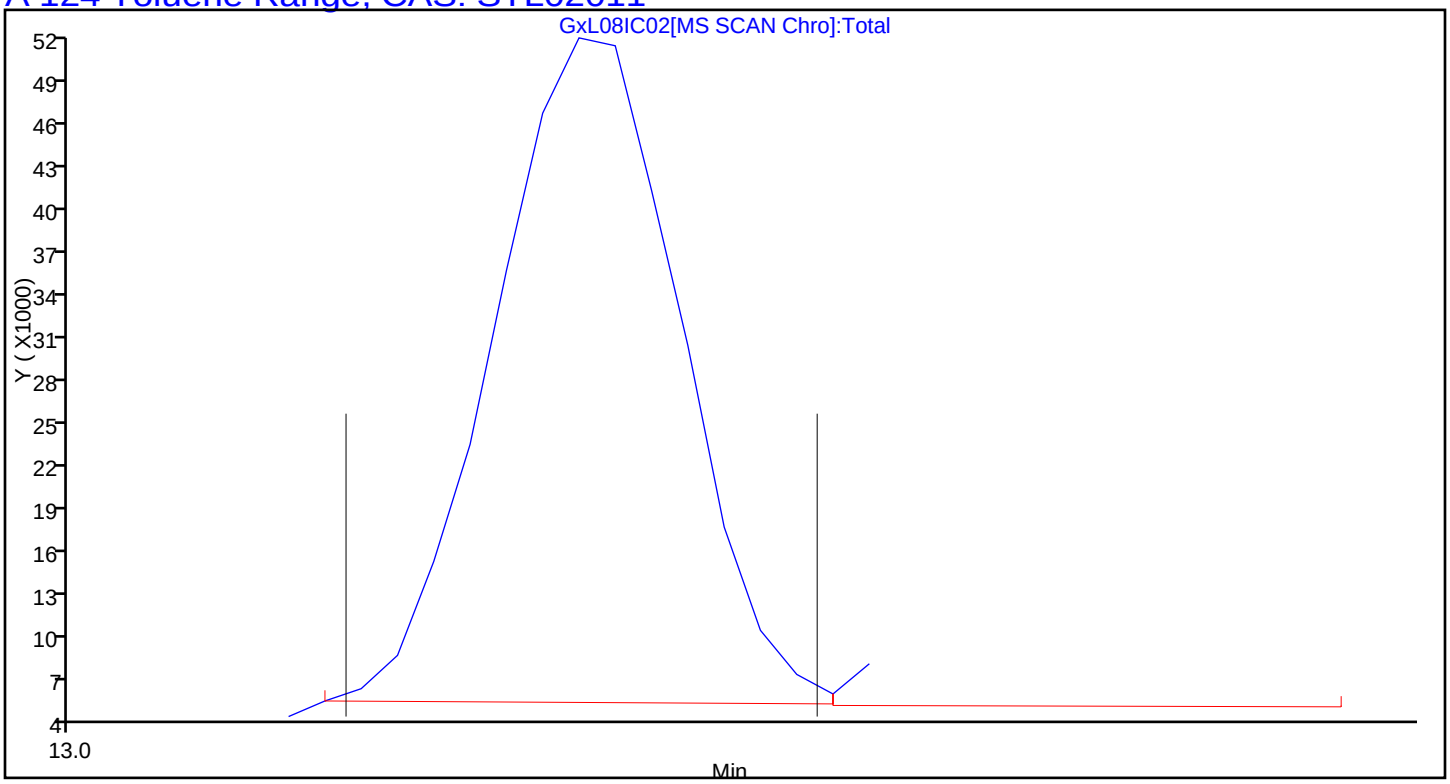


Report Date: 13-Dec-2016 14:27:58 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC02.D				
Injection Date:	08-Dec-2016 20:42:30	Instrument ID:	MG		
Lims ID:	IC L2				
Client ID:					
Operator ID:	403648	ALS Bottle#:	1	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

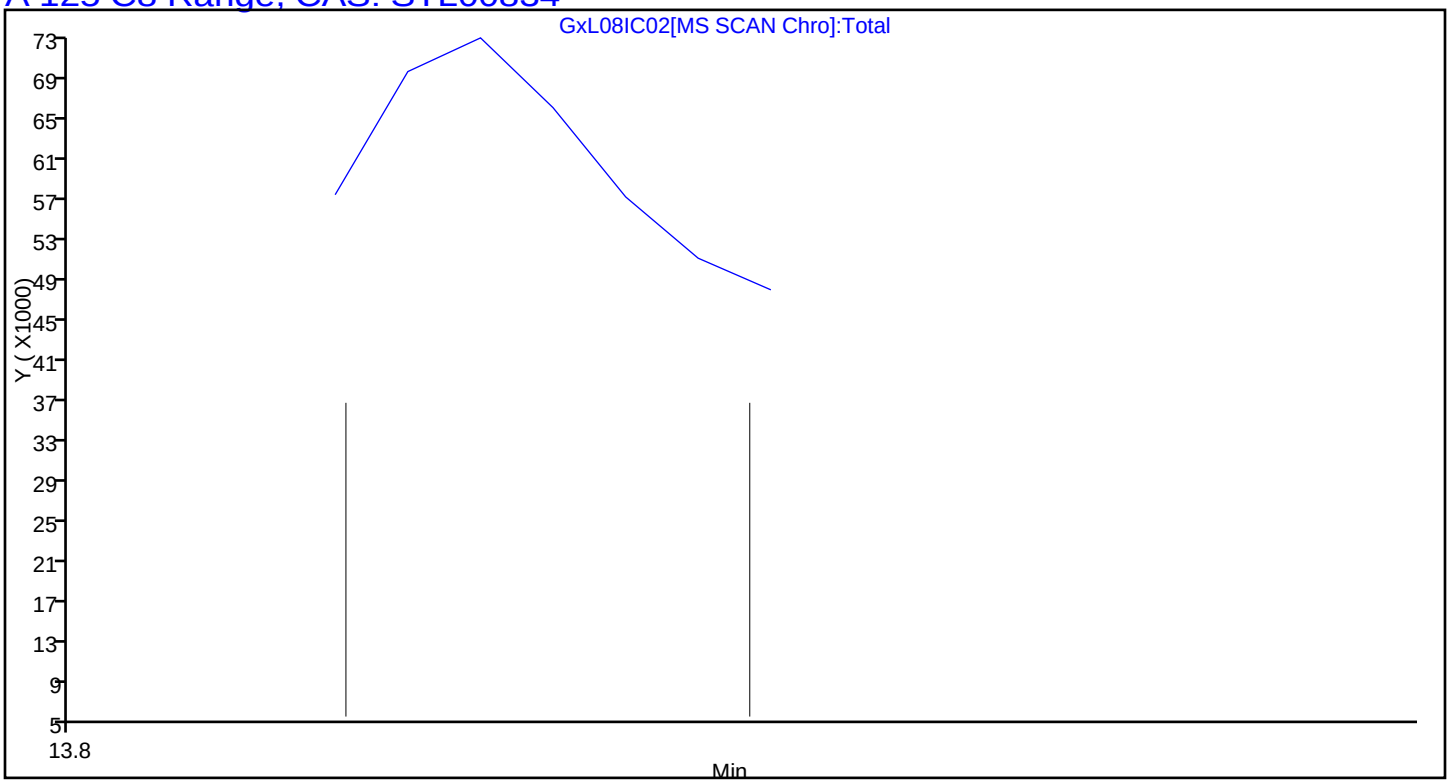


Report Date: 13-Dec-2016 14:27:58 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC02.D				
Injection Date:	08-Dec-2016 20:42:30	Instrument ID:	MG		
Lims ID:	IC L2				
Client ID:					
Operator ID:	403648	ALS Bottle#:	1	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville

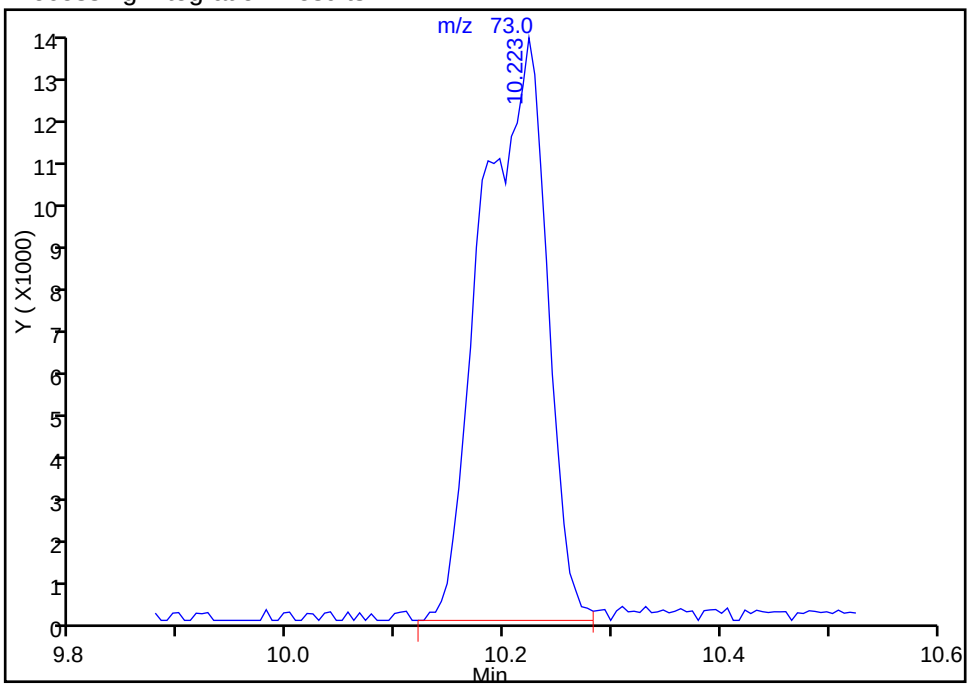
Data File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC02.D				
Injection Date:	08-Dec-2016 20:42:30	Instrument ID:	MG		
Lims ID:	IC L2				
Client ID:					
Operator ID:	403648	ALS Bottle#:	1	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

55 Tert-amyl methyl ether, CAS: 994-05-8

Signal: 1

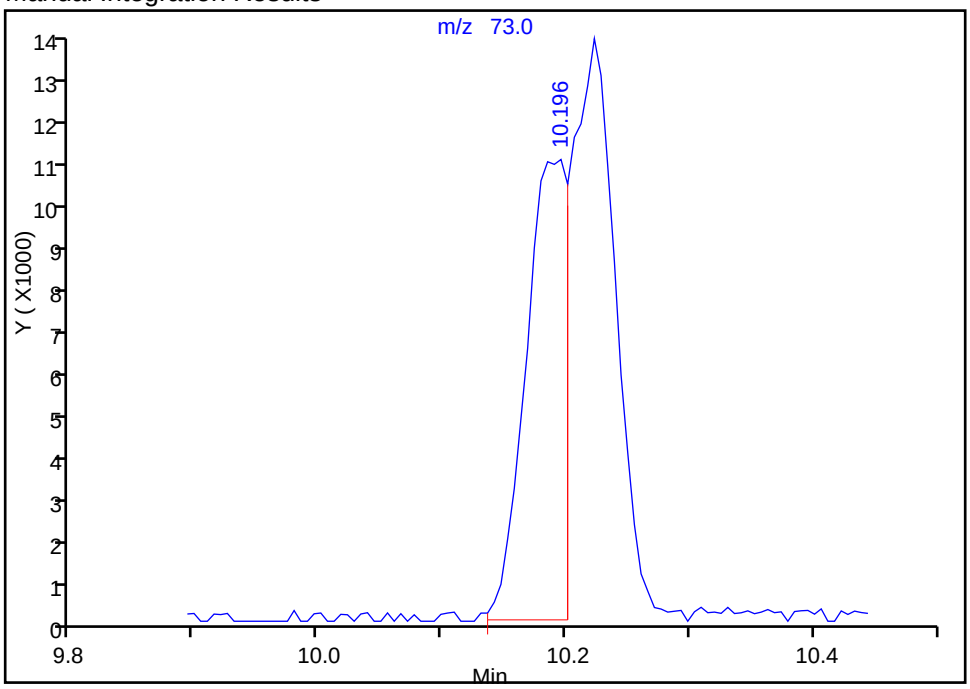
Processing Integration Results

RT: 10.22
Area: 56091
Amount: 0.124118
Amount Units: ppb v/v



Manual Integration Results

RT: 10.20
Area: 25252
Amount: 0.066043
Amount Units: ppb v/v



Reviewer: tajh, 09-Dec-2016 14:29:12
Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC03.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 08-Dec-2016 21:25:30 ALS Bottle#: 2 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003696-005
Misc. Info.: 067940
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Dec-2016 14:28:01 Calib Date: 09-Dec-2016 12:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK009

First Level Reviewer: barlozhetskayaa Date: 09-Dec-2016 10:41:56

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.055	8.063	-0.008	95	450637	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.229	10.234	-0.005	95	1837733	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.087	15.090	-0.003	87	1829554	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.753	16.758	-0.005	94	1168369	4.00	3.86	
6 Chlorodifluoromethane	67	3.483	3.481	0.002	97	5647	0.1587	0.1528	
7 Propene	41	3.488	3.489	-0.001	99	20326	0.1587	0.1650	
8 Dichlorodifluoromethane	85	3.537	3.533	0.004	100	60760	0.1587	0.1575	
9 Chloromethane	52	3.688	3.685	0.003	63	7372	0.1587	0.1780	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.698	3.696	0.002	92	40305	0.1587	0.1577	
11 Acetaldehyde	44	3.817	3.816	0.001	95	50465	0.7933	1.10	
12 Vinyl chloride	62	3.833	3.830	0.003	99	21755	0.1587	0.1600	
13 Butadiene	54	3.903	3.906	-0.003	98	17716	0.1587	0.1615	
14 Butane	43	3.909	3.907	0.002	94	34413	0.1587	0.1606	
15 Bromomethane	94	4.173	4.174	-0.001	99	21028	0.1587	0.1620	
16 Chloroethane	64	4.292	4.292	0.000	97	11486	0.1587	0.1590	
17 Ethanol	31	4.383	4.393	-0.010	95	36685	0.7933	0.8147	
18 Vinyl bromide	106	4.545	4.550	-0.005	98	19383	0.1587	0.1582	
19 2-Methylbutane	43	4.599	4.598	0.001	91	26223	0.1587	0.1675	
21 Acrolein	56	4.788	4.783	0.005	32	5678	0.1587	0.1618	
20 Trichlorofluoromethane	101	4.782	4.785	-0.003	100	59109	0.1587	0.1581	
22 Acetonitrile	40	4.831	4.838	-0.007	97	6381	0.1587	0.1534	
23 Acetone	58	4.890	4.882	0.008	98	31857	0.4760	0.6709	
24 Pentane	72	4.982	4.978	0.004	96	3817	0.1587	0.1664	
25 Isopropyl alcohol	45	4.971	4.987	-0.016	93	75884	0.4760	0.4724	
26 Ethyl ether	31	5.133	5.124	0.009	96	13794	0.1587	0.1457	
27 1,1-Dichloroethene	96	5.397	5.400	-0.003	96	17917	0.1587	0.1626	
28 Acrylonitrile	53	5.483	5.487	-0.004	93	10031	0.1587	0.1685	
29 2-Methyl-2-propanol	59	5.521	5.526	-0.005	89	25645	0.1587	0.1519	
30 1,1,2-Trichloro-1,2,2-trif	101	5.570	5.572	-0.002	97	37390	0.1587	0.1582	
31 Methylene Chloride	84	5.704	5.708	-0.004	94	21084	0.1587	0.2200	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.721	5.725	-0.004	97	15711	0.1587	0.1656	
33 Carbon disulfide	76	5.845	5.849	-0.004	100	58242	0.1587	0.1617	
34 trans-1,2-Dichloroethene	96	6.443	6.448	-0.005	99	20615	0.1587	0.1592	
35 2-Methylpentane	43	6.475	6.481	-0.006	95	44795	0.1587	0.1606	
36 Methyl tert-butyl ether	73	6.583	6.575	0.008	96	41332	0.1587	0.1344	
37 1,1-Dichloroethane	63	6.826	6.832	-0.006	100	36850	0.1587	0.1515	
38 Vinyl acetate	43	6.939	6.942	-0.003	100	38691	0.1587	0.1280	
39 2-Butanone (MEK)	72	7.344	7.349	-0.005	99	8249	0.1587	0.1546	
40 Hexane	56	7.392	7.397	-0.005	86	17936	0.1587	0.1674	
41 Isopropyl ether	45	7.549	7.547	0.002	96	51520	0.1587	0.1341	
42 cis-1,2-Dichloroethene	96	7.753	7.759	-0.006	96	20178	0.1587	0.1535	
43 Ethyl acetate	43	7.942	7.946	-0.004	99	30082	0.1587	0.1262	
44 Chloroform	83	8.077	8.085	-0.008	96	43727	0.1587	0.1547	
45 Tert-butyl ethyl ether	59	8.196	8.191	0.005	95	43833	0.1587	0.1312	
46 Tetrahydrofuran	42	8.465	8.460	0.005	96	16880	0.1587	0.1372	
47 1,1,1-Trichloroethane	97	9.064	9.068	-0.004	95	47399	0.1587	0.1537	
48 1,2-Dichloroethane	62	9.150	9.160	-0.010	98	27221	0.1587	0.1589	
49 Benzene	78	9.646	9.654	-0.008	97	54815	0.1587	0.1658	
50 Cyclohexane	69	9.652	9.659	-0.007	95	11068	0.1587	0.1816	
52 Carbon tetrachloride	117	9.679	9.684	-0.005	98	48171	0.1587	0.1632	
51 n-Butanol	31	9.689	9.685	0.004	59	6873	0.1587	0.1710	
53 2,3-Dimethylpentane	71	9.808	9.808	0.000	91	14554	0.1587	0.1704	
54 Thiophene	84	9.927	9.930	-0.003	97	31533	0.1587	0.1594	
55 Tert-amyl methyl ether	73	10.185	10.181	0.004	98	42901	0.1587	0.1451	M
56 Isooctane	57	10.477	10.479	-0.002	98	99827	0.1587	0.1665	
57 n-Heptane	71	10.876	10.881	-0.005	90	22004	0.1587	0.1658	
58 1,2-Dichloropropane	63	10.913	10.916	-0.003	87	18837	0.1587	0.1504	
59 Trichloroethene	130	10.957	10.966	-0.009	97	37343	0.1587	0.1942	
60 Dibromomethane	93	11.027	11.033	-0.006	92	24045	0.1587	0.1578	
61 Dichlorobromomethane	83	11.188	11.194	-0.006	99	40369	0.1587	0.1525	
62 1,4-Dioxane	88	11.226	11.222	0.004	90	6766	0.1587	0.1526	
63 Methyl methacrylate	41	11.323	11.327	-0.004	92	17354	0.1587	0.1282	
64 Methylcyclohexane	83	11.760	11.766	-0.006	94	46095	0.1587	0.1685	
65 4-Methyl-2-pentanone (MIBK	43	12.197	12.198	-0.001	98	34513	0.1587	0.1534	
66 cis-1,3-Dichloropropene	75	12.235	12.240	-0.005	95	29255	0.1587	0.1479	
67 trans-1,3-Dichloropropene	75	12.952	12.958	-0.006	98	24864	0.1587	0.1409	
68 Toluene	91	13.081	13.083	-0.002	93	53183	0.1587	0.1454	
69 1,1,2-Trichloroethane	83	13.151	13.154	-0.003	98	16016	0.1587	0.1484	
70 2-Methylthiophene	97	13.227	13.233	-0.006	98	46273	0.1587	0.1499	
71 3-Methylthiophene	97	13.432	13.439	-0.007	98	43735	0.1587	0.1455	
72 2-Hexanone	58	13.577	13.578	-0.001	94	16057	0.1587	0.1495	
73 n-Octane	85	13.831	13.833	-0.002	93	23418	0.1587	0.1628	
74 Chlorodibromomethane	129	13.858	13.862	-0.004	98	36091	0.1587	0.1454	
75 Ethylene Dibromide	107	14.149	14.152	-0.003	98	31431	0.1587	0.1481	
76 Tetrachloroethene	129	14.251	14.251	0.000	96	25535	0.1587	0.1591	
77 Chlorobenzene	112	15.136	15.138	-0.002	94	44998	0.1587	0.1482	
78 2,3-Dimethylheptane	43	15.200	15.203	-0.003	96	60872	0.1587	0.1679	
79 Ethylbenzene	91	15.443	15.445	-0.002	98	69003	0.1587	0.1439	
80 2-Ethylthiophene	97	15.540	15.544	-0.004	98	49663	0.1587	0.1384	
81 m-Xylene & p-Xylene	91	15.605	15.612	-0.007	99	106515	0.3173	0.2881	
83 Bromoform	173	16.031	16.034	-0.003	96	29557	0.1587	0.1294	
82 n-Nonane	57	16.074	16.076	-0.002	92	39709	0.1587	0.1656	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.074	16.079	-0.005	77	34245	0.1587	0.1304	
85 o-Xylene	91	16.133	16.140	-0.007	98	55923	0.1587	0.1435	
86 1,1,2,2-Tetrachloroethane	83	16.457	16.462	-0.005	99	28104	0.1587	0.1092	
87 1,2,3-Trichloropropane	110	16.613	16.619	-0.006	96	11556	0.1587	0.1363	
88 Isopropylbenzene	105	16.737	16.740	-0.003	97	77471	0.1587	0.1413	
89 N-Propylbenzene	120	17.293	17.295	-0.002	99	21354	0.1587	0.1430	
90 2-Chlorotoluene	126	17.325	17.327	-0.002	97	19691	0.1587	0.1428	
91 4-Ethyltoluene	105	17.454	17.457	-0.003	99	73785	0.1587	0.1395	
92 1,3,5-Trimethylbenzene	120	17.535	17.539	-0.004	93	35870	0.1587	0.1410	
93 Alpha Methyl Styrene	118	17.778	17.781	-0.003	90	26661	0.1587	0.1271	
94 n-Decane	57	17.875	17.878	-0.003	90	45478	0.1587	0.1607	
95 tert-Butylbenzene	119	17.983	17.985	-0.002	94	70467	0.1587	0.1430	
96 1,2,4-Trimethylbenzene	105	17.994	18.000	-0.006	95	63716	0.1587	0.1438	
98 1,3-Dichlorobenzene	146	18.269	18.270	-0.001	63	44633	0.1587	0.1394	
97 sec-Butylbenzene	105	18.269	18.270	-0.001	98	94767	0.1587	0.1478	
99 Benzyl chloride	91	18.349	18.349	0.000	97	46504	0.1587	0.1314	
100 1,4-Dichlorobenzene	146	18.360	18.363	-0.003	92	43579	0.1587	0.1392	
101 4-Isopropyltoluene	119	18.441	18.444	-0.003	97	77592	0.1587	0.1421	
102 1,2,3-Trimethylbenzene	105	18.484	18.488	-0.004	97	49232	0.1587	0.1445	
103 Butylcyclohexane	83	18.560	18.561	-0.001	93	55512	0.1587	0.1619	
104 1,2-Dichlorobenzene	146	18.732	18.735	-0.003	95	43248	0.1587	0.1414	
105 2,3-Dihydroindene	117	18.732	18.736	-0.004	93	59010	0.1587	0.1430	
106 Indene	116	18.867	18.869	-0.002	94	41234	0.1587	0.1934	
107 n-Butylbenzene	91	18.894	18.896	-0.002	98	70024	0.1587	0.1475	
108 Undecane	57	19.245	19.247	-0.002	97	48725	0.1587	0.1631	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.277	19.279	-0.002	97	56926	0.1587	0.1438	
110 1,2-Dibromo-3-Chloropropan	157	19.352	19.352	0.000	94	14967	0.1587	0.1164	
111 1,2,4,5-Tetramethylbenzene	119	19.671	19.673	-0.002	97	68727	0.1587	0.1476	
112 1,2,3,5-Tetramethylbenzene	119	19.725	19.727	-0.002	95	41533	0.1587	0.1460	
113 1,2,3,4-Tetramethylbenzene	119	20.118	20.121	-0.003	98	57669	0.1587	0.1500	
114 Dodecane	57	20.312	20.313	-0.001	96	47372	0.1587	0.1792	
115 1,2,4-Trichlorobenzene	180	20.458	20.458	0.000	94	25744	0.1587	0.1210	
116 Naphthalene	128	20.587	20.588	-0.001	99	61374	0.1587	0.1360	
117 Benzo(b)thiophene	134	20.690	20.688	0.002	99	29349	0.1587	0.1187	
118 Hexachlorobutadiene	225	20.814	20.814	0.000	94	47564	0.1587	0.1456	
119 1,2,3-Trichlorobenzene	180	20.868	20.865	0.003	94	29020	0.1587	0.1399	
120 2-Methylnaphthalene	142	21.660	21.661	-0.001	100	29488	0.4958	0.4484	
121 1-Methylnaphthalene	142	21.844	21.841	0.003	99	36495	0.4958	0.5446	
A 124 Toluene Range	1	13.076	(13.041-13.111)		0	135421	0.1587	0.1452	
A 125 C8 Range	1	13.836	(13.821-13.851)		0	340899	0.1587	0.2354	
S 126 Xylenes, Total	100				0		0.4760	0.4316	
S 127 1,2-Dichloroethene, Total	1				0		0.3173	0.3128	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L3DNP_00009	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

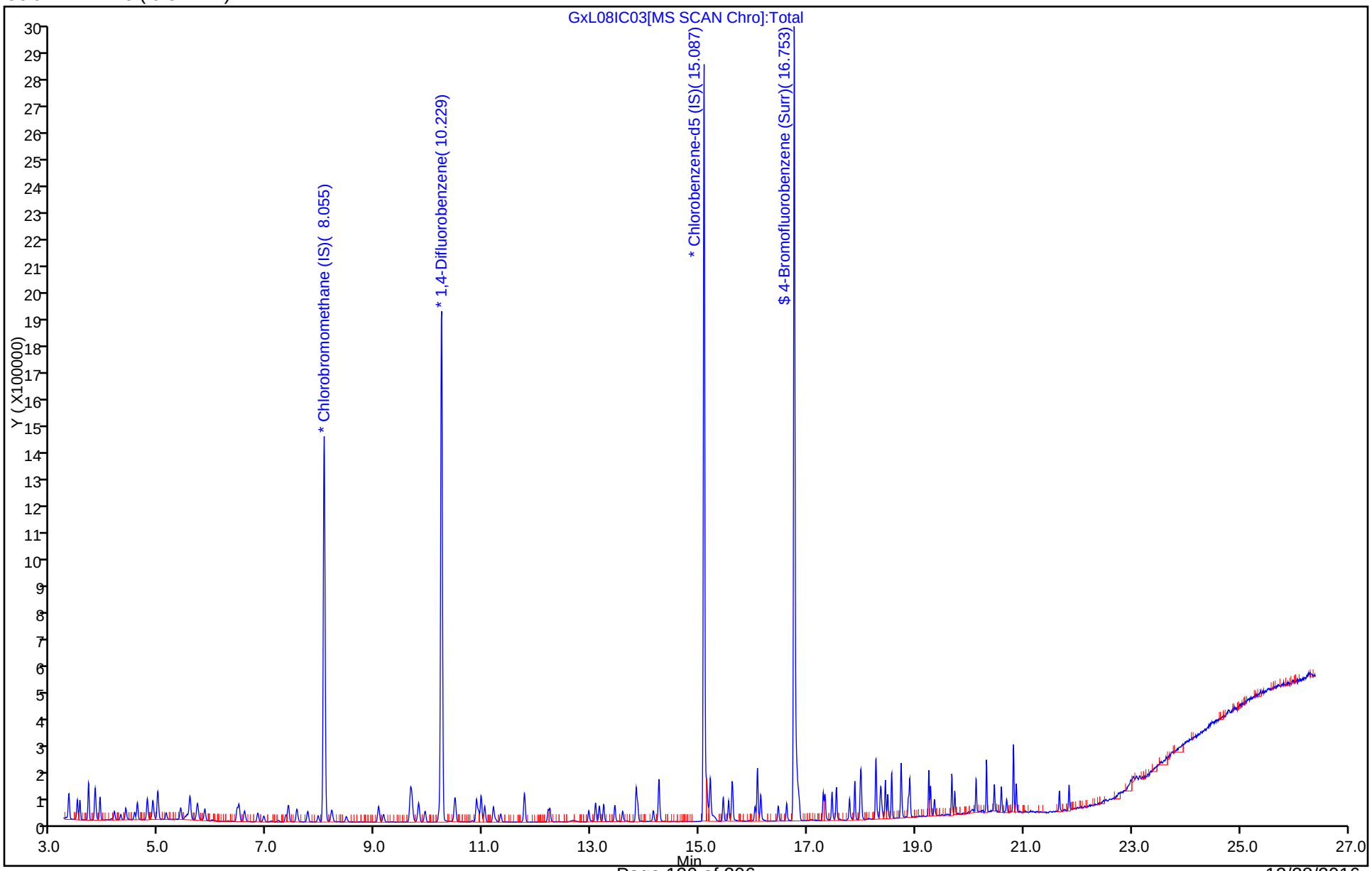
Report Date: 13-Dec-2016 14:28:02 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC03.D

Injection Date:	08-Dec-2016 21:25:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	IC L3			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

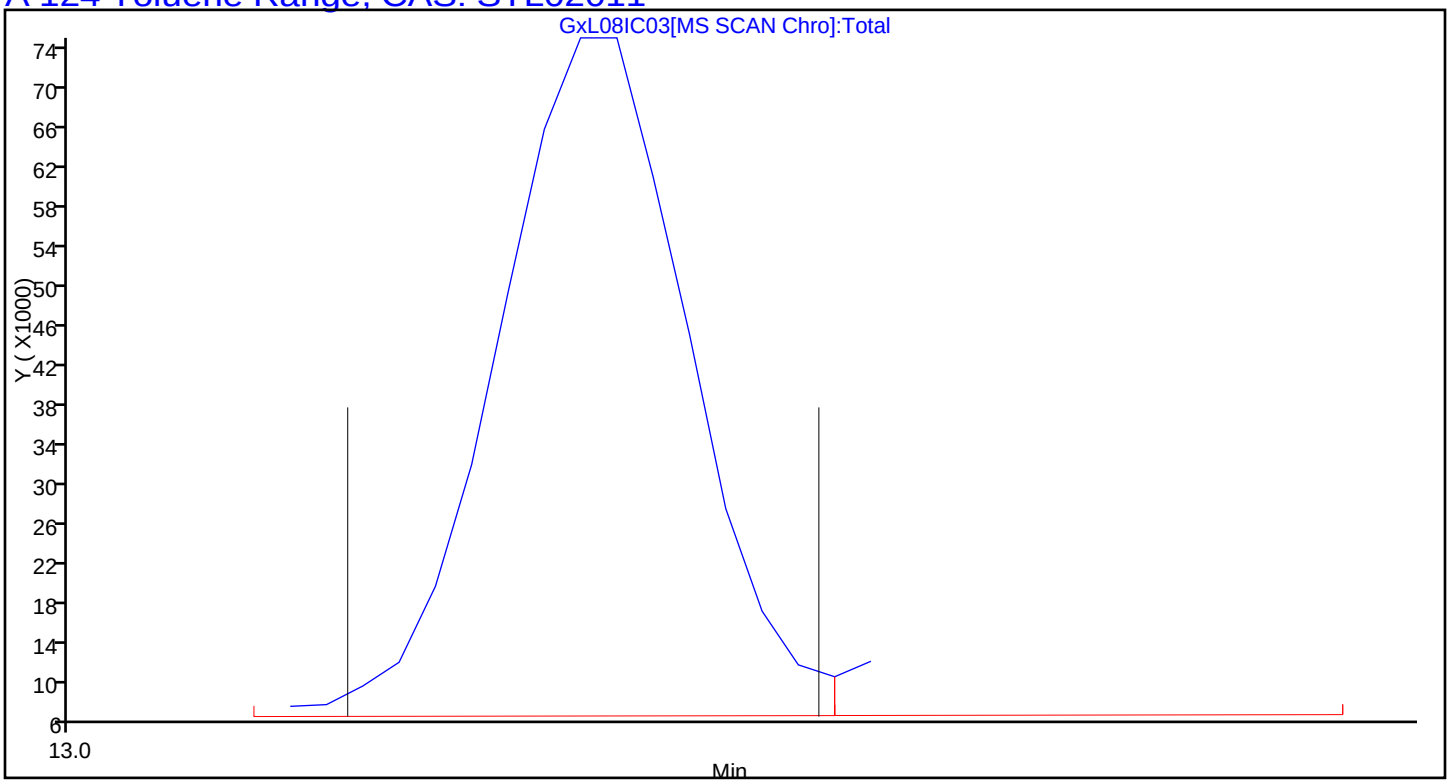


Report Date: 13-Dec-2016 14:28:02 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC03.D				
Injection Date:	08-Dec-2016 21:25:30	Instrument ID:	MG		
Lims ID:	IC L3				
Client ID:					
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

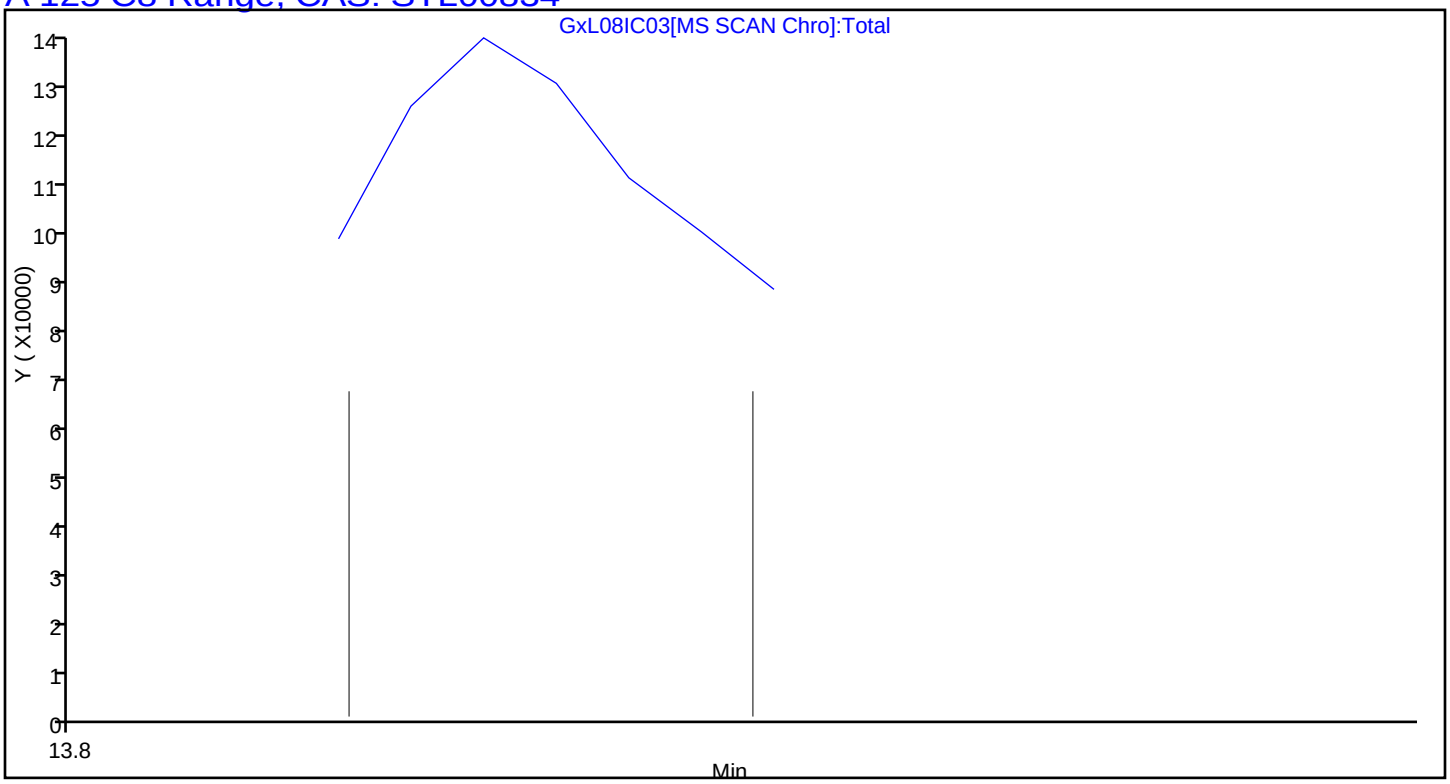
A 124 Toluene Range, CAS: STL02011



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC03.D				
Injection Date:	08-Dec-2016 21:25:30	Instrument ID:	MG		
Lims ID:	IC L3				
Client ID:					
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

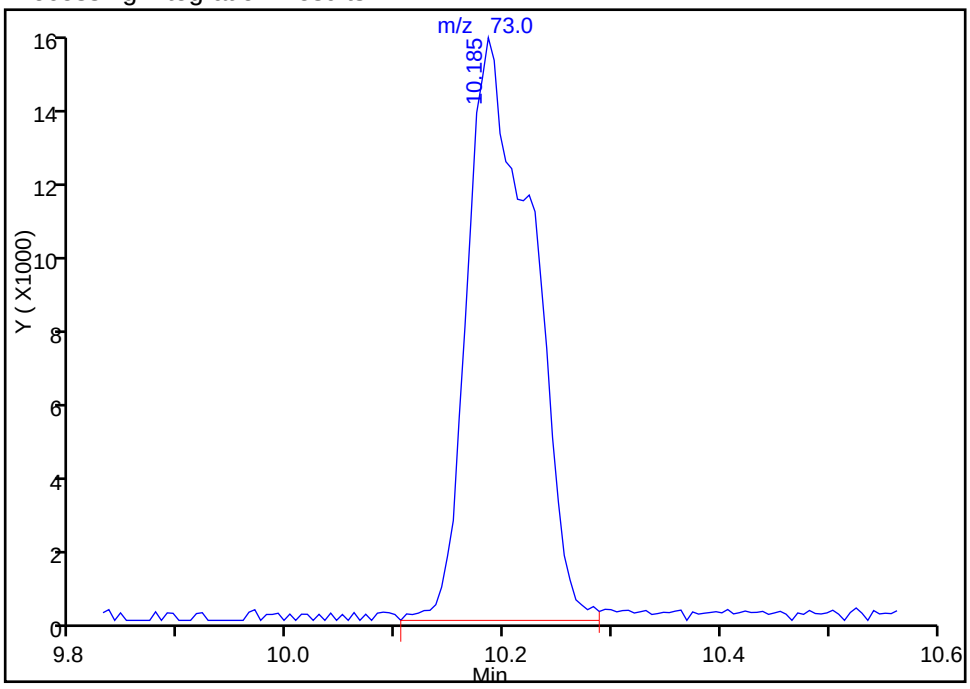
Data File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC03.D				
Injection Date:	08-Dec-2016 21:25:30	Instrument ID:	MG		
Lims ID:	IC L3				
Client ID:					
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

55 Tert-amyl methyl ether, CAS: 994-05-8

Signal: 1

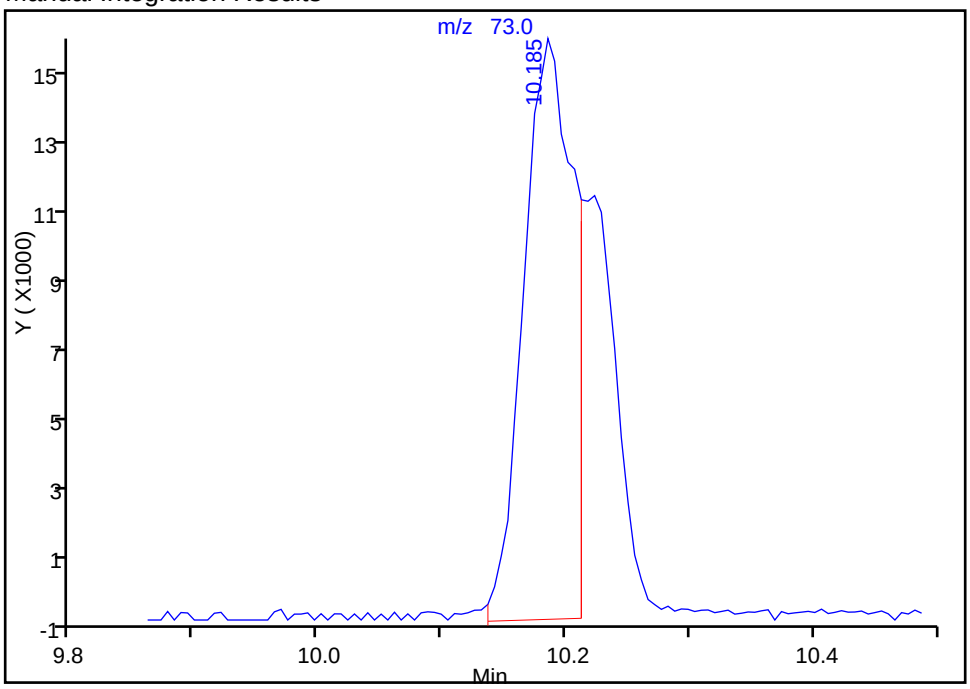
Processing Integration Results

RT: 10.19
Area: 62919
Amount: 0.201999
Amount Units: ppb v/v



Manual Integration Results

RT: 10.19
Area: 42901
Amount: 0.145078
Amount Units: ppb v/v



Reviewer: tajh, 09-Dec-2016 14:30:03

Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC04.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 08-Dec-2016 22:07:30 ALS Bottle#: 3 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003696-006
Misc. Info.: 067939
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Dec-2016 14:28:06 Calib Date: 09-Dec-2016 12:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK009

First Level Reviewer: barlozhetskayaa Date: 09-Dec-2016 10:39:34

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.055	8.063	-0.008	96	463981	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.229	10.234	-0.005	95	2108247	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.087	15.090	-0.003	87	2175734	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.753	16.758	-0.005	95	1442147	4.00	4.01	
6 Chlorodifluoromethane	67	3.483	3.481	0.002	96	14013	0.4000	0.3683	
7 Propene	41	3.488	3.489	-0.001	97	49008	0.4000	0.3863	
8 Dichlorodifluoromethane	85	3.531	3.533	-0.002	99	148238	0.4000	0.3733	
9 Chloromethane	52	3.682	3.685	-0.003	98	17148	0.4000	0.4021	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.693	3.696	-0.003	96	97416	0.4000	0.3703	
11 Acetaldehyde	44	3.812	3.816	-0.004	98	111731	2.00	2.37	
12 Vinyl chloride	62	3.828	3.830	-0.002	99	52292	0.4000	0.3736	
13 Butadiene	54	3.903	3.906	-0.003	89	42040	0.4000	0.3721	
14 Butane	43	3.903	3.907	-0.004	90	83428	0.4000	0.3782	
15 Bromomethane	94	4.168	4.174	-0.006	98	49897	0.4000	0.3734	
16 Chloroethane	64	4.292	4.292	0.000	97	28019	0.4000	0.3767	
17 Ethanol	31	4.378	4.393	-0.015	97	90742	2.00	1.96	
18 Vinyl bromide	106	4.545	4.550	-0.005	98	47395	0.4000	0.3756	
19 2-Methylbutane	43	4.594	4.598	-0.004	90	60759	0.4000	0.3770	
21 Acrolein	56	4.777	4.783	-0.006	32	12347	0.4000	0.3418	
20 Trichlorofluoromethane	101	4.782	4.785	-0.003	99	143536	0.4000	0.3730	
22 Acetonitrile	40	4.831	4.838	-0.007	97	18027	0.4000	0.4210	
23 Acetone	58	4.879	4.882	-0.003	99	71784	1.20	1.47	
24 Pentane	72	4.971	4.978	-0.007	94	9414	0.4000	0.3986	
25 Isopropyl alcohol	45	4.960	4.987	-0.027	93	196241	1.20	1.19	
26 Ethyl ether	31	5.117	5.124	-0.007	96	38146	0.4000	0.3914	
27 1,1-Dichloroethene	96	5.397	5.400	-0.003	95	41972	0.4000	0.3700	
28 Acrylonitrile	53	5.478	5.487	-0.009	93	23057	0.4000	0.3762	
29 2-Methyl-2-propanol	59	5.499	5.526	-0.027	94	65529	0.4000	0.3769	
30 1,1,2-Trichloro-1,2,2-trif	101	5.570	5.572	-0.002	97	91069	0.4000	0.3743	
31 Methylene Chloride	84	5.704	5.708	-0.004	96	39868	0.4000	0.4040	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.721	5.725	-0.004	98	37831	0.4000	0.3873	
33 Carbon disulfide	76	5.845	5.849	-0.004	100	141704	0.4000	0.3822	
34 trans-1,2-Dichloroethene	96	6.443	6.448	-0.005	97	49737	0.4000	0.3731	
35 2-Methylpentane	43	6.476	6.481	-0.005	95	109315	0.4000	0.3806	
36 Methyl tert-butyl ether	73	6.573	6.575	-0.002	97	116320	0.4000	0.3674	
37 1,1-Dichloroethane	63	6.826	6.832	-0.006	100	92833	0.4000	0.3707	
38 Vinyl acetate	43	6.934	6.942	-0.008	100	115180	0.4000	0.3700	
39 2-Butanone (MEK)	72	7.344	7.349	-0.005	99	21700	0.4000	0.3949	
40 Hexane	56	7.392	7.397	-0.005	89	42161	0.4000	0.3823	
41 Isopropyl ether	45	7.543	7.547	-0.004	97	148142	0.4000	0.3744	
42 cis-1,2-Dichloroethene	96	7.753	7.759	-0.006	95	51356	0.4000	0.3796	
43 Ethyl acetate	43	7.937	7.946	-0.009	99	89774	0.4000	0.3658	
44 Chloroform	83	8.077	8.085	-0.008	96	109487	0.4000	0.3762	
45 Tert-butyl ethyl ether	59	8.185	8.191	-0.006	94	126645	0.4000	0.3681	
46 Tetrahydrofuran	42	8.455	8.460	-0.006	95	46626	0.4000	0.3680	
47 1,1,1-Trichloroethane	97	9.064	9.068	-0.004	95	119146	0.4000	0.3753	
48 1,2-Dichloroethane	62	9.156	9.160	-0.004	98	70665	0.4000	0.3595	
49 Benzene	78	9.646	9.654	-0.008	97	145030	0.4000	0.3824	
50 Cyclohexane	69	9.657	9.659	-0.002	92	26449	0.4000	0.3784	
52 Carbon tetrachloride	117	9.679	9.684	-0.005	98	121879	0.4000	0.3600	
51 n-Butanol	31	9.668	9.685	-0.017	66	15567	0.4000	0.3377	
53 2,3-Dimethylpentane	71	9.803	9.808	-0.005	91	35370	0.4000	0.3610	
54 Thiophene	84	9.927	9.930	-0.003	96	81985	0.4000	0.3612	
55 Tert-amyl methyl ether	73	10.169	10.181	-0.012	98	116541	0.4000	0.3435	
56 Isooctane	57	10.477	10.479	-0.002	98	250466	0.4000	0.3642	
57 n-Heptane	71	10.876	10.881	-0.005	91	54557	0.4000	0.3583	
58 1,2-Dichloropropane	63	10.908	10.916	-0.008	89	53314	0.4000	0.3711	
59 Trichloroethene	130	10.962	10.966	-0.004	97	75756	0.4000	0.3434	
60 Dibromomethane	93	11.027	11.033	-0.006	93	62732	0.4000	0.3589	
61 Dichlorobromomethane	83	11.188	11.194	-0.006	100	105567	0.4000	0.3476	
62 1,4-Dioxane	88	11.210	11.222	-0.012	89	17470	0.4000	0.3434	
63 Methyl methacrylate	41	11.318	11.327	-0.009	92	52693	0.4000	0.3393	
64 Methylcyclohexane	83	11.760	11.766	-0.006	95	114511	0.4000	0.3649	
65 4-Methyl-2-pentanone (MIBK	43	12.191	12.198	-0.007	96	88279	0.4000	0.3421	
66 cis-1,3-Dichloropropene	75	12.235	12.240	-0.005	93	84196	0.4000	0.3709	
67 trans-1,3-Dichloropropene	75	12.952	12.958	-0.006	98	72970	0.4000	0.3476	
68 Toluene	91	13.076	13.083	-0.007	94	158232	0.4000	0.3637	
69 1,1,2-Trichloroethane	83	13.146	13.154	-0.008	99	46210	0.4000	0.3601	
70 2-Methylthiophene	97	13.227	13.233	-0.006	97	132638	0.4000	0.3614	
71 3-Methylthiophene	97	13.437	13.439	-0.002	99	128096	0.4000	0.3583	
72 2-Hexanone	58	13.572	13.578	-0.006	93	38378	0.4000	0.3005	
73 n-Octane	85	13.831	13.833	-0.002	94	60225	0.4000	0.3520	
74 Chlorodibromomethane	129	13.858	13.862	-0.004	98	98960	0.4000	0.3351	
75 Ethylene Dibromide	107	14.149	14.152	-0.003	99	86235	0.4000	0.3417	
76 Tetrachloroethene	129	14.246	14.251	-0.005	96	65941	0.4000	0.3454	
77 Chlorobenzene	112	15.136	15.138	-0.002	94	128374	0.4000	0.3555	
78 2,3-Dimethylheptane	43	15.200	15.203	-0.003	97	160682	0.4000	0.3726	
79 Ethylbenzene	91	15.443	15.445	-0.002	98	202566	0.4000	0.3551	
80 2-Ethylthiophene	97	15.540	15.544	-0.004	97	148846	0.4000	0.3488	
81 m-Xylene & p-Xylene	91	15.610	15.612	-0.002	98	312199	0.8000	0.7100	
83 Bromoform	173	16.031	16.034	-0.003	97	89222	0.4000	0.3283	
82 n-Nonane	57	16.074	16.076	-0.002	93	108527	0.4000	0.3807	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.074	16.079	-0.005	81	105962	0.4000	0.3392	
85 o-Xylene	91	16.133	16.140	-0.007	98	163242	0.4000	0.3522	
86 1,1,2,2-Tetrachloroethane	83	16.457	16.462	-0.005	100	107105	0.4000	0.3500	
87 1,2,3-Trichloropropane	110	16.613	16.619	-0.006	97	34699	0.4000	0.3443	
88 Isopropylbenzene	105	16.737	16.740	-0.003	96	226287	0.4000	0.3471	
89 N-Propylbenzene	120	17.293	17.295	-0.002	99	58580	0.4000	0.3300	
90 2-Chlorotoluene	126	17.325	17.327	-0.002	97	56487	0.4000	0.3445	
91 4-Ethyltoluene	105	17.454	17.457	-0.003	99	212251	0.4000	0.3375	
92 1,3,5-Trimethylbenzene	120	17.535	17.539	-0.004	93	101711	0.4000	0.3363	
93 Alpha Methyl Styrene	118	17.778	17.781	-0.003	90	75940	0.4000	0.3044	
94 n-Decane	57	17.875	17.878	-0.003	90	122535	0.4000	0.3642	
95 tert-Butylbenzene	119	17.983	17.985	-0.002	94	197002	0.4000	0.3361	
96 1,2,4-Trimethylbenzene	105	17.994	18.000	-0.006	95	178941	0.4000	0.3395	
98 1,3-Dichlorobenzene	146	18.269	18.270	-0.001	79	123184	0.4000	0.3235	
97 sec-Butylbenzene	105	18.269	18.270	-0.001	98	259583	0.4000	0.3404	
99 Benzyl chloride	91	18.344	18.349	-0.005	99	129478	0.4000	0.3076	
100 1,4-Dichlorobenzene	146	18.360	18.363	-0.003	96	121046	0.4000	0.3252	
101 4-Isopropyltoluene	119	18.441	18.444	-0.003	97	215898	0.4000	0.3325	
102 1,2,3-Trimethylbenzene	105	18.484	18.488	-0.004	97	135985	0.4000	0.3356	
103 Butylcyclohexane	83	18.560	18.561	-0.001	94	149636	0.4000	0.3670	
104 1,2-Dichlorobenzene	146	18.732	18.735	-0.003	95	116482	0.4000	0.3201	
105 2,3-Dihydroindene	117	18.732	18.736	-0.004	93	162369	0.4000	0.3309	
106 Indene	116	18.867	18.869	-0.002	93	112729	0.4000	0.3418	
107 n-Butylbenzene	91	18.894	18.896	-0.002	98	189235	0.4000	0.3352	
108 Undecane	57	19.245	19.247	-0.002	97	125419	0.4000	0.3530	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.277	19.279	-0.002	97	146402	0.4000	0.3109	
110 1,2-Dibromo-3-Chloropropan	157	19.352	19.352	0.000	96	41895	0.4000	0.2741	
111 1,2,4,5-Tetramethylbenzene	119	19.671	19.673	-0.002	97	174813	0.4000	0.3158	
112 1,2,3,5-Tetramethylbenzene	119	19.725	19.727	-0.002	95	108120	0.4000	0.3196	
113 1,2,3,4-Tetramethylbenzene	119	20.118	20.121	-0.003	97	140998	0.4000	0.3083	
114 Dodecane	57	20.312	20.313	-0.001	96	100259	0.4000	0.3189	
115 1,2,4-Trichlorobenzene	180	20.458	20.458	0.000	94	65094	0.4000	0.2574	
116 Naphthalene	128	20.587	20.588	-0.001	99	144616	0.4000	0.2695	
117 Benzo(b)thiophene	134	20.690	20.688	0.002	99	71357	0.4000	0.2426	
118 Hexachlorobutadiene	225	20.814	20.814	0.000	94	112530	0.4000	0.2897	
119 1,2,3-Trichlorobenzene	180	20.862	20.865	-0.003	95	63109	0.4000	0.2558	
120 2-Methylnaphthalene	142	21.660	21.661	-0.001	99	42003	1.25	0.5371	
121 1-Methylnaphthalene	142	21.838	21.841	-0.003	99	46064	1.25	0.5780	
A 124 Toluene Range	1	13.071	(13.036-13.106)		0	395488	0.4000	0.3695	
A 125 C8 Range	1	13.836	(13.821-13.851)		0	598729	0.4000	0.3604	M
S 126 Xylenes, Total	100				0		1.20	1.06	
S 127 1,2-Dichloroethene, Total	1				0		0.8000	0.7527	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L4DNP_00008	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

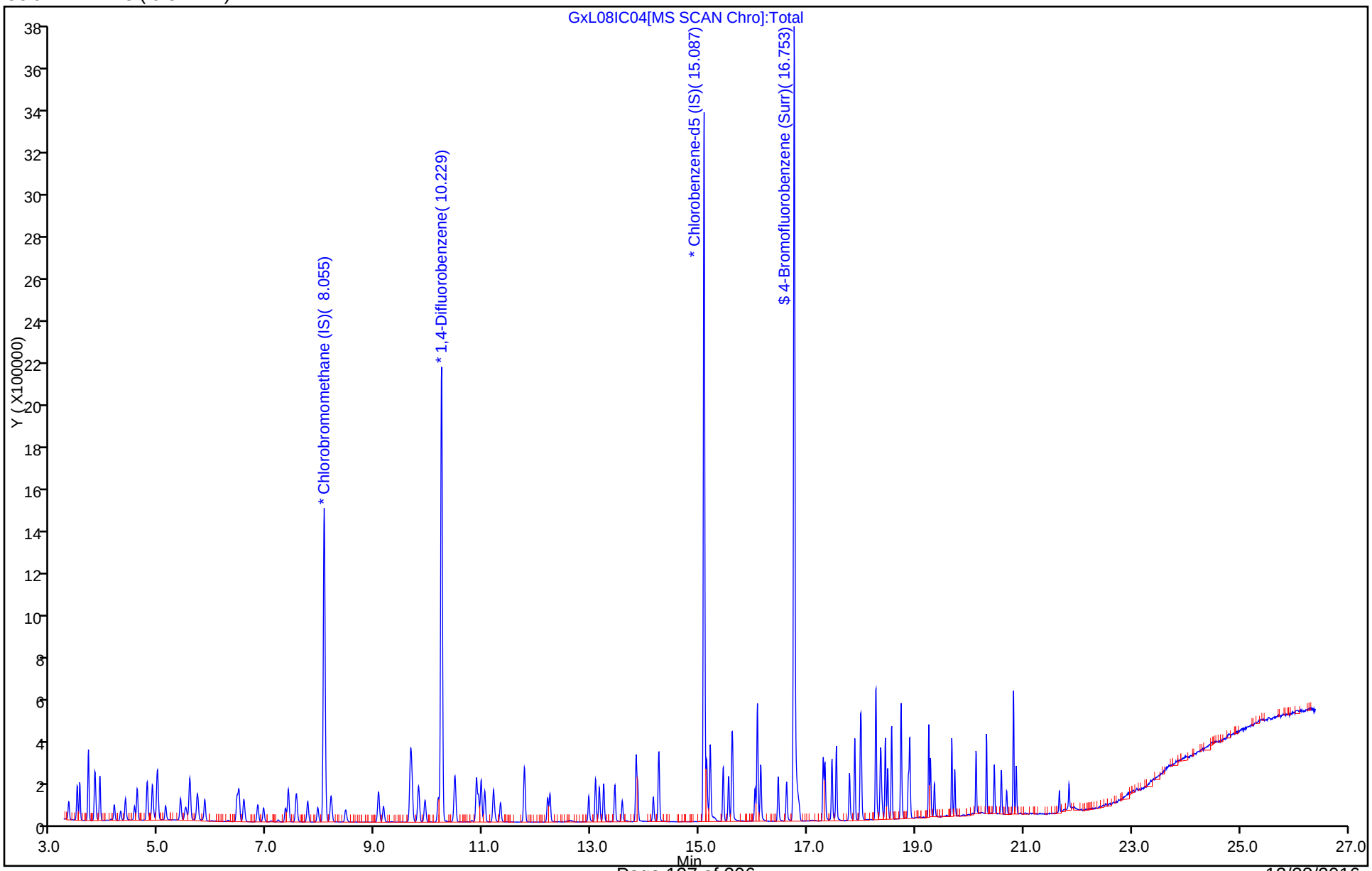
Report Date: 13-Dec-2016 14:28:07 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC04.D

Injection Date:	08-Dec-2016 22:07:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	IC L4			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

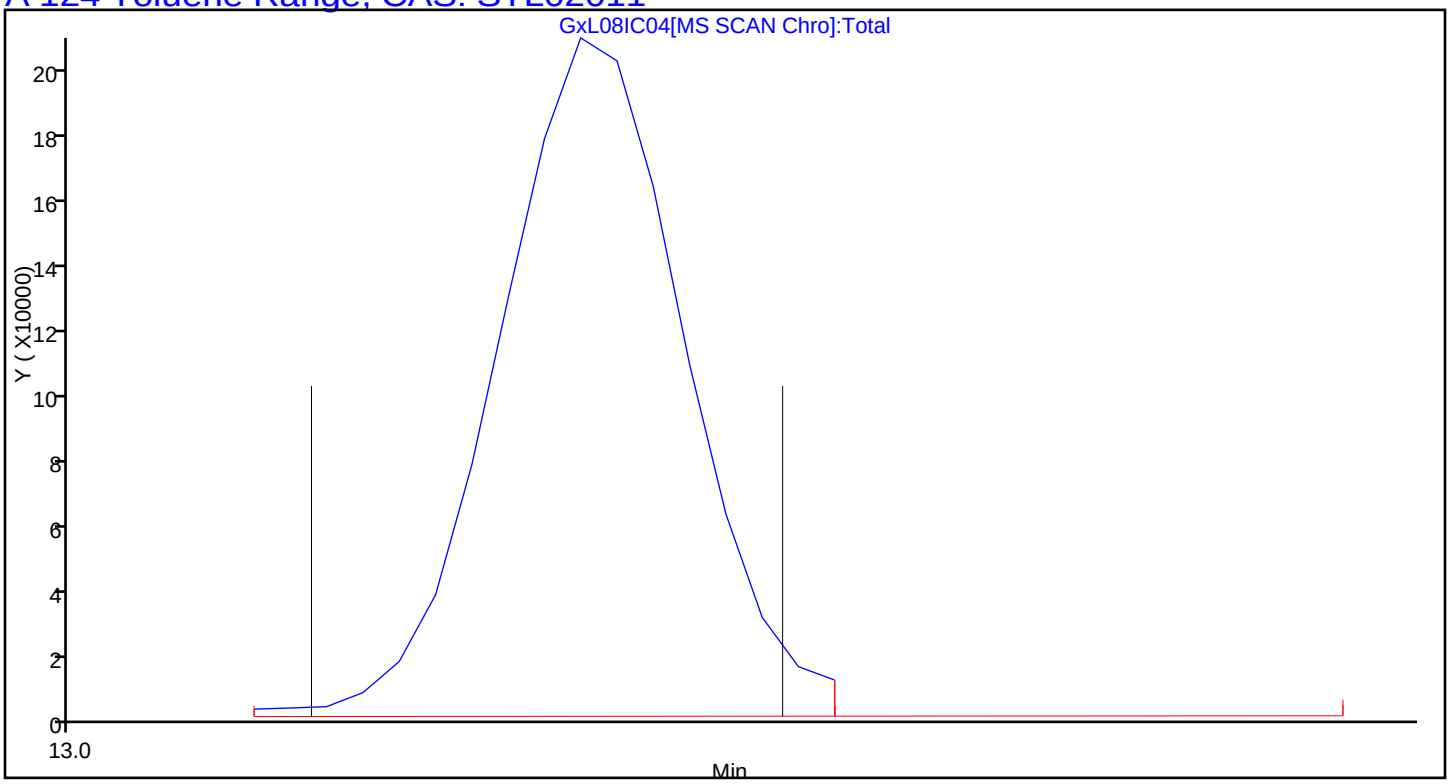


Report Date: 13-Dec-2016 14:28:07 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC04.D				
Injection Date:	08-Dec-2016 22:07:30	Instrument ID:	MG		
Lims ID:	IC L4				
Client ID:					
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

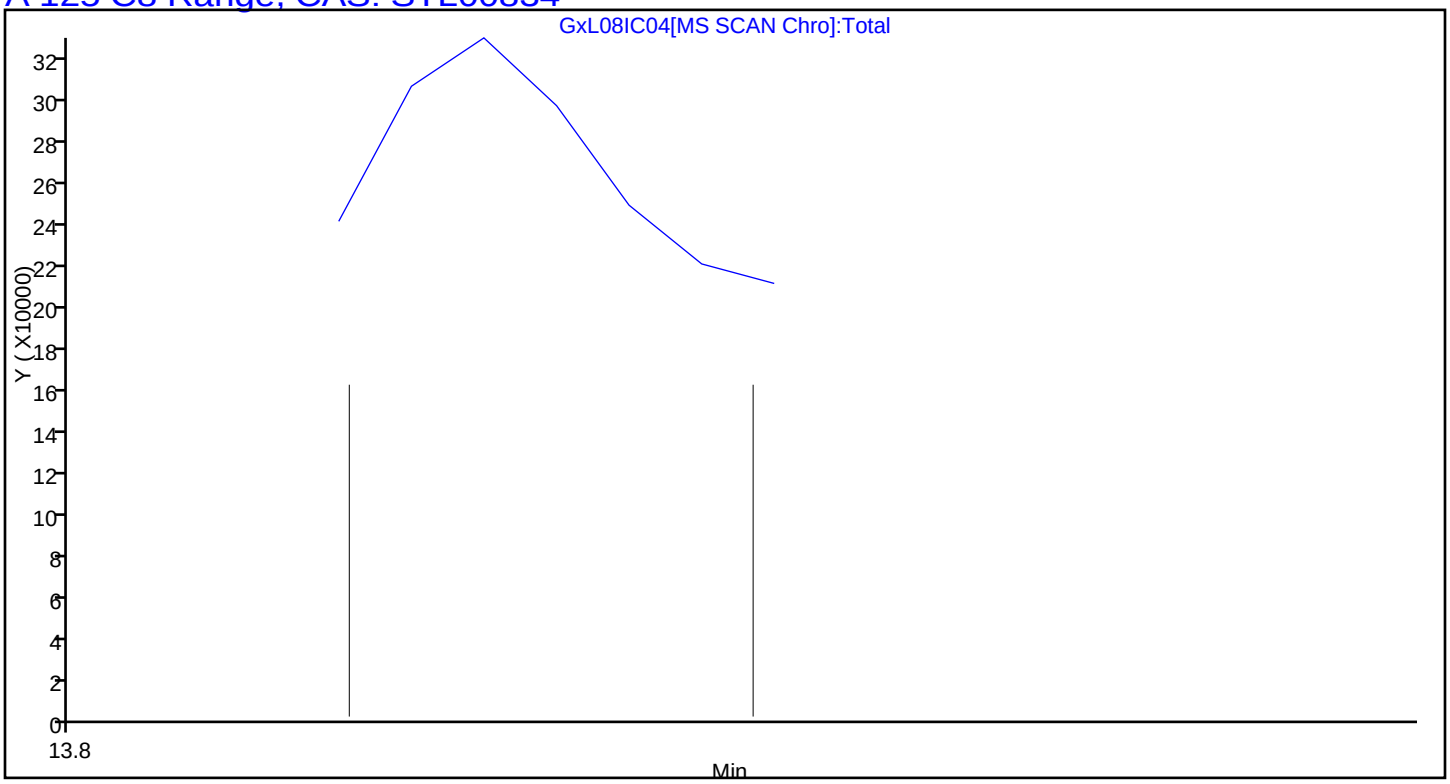


Report Date: 13-Dec-2016 14:28:07 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC04.D				
Injection Date:	08-Dec-2016 22:07:30	Instrument ID:	MG		
Lims ID:	IC L4				
Client ID:					
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

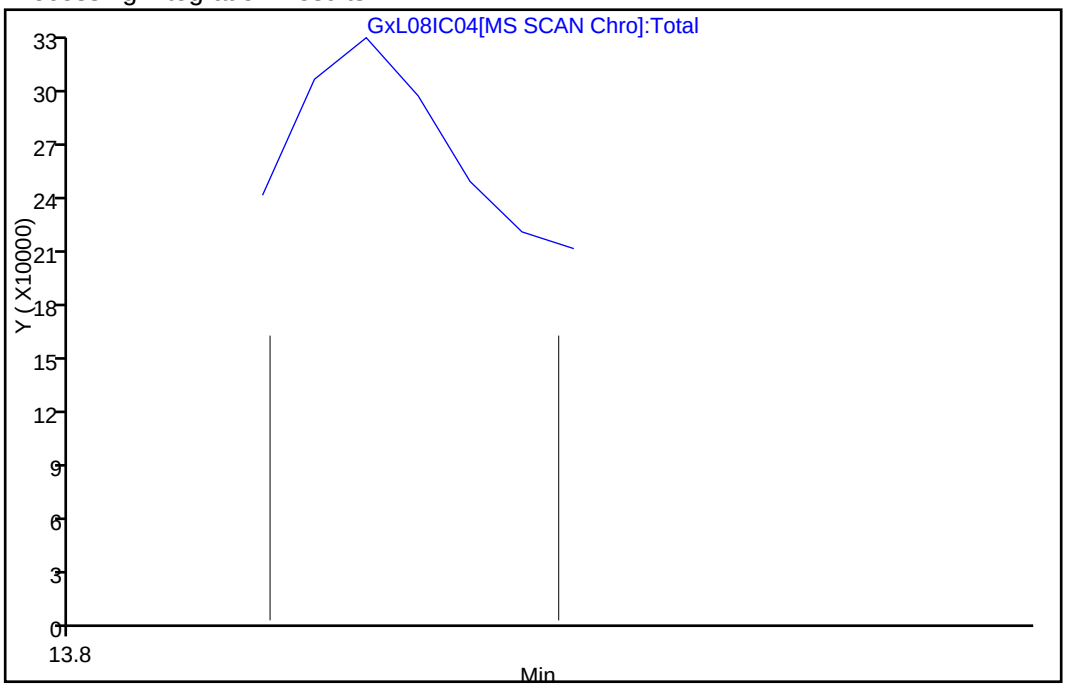
Data File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC04.D				
Injection Date:	08-Dec-2016 22:07:30	Instrument ID:	MG		
Lims ID:	IC L4				
Client ID:					
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, RT: 13.836, CAS: STL00834

Signal: 1

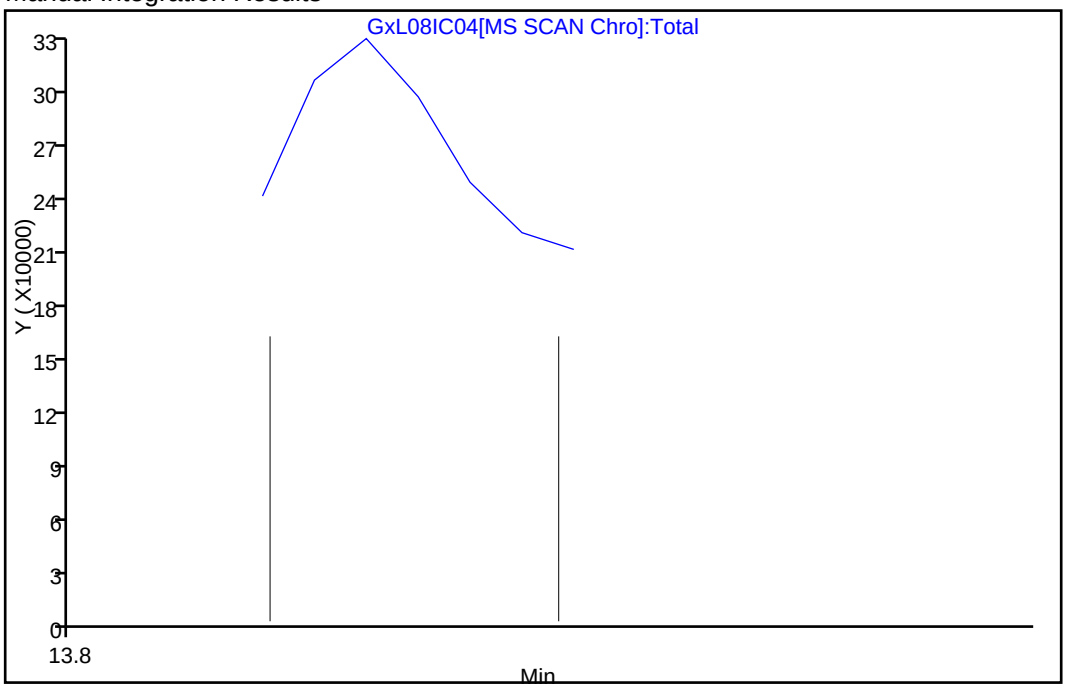
Processing Integration Results

RT: 13.84
Response: 866055
Amount: 0.430360



Manual Integration Results

RT: 13.84
Response: 598729
Amount: 0.360421



Reviewer: tajh, 09-Dec-2016 14:35:06

Audit Action: Manually Integrated Audit Reason: Baseline

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC05.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 08-Dec-2016 22:50:30 ALS Bottle#: 4 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003696-007
Misc. Info.: 067938
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Dec-2016 14:28:10 Calib Date: 09-Dec-2016 12:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK009

First Level Reviewer: barlozhetskayaa Date: 09-Dec-2016 10:39:17

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.061	8.063	-0.002	95	447350	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.228	10.234	-0.006	95	1837821	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.087	15.090	-0.003	86	1818459	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.753	16.758	-0.005	97	1199357	4.00	3.99	
6 Chlorodifluoromethane	67	3.477	3.481	-0.004	96	36626	1.00	1.00	
7 Propene	41	3.488	3.489	-0.001	99	120900	1.00	0.9884	
8 Dichlorodifluoromethane	85	3.531	3.533	-0.002	100	398936	1.00	1.04	
9 Chloromethane	52	3.682	3.685	-0.003	98	40624	1.00	0.9879	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.693	3.696	-0.003	92	266972	1.00	1.05	
11 Acetaldehyde	44	3.811	3.816	-0.005	99	203897	5.01	4.49	
12 Vinyl chloride	62	3.828	3.830	-0.002	98	144743	1.00	1.07	
13 Butadiene	54	3.903	3.906	-0.003	92	117692	1.00	1.08	
14 Butane	43	3.903	3.907	-0.004	92	236594	1.00	1.11	
15 Bromomethane	94	4.173	4.174	-0.001	99	132665	1.00	1.03	
16 Chloroethane	64	4.291	4.292	-0.001	99	74023	1.00	1.03	
17 Ethanol	31	4.383	4.393	-0.010	96	215410	5.01	4.82	
18 Vinyl bromide	106	4.545	4.550	-0.005	99	126157	1.00	1.04	
19 2-Methylbutane	43	4.599	4.598	0.001	91	165413	1.00	1.06	
21 Acrolein	56	4.782	4.783	-0.001	31	29554	1.00	0.8485	
20 Trichlorofluoromethane	101	4.782	4.785	-0.003	99	384683	1.00	1.04	
22 Acetonitrile	40	4.831	4.838	-0.007	99	40598	1.00	0.9834	
23 Acetone	58	4.874	4.882	-0.008	98	140276	3.01	2.98	
24 Pentane	72	4.976	4.978	-0.002	96	23731	1.00	1.04	
25 Isopropyl alcohol	45	4.965	4.987	-0.022	93	481177	3.01	3.02	
26 Ethyl ether	31	5.116	5.124	-0.008	96	88736	1.00	0.9443	
27 1,1-Dichloroethene	96	5.397	5.400	-0.003	96	112496	1.00	1.03	
28 Acrylonitrile	53	5.478	5.487	-0.009	94	52384	1.00	0.8864	
29 2-Methyl-2-propanol	59	5.499	5.526	-0.027	94	168323	1.00	1.00	
30 1,1,2-Trichloro-1,2,2-trif	101	5.569	5.572	-0.003	96	234900	1.00	1.00	
31 Methylene Chloride	84	5.704	5.708	-0.004	96	92116	1.00	0.9681	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.720	5.725	-0.005	99	98686	1.00	1.05	
33 Carbon disulfide	76	5.844	5.849	-0.005	100	371252	1.00	1.04	
34 trans-1,2-Dichloroethene	96	6.443	6.448	-0.005	98	129589	1.00	1.01	
35 2-Methylpentane	43	6.481	6.481	0.000	95	282816	1.00	1.02	
36 Methyl tert-butyl ether	73	6.567	6.575	-0.008	96	280300	1.00	0.9182	
37 1,1-Dichloroethane	63	6.831	6.832	-0.001	100	235707	1.00	0.9763	
38 Vinyl acetate	43	6.934	6.942	-0.008	100	263434	1.00	0.8776	
39 2-Butanone (MEK)	72	7.338	7.349	-0.011	99	46710	1.00	0.8817	
40 Hexane	56	7.397	7.397	0.000	86	104967	1.00	0.9872	
41 Isopropyl ether	45	7.538	7.547	-0.009	97	353610	1.00	0.9268	
42 cis-1,2-Dichloroethene	96	7.753	7.759	-0.006	95	129520	1.00	0.99	
43 Ethyl acetate	43	7.937	7.946	-0.009	99	208629	1.00	0.8818	
44 Chloroform	83	8.077	8.085	-0.008	97	278997	1.00	0.99	
45 Tert-butyl ethyl ether	59	8.179	8.191	-0.012	94	304722	1.00	0.9186	
46 Tetrahydrofuran	42	8.449	8.460	-0.011	94	110305	1.00	0.9030	
47 1,1,1-Trichloroethane	97	9.064	9.068	-0.004	95	301989	1.00	0.9867	
48 1,2-Dichloroethane	62	9.155	9.160	-0.005	98	172759	1.00	1.01	
49 Benzene	78	9.651	9.654	-0.003	96	351164	1.00	1.06	
50 Cyclohexane	69	9.657	9.659	-0.002	93	65816	1.00	1.08	
52 Carbon tetrachloride	117	9.684	9.684	0.000	98	321989	1.00	1.09	
51 n-Butanol	31	9.657	9.685	-0.028	63	42204	1.00	1.05	
53 2,3-Dimethylpentane	71	9.808	9.808	0.000	91	89073	1.00	1.04	
54 Thiophene	84	9.926	9.930	-0.004	97	206846	1.00	1.05	
55 Tert-amyl methyl ether	73	10.164	10.181	-0.017	98	283852	1.00	0.9599	
56 Isooctane	57	10.476	10.479	-0.003	99	633974	1.00	1.06	
57 n-Heptane	71	10.875	10.881	-0.006	91	139658	1.00	1.05	
58 1,2-Dichloropropane	63	10.913	10.916	-0.003	88	121683	1.00	0.9715	
59 Trichloroethene	130	10.962	10.966	-0.004	98	209417	1.00	1.09	
60 Dibromomethane	93	11.026	11.033	-0.007	93	158962	1.00	1.04	
61 Dichlorobromomethane	83	11.194	11.194	0.000	99	274425	1.00	1.04	
62 1,4-Dioxane	88	11.204	11.222	-0.018	91	44488	1.00	1.00	
63 Methyl methacrylate	41	11.318	11.327	-0.009	92	122959	1.00	0.9084	
64 Methylcyclohexane	83	11.765	11.766	-0.001	95	294616	1.00	1.08	
65 4-Methyl-2-pentanone (MIBK	43	12.186	12.198	-0.012	96	234208	1.00	1.04	
66 cis-1,3-Dichloropropene	75	12.234	12.240	-0.006	93	194871	1.00	0.9848	
67 trans-1,3-Dichloropropene	75	12.951	12.958	-0.007	98	167829	1.00	0.9566	
68 Toluene	91	13.081	13.083	-0.002	94	353389	1.00	0.9717	
69 1,1,2-Trichloroethane	83	13.151	13.154	-0.003	98	106377	1.00	0.99	
70 2-Methylthiophene	97	13.232	13.233	-0.001	97	302331	1.00	0.9856	
71 3-Methylthiophene	97	13.437	13.439	-0.002	99	293803	1.00	0.9832	
72 2-Hexanone	58	13.572	13.578	-0.006	93	105315	1.00	0.9866	
73 n-Octane	85	13.830	13.833	-0.003	93	157625	1.00	1.10	
74 Chlorodibromomethane	129	13.857	13.862	-0.005	98	252927	1.00	1.02	
75 Ethylene Dibromide	107	14.149	14.152	-0.003	99	213500	1.00	1.01	
76 Tetrachloroethene	129	14.246	14.251	-0.005	96	170189	1.00	1.07	
77 Chlorobenzene	112	15.135	15.138	-0.003	94	302836	1.00	1.00	
78 2,3-Dimethylheptane	43	15.200	15.203	-0.003	96	398405	1.00	1.11	
79 Ethylbenzene	91	15.443	15.445	-0.002	98	464337	1.00	0.9740	
80 2-Ethylthiophene	97	15.540	15.544	-0.004	98	349903	1.00	0.9811	
81 m-Xylene & p-Xylene	91	15.610	15.612	-0.002	98	737471	2.00	2.01	
83 Bromoform	173	16.031	16.034	-0.003	98	209416	1.00	0.9221	
82 n-Nonane	57	16.074	16.076	-0.002	92	272373	1.00	1.14	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.074	16.079	-0.005	80	265036	1.00	1.02	
85 o-Xylene	91	16.138	16.140	-0.002	98	382333	1.00	0.9870	
86 1,1,2,2-Tetrachloroethane	83	16.457	16.462	-0.005	99	262784	1.00	1.03	
87 1,2,3-Trichloropropane	110	16.618	16.619	-0.001	97	82463	1.00	0.9789	
88 Isopropylbenzene	105	16.737	16.740	-0.003	97	537636	1.00	0.9866	
89 N-Propylbenzene	120	17.292	17.295	-0.003	100	145833	1.00	0.9828	
90 2-Chlorotoluene	126	17.325	17.327	-0.002	97	135683	1.00	0.9899	
91 4-Ethyltoluene	105	17.454	17.457	-0.003	99	521274	1.00	0.99	
92 1,3,5-Trimethylbenzene	120	17.535	17.539	-0.004	93	255158	1.00	1.01	
93 Alpha Methyl Styrene	118	17.778	17.781	-0.003	90	209327	1.00	1.00	
94 n-Decane	57	17.875	17.878	-0.003	91	303112	1.00	1.08	
95 tert-Butylbenzene	119	17.983	17.985	-0.002	93	494103	1.00	1.01	
96 1,2,4-Trimethylbenzene	105	17.999	18.000	-0.001	95	454094	1.00	1.03	
98 1,3-Dichlorobenzene	146	18.268	18.270	-0.002	64	314991	1.00	0.9898	
97 sec-Butylbenzene	105	18.268	18.270	-0.002	98	655811	1.00	1.03	
99 Benzyl chloride	91	18.344	18.349	-0.005	98	328706	1.00	0.9345	
100 1,4-Dichlorobenzene	146	18.360	18.363	-0.003	97	305569	1.00	0.9823	
101 4-Isopropyltoluene	119	18.441	18.444	-0.003	97	558404	1.00	1.03	
102 1,2,3-Trimethylbenzene	105	18.484	18.488	-0.004	97	344310	1.00	1.02	
103 Butylcyclohexane	83	18.560	18.561	-0.001	94	360384	1.00	1.06	
104 1,2-Dichlorobenzene	146	18.732	18.735	-0.003	94	309696	1.00	1.02	
105 2,3-Dihydroindene	117	18.732	18.736	-0.004	94	419286	1.00	1.02	
106 Indene	116	18.867	18.869	-0.002	93	306444	1.00	0.9333	
107 n-Butylbenzene	91	18.894	18.896	-0.002	98	495756	1.00	1.05	
108 Undecane	57	19.244	19.247	-0.003	96	332785	1.00	1.12	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.277	19.279	-0.002	97	403699	1.00	1.03	
110 1,2-Dibromo-3-Chloropropan	157	19.352	19.352	0.000	98	114997	1.00	0.9002	
111 1,2,4,5-Tetramethylbenzene	119	19.670	19.673	-0.003	97	485595	1.00	1.05	
112 1,2,3,5-Tetramethylbenzene	119	19.724	19.727	-0.003	95	300031	1.00	1.06	
113 1,2,3,4-Tetramethylbenzene	119	20.118	20.121	-0.003	97	412238	1.00	1.08	
114 Dodecane	57	20.312	20.313	-0.001	96	306173	1.00	1.17	
115 1,2,4-Trichlorobenzene	180	20.458	20.458	0.000	94	211936	1.00	1.00	
116 Naphthalene	128	20.587	20.588	-0.001	99	481190	1.00	1.07	
117 Benzo(b)thiophene	134	20.684	20.688	-0.004	99	239611	1.00	0.9747	
118 Hexachlorobutadiene	225	20.814	20.814	0.000	95	338964	1.00	1.04	
119 1,2,3-Trichlorobenzene	180	20.862	20.865	-0.003	95	222349	1.00	1.08	
120 2-Methylnaphthalene	142	21.660	21.661	-0.001	100	217545	3.13	3.33	
121 1-Methylnaphthalene	142	21.838	21.841	-0.003	100	236387	3.13	3.55	
A 124 Toluene Range	1	13.076	(13.041-13.111)		0	864195	1.00	0.9263	
A 125 C8 Range	1	13.835	(13.820-13.850)		0	1645102	1.00	1.14	M
S 126 Xylenes, Total	100				0		3.00	2.99	
S 127 1,2-Dichloroethene, Total	1				0		2.00	2.00	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L5DNP_00008	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

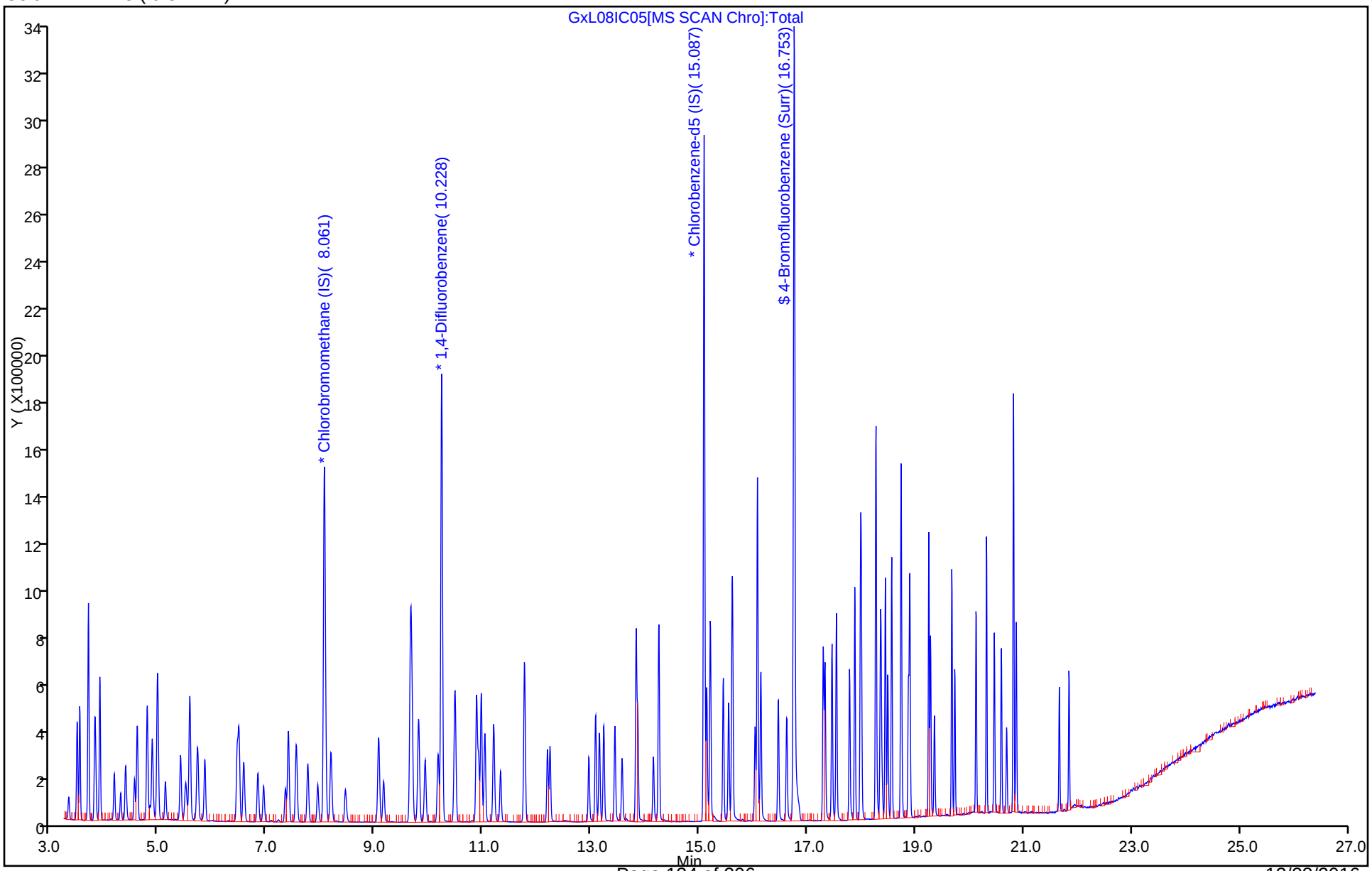
Report Date: 13-Dec-2016 14:28:11 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC05.D

Injection Date:	08-Dec-2016 22:50:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	IC L5			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

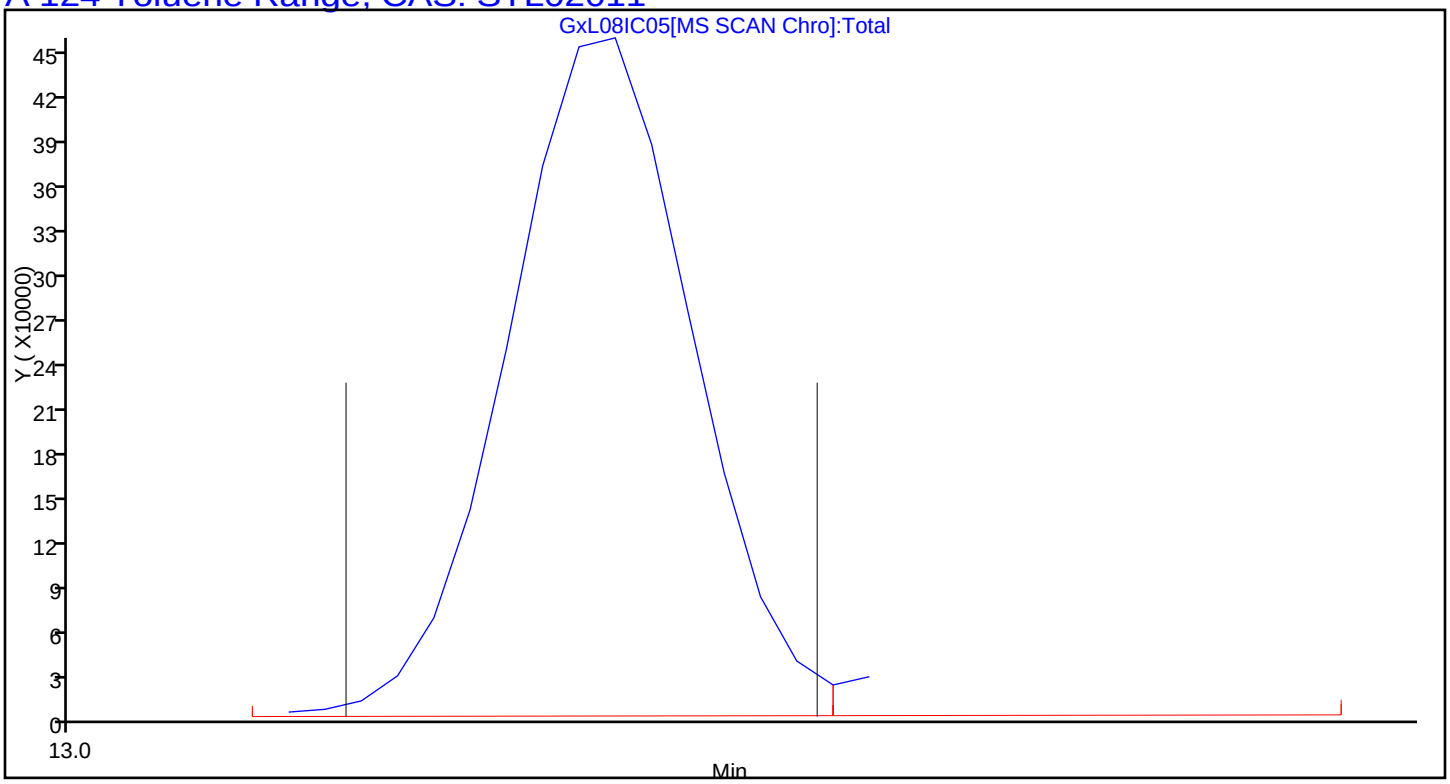


Report Date: 13-Dec-2016 14:28:11 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC05.D				
Injection Date:	08-Dec-2016 22:50:30	Instrument ID:	MG		
Lims ID:	IC L5				
Client ID:					
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

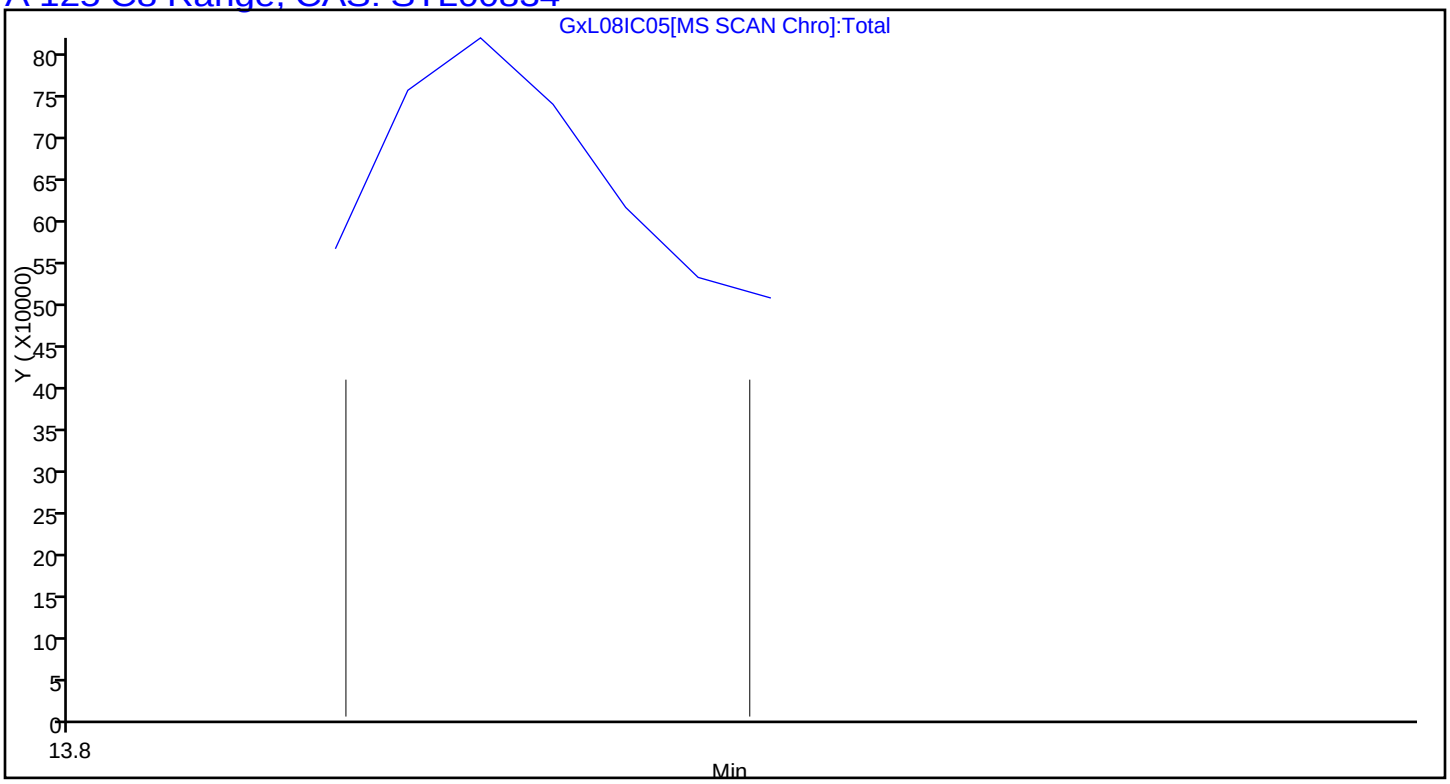


Report Date: 13-Dec-2016 14:28:11 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC05.D				
Injection Date:	08-Dec-2016 22:50:30	Instrument ID:	MG		
Lims ID:	IC L5				
Client ID:					
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

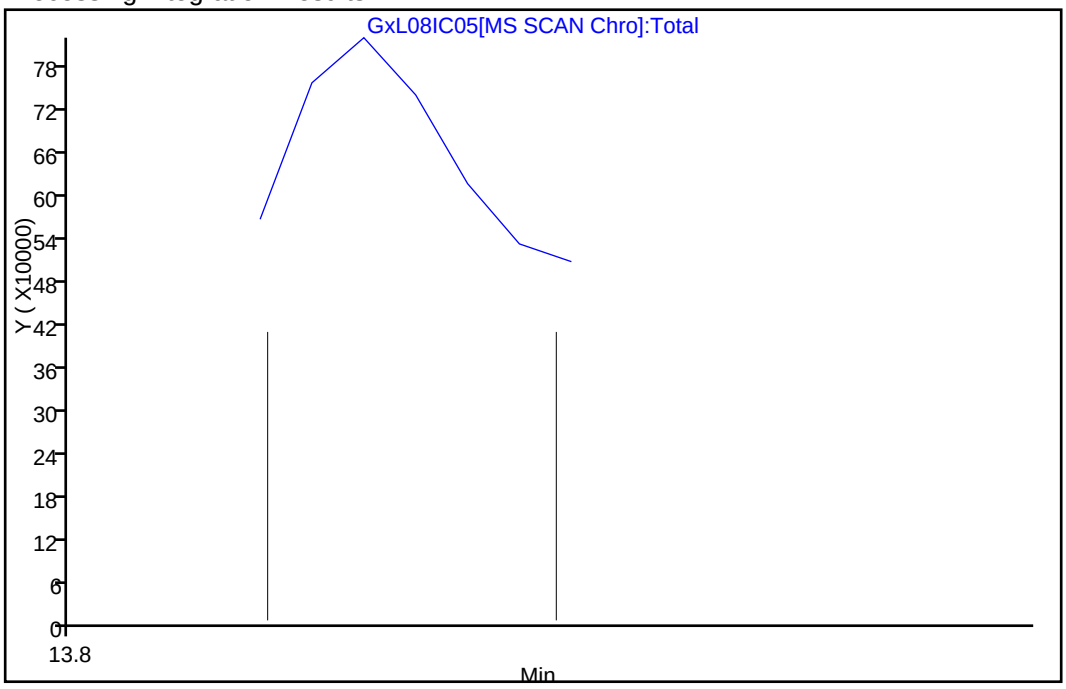
Data File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC05.D				
Injection Date:	08-Dec-2016 22:50:30	Instrument ID:	MG		
Lims ID:	IC L5				
Client ID:					
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, RT: 13.835, CAS: STL00834

Signal: 1

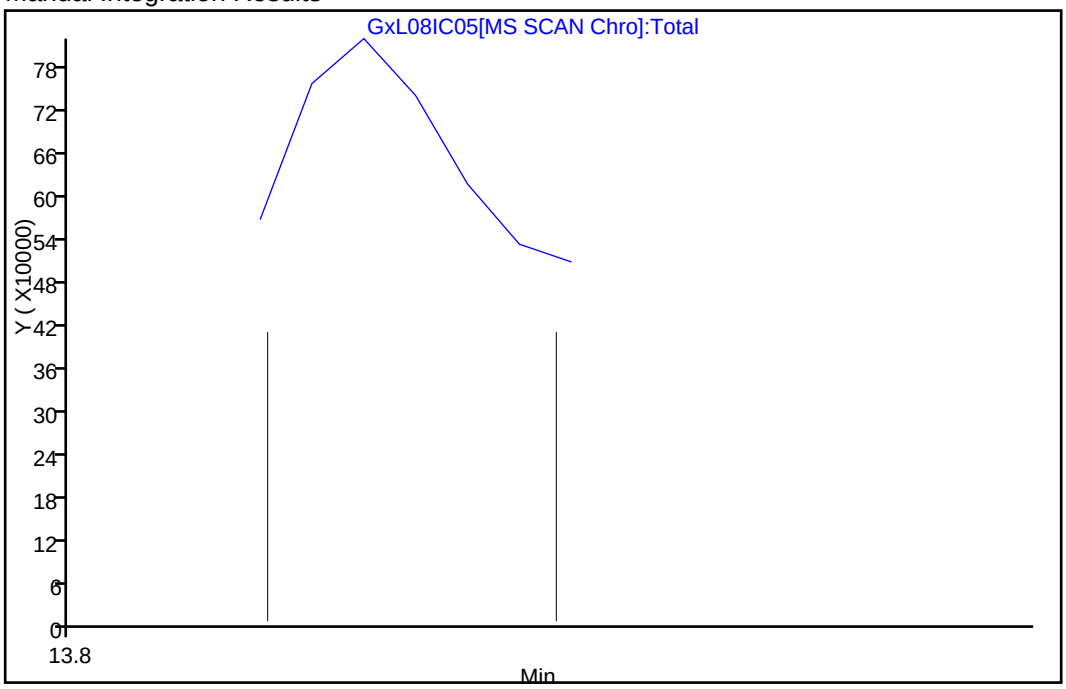
Processing Integration Results

RT: 13.84
Response: 2212853
Amount: 1.335324



Manual Integration Results

RT: 13.84
Response: 1645102
Amount: 1.136034



Reviewer: tajh, 09-Dec-2016 14:37:23

Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC06.D
Lims ID: ICIS L6
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 08-Dec-2016 23:31:30 ALS Bottle#: 5 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003696-008
Misc. Info.: 067937
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Dec-2016 14:28:14 Calib Date: 09-Dec-2016 12:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK009

First Level Reviewer: barlozhetskayaa Date: 09-Dec-2016 10:09:00

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.061	8.063	-0.002	95	436534	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.234	10.234	0.000	95	1631243	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.087	15.090	-0.003	87	1662474	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.759	16.758	0.001	97	1131193	4.00	4.11	
6 Chlorodifluoromethane	67	3.483	3.481	0.002	96	72767	2.00	2.03	
7 Propene	41	3.488	3.489	-0.001	99	235491	2.00	1.97	
8 Dichlorodifluoromethane	85	3.531	3.533	-0.002	100	772063	2.00	2.07	
9 Chloromethane	52	3.687	3.685	0.002	98	82499	2.00	2.06	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.693	3.696	-0.003	97	523333	2.00	2.11	
11 Acetaldehyde	44	3.812	3.816	-0.004	100	389664	9.99	8.79	
12 Vinyl chloride	62	3.828	3.830	-0.002	99	294355	2.00	2.24	
13 Butadiene	54	3.903	3.906	-0.003	91	230625	2.00	2.17	
14 Butane	43	3.909	3.907	0.002	93	458987	2.00	2.21	
15 Bromomethane	94	4.173	4.174	-0.001	98	259428	2.00	2.06	
16 Chloroethane	64	4.291	4.292	-0.001	99	144914	2.00	2.07	
17 Ethanol	31	4.383	4.393	-0.010	96	428898	9.99	9.83	
18 Vinyl bromide	106	4.550	4.550	0.000	98	245002	2.00	2.06	
19 2-Methylbutane	43	4.599	4.598	0.001	91	311988	2.00	2.06	
21 Acrolein	56	4.777	4.783	-0.006	93	51584	2.00	1.52	
20 Trichlorofluoromethane	101	4.782	4.785	-0.003	99	756823	2.00	2.09	
22 Acetonitrile	40	4.836	4.838	-0.002	98	75671	2.00	1.88	
23 Acetone	58	4.874	4.882	-0.008	98	268511	5.99	5.84	
24 Pentane	72	4.976	4.978	-0.002	98	45337	2.00	2.04	
25 Isopropyl alcohol	45	4.971	4.987	-0.016	94	980401	5.99	6.30	
26 Ethyl ether	31	5.116	5.124	-0.008	96	171608	2.00	1.87	
27 1,1-Dichloroethene	96	5.402	5.400	0.002	96	223308	2.00	2.09	
28 Acrylonitrile	53	5.483	5.487	-0.004	93	98680	2.00	1.71	
29 2-Methyl-2-propanol	59	5.505	5.526	-0.021	93	357104	2.00	2.18	
30 1,1,2-Trichloro-1,2,2-trif	101	5.569	5.572	-0.003	96	458554	2.00	2.00	
31 Methylene Chloride	84	5.710	5.708	0.002	95	176649	2.00	1.90	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.726	5.725	0.001	99	184286	2.00	2.01	
33 Carbon disulfide	76	5.850	5.849	0.001	99	730062	2.00	2.09	
34 trans-1,2-Dichloroethene	96	6.448	6.448	0.000	98	258077	2.00	2.06	
35 2-Methylpentane	43	6.481	6.481	0.000	95	554181	2.00	2.05	
36 Methyl tert-butyl ether	73	6.567	6.575	-0.008	96	558292	2.00	1.87	
37 1,1-Dichloroethane	63	6.831	6.832	-0.001	100	464990	2.00	1.97	
38 Vinyl acetate	43	6.939	6.942	-0.003	100	523514	2.00	1.79	
39 2-Butanone (MEK)	72	7.338	7.349	-0.011	99	95501	2.00	1.85	
40 Hexane	56	7.397	7.397	0.000	86	203795	2.00	1.96	
41 Isopropyl ether	45	7.538	7.547	-0.009	97	708886	2.00	1.90	
42 cis-1,2-Dichloroethene	96	7.759	7.759	0.000	94	258646	2.00	2.03	
43 Ethyl acetate	43	7.937	7.946	-0.009	99	432491	2.00	1.87	
44 Chloroform	83	8.082	8.085	-0.003	98	543452	2.00	1.98	
45 Tert-butyl ethyl ether	59	8.179	8.191	-0.012	94	621453	2.00	1.92	
46 Tetrahydrofuran	42	8.444	8.460	-0.016	95	220876	2.00	1.85	
47 1,1,1-Trichloroethane	97	9.069	9.068	0.001	95	594430	2.00	1.99	
48 1,2-Dichloroethane	62	9.161	9.160	0.001	98	312783	2.00	2.06	
49 Benzene	78	9.651	9.654	-0.003	97	639987	2.00	2.18	
50 Cyclohexane	69	9.657	9.659	-0.002	96	130219	2.00	2.41	
52 Carbon tetrachloride	117	9.684	9.684	0.000	98	650072	2.00	2.48	
51 n-Butanol	31	9.651	9.685	-0.034	64	92138	2.00	2.58	
53 2,3-Dimethylpentane	71	9.808	9.808	0.000	91	177632	2.00	2.34	
54 Thiophene	84	9.926	9.930	-0.004	96	399453	2.00	2.27	
55 Tert-amyl methyl ether	73	10.164	10.181	-0.017	98	590187	2.00	2.25	
56 Isooctane	57	10.476	10.479	-0.003	99	1284826	2.00	2.41	
57 n-Heptane	71	10.881	10.881	0.000	92	282575	2.00	2.40	
58 1,2-Dichloropropane	63	10.913	10.916	-0.003	89	231049	2.00	2.08	
59 Trichloroethene	130	10.962	10.966	-0.004	96	409949	2.00	2.40	
60 Dibromomethane	93	11.032	11.033	-0.001	94	316778	2.00	2.34	
61 Dichlorobromomethane	83	11.194	11.194	0.000	99	564938	2.00	2.40	
62 1,4-Dioxane	88	11.210	11.222	-0.012	89	99307	2.00	2.52	
63 Methyl methacrylate	41	11.323	11.327	-0.004	92	260860	2.00	2.17	
64 Methylcyclohexane	83	11.765	11.766	-0.001	94	577507	2.00	2.38	
65 4-Methyl-2-pentanone (MIBK	43	12.186	12.198	-0.012	97	482907	2.00	2.42	
66 cis-1,3-Dichloropropene	75	12.240	12.240	0.000	94	372121	2.00	2.12	
67 trans-1,3-Dichloropropene	75	12.957	12.958	-0.001	98	337087	2.00	2.10	
68 Toluene	91	13.081	13.083	-0.002	94	690854	2.00	2.08	
69 1,1,2-Trichloroethane	83	13.151	13.154	-0.003	99	210396	2.00	2.15	
70 2-Methylthiophene	97	13.232	13.233	-0.001	97	583362	2.00	2.08	
71 3-Methylthiophene	97	13.437	13.439	-0.002	99	564583	2.00	2.07	
72 2-Hexanone	58	13.566	13.578	-0.012	93	241991	2.00	2.48	
73 n-Octane	85	13.831	13.833	-0.002	93	309364	2.00	2.37	
74 Chlorodibromomethane	129	13.863	13.862	0.001	98	504583	2.00	2.24	
75 Ethylene Dibromide	107	14.149	14.152	-0.003	98	418094	2.00	2.17	
76 Tetrachloroethene	129	14.251	14.251	0.000	96	330273	2.00	2.26	
77 Chlorobenzene	112	15.135	15.138	-0.003	94	595827	2.00	2.16	
78 2,3-Dimethylheptane	43	15.200	15.203	-0.003	97	781836	2.00	2.37	
79 Ethylbenzene	91	15.443	15.445	-0.002	98	956791	2.00	2.20	
80 2-Ethylthiophene	97	15.545	15.544	0.001	98	711981	2.00	2.18	
81 m-Xylene & p-Xylene	91	15.610	15.612	-0.002	99	1499037	3.99	4.46	
83 Bromoform	173	16.031	16.034	-0.003	98	482422	2.00	2.32	
82 n-Nonane	57	16.074	16.076	-0.002	92	528980	2.00	2.43	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.079	16.079	0.000	97	555108	2.00	2.33	
85 o-Xylene	91	16.138	16.140	-0.002	99	780466	2.00	2.20	
86 1,1,2,2-Tetrachloroethane	83	16.462	16.462	0.000	99	553887	2.00	2.37	
87 1,2,3-Trichloropropane	110	16.618	16.619	-0.001	98	171965	2.00	2.23	
88 Isopropylbenzene	105	16.737	16.740	-0.003	97	1094815	2.00	2.20	
89 N-Propylbenzene	120	17.292	17.295	-0.003	99	310526	2.00	2.29	
90 2-Chlorotoluene	126	17.325	17.327	-0.002	97	282300	2.00	2.25	
91 4-Ethyltoluene	105	17.454	17.457	-0.003	99	1099531	2.00	2.29	
92 1,3,5-Trimethylbenzene	120	17.535	17.539	-0.004	93	529246	2.00	2.29	
93 Alpha Methyl Styrene	118	17.778	17.781	-0.003	90	458316	2.00	2.40	
94 n-Decane	57	17.880	17.878	0.002	90	643304	2.00	2.50	
95 tert-Butylbenzene	119	17.983	17.985	-0.002	92	1018631	2.00	2.27	
96 1,2,4-Trimethylbenzene	105	17.999	18.000	-0.001	96	937912	2.00	2.33	
98 1,3-Dichlorobenzene	146	18.268	18.270	-0.002	66	655726	2.00	2.25	
97 sec-Butylbenzene	105	18.268	18.270	-0.002	98	1352819	2.00	2.32	
99 Benzyl chloride	91	18.349	18.349	0.000	98	803407	2.00	2.50	
100 1,4-Dichlorobenzene	146	18.360	18.363	-0.003	96	650905	2.00	2.29	
101 4-Isopropyltoluene	119	18.441	18.444	-0.003	97	1157019	2.00	2.33	
102 1,2,3-Trimethylbenzene	105	18.490	18.488	0.002	97	707435	2.00	2.28	
103 Butylcyclohexane	83	18.560	18.561	-0.001	94	730710	2.00	2.35	
104 1,2-Dichlorobenzene	146	18.732	18.735	-0.003	95	640659	2.00	2.30	
105 2,3-Dihydroindene	117	18.738	18.736	0.002	94	874588	2.00	2.33	
106 Indene	116	18.867	18.869	-0.002	95	657876	2.00	2.08	
107 n-Butylbenzene	91	18.894	18.896	-0.002	98	1056764	2.00	2.45	
108 Undecane	57	19.244	19.247	-0.003	96	699188	2.00	2.58	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.277	19.279	-0.002	97	849288	2.00	2.36	
110 1,2-Dibromo-3-Chloropropan	157	19.352	19.352	0.000	97	284562	2.00	2.44	
111 1,2,4,5-Tetramethylbenzene	119	19.670	19.673	-0.003	97	1048174	2.00	2.48	
112 1,2,3,5-Tetramethylbenzene	119	19.730	19.727	0.003	96	627559	2.00	2.43	
113 1,2,3,4-Tetramethylbenzene	119	20.123	20.121	0.002	97	864752	2.00	2.47	
114 Dodecane	57	20.312	20.313	-0.001	96	613207	2.00	2.55	
115 1,2,4-Trichlorobenzene	180	20.458	20.458	0.000	94	485907	2.00	2.51	
116 Naphthalene	128	20.587	20.588	-0.001	99	1070871	2.00	2.61	
117 Benzo(b)thiophene	134	20.684	20.688	-0.004	99	555961	2.00	2.47	
118 Hexachlorobutadiene	225	20.814	20.814	0.000	94	676266	2.00	2.28	
119 1,2,3-Trichlorobenzene	180	20.862	20.865	-0.003	95	480029	2.00	2.55	
120 2-Methylnaphthalene	142	21.660	21.661	-0.001	100	519281	6.24	8.69	
121 1-Methylnaphthalene	142	21.838	21.841	-0.003	100	532152	6.24	8.74	
A 124 Toluene Range	1	13.076	(13.041-13.111)		0	1697187	2.00	2.05	
A 125 C8 Range	1	13.836	(13.821-13.851)		0	3200146	2.00	2.49	M
S 126 Xylenes, Total	100				0		5.99	6.67	
S 127 1,2-Dichloroethene, Total	1				0		3.99	4.09	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L6DNP_00009	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

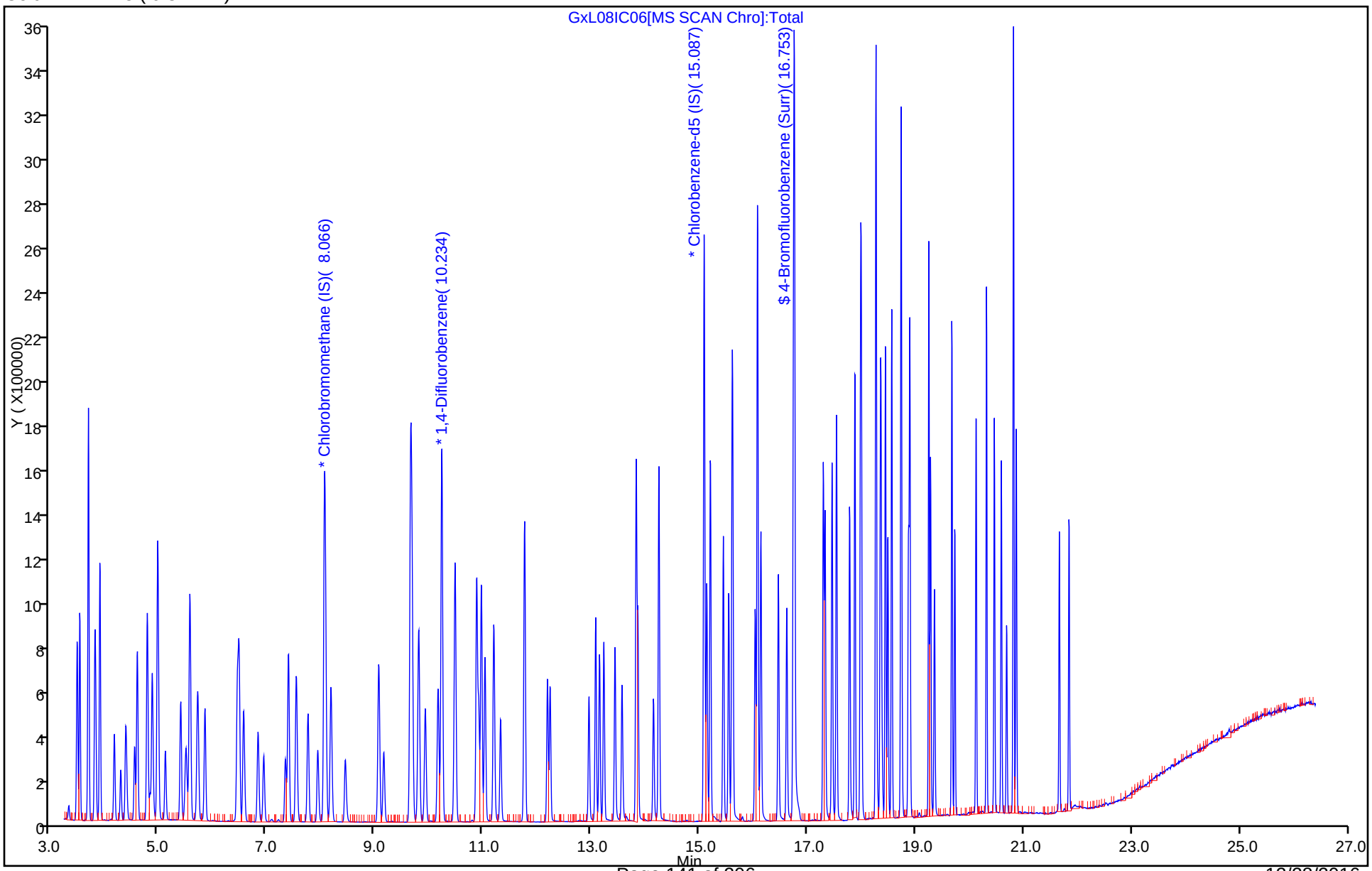
Report Date: 13-Dec-2016 14:28:15 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC06.D

Injection Date:	08-Dec-2016 23:31:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	ICIS L6			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

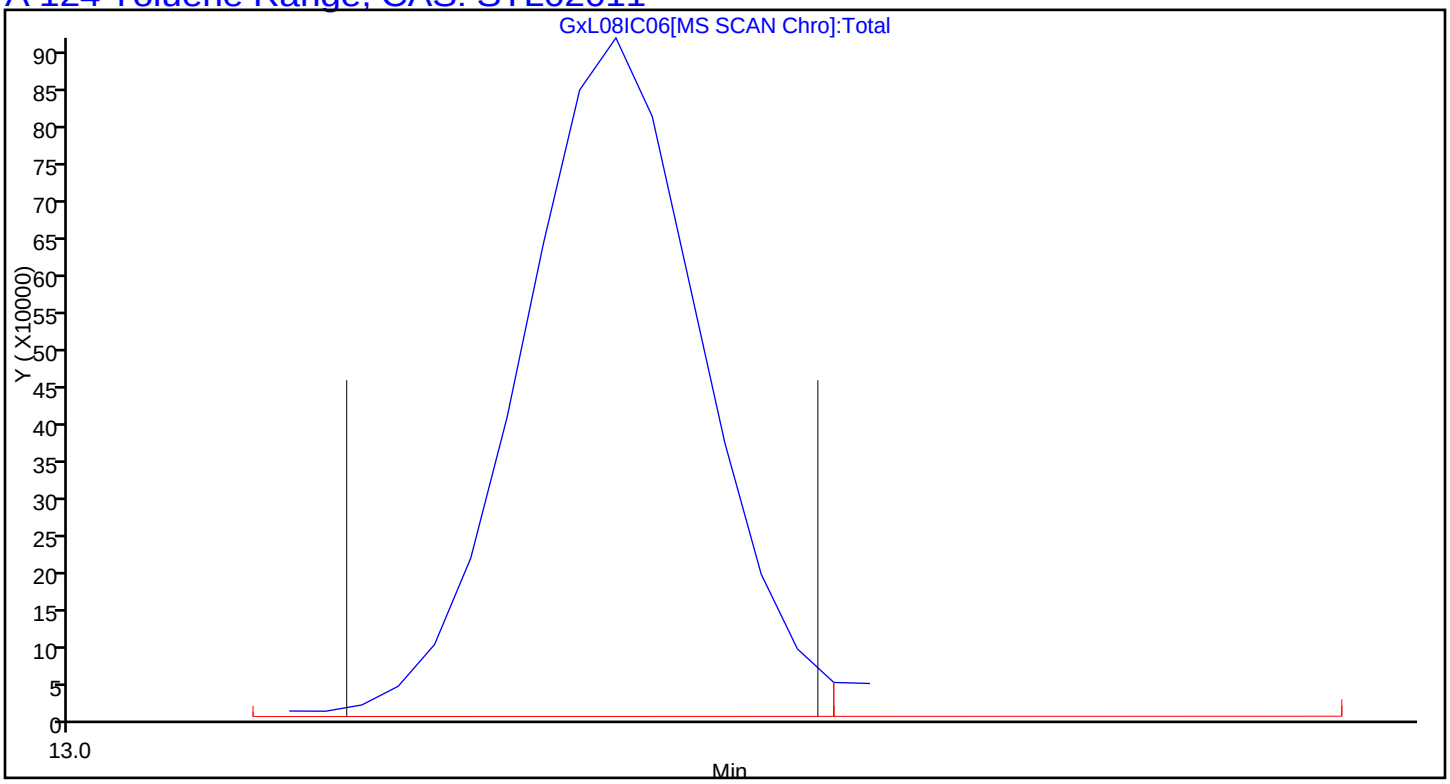


Report Date: 13-Dec-2016 14:28:15 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC06.D				
Injection Date:	08-Dec-2016 23:31:30	Instrument ID:	MG		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

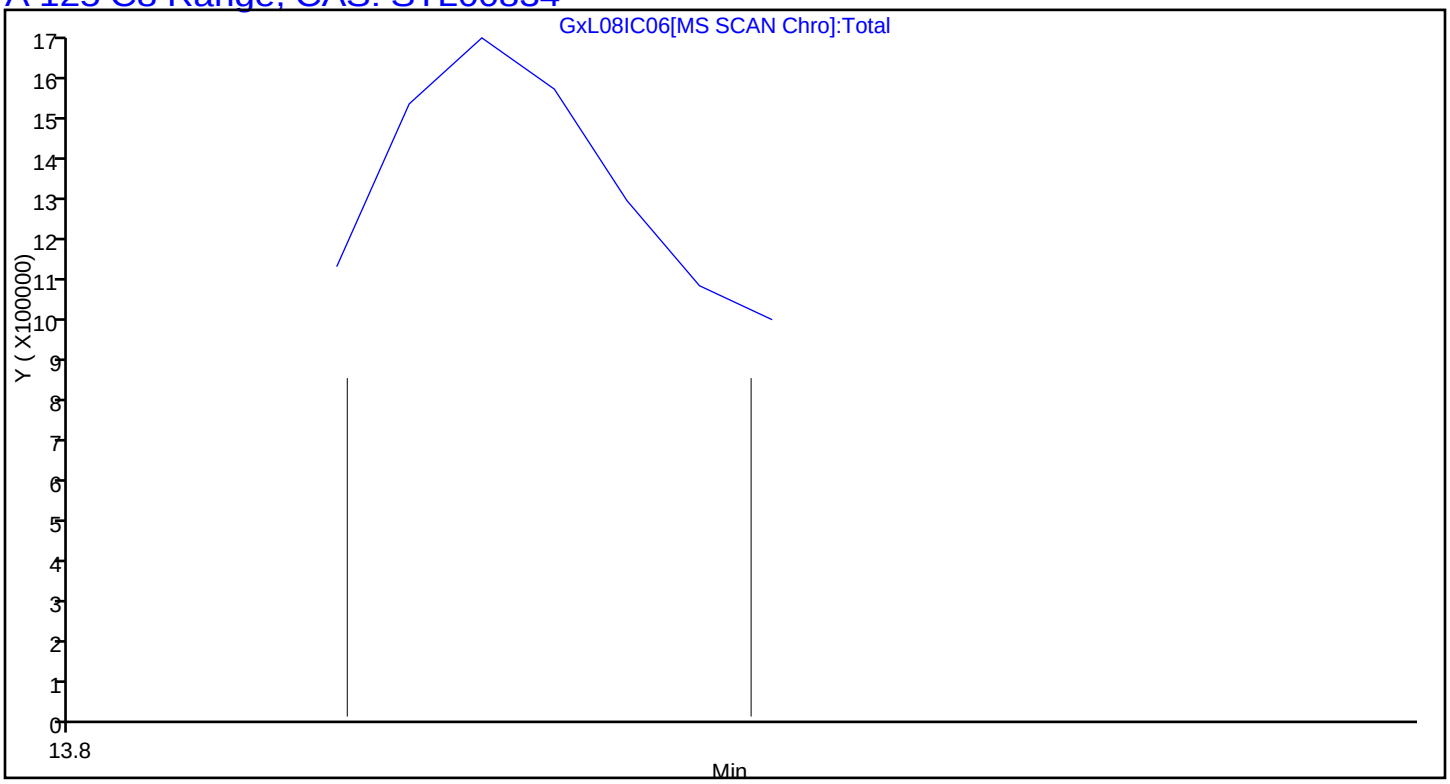


Report Date: 13-Dec-2016 14:28:15 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC06.D				
Injection Date:	08-Dec-2016 23:31:30	Instrument ID:	MG		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

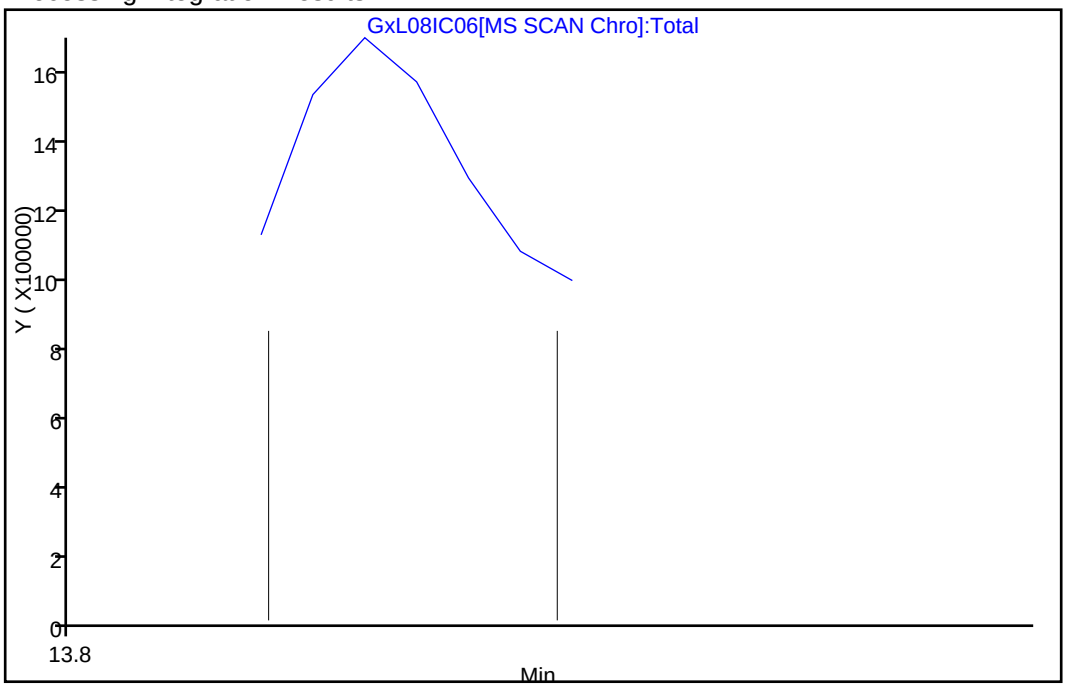
Data File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC06.D				
Injection Date:	08-Dec-2016 23:31:30	Instrument ID:	MG		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, RT: 13.836, CAS: STL00834

Signal: 1

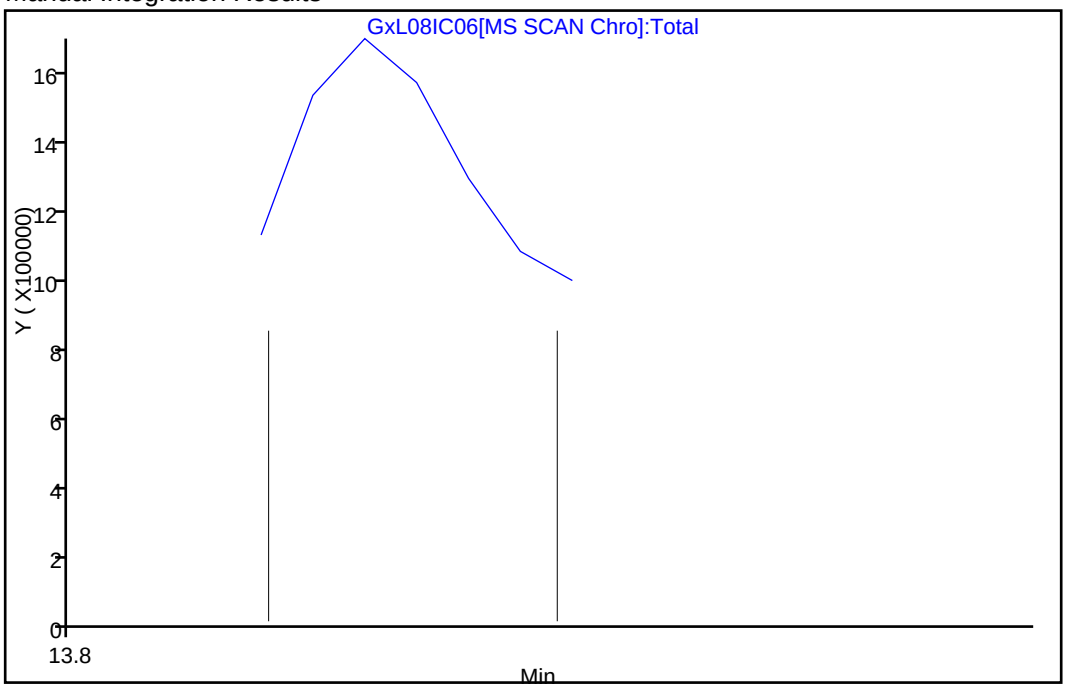
Processing Integration Results

RT: 13.84
Response: 4418941
Amount: 3.185882



Manual Integration Results

RT: 13.84
Response: 3200146
Amount: 2.489733



Reviewer: tajh, 09-Dec-2016 14:39:16

Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC07.D
Lims ID: IC L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 09-Dec-2016 00:14:30 ALS Bottle#: 6 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003696-009
Misc. Info.: 067936
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Dec-2016 14:28:18 Calib Date: 09-Dec-2016 12:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK009

First Level Reviewer: barlozhetskayaa Date: 09-Dec-2016 10:38:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.071	8.063	0.008	94	443228	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.239	10.234	0.005	95	1855389	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.092	15.090	0.002	86	1903864	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.759	16.758	0.001	96	1268973	4.00	4.03	
6 Chlorodifluoromethane	67	3.488	3.481	0.007	96	147523	4.00	4.06	
7 Propene	41	3.493	3.489	0.004	99	460046	4.00	3.80	
8 Dichlorodifluoromethane	85	3.536	3.533	0.003	100	1563438	4.00	4.12	
9 Chloromethane	52	3.687	3.685	0.002	99	163356	4.00	4.01	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.704	3.696	0.008	92	1030111	4.00	4.10	
11 Acetaldehyde	44	3.822	3.816	0.006	100	903339	20.0	20.1	
12 Vinyl chloride	62	3.838	3.830	0.008	99	577610	4.00	4.32	
13 Butadiene	54	3.909	3.906	0.003	68	453774	4.00	4.20	
14 Butane	43	3.914	3.907	0.007	86	898506	4.00	4.26	
15 Bromomethane	94	4.178	4.174	0.004	98	518278	4.00	4.06	
16 Chloroethane	64	4.297	4.292	0.005	99	291201	4.00	4.10	
17 Ethanol	31	4.405	4.393	0.012	95	885156	20.0	20.0	
18 Vinyl bromide	106	4.556	4.550	0.006	99	489664	4.00	4.06	
19 2-Methylbutane	43	4.604	4.598	0.006	91	614930	4.00	3.99	
21 Acrolein	56	4.788	4.783	0.005	94	126307	4.00	3.66	
20 Trichlorofluoromethane	101	4.793	4.785	0.008	99	1501894	4.00	4.09	
22 Acetonitrile	40	4.847	4.838	0.009	99	176495	4.00	4.32	
23 Acetone	58	4.885	4.882	0.003	98	573107	12.0	12.3	
24 Pentane	72	4.987	4.978	0.009	98	89358	4.00	3.96	
25 Isopropyl alcohol	45	4.998	4.987	0.011	96	1988338	12.0	12.6	
26 Ethyl ether	31	5.122	5.124	-0.002	96	394490	4.00	4.24	
27 1,1-Dichloroethene	96	5.408	5.400	0.008	97	441297	4.00	4.07	
28 Acrylonitrile	53	5.494	5.487	0.007	95	244751	4.00	4.18	
29 2-Methyl-2-propanol	59	5.526	5.526	0.000	91	725277	4.00	4.37	
30 1,1,2-Trichloro-1,2,2-trif	101	5.580	5.572	0.008	96	947278	4.00	4.08	
31 Methylene Chloride	84	5.715	5.708	0.007	95	348409	4.00	3.70	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.731	5.725	0.006	99	374322	4.00	4.01	
33 Carbon disulfide	76	5.855	5.849	0.006	99	1482267	4.00	4.19	
34 trans-1,2-Dichloroethene	96	6.459	6.448	0.011	98	536489	4.00	4.21	
35 2-Methylpentane	43	6.486	6.481	0.005	95	1200210	4.00	4.37	
36 Methyl tert-butyl ether	73	6.572	6.575	-0.003	96	1312740	4.00	4.34	
37 1,1-Dichloroethane	63	6.842	6.832	0.010	100	1001975	4.00	4.19	
38 Vinyl acetate	43	6.944	6.942	0.002	100	1290955	4.00	4.34	
39 2-Butanone (MEK)	72	7.349	7.349	0.000	100	222106	4.00	4.23	
40 Hexane	56	7.403	7.397	0.006	85	436872	4.00	4.15	
41 Isopropyl ether	45	7.548	7.547	0.001	98	1706140	4.00	4.51	
42 cis-1,2-Dichloroethene	96	7.764	7.759	0.005	95	550542	4.00	4.26	
43 Ethyl acetate	43	7.947	7.946	0.001	99	1045560	4.00	4.46	
44 Chloroform	83	8.098	8.085	0.013	97	1156020	4.00	4.16	
45 Tert-butyl ethyl ether	59	8.190	8.191	-0.001	95	1488774	4.00	4.53	
46 Tetrahydrofuran	42	8.454	8.460	-0.006	94	522810	4.00	4.32	
47 1,1,1-Trichloroethane	97	9.074	9.068	0.006	95	1279894	4.00	4.22	
48 1,2-Dichloroethane	62	9.166	9.160	0.006	98	768059	4.00	4.44	
49 Benzene	78	9.662	9.654	0.008	98	1453265	4.00	4.35	
50 Cyclohexane	69	9.662	9.659	0.003	92	256435	4.00	4.17	
52 Carbon tetrachloride	117	9.689	9.684	0.005	99	1353700	4.00	4.54	
51 n-Butanol	31	9.673	9.685	-0.012	66	182779	4.00	4.50	
53 2,3-Dimethylpentane	71	9.813	9.808	0.005	91	379931	4.00	4.41	
54 Thiophene	84	9.937	9.930	0.007	97	886036	4.00	4.44	
55 Tert-amyl methyl ether	73	10.169	10.181	-0.012	98	1420675	4.00	4.76	
56 Isooctane	57	10.482	10.479	0.003	98	2652622	4.00	4.38	
57 n-Heptane	71	10.886	10.881	0.005	91	585125	4.00	4.37	
58 1,2-Dichloropropane	63	10.924	10.916	0.008	88	573027	4.00	4.53	
59 Trichloroethene	130	10.973	10.966	0.007	97	800842	4.00	4.12	
60 Dibromomethane	93	11.037	11.033	0.004	94	666745	4.00	4.33	
61 Dichlorobromomethane	83	11.199	11.194	0.005	99	1218893	4.00	4.56	
62 1,4-Dioxane	88	11.215	11.222	-0.007	89	211493	4.00	4.72	
63 Methyl methacrylate	41	11.328	11.327	0.001	92	681937	4.00	4.99	
64 Methylcyclohexane	83	11.771	11.766	0.005	95	1182033	4.00	4.28	
65 4-Methyl-2-pentanone (MIBK	43	12.197	12.198	-0.001	97	1106976	4.00	4.87	
66 cis-1,3-Dichloropropene	75	12.245	12.240	0.005	94	922671	4.00	4.62	
67 trans-1,3-Dichloropropene	75	12.962	12.958	0.004	98	854993	4.00	4.65	
68 Toluene	91	13.086	13.083	0.003	94	1705333	4.00	4.48	
69 1,1,2-Trichloroethane	83	13.156	13.154	0.002	99	510325	4.00	4.55	
70 2-Methylthiophene	97	13.237	13.233	0.004	97	1436338	4.00	4.47	
71 3-Methylthiophene	97	13.442	13.439	0.003	99	1404632	4.00	4.49	
72 2-Hexanone	58	13.577	13.578	-0.001	93	515917	4.00	4.62	
73 n-Octane	85	13.836	13.833	0.003	93	636410	4.00	4.25	
74 Chlorodibromomethane	129	13.868	13.862	0.006	98	1214365	4.00	4.70	
75 Ethylene Dibromide	107	14.154	14.152	0.002	100	1008301	4.00	4.57	
76 Tetrachloroethene	129	14.257	14.251	0.006	96	693825	4.00	4.15	
77 Chlorobenzene	112	15.141	15.138	0.003	93	1406777	4.00	4.45	
78 2,3-Dimethylheptane	43	15.206	15.203	0.003	95	1669310	4.00	4.42	
79 Ethylbenzene	91	15.448	15.445	0.003	98	2269899	4.00	4.55	
80 2-Ethylthiophene	97	15.545	15.544	0.001	98	1729533	4.00	4.63	
81 m-Xylene & p-Xylene	91	15.615	15.612	0.003	98	3431351	8.00	8.92	
83 Bromoform	173	16.036	16.034	0.002	98	1239966	4.00	5.21	
82 n-Nonane	57	16.079	16.076	0.003	90	1068900	4.00	4.28	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.079	16.079	0.000	97	1281806	4.00	4.69	
85 o-Xylene	91	16.144	16.140	0.004	99	1829078	4.00	4.51	
86 1,1,2,2-Tetrachloroethane	83	16.467	16.462	0.005	99	1285895	4.00	4.80	
87 1,2,3-Trichloropropane	110	16.624	16.619	0.005	98	404993	4.00	4.59	
88 Isopropylbenzene	105	16.742	16.740	0.002	96	2484064	4.00	4.35	
89 N-Propylbenzene	120	17.298	17.295	0.003	99	705553	4.00	4.54	
90 2-Chlorotoluene	126	17.330	17.327	0.003	97	639799	4.00	4.46	
91 4-Ethyltoluene	105	17.460	17.457	0.003	99	2524681	4.00	4.59	
92 1,3,5-Trimethylbenzene	120	17.540	17.539	0.001	93	1180801	4.00	4.46	
93 Alpha Methyl Styrene	118	17.783	17.781	0.002	90	1077457	4.00	4.94	
94 n-Decane	57	17.880	17.878	0.002	91	1307633	4.00	4.44	
95 tert-Butylbenzene	119	17.988	17.985	0.003	94	2262282	4.00	4.41	
96 1,2,4-Trimethylbenzene	105	18.004	18.000	0.004	95	2060865	4.00	4.47	
98 1,3-Dichlorobenzene	146	18.274	18.270	0.004	95	1464206	4.00	4.39	
97 sec-Butylbenzene	105	18.274	18.270	0.004	98	2946631	4.00	4.42	
99 Benzyl chloride	91	18.349	18.349	0.000	98	1821777	4.00	4.95	
100 1,4-Dichlorobenzene	146	18.366	18.363	0.003	95	1431445	4.00	4.40	
101 4-Isopropyltoluene	119	18.446	18.444	0.002	97	2578526	4.00	4.54	
102 1,2,3-Trimethylbenzene	105	18.490	18.488	0.002	97	1613155	4.00	4.55	
103 Butylcyclohexane	83	18.565	18.561	0.004	94	1507917	4.00	4.23	
104 1,2-Dichlorobenzene	146	18.738	18.735	0.003	96	1396045	4.00	4.38	
105 2,3-Dihydroindene	117	18.738	18.736	0.002	94	1909882	4.00	4.45	
106 Indene	116	18.872	18.869	0.003	93	1492896	4.00	4.05	
107 n-Butylbenzene	91	18.899	18.896	0.003	98	2281578	4.00	4.62	
108 Undecane	57	19.250	19.247	0.003	96	1408070	4.00	4.53	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.282	19.279	0.003	97	1881502	4.00	4.57	
110 1,2-Dibromo-3-Chloropropan	157	19.352	19.352	0.000	98	645406	4.00	4.83	
111 1,2,4,5-Tetramethylbenzene	119	19.676	19.673	0.003	97	2254750	4.00	4.65	
112 1,2,3,5-Tetramethylbenzene	119	19.730	19.727	0.003	96	1366732	4.00	4.62	
113 1,2,3,4-Tetramethylbenzene	119	20.123	20.121	0.002	97	1862467	4.00	4.65	
114 Dodecane	57	20.312	20.313	-0.001	97	1294655	4.00	4.71	
115 1,2,4-Trichlorobenzene	180	20.458	20.458	0.000	94	1100159	4.00	4.97	
116 Naphthalene	128	20.587	20.588	-0.001	99	2364720	4.00	5.04	
117 Benzo(b)thiophene	134	20.690	20.688	0.002	99	1260466	4.00	4.90	
118 Hexachlorobutadiene	225	20.814	20.814	0.000	93	1466454	4.00	4.31	
119 1,2,3-Trichlorobenzene	180	20.868	20.865	0.003	95	1039517	4.00	4.82	
120 2-Methylnaphthalene	142	21.660	21.661	-0.001	100	1064971	12.5	15.6	
121 1-Methylnaphthalene	142	21.844	21.841	0.003	100	1054061	12.5	15.1	
A 124 Toluene Range	1	13.081	(13.046-13.116)		0	4208350	4.00	4.47	
A 125 C8 Range	1	13.841	(13.826-13.856)		0	6547717	4.00	4.48	
S 126 Xylenes, Total	100				0		12.0	13.4	
S 127 1,2-Dichloroethene, Total	1				0		8.00	8.47	

Reagents:

40L7DNP_00008	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

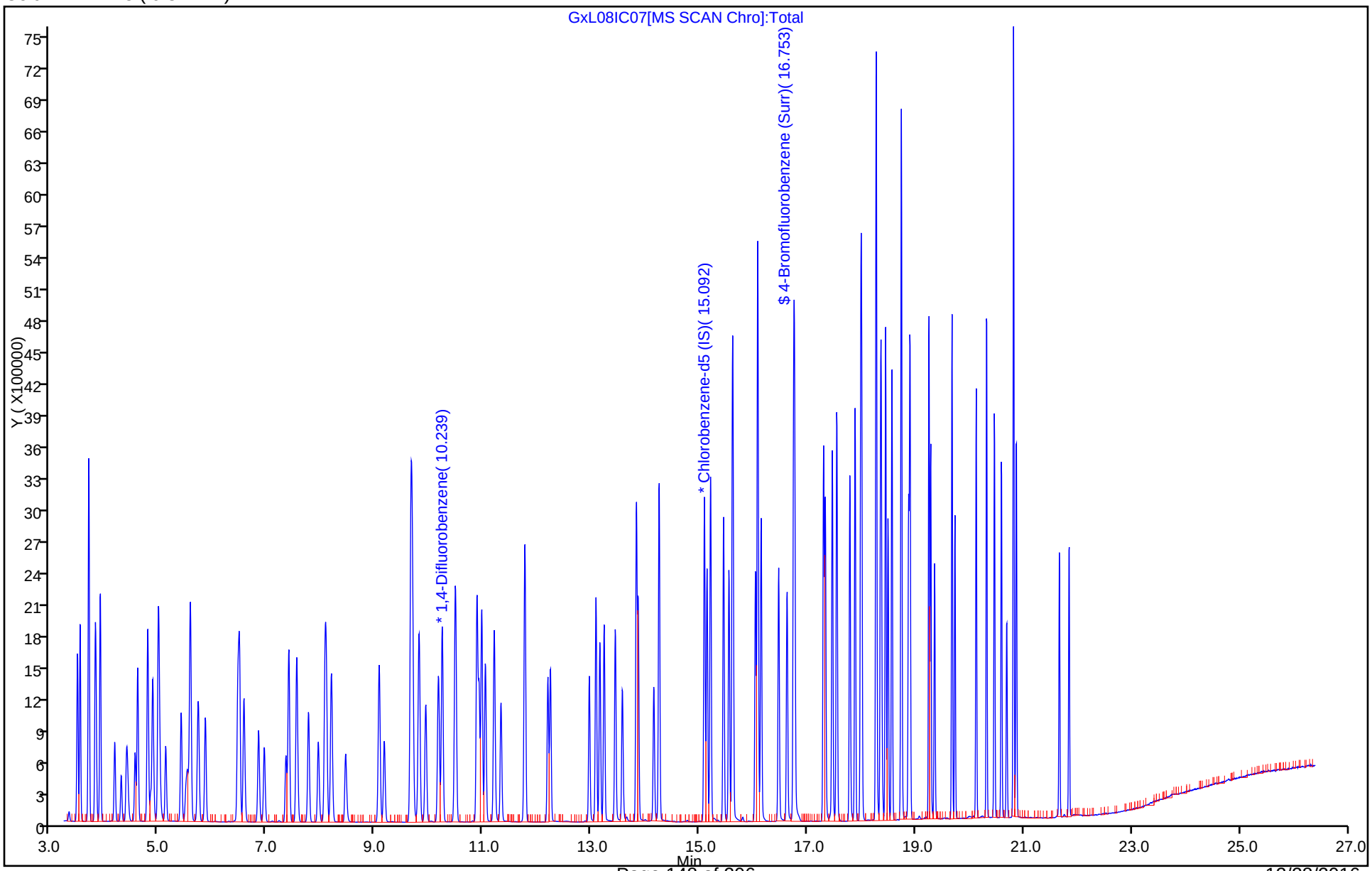
Report Date: 13-Dec-2016 14:28:20 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC07.D

Injection Date:	09-Dec-2016 00:14:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	IC L7			Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

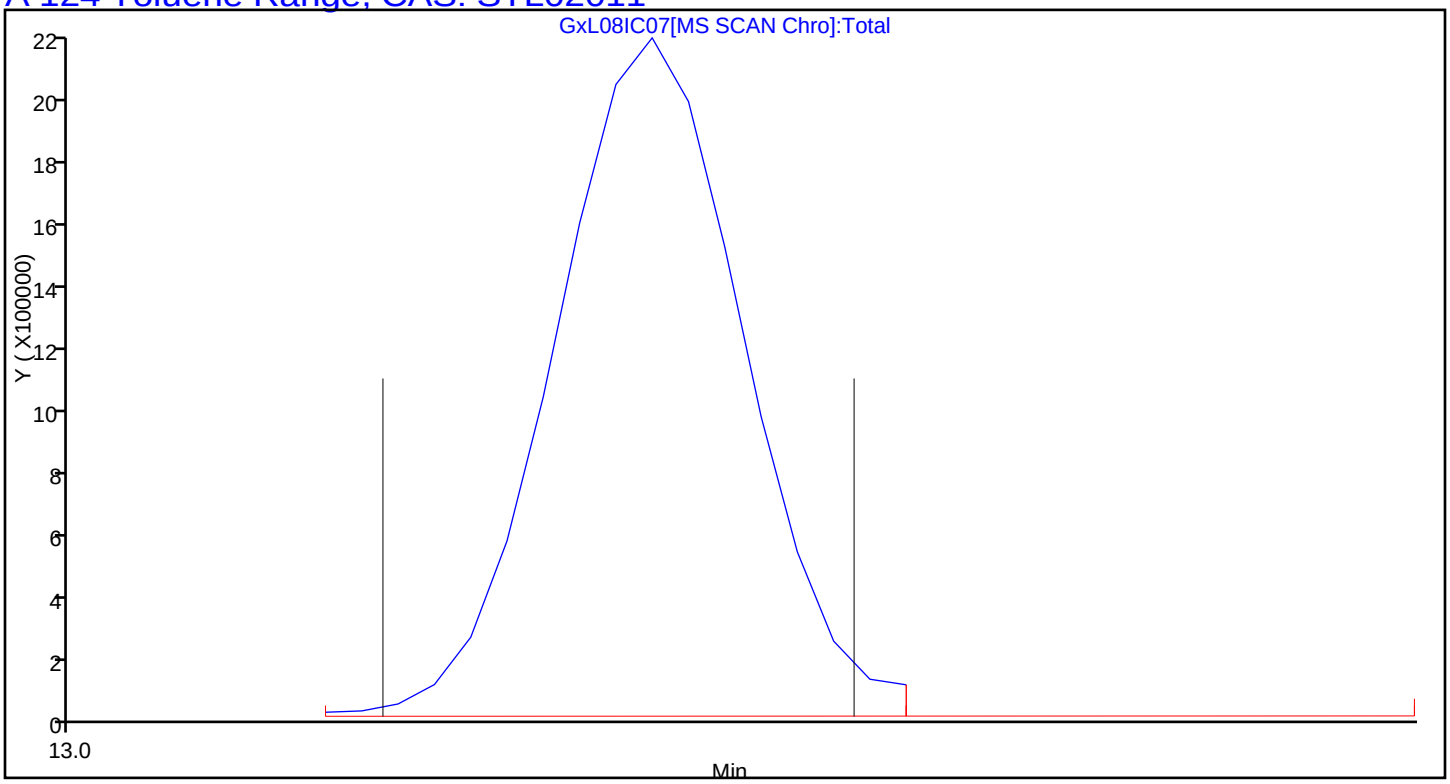


Report Date: 13-Dec-2016 14:28:20 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC07.D				
Injection Date:	09-Dec-2016 00:14:30	Instrument ID:	MG		
Lims ID:	IC L7				
Client ID:					
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

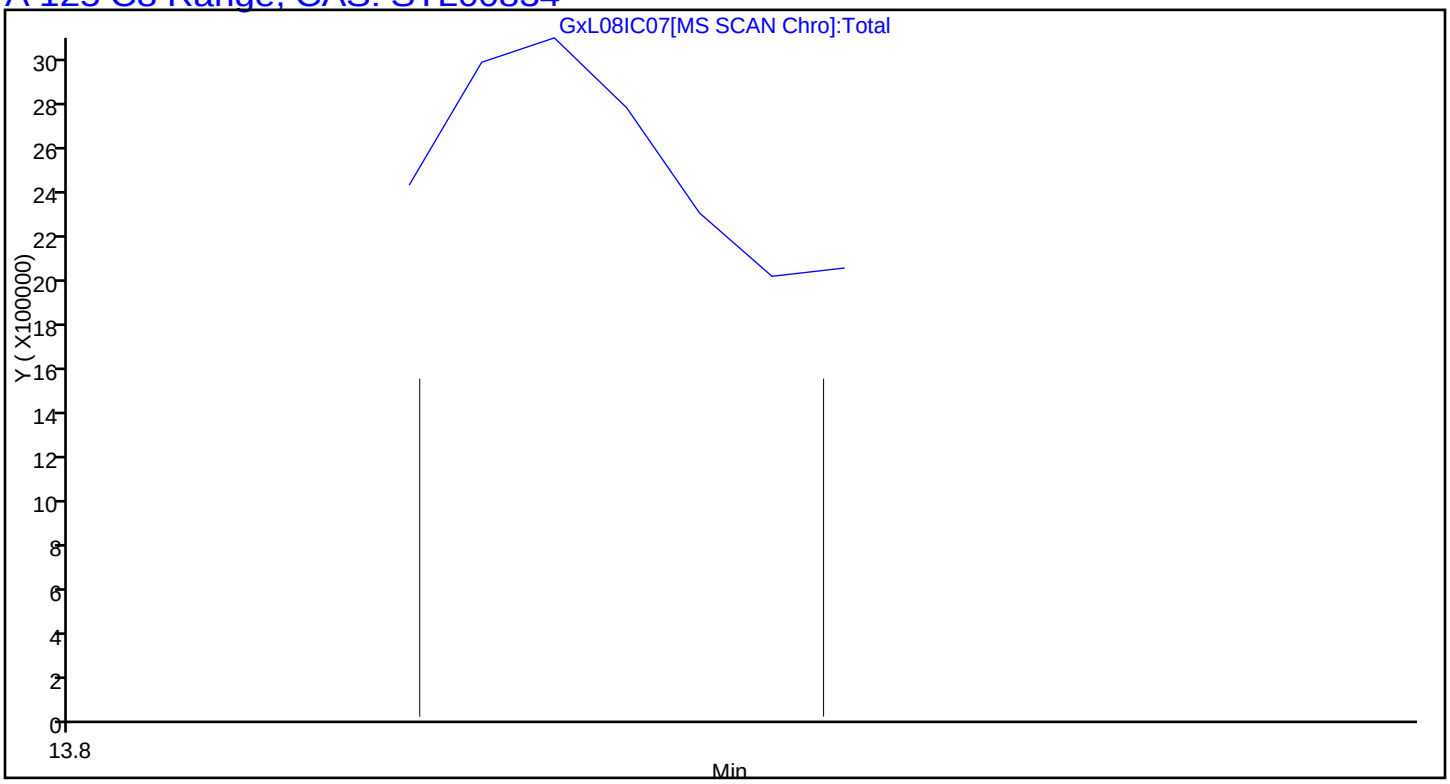


Report Date: 13-Dec-2016 14:28:20 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC07.D				
Injection Date:	09-Dec-2016 00:14:30	Instrument ID:	MG		
Lims ID:	IC L7				
Client ID:					
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC08.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 09-Dec-2016 00:56:30 ALS Bottle#: 7 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003696-010
Misc. Info.: 067935
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Dec-2016 14:28:22 Calib Date: 09-Dec-2016 12:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK009

First Level Reviewer: barlozhetskayaa Date: 09-Dec-2016 10:40:55

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.072	8.063	0.009	94	446541	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.239	10.234	0.005	95	2019784	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.092	15.090	0.002	86	2030113	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.764	16.758	0.006	96	1365365	4.00	4.07	
6 Chlorodifluoromethane	67	3.477	3.481	-0.004	96	292311	8.00	7.98	
7 Propene	41	3.488	3.489	-0.001	99	939449	8.00	7.69	
8 Dichlorodifluoromethane	85	3.531	3.533	-0.002	100	3034352	8.00	7.94	
9 Chloromethane	52	3.682	3.685	-0.003	99	287150	8.00	7.00	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.693	3.696	-0.003	91	1962149	8.00	7.75	
11 Acetaldehyde	44	3.812	3.816	-0.004	99	1572354	40.0	34.7	
12 Vinyl chloride	62	3.828	3.830	-0.002	99	1037365	8.00	7.70	
13 Butadiene	54	3.903	3.906	-0.003	68	802516	8.00	7.38	
14 Butane	43	3.903	3.907	-0.004	85	1552213	8.00	7.31	
15 Bromomethane	94	4.173	4.174	-0.001	99	993397	8.00	7.72	
16 Chloroethane	64	4.291	4.292	-0.001	100	552656	8.00	7.72	
17 Ethanol	31	4.399	4.393	0.006	96	1562780	40.0	35.0	
18 Vinyl bromide	106	4.550	4.550	0.000	99	955316	8.00	7.87	
19 2-Methylbutane	43	4.599	4.598	0.001	90	1125727	8.00	7.26	
21 Acrolein	56	4.782	4.783	-0.001	95	214693	8.00	6.17	
20 Trichlorofluoromethane	101	4.782	4.785	-0.003	99	2914069	8.00	7.87	
22 Acetonitrile	40	4.836	4.838	-0.002	99	309105	8.00	7.50	
23 Acetone	58	4.874	4.882	-0.008	98	976001	24.0	20.7	
24 Pentane	72	4.976	4.978	-0.002	96	167888	8.00	7.39	
25 Isopropyl alcohol	45	4.998	4.987	0.011	94	3326202	24.0	20.9	
26 Ethyl ether	31	5.116	5.124	-0.008	95	693477	8.00	7.39	
27 1,1-Dichloroethene	96	5.402	5.400	0.002	97	849769	8.00	7.78	
28 Acrylonitrile	53	5.489	5.487	0.002	94	439702	8.00	7.45	
29 2-Methyl-2-propanol	59	5.526	5.526	0.000	91	1314289	8.00	7.85	
30 1,1,2-Trichloro-1,2,2-trif	101	5.575	5.572	0.003	95	1814621	8.00	7.75	
31 Methylene Chloride	84	5.710	5.708	0.002	94	655205	8.00	6.90	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.726	5.725	0.001	99	676808	8.00	7.20	
33 Carbon disulfide	76	5.850	5.849	0.001	99	2787285	8.00	7.81	
34 trans-1,2-Dichloroethene	96	6.454	6.448	0.006	97	1006280	8.00	7.84	
35 2-Methylpentane	43	6.481	6.481	0.000	95	2203279	8.00	7.97	
36 Methyl tert-butyl ether	73	6.562	6.575	-0.013	96	2475436	8.00	8.12	
37 1,1-Dichloroethane	63	6.837	6.832	0.005	100	1957037	8.00	8.12	
38 Vinyl acetate	43	6.945	6.942	0.002	100	2546899	8.00	8.50	
39 2-Butanone (MEK)	72	7.344	7.349	-0.005	99	413943	8.00	7.83	
40 Hexane	56	7.397	7.397	0.000	89	821099	8.00	7.74	
41 Isopropyl ether	45	7.543	7.547	-0.004	97	3119866	8.00	8.19	
42 cis-1,2-Dichloroethene	96	7.764	7.759	0.005	96	1041594	8.00	8.00	
43 Ethyl acetate	43	7.942	7.946	-0.004	99	1961789	8.00	8.31	
44 Chloroform	83	8.093	8.085	0.008	97	2180906	8.00	7.79	
45 Tert-butyl ethyl ether	59	8.185	8.191	-0.006	95	2723491	8.00	8.22	
46 Tetrahydrofuran	42	8.449	8.460	-0.011	94	1002984	8.00	8.23	
47 1,1,1-Trichloroethane	97	9.069	9.068	0.001	95	2429887	8.00	7.95	
48 1,2-Dichloroethane	62	9.166	9.160	0.006	99	1498236	8.00	7.96	
49 Benzene	78	9.657	9.654	0.003	97	2604625	8.00	7.17	
50 Cyclohexane	69	9.662	9.659	0.003	93	449383	8.00	6.71	
52 Carbon tetrachloride	117	9.689	9.684	0.005	99	1719063	8.00	5.30	
51 n-Butanol	31	9.662	9.685	-0.023	63	297985	8.00	6.75	
53 2,3-Dimethylpentane	71	9.808	9.808	0.000	91	701048	8.00	7.47	
54 Thiophene	84	9.937	9.930	0.007	97	1674022	8.00	7.70	
55 Tert-amyl methyl ether	73	10.169	10.181	-0.012	98	2525168	8.00	7.77	
56 Isooctane	57	10.482	10.479	0.003	99	4780993	8.00	7.26	
57 n-Heptane	71	10.886	10.881	0.005	90	1048692	8.00	7.19	
58 1,2-Dichloropropane	63	10.924	10.916	0.008	89	1037078	8.00	7.53	
59 Trichloroethene	130	10.973	10.966	0.007	98	1527011	8.00	7.22	
60 Dibromomethane	93	11.037	11.033	0.004	91	1228541	8.00	7.34	
61 Dichlorobromomethane	83	11.199	11.194	0.005	99	2272827	8.00	7.81	
62 1,4-Dioxane	88	11.215	11.222	-0.007	88	365186	8.00	7.49	
63 Methyl methacrylate	41	11.329	11.327	0.001	92	1196974	8.00	8.05	
64 Methylcyclohexane	83	11.771	11.766	0.005	95	2131544	8.00	7.09	
65 4-Methyl-2-pentanone (MIBK	43	12.197	12.198	-0.001	97	1920348	8.00	7.77	
66 cis-1,3-Dichloropropene	75	12.245	12.240	0.005	94	1738337	8.00	7.99	
67 trans-1,3-Dichloropropene	75	12.962	12.958	0.004	97	1632235	8.00	8.33	
68 Toluene	91	13.086	13.083	0.003	94	3151028	8.00	7.76	
69 1,1,2-Trichloroethane	83	13.157	13.154	0.003	99	931501	8.00	7.78	
70 2-Methylthiophene	97	13.237	13.233	0.004	97	2684721	8.00	7.84	
71 3-Methylthiophene	97	13.442	13.439	0.003	99	2624633	8.00	7.87	
72 2-Hexanone	58	13.572	13.578	-0.006	93	949384	8.00	7.97	
73 n-Octane	85	13.836	13.833	0.003	90	1150679	8.00	7.21	
74 Chlorodibromomethane	129	13.868	13.862	0.006	97	2327802	8.00	8.45	
75 Ethylene Dibromide	107	14.160	14.152	0.008	98	1924671	8.00	8.17	
76 Tetrachloroethene	129	14.257	14.251	0.006	96	1357814	8.00	7.62	
77 Chlorobenzene	112	15.141	15.138	0.003	94	2641230	8.00	7.84	
78 2,3-Dimethylheptane	43	15.206	15.203	0.003	92	2777262	8.00	6.90	
79 Ethylbenzene	91	15.448	15.445	0.003	98	4150248	8.00	7.80	
80 2-Ethylthiophene	97	15.545	15.544	0.001	97	3203327	8.00	8.05	
81 m-Xylene & p-Xylene	91	15.615	15.612	0.003	98	6184279	16.0	15.1	
83 Bromoform	173	16.036	16.034	0.002	99	2629265	8.00	10.4	
82 n-Nonane	57	16.079	16.076	0.003	89	1763559	8.00	6.63	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.085	16.079	0.006	97	2378609	8.00	8.16	
85 o-Xylene	91	16.144	16.140	0.004	98	3322495	8.00	7.68	
86 1,1,2,2-Tetrachloroethane	83	16.467	16.462	0.005	99	2286622	8.00	8.01	
87 1,2,3-Trichloropropane	110	16.624	16.619	0.005	97	745283	8.00	7.92	
88 Isopropylbenzene	105	16.742	16.740	0.002	96	4568570	8.00	7.51	
89 N-Propylbenzene	120	17.298	17.295	0.003	99	1292302	8.00	7.80	
90 2-Chlorotoluene	126	17.330	17.327	0.003	97	1192871	8.00	7.80	
91 4-Ethyltoluene	105	17.460	17.457	0.003	99	4602017	8.00	7.84	
92 1,3,5-Trimethylbenzene	120	17.546	17.539	0.007	93	2166860	8.00	7.68	
93 Alpha Methyl Styrene	118	17.783	17.781	0.002	90	2029631	8.00	8.72	
94 n-Decane	57	17.880	17.878	0.002	92	2230034	8.00	7.10	
95 tert-Butylbenzene	119	17.988	17.985	0.003	94	4192051	8.00	7.67	
96 1,2,4-Trimethylbenzene	105	18.004	18.000	0.004	95	3807592	8.00	7.74	
98 1,3-Dichlorobenzene	146	18.274	18.270	0.004	70	2988285	8.00	8.41	
97 sec-Butylbenzene	105	18.274	18.270	0.004	98	5445613	8.00	7.65	
99 Benzyl chloride	91	18.355	18.349	0.006	99	3454376	8.00	8.80	
100 1,4-Dichlorobenzene	146	18.366	18.363	0.003	97	2887306	8.00	8.31	
101 4-Isopropyltoluene	119	18.446	18.444	0.002	97	4764104	8.00	7.86	
102 1,2,3-Trimethylbenzene	105	18.495	18.488	0.007	98	2947828	8.00	7.80	
103 Butylcyclohexane	83	18.565	18.561	0.004	96	2743371	8.00	7.21	
104 1,2-Dichlorobenzene	146	18.738	18.735	0.003	97	2786845	8.00	8.21	
105 2,3-Dihydroindene	117	18.743	18.736	0.007	94	3606458	8.00	7.88	
106 Indene	116	18.872	18.869	0.003	94	2791759	8.00	7.05	
107 n-Butylbenzene	91	18.899	18.896	0.003	98	4058346	8.00	7.70	
108 Undecane	57	19.250	19.247	0.003	93	2329972	8.00	7.03	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.282	19.279	0.003	98	3428964	8.00	7.80	
110 1,2-Dibromo-3-Chloropropan	157	19.352	19.352	0.000	99	1274571	8.00	8.94	
111 1,2,4,5-Tetramethylbenzene	119	19.676	19.673	0.003	97	4158725	8.00	8.05	
112 1,2,3,5-Tetramethylbenzene	119	19.730	19.727	0.003	96	2514994	8.00	7.97	
113 1,2,3,4-Tetramethylbenzene	119	20.123	20.121	0.002	97	3418581	8.00	8.01	
114 Dodecane	57	20.318	20.313	0.005	97	2172344	8.00	7.41	
115 1,2,4-Trichlorobenzene	180	20.458	20.458	0.000	94	2330633	8.00	9.88	
116 Naphthalene	128	20.587	20.588	-0.001	99	4535967	8.00	9.06	
117 Benzo(b)thiophene	134	20.690	20.688	0.002	99	2531375	8.00	9.22	
118 Hexachlorobutadiene	225	20.814	20.814	0.000	91	3240488	8.00	8.94	
119 1,2,3-Trichlorobenzene	180	20.868	20.865	0.003	94	2115119	8.00	9.19	
120 2-Methylnaphthalene	142	21.660	21.661	-0.001	99	2197530	25.0	30.1	
121 1-Methylnaphthalene	142	21.844	21.841	0.003	99	2081286	25.0	28.0	
A 124 Toluene Range	1	13.081	(13.046-13.116)		0	7723720	8.00	7.53	
A 125 C8 Range	1	13.841	(13.826-13.856)		0	11244888	8.00	7.07	
S 126 Xylenes, Total	100				0		24.0	22.8	
S 127 1,2-Dichloroethene, Total	1				0		16.0	15.8	

Reagents:

40L8DNP_00008	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

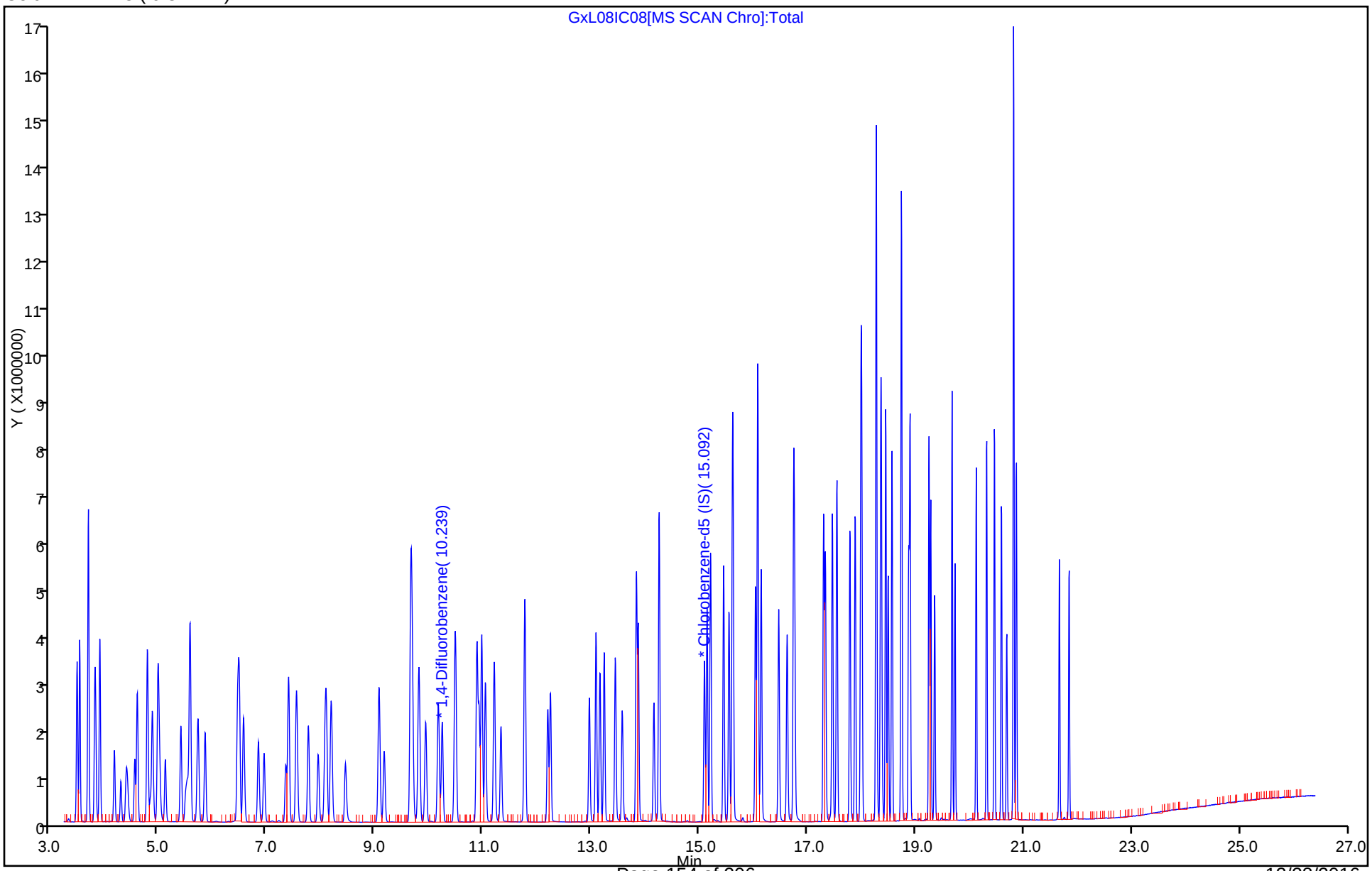
Report Date: 13-Dec-2016 14:28:23 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC08.D

Injection Date:	09-Dec-2016 00:56:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	IC L8			Worklist Smp#:	10
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

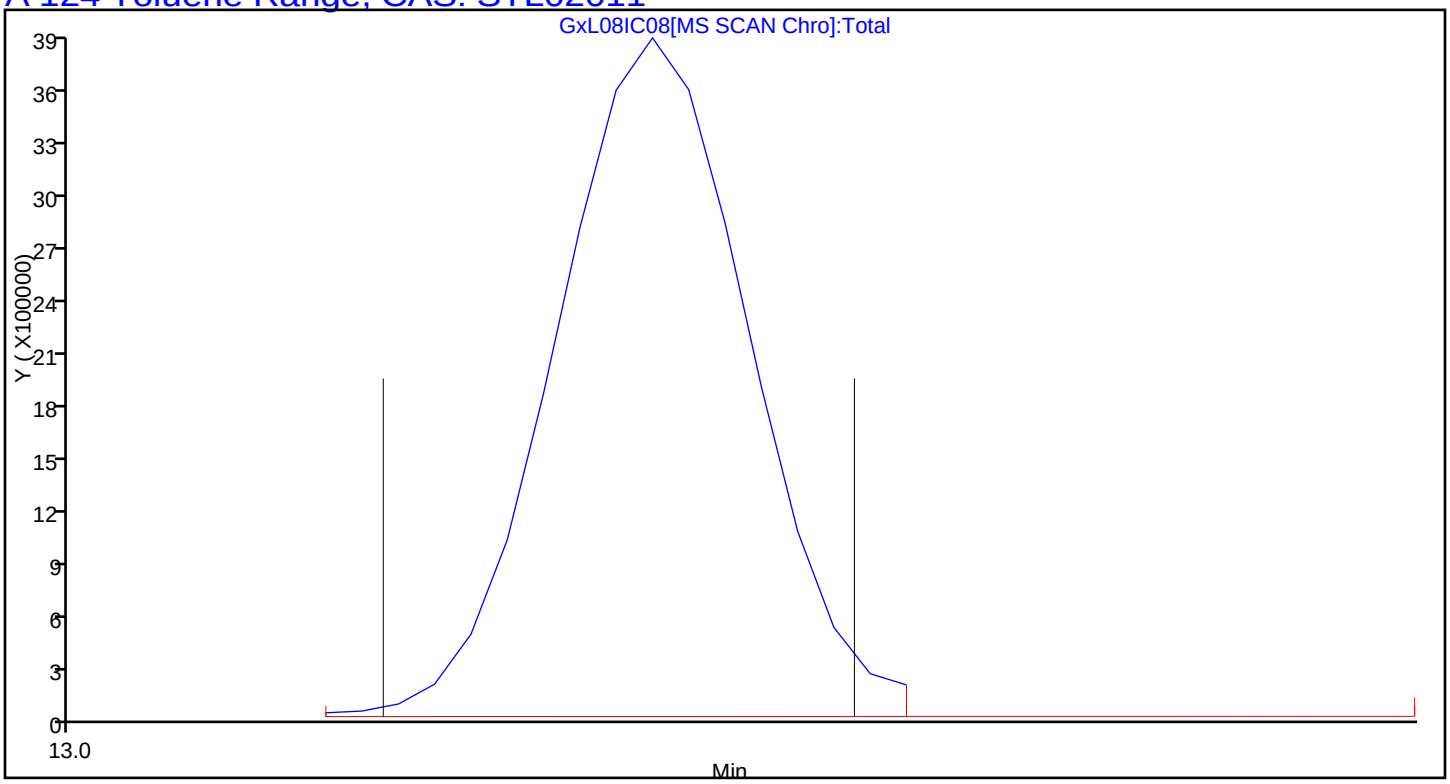


Report Date: 13-Dec-2016 14:28:23 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC08.D				
Injection Date:	09-Dec-2016 00:56:30	Instrument ID:	MG		
Lims ID:	IC L8				
Client ID:					
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

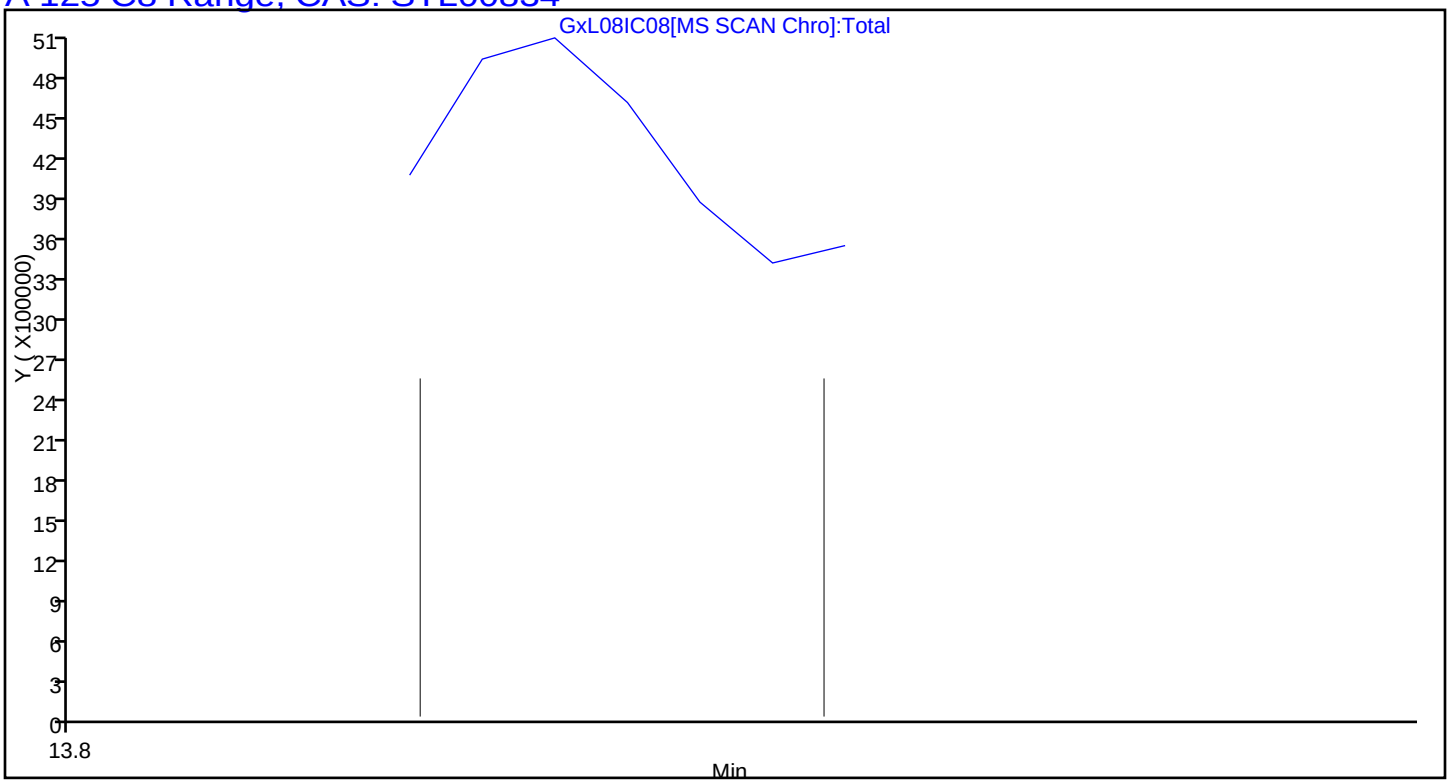


Report Date: 13-Dec-2016 14:28:23 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC08.D				
Injection Date:	09-Dec-2016 00:56:30	Instrument ID:	MG		
Lims ID:	IC L8				
Client ID:					
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC09.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 09-Dec-2016 01:38:30 ALS Bottle#: 8 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003696-011
Misc. Info.: 067934
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Dec-2016 14:28:26 Calib Date: 09-Dec-2016 12:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK009

First Level Reviewer: barlozhetskayaa Date: 09-Dec-2016 10:32:42

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.082	8.063	0.019	93	431521	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.255	10.234	0.021	95	1821448	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.103	15.090	0.013	85	1900751	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.775	16.758	0.017	96	1261386	4.00	4.01	
6 Chlorodifluoromethane	67	3.477	3.481	-0.004	96	570750	16.0	16.1	
7 Propene	41	3.488	3.489	-0.001	99	1680175	16.0	14.2	
8 Dichlorodifluoromethane	85	3.531	3.533	-0.002	100	5818805	16.0	15.8	
9 Chloromethane	52	3.682	3.685	-0.003	99	486023	16.0	12.3	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.698	3.696	0.002	93	3960934	16.0	16.2	
11 Acetaldehyde	44	3.817	3.816	0.001	99	2713131	80.0	61.9	
12 Vinyl chloride	62	3.833	3.830	0.003	99	1800793	16.0	13.8	
13 Butadiene	54	3.909	3.906	0.003	69	1388093	16.0	13.2	
14 Butane	43	3.909	3.907	0.002	84	2596919	16.0	12.7	
15 Bromomethane	94	4.178	4.174	0.004	99	1885484	16.0	15.2	
16 Chloroethane	64	4.297	4.292	0.005	100	1053045	16.0	15.2	
17 Ethanol	31	4.426	4.393	0.033	95	3054812	80.0	70.9	
18 Vinyl bromide	106	4.556	4.550	0.006	99	1860265	16.0	15.9	
19 2-Methylbutane	43	4.599	4.598	0.001	89	1993361	16.0	13.3	
21 Acrolein	56	4.788	4.783	0.005	94	461450	16.0	13.7	
20 Trichlorofluoromethane	101	4.788	4.785	0.003	99	5901125	16.0	16.5	
22 Acetonitrile	40	4.852	4.838	0.014	99	663618	16.0	16.7	
23 Acetone	58	4.885	4.882	0.003	98	2019556	48.0	44.4	
24 Pentane	72	4.982	4.978	0.004	99	343931	16.0	15.7	
25 Isopropyl alcohol	45	5.046	4.987	0.059	98	6932486	48.0	45.1	
26 Ethyl ether	31	5.122	5.124	-0.002	91	1444630	16.0	15.9	
27 1,1-Dichloroethene	96	5.408	5.400	0.008	98	1718361	16.0	16.3	
28 Acrylonitrile	53	5.505	5.487	0.018	94	996643	16.0	17.5	
29 2-Methyl-2-propanol	59	5.575	5.526	0.049	94	2583882	16.0	16.0	
30 1,1,2-Trichloro-1,2,2-trif	101	5.580	5.572	0.008	93	3778238	16.0	16.7	
31 Methylene Chloride	84	5.720	5.708	0.012	93	1319618	16.0	14.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.737	5.725	0.012	97	1354242	16.0	14.9	
33 Carbon disulfide	76	5.855	5.849	0.006	99	5474536	16.0	15.9	
34 trans-1,2-Dichloroethene	96	6.459	6.448	0.011	99	1930221	16.0	15.6	
35 2-Methylpentane	43	6.492	6.481	0.011	96	3810096	16.0	14.3	
36 Methyl tert-butyl ether	73	6.572	6.575	-0.003	96	5364390	16.0	18.2	
37 1,1-Dichloroethane	63	6.848	6.832	0.016	100	3876835	16.0	16.6	
38 Vinyl acetate	43	6.955	6.942	0.013	100	5589948	16.0	19.3	
39 2-Butanone (MEK)	72	7.365	7.349	0.016	99	878803	16.0	17.2	
40 Hexane	56	7.403	7.397	0.006	90	1493982	16.0	14.6	
41 Isopropyl ether	45	7.554	7.547	0.007	97	6292986	16.0	17.1	
42 cis-1,2-Dichloroethene	96	7.775	7.759	0.016	95	2078366	16.0	16.5	
43 Ethyl acetate	43	7.964	7.946	0.018	99	4364408	16.0	19.1	
44 Chloroform	83	8.109	8.085	0.024	97	4367350	16.0	16.1	
45 Tert-butyl ethyl ether	59	8.196	8.191	0.005	94	5753046	16.0	18.0	
46 Tetrahydrofuran	42	8.460	8.460	0.000	94	2180844	16.0	18.5	
47 1,1,1-Trichloroethane	97	9.080	9.068	0.012	94	4921388	16.0	16.7	
48 1,2-Dichloroethane	62	9.182	9.160	0.022	98	3034051	16.0	17.9	
49 Benzene	78	9.673	9.654	0.019	96	4859184	16.0	14.8	
50 Cyclohexane	69	9.668	9.659	0.009	86	818029	16.0	13.5	
52 Carbon tetrachloride	117	9.695	9.684	0.011	97	5495740	16.0	18.8	
51 n-Butanol	31	9.727	9.685	0.042	73	573494	16.0	14.4	
53 2,3-Dimethylpentane	71	9.819	9.808	0.011	90	1327614	16.0	15.7	
54 Thiophene	84	9.948	9.930	0.018	96	3303884	16.0	16.8	
55 Tert-amyl methyl ether	73	10.180	10.181	-0.001	98	5343717	16.0	18.2	
56 Isooctane	57	10.493	10.479	0.014	98	8835628	16.0	14.9	
57 n-Heptane	71	10.892	10.881	0.011	87	1970974	16.0	15.0	
58 1,2-Dichloropropane	63	10.935	10.916	0.019	89	1969395	16.0	15.9	
59 Trichloroethene	130	10.983	10.966	0.017	96	3024239	16.0	15.9	
60 Dibromomethane	93	11.054	11.033	0.021	88	2458883	16.0	16.3	
61 Dichlorobromomethane	83	11.215	11.194	0.021	99	4592413	16.0	17.5	
62 1,4-Dioxane	88	11.237	11.222	0.015	87	753201	16.0	17.1	
63 Methyl methacrylate	41	11.345	11.327	0.018	89	2492814	16.0	18.6	
64 Methylcyclohexane	83	11.776	11.766	0.010	95	4088614	16.0	15.1	
65 4-Methyl-2-pentanone (MIBK	43	12.213	12.198	0.015	96	3849816	16.0	17.3	
66 cis-1,3-Dichloropropene	75	12.256	12.240	0.016	92	3417073	16.0	17.4	
67 trans-1,3-Dichloropropene	75	12.979	12.958	0.021	97	3420157	16.0	18.6	
68 Toluene	91	13.097	13.083	0.014	94	6535309	16.0	17.2	
69 1,1,2-Trichloroethane	83	13.173	13.154	0.019	98	1894431	16.0	16.9	
70 2-Methylthiophene	97	13.248	13.233	0.015	97	5504671	16.0	17.2	
71 3-Methylthiophene	97	13.459	13.439	0.020	98	5425286	16.0	17.4	
72 2-Hexanone	58	13.588	13.578	0.010	94	2000620	16.0	17.9	
73 n-Octane	85	13.841	13.833	0.008	86	2222803	16.0	14.9	
74 Chlorodibromomethane	129	13.879	13.862	0.017	97	5133377	16.0	19.9	
75 Ethylene Dibromide	107	14.170	14.152	0.018	98	4020392	16.0	18.2	
76 Tetrachloroethene	129	14.262	14.251	0.011	96	2885902	16.0	17.3	
77 Chlorobenzene	112	15.152	15.138	0.014	96	5597166	16.0	17.7	
78 2,3-Dimethylheptane	43	15.216	15.203	0.013	86	4679067	16.0	12.4	
79 Ethylbenzene	91	15.459	15.445	0.014	98	8758179	16.0	17.6	
80 2-Ethylthiophene	97	15.556	15.544	0.012	97	6841807	16.0	18.4	
81 m-Xylene & p-Xylene	91	15.626	15.612	0.014	97	13248413	32.0	34.5	
83 Bromoform	173	16.052	16.034	0.018	99	6594138	16.0	27.8	
82 n-Nonane	57	16.085	16.076	0.009	85	2961409	16.0	11.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.095	16.079	0.016	95	5251876	16.0	19.2	
85 o-Xylene	91	16.155	16.140	0.015	98	7069465	16.0	17.5	
86 1,1,2,2-Tetrachloroethane	83	16.478	16.462	0.016	99	4738085	16.0	17.7	
87 1,2,3-Trichloropropane	110	16.635	16.619	0.016	97	1650297	16.0	18.7	
88 Isopropylbenzene	105	16.753	16.740	0.013	95	10000909	16.0	17.6	
89 N-Propylbenzene	120	17.309	17.295	0.014	100	2882014	16.0	18.6	
90 2-Chlorotoluene	126	17.341	17.327	0.014	96	2611501	16.0	18.2	
91 4-Ethyltoluene	105	17.470	17.457	0.013	98	10162010	16.0	18.5	
92 1,3,5-Trimethylbenzene	120	17.557	17.539	0.018	93	4929710	16.0	18.7	
93 Alpha Methyl Styrene	118	17.794	17.781	0.013	91	4555512	16.0	20.9	
94 n-Decane	57	17.891	17.878	0.013	93	4031286	16.0	13.7	
95 tert-Butylbenzene	119	17.999	17.985	0.014	94	9554102	16.0	18.7	
96 1,2,4-Trimethylbenzene	105	18.015	18.000	0.015	95	8518690	16.0	18.5	
98 1,3-Dichlorobenzene	146	18.279	18.270	0.009	92	6970912	16.0	21.0	
97 sec-Butylbenzene	105	18.285	18.270	0.015	97	11727632	16.0	17.6	
99 Benzyl chloride	91	18.360	18.349	0.011	99	7456385	16.0	20.3	
100 1,4-Dichlorobenzene	146	18.376	18.363	0.013	98	6739732	16.0	20.7	
101 4-Isopropyltoluene	119	18.457	18.444	0.013	97	10734531	16.0	18.9	
102 1,2,3-Trimethylbenzene	105	18.500	18.488	0.012	97	6454183	16.0	18.2	
103 Butylcyclohexane	83	18.571	18.561	0.009	96	5332453	16.0	15.0	
104 1,2-Dichlorobenzene	146	18.743	18.735	0.008	99	6549763	16.0	20.6	
105 2,3-Dihydroindene	117	18.748	18.736	0.012	94	8122275	16.0	18.9	
106 Indene	116	18.878	18.869	0.009	94	6308476	16.0	16.9	
107 n-Butylbenzene	91	18.905	18.896	0.009	97	8621259	16.0	17.5	
108 Undecane	57	19.255	19.247	0.008	89	4080761	16.0	13.1	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.288	19.279	0.009	98	7688453	16.0	18.7	
110 1,2-Dibromo-3-Chloropropan	157	19.358	19.352	0.006	90	3083243	16.0	23.1	
111 1,2,4,5-Tetramethylbenzene	119	19.681	19.673	0.008	98	9287987	16.0	19.2	
112 1,2,3,5-Tetramethylbenzene	119	19.735	19.727	0.008	96	5594149	16.0	18.9	
113 1,2,3,4-Tetramethylbenzene	119	20.129	20.121	0.008	97	7579036	16.0	19.0	
114 Dodecane	57	20.318	20.313	0.005	96	3802595	16.0	13.8	
115 1,2,4-Trichlorobenzene	180	20.463	20.458	0.005	93	5651953	16.0	25.6	
116 Naphthalene	128	20.593	20.588	0.005	99	10025298	16.0	21.4	
117 Benzo(b)thiophene	134	20.690	20.688	0.002	100	5741539	16.0	22.3	
118 Hexachlorobutadiene	225	20.819	20.814	0.005	92	7094731	16.0	20.9	
119 1,2,3-Trichlorobenzene	180	20.868	20.865	0.003	94	4817115	16.0	22.4	
120 2-Methylnaphthalene	142	21.666	21.661	0.005	99	2595825	50.0	38.0	
121 1-Methylnaphthalene	142	21.844	21.841	0.003	100	2006398	50.0	28.8	
A 124 Toluene Range	1	13.092	(13.057-13.127)		0	15781323	16.0	17.1	
A 125 C8 Range	1	13.839	(13.831-13.861)		0	16425810	16.0	11.4	
S 126 Xylenes, Total	100				0		48.0	51.9	
S 127 1,2-Dichloroethene, Total	1				0		32.0	32.1	

Reagents:

40L9DNP_00011	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

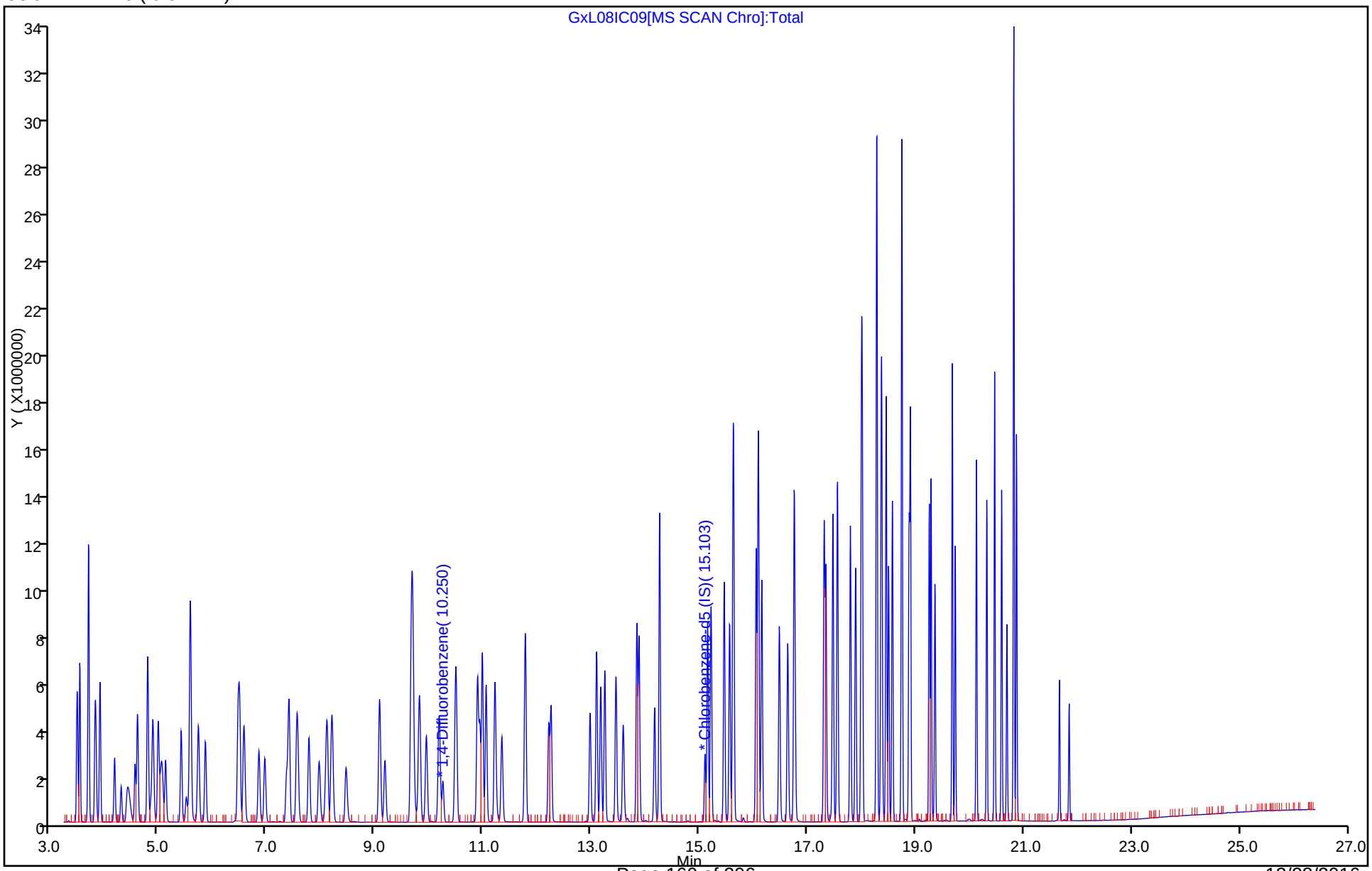
Report Date: 13-Dec-2016 14:28:27 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC09.D

Injection Date:	09-Dec-2016 01:38:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	IC L9			Worklist Smp#:	11
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

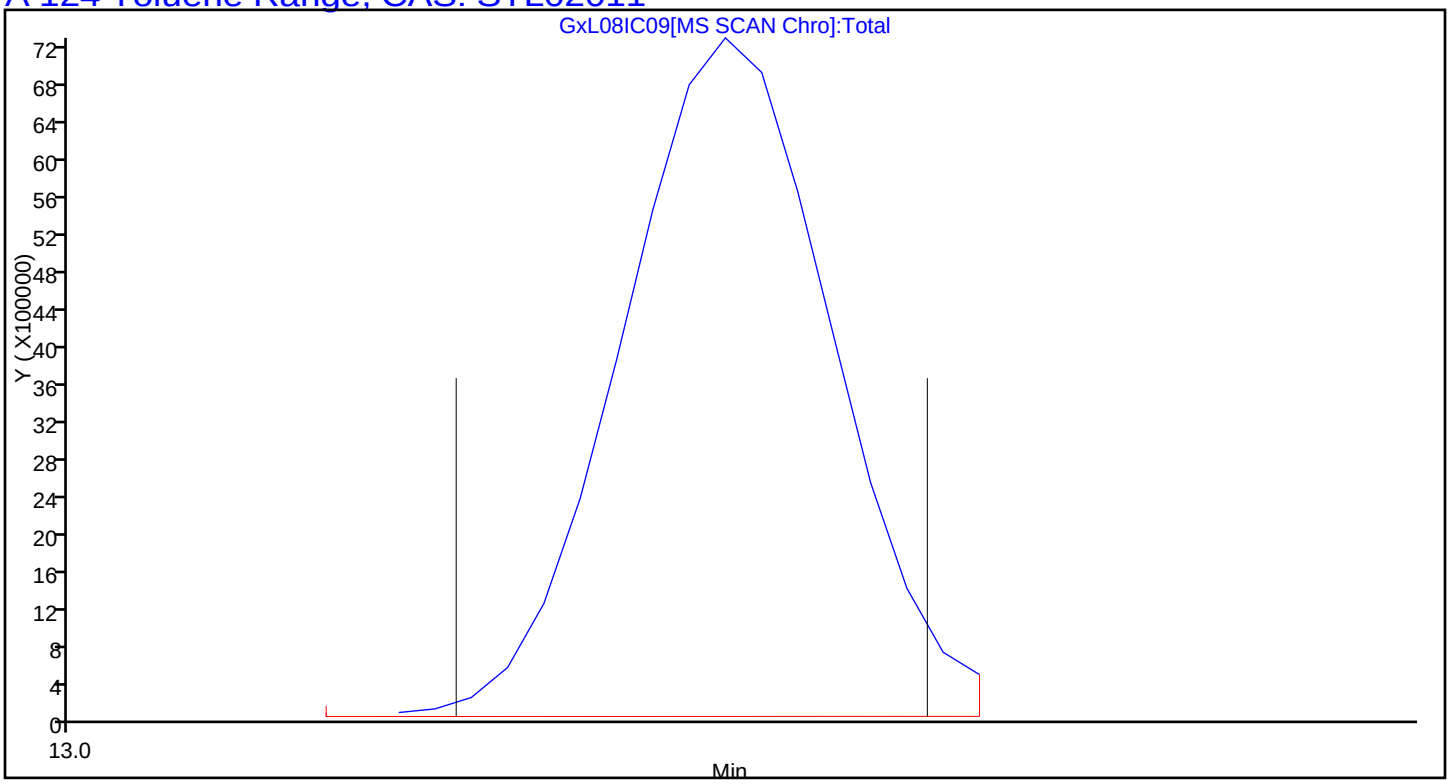


Report Date: 13-Dec-2016 14:28:27 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC09.D				
Injection Date:	09-Dec-2016 01:38:30	Instrument ID:	MG		
Lims ID:	IC L9				
Client ID:					
Operator ID:	403648	ALS Bottle#:	8	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

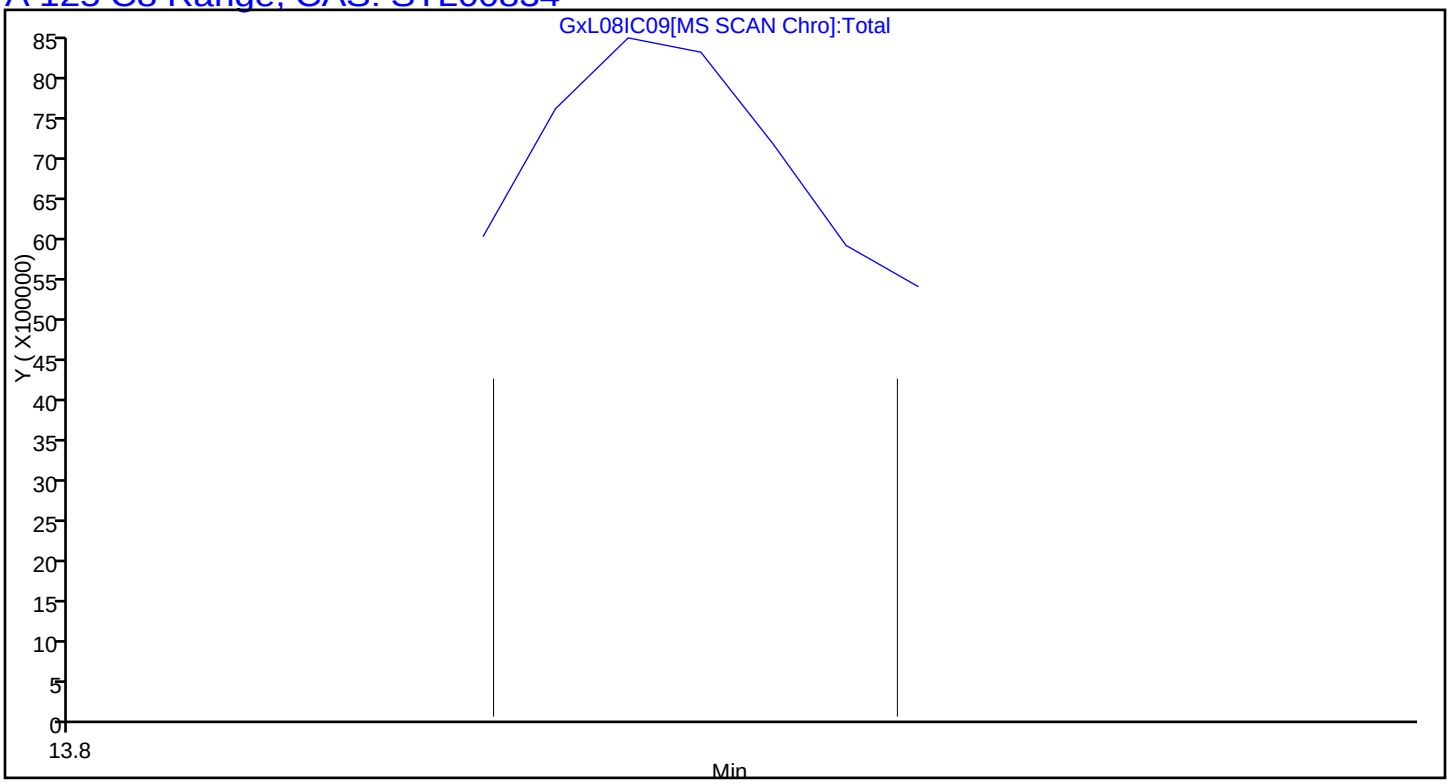


Report Date: 13-Dec-2016 14:28:27 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08IC09.D				
Injection Date:	09-Dec-2016 01:38:30	Instrument ID:	MG		
Lims ID:	IC L9				
Client ID:					
Operator ID:	403648	ALS Bottle#:	8	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1

SDG No.:

Lab Sample ID: ICV 140-7384/13 Calibration Date: 12/09/2016 03:01

Instrument ID: MG Calib Start Date: 12/08/2016 19:58

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 12/09/2016 01:38

Lab File ID: GxL08ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3281	0.3236		1.97	2.00	-1.4	35.0
Propene	Ave	1.094	0.9705		1.78	2.00	-11.3	35.0
Dichlorodifluoromethane	Ave	3.423	3.406		1.99	2.00	-0.5	35.0
Chloromethane	Ave	0.3677	0.3523		1.92	2.00	-4.2	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.268	2.334		2.06	2.00	2.9	35.0
Acetaldehyde	Ave	0.4060	0.3719		9.25	10.1	-8.4	35.0
Vinyl chloride	Ave	1.207	1.290		2.14	2.00	6.9	35.0
1,3-Butadiene	Ave	0.9739	0.9802		2.01	2.00	0.6	35.0
Butane	Ave	1.902	1.981		2.08	2.00	4.2	35.0
Bromomethane	Ave	1.152	1.136		1.97	2.00	-1.3	35.0
Chloroethane	Ave	0.6412	0.6501		2.03	2.00	1.4	35.0
Ethanol	Ave	0.3997	0.3651		9.22	10.1	-8.7	35.0
Vinyl bromide	Ave	1.088	1.131		2.08	2.00	3.9	35.0
2-Methylbutane	Ave	1.389	1.300		1.87	2.00	-6.4	35.0
Acrolein	Ave	0.3114	0.3670		2.36	2.00	17.8	35.0
Trichlorofluoromethane	Ave	3.318	3.275		1.98	2.00	-1.3	35.0
Acetonitrile	Ave	0.3691	0.3926		2.13	2.00	6.4	35.0
Acetone	Ave	0.4215	0.3992		5.69	6.00	-5.3	35.0
Isopropyl alcohol	Ave	1.426	1.281		5.39	6.00	-10.2	35.0
Pentane	Ave	0.2036	0.2061		2.03	2.00	1.2	35.0
Ethyl ether	Ave	0.8402	0.9143		2.18	2.00	8.8	35.0
1,1-Dichloroethene	Ave	0.9780	1.007		2.06	2.00	3.0	35.0
Acrylonitrile	Ave	0.5284	0.5968		2.26	2.00	12.9	35.0
tert-Butyl alcohol	Ave	1.499	1.552		2.07	2.00	3.6	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.097	2.166		2.07	2.00	3.3	35.0
Methylene Chloride	Ave	0.8508	0.8027		1.89	2.00	-5.7	35.0
3-Chloropropene	Ave	0.8422	0.8616		2.05	2.00	2.3	35.0
Carbon disulfide	Ave	3.196	3.222		2.02	2.00	0.8	35.0
trans-1,2-Dichloroethene	Ave	1.149	1.187		2.07	2.00	3.3	35.0
2-Methylpentane	Ave	2.476	2.725		2.22	2.02	10.0	35.0
Methyl tert-butyl ether	Ave	2.730	2.998		2.20	2.00	9.8	35.0
1,1-Dichloroethane	Ave	2.159	2.201		2.04	2.00	2.0	35.0
Vinyl acetate	Ave	2.684	2.988		2.23	2.00	11.3	35.0
2-Butanone (MEK)	Ave	0.4737	0.4890		2.07	2.00	3.2	35.0
Hexane	Ave	0.9508	0.9358		1.97	2.00	-1.6	35.0
Isopropyl ether	Ave	3.411	3.300		1.94	2.00	-3.3	35.0
cis-1,2-Dichloroethene	Ave	1.166	1.266		2.17	2.00	8.6	35.0
Ethyl acetate	Ave	2.116	2.203		2.08	2.00	4.1	35.0
Chloroform	Ave	2.509	2.652		2.12	2.00	5.7	35.0
Tert-butyl ethyl ether	Ave	2.966	3.191		2.15	2.00	7.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1

SDG No.:

Lab Sample ID: ICV 140-7384/13 Calibration Date: 12/09/2016 03:01

Instrument ID: MG Calib Start Date: 12/08/2016 19:58

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 12/09/2016 01:38

Lab File ID: GxL08ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.092	1.159		2.12	2.00	6.1	35.0
1,1,1-Trichloroethane	Ave	2.737	2.877		2.10	2.00	5.1	35.0
1,2-Dichloroethane	Ave	0.3729	0.3726		2.00	2.00	-0.0	35.0
1-Butanol	Ave	0.0875	0.0829		1.90	2.00	-5.3	35.0
Benzene	Ave	0.7195	0.7701		2.14	2.00	7.0	35.0
Cyclohexane	Ave	0.1326	0.1303		1.97	2.00	-1.7	35.0
Carbon tetrachloride	Ave	0.6424	0.6881		2.14	2.00	7.1	35.0
2,3-Dimethylpentane	Ave	0.1859	0.1743		1.89	2.02	-6.3	35.0
Thiophene	Ave	0.4306	0.4580		2.15	2.02	6.4	35.0
Tert-amyl methyl ether	Ave	0.6436	0.6299		1.96	2.00	-2.1	35.0
2,2,4-Trimethylpentane	Ave	1.305	1.349		2.07	2.00	3.4	35.0
Heptane	Ave	0.2889	0.2957		2.05	2.00	2.4	35.0
1,2-Dichloropropane	Ave	0.2726	0.2948		2.16	2.00	8.2	35.0
Trichloroethene	Ave	0.4186	0.4089		1.95	2.00	-2.3	35.0
Dibromomethane	Ave	0.3316	0.3406		2.06	2.00	2.7	35.0
Bromodichloromethane	Ave	0.5762	0.6095		2.12	2.00	5.8	35.0
1,4-Dioxane	Ave	0.0965	0.0942		1.95	2.00	-2.4	35.0
Methyl methacrylate	Ave	0.2946	0.3180		2.16	2.00	7.9	35.0
Methylcyclohexane	Ave	0.5953	0.4923		1.67	2.02	-17.3	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4897	0.5064		2.07	2.00	3.4	35.0
cis-1,3-Dichloropropene	Ave	0.4307	0.4736		2.20	2.00	10.0	35.0
trans-1,3-Dichloropropene	Ave	0.3859	0.4267		2.21	2.00	10.6	35.0
Toluene	Ave	0.7999	0.9016		2.26	2.00	12.7	35.0
1,1,2-Trichloroethane	Ave	0.2359	0.2509		2.13	2.00	6.4	35.0
2-Methylthiophene	Ave	0.6747	0.7635		2.29	2.02	13.2	35.0
3-Methylthiophene	Ave	0.6573	0.7766		2.39	2.02	18.1	35.0
2-Hexanone	Ave	0.2348	0.2349		2.00	2.00	0.0	35.0
Octane	Ave	0.3146	0.3321		2.11	2.00	5.6	35.0
Dibromochloromethane	Ave	0.5428	0.5993		2.21	2.00	10.4	35.0
1,2-Dibromoethane (EDB)	Ave	0.4640	0.5103		2.20	2.00	10.0	35.0
Tetrachloroethene	Ave	0.3510	0.3558		2.03	2.00	1.4	35.0
Chlorobenzene	Ave	0.6640	0.7299		2.20	2.00	9.9	35.0
2,3-Dimethylheptane	Ave	0.7928	0.8543		2.18	2.02	7.8	35.0
Ethylbenzene	Ave	1.049	1.170		2.23	2.00	11.6	35.0
2-Ethylthiophene	Ave	0.7845	0.8673		2.23	2.02	10.6	35.0
m-Xylene & p-Xylene	Ave	0.8084	0.9051		4.48	4.00	12.0	35.0
Bromoform	Ave	0.4996	0.6071		2.43	2.00	21.5	35.0
Nonane	Ave	0.5241	0.5669		2.16	2.00	8.2	35.0
Styrene	Ave	0.5743	0.6733		2.35	2.00	17.2	35.0
o-Xylene	Ave	0.8521	0.9247		2.17	2.00	8.5	35.0
1,1,2,2-Tetrachloroethane	Ave	0.5626	0.6210		2.21	2.00	10.4	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1

SDG No.:

Lab Sample ID: ICV 140-7384/13 Calibration Date: 12/09/2016 03:01

Instrument ID: MG Calib Start Date: 12/08/2016 19:58

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 12/09/2016 01:38

Lab File ID: GxL08ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1853	0.2006		2.17	2.00	8.3	35.0
Isopropylbenzene	Ave	1.199	1.311		2.19	2.00	9.4	35.0
Propylbenzene	Ave	0.3264	0.3686		2.26	2.00	12.9	35.0
2-Chlorotoluene	Ave	0.3015	0.3368		2.24	2.00	11.7	35.0
4-Ethyltoluene	Ave	1.156	1.213		2.10	2.00	4.9	35.0
1,3,5-Trimethylbenzene	Ave	0.5561	0.6152		2.21	2.00	10.6	35.0
Alpha Methyl Styrene	Ave	0.4587	0.5349		2.33	2.00	16.6	35.0
Decane	Ave	0.6186	0.6732		2.18	2.00	8.8	35.0
tert-Butylbenzene	Ave	1.078	1.171		2.18	2.00	8.7	35.0
1,2,4-Trimethylbenzene	Ave	0.9689	1.060		2.19	2.00	9.4	35.0
1,3-Dichlorobenzene	Ave	0.7000	0.7298		2.09	2.00	4.3	35.0
sec-Butylbenzene	Ave	1.402	1.517		2.16	2.00	8.2	35.0
Benzyl chloride	Ave	0.7737	0.8985		2.32	2.00	16.1	35.0
1,4-Dichlorobenzene	Ave	0.6842	0.7278		2.13	2.00	6.4	35.0
4-Isopropyltoluene	Ave	1.194	1.279		2.14	2.00	7.2	35.0
1,2,3-Trimethylbenzene	Ave	0.7450	0.8540		2.32	2.02	14.6	35.0
Butylcyclohexane	Ave	0.7496	0.7541		2.03	2.02	0.6	35.0
1,2-Dichlorobenzene	Ave	0.6689	0.6954		2.08	2.00	4.0	35.0
Indane	Ave	0.9021	0.9132		2.04	2.02	1.2	35.0
Indene	Lin1		0.9290		2.46	2.02	21.6	35.0
Butylbenzene	Ave	1.038	1.127		2.17	2.00	8.6	35.0
Undecane	Ave	0.6532	0.6961		2.13	2.00	6.6	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.8658	1.121		2.62	2.02	29.5	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.2810	0.2588		1.84	2.00	-7.9	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.018	1.156		2.29	2.02	13.6	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.6220	0.7154		2.32	2.02	15.0	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.8407	0.9200		2.21	2.02	9.4	35.0
Dodecane	Ave	0.5779	0.5706		1.98	2.00	-1.3	35.0
1,2,4-Trichlorobenzene	Ave	0.4650	0.5108		2.20	2.00	9.9	35.0
Naphthalene	Ave	0.9864	1.076		2.18	2.00	9.1	35.0
Benzo(b)thiophene	Ave	0.5407	0.5926		2.21	2.02	9.6	35.0
Hexachlorobutadiene	Ave	0.7142	0.6829		1.91	2.00	-4.4	35.0
1,2,3-Trichlorobenzene	Ave	0.4535	0.4825		2.13	2.00	6.4	35.0
2-Methylnaphthalene	Ave	0.1438	0.1444		6.28	6.25	0.4	50.0
1-Methylnaphthalene	Ave	0.1465	0.1599		6.83	6.25	9.1	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6615	0.6635		4.01	4.00	0.3	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08ICV.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 09-Dec-2016 03:01:30 ALS Bottle#: 9 Worklist Smp#: 13
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003696-013
Misc. Info.: 069464/S28
Operator ID: 403648 Instrument ID: MG
Sublist:

Method: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Dec-2016 14:47:06 Calib Date: 09-Dec-2016 12:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK009

First Level Reviewer: tajh Date: 13-Dec-2016 14:47:06

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.066	8.063	0.003	93	455645	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.234	10.234	0.000	95	2097795	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.087	15.090	-0.003	86	2138644	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.759	16.755	0.001	96	1418993	4.00	4.01	
6 Chlorodifluoromethane	67	3.483	3.483	0.002	96	73764	2.00	1.97	
7 Propene	41	3.488	3.490	-0.001	99	221216	2.00	1.78	
8 Dichlorodifluoromethane	85	3.531	3.534	-0.002	100	776329	2.00	1.99	
9 Chloromethane	52	3.682	3.686	-0.003	99	80300	2.00	1.92	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.693	3.697	-0.003	92	531914	2.00	2.06	
11 Acetaldehyde	44	3.817	3.817	0.001	99	427719	10.1	9.25	
12 Vinyl chloride	62	3.833	3.832	0.003	99	294073	2.00	2.14	
13 Butadiene	54	3.903	3.907	-0.003	94	223428	2.00	2.01	
14 Butane	43	3.909	3.908	0.002	93	451643	2.00	2.08	
15 Bromomethane	94	4.173	4.176	-0.001	99	259037	2.00	1.97	
16 Chloroethane	64	4.291	4.294	-0.001	100	148192	2.00	2.03	
17 Ethanol	31	4.388	4.395	-0.005	95	419908	10.1	9.22	
18 Vinyl bromide	106	4.550	4.551	0.000	99	257715	2.00	2.08	
19 2-Methylbutane	43	4.599	4.600	0.001	91	296393	2.00	1.87	
21 Acrolein	56	4.782	4.785	-0.001	94	83657	2.00	2.36	
20 Trichlorofluoromethane	101	4.782	4.786	-0.003	99	746453	2.00	1.98	
22 Acetonitrile	40	4.836	4.840	-0.002	100	89496	2.00	2.13	
23 Acetone	58	4.874	4.884	-0.008	98	273013	6.00	5.69	
24 Pentane	72	4.976	4.980	-0.002	96	46978	2.00	2.03	
25 Isopropyl alcohol	45	4.976	4.989	-0.011	94	875906	6.00	5.39	
26 Ethyl ether	31	5.116	5.126	-0.008	95	208404	2.00	2.18	
27 1,1-Dichloroethene	96	5.402	5.402	0.002	97	229563	2.00	2.06	
28 Acrylonitrile	53	5.483	5.489	-0.004	95	136037	2.00	2.26	
29 2-Methyl-2-propanol	59	5.505	5.528	-0.021	93	353853	2.00	2.07	
30 1,1,2-Trichloro-1,2,2-trif	101	5.575	5.574	0.003	96	493702	2.00	2.07	
31 Methylene Chloride	84	5.710	5.711	0.002	95	182976	2.00	1.89	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.726	5.727	0.001	99	196390	2.00	2.05	
33 Carbon disulfide	76	5.850	5.851	0.001	99	734444	2.00	2.02	
34 trans-1,2-Dichloroethene	96	6.448	6.451	0.000	98	270488	2.00	2.07	
35 2-Methylpentane	43	6.481	6.484	0.000	94	626773	2.02	2.22	
36 Methyl tert-butyl ether	73	6.567	6.577	-0.008	96	683319	2.00	2.20	
37 1,1-Dichloroethane	63	6.837	6.835	0.005	100	501806	2.00	2.04	
38 Vinyl acetate	43	6.939	6.945	-0.003	100	681191	2.00	2.23	
39 2-Butanone (MEK)	72	7.343	7.352	-0.006	99	111467	2.00	2.07	
40 Hexane	56	7.397	7.400	0.000	86	213309	2.00	1.97	
41 Isopropyl ether	45	7.543	7.550	-0.004	97	752403	2.00	1.94	
42 cis-1,2-Dichloroethene	96	7.759	7.762	0.000	94	288670	2.00	2.17	
43 Ethyl acetate	43	7.937	7.949	-0.009	99	502092	2.00	2.08	
44 Chloroform	83	8.088	8.088	0.003	97	604584	2.00	2.12	
45 Tert-butyl ethyl ether	59	8.185	8.194	-0.006	94	727385	2.00	2.15	
46 Tetrahydrofuran	42	8.449	8.463	-0.011	94	264214	2.00	2.12	
47 1,1,1-Trichloroethane	97	9.069	9.071	0.001	95	655693	2.00	2.10	
48 1,2-Dichloroethane	62	9.161	9.160	0.001	98	391063	2.00	2.00	
49 Benzene	78	9.657	9.653	0.003	97	808204	2.00	2.14	
50 Cyclohexane	69	9.657	9.658	-0.002	94	136764	2.00	1.97	
52 Carbon tetrachloride	117	9.684	9.683	0.000	99	722109	2.00	2.14	
51 n-Butanol	31	9.657	9.684	-0.028	66	86948	2.00	1.90	
53 2,3-Dimethylpentane	71	9.808	9.807	0.000	91	184564	2.02	1.89	
54 Thiophene	84	9.926	9.929	-0.004	96	485117	2.02	2.15	
55 Tert-amyl methyl ether	73	10.164	10.180	-0.017	98	661085	2.00	1.96	
56 Isooctane	57	10.482	10.478	0.003	99	1415446	2.00	2.07	
57 n-Heptane	71	10.881	10.880	0.000	91	310368	2.00	2.05	
58 1,2-Dichloropropane	63	10.913	10.916	-0.003	91	309406	2.00	2.16	
59 Trichloroethene	130	10.967	10.965	0.001	97	429100	2.00	1.95	
60 Dibromomethane	93	11.032	11.032	-0.001	93	357390	2.00	2.06	
61 Dichlorobromomethane	83	11.194	11.193	0.000	99	639678	2.00	2.12	
62 1,4-Dioxane	88	11.210	11.221	-0.012	88	98880	2.00	1.95	
63 Methyl methacrylate	41	11.323	11.326	-0.004	92	333725	2.00	2.16	
64 Methylcyclohexane	83	11.765	11.765	-0.001	95	521357	2.02	1.67	
65 4-Methyl-2-pentanone (MIBK	43	12.191	12.197	-0.007	96	531479	2.00	2.07	
66 cis-1,3-Dichloropropene	75	12.240	12.239	0.000	94	497067	2.00	2.20	
67 trans-1,3-Dichloropropene	75	12.957	12.955	-0.001	98	456545	2.00	2.21	
68 Toluene	91	13.081	13.081	-0.002	94	964585	2.00	2.26	
69 1,1,2-Trichloroethane	83	13.151	13.158	-0.003	99	268415	2.00	2.13	
70 2-Methylthiophene	97	13.232	13.231	-0.001	97	824414	2.02	2.29	
71 3-Methylthiophene	97	13.437	13.437	-0.002	99	838500	2.02	2.39	
72 2-Hexanone	58	13.566	13.575	-0.012	94	251264	2.00	2.00	
73 n-Octane	85	13.831	13.830	-0.003	93	355304	2.00	2.11	
74 Chlorodibromomethane	129	13.863	13.860	0.001	98	641200	2.00	2.21	
75 Ethylene Dibromide	107	14.149	14.149	-0.003	99	545908	2.00	2.20	
76 Tetrachloroethene	129	14.251	14.248	0.000	96	380622	2.00	2.03	
77 Chlorobenzene	112	15.135	15.135	-0.003	94	780861	2.00	2.20	
78 2,3-Dimethylheptane	43	15.200	15.200	-0.003	96	922396	2.02	2.18	
79 Ethylbenzene	91	15.443	15.442	-0.002	98	1251681	2.00	2.23	
80 2-Ethylthiophene	97	15.545	15.540	0.001	98	936467	2.02	2.23	
81 m-Xylene & p-Xylene	91	15.610	15.609	-0.002	99	1936648	4.00	4.48	
83 Bromoform	173	16.031	16.030	-0.003	98	649507	2.00	2.43	
82 n-Nonane	57	16.074	16.073	-0.002	93	606554	2.00	2.16	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.079	16.075	0.000	97	720373	2.00	2.35	
85 o-Xylene	91	16.138	16.136	-0.002	99	989344	2.00	2.17	
86 1,1,2,2-Tetrachloroethane	83	16.462	16.459	0.000	99	664451	2.00	2.21	
87 1,2,3-Trichloropropane	110	16.618	16.616	-0.001	98	214617	2.00	2.17	
88 Isopropylbenzene	105	16.737	16.737	-0.003	96	1402660	2.00	2.19	
89 N-Propylbenzene	120	17.292	17.292	-0.003	99	394328	2.00	2.26	
90 2-Chlorotoluene	126	17.325	17.323	-0.002	97	360349	2.00	2.24	
91 4-Ethyltoluene	105	17.454	17.454	-0.003	99	1297483	2.00	2.10	
92 1,3,5-Trimethylbenzene	120	17.540	17.536	0.001	93	658225	2.00	2.21	
93 Alpha Methyl Styrene	118	17.783	17.777	0.002	90	572326	2.00	2.33	
94 n-Decane	57	17.880	17.875	0.002	91	720270	2.00	2.18	
95 tert-Butylbenzene	119	17.983	17.981	-0.002	94	1253144	2.00	2.18	
96 1,2,4-Trimethylbenzene	105	17.999	17.996	-0.001	96	1134339	2.00	2.19	
98 1,3-Dichlorobenzene	146	18.268	18.266	-0.002	66	780831	2.00	2.09	
97 sec-Butylbenzene	105	18.268	18.267	-0.002	98	1622625	2.00	2.16	
99 Benzyl chloride	91	18.349	18.346	0.000	98	961343	2.00	2.32	
100 1,4-Dichlorobenzene	146	18.360	18.359	-0.003	96	778649	2.00	2.13	
101 4-Isopropyltoluene	119	18.446	18.440	0.002	97	1368466	2.00	2.14	
102 1,2,3-Trimethylbenzene	105	18.490	18.485	0.002	97	922084	2.02	2.32	
103 Butylcyclohexane	83	18.560	18.557	-0.001	94	814182	2.02	2.03	
104 1,2-Dichlorobenzene	146	18.732	18.731	-0.003	95	744005	2.00	2.08	
105 2,3-Dihydroindene	117	18.738	18.733	0.002	94	986039	2.02	2.04	
106 Indene	116	18.867	18.866	-0.002	94	1003097	2.02	2.46	
107 n-Butylbenzene	91	18.894	18.893	-0.002	98	1205992	2.00	2.17	
108 Undecane	57	19.244	19.243	-0.003	96	744777	2.00	2.13	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.277	19.275	-0.002	98	1210567	2.02	2.62	
110 1,2-Dibromo-3-Chloropropan	157	19.352	19.348	0.000	95	276949	2.00	1.84	
111 1,2,4,5-Tetramethylbenzene	119	19.670	19.669	-0.003	97	1248695	2.02	2.29	
112 1,2,3,5-Tetramethylbenzene	119	19.724	19.723	-0.003	96	772406	2.02	2.32	
113 1,2,3,4-Tetramethylbenzene	119	20.123	20.117	0.002	97	993390	2.02	2.21	
114 Dodecane	57	20.312	20.309	-0.001	96	610489	2.00	1.98	
115 1,2,4-Trichlorobenzene	180	20.458	20.454	0.000	94	546506	2.00	2.20	
116 Naphthalene	128	20.587	20.584	-0.001	99	1150964	2.00	2.18	
117 Benzo(b)thiophene	134	20.684	20.684	-0.004	99	639879	2.02	2.21	
118 Hexachlorobutadiene	225	20.814	20.810	0.000	94	730666	2.00	1.91	
119 1,2,3-Trichlorobenzene	180	20.862	20.861	-0.003	94	516240	2.00	2.13	
120 2-Methylnaphthalene	142	21.660	21.656	-0.001	100	482725	6.25	6.28	
121 1-Methylnaphthalene	142	21.838	21.837	-0.003	100	534706	6.25	6.83	
A 124 Toluene Range	1	13.071	(13.036-13.106)		0	2336088	2.00	2.19	
A 125 C8 Range	1	13.836	(13.821-13.851)		0	3958974	2.00	2.40	M
S 126 Xylenes, Total	100				0		6.00	6.65	
S 127 1,2-Dichloroethene, Total	1				0		4.00	4.24	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40CV101S_00028	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

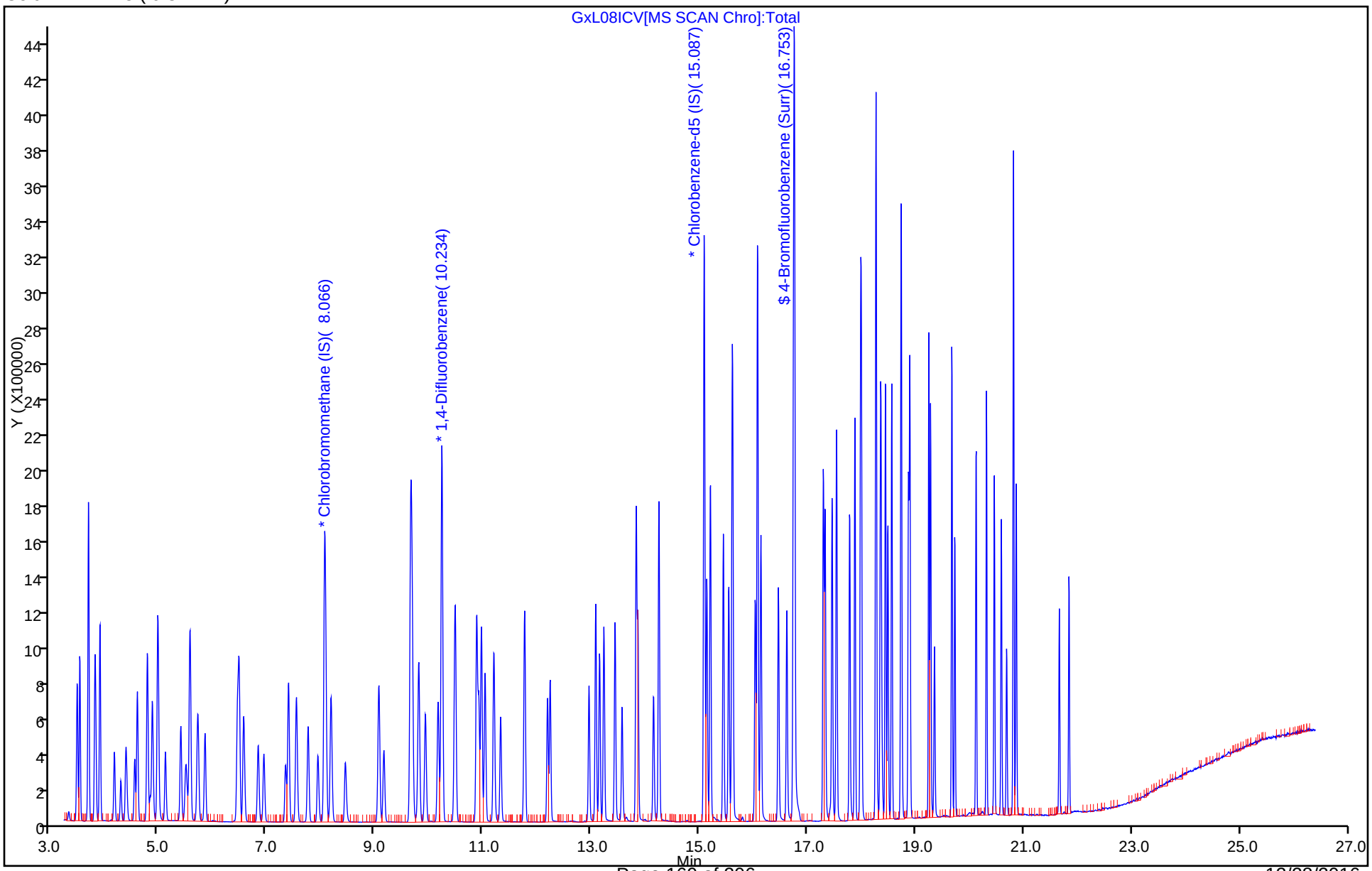
Report Date: 13-Dec-2016 14:47:08 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08ICV.D

Injection Date:	09-Dec-2016 03:01:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	ICV			Worklist Smp#:	13
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1

SDG No.:

Lab Sample ID: CCVIS 140-7415/2 Calibration Date: 12/19/2016 10:19

Instrument ID: MG Calib Start Date: 12/08/2016 19:58

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 12/09/2016 01:38

Lab File ID: GCCVL19.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3281	0.4358		2.66	2.00	32.8*	30.0
Propene	Ave	1.094	1.382		2.53	2.00	26.3	30.0
Dichlorodifluoromethane	Ave	3.423	4.428		2.59	2.00	29.3	30.0
Chloromethane	Ave	0.3677	0.4421		2.41	2.00	20.2	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.268	2.638		2.33	2.00	16.3	30.0
Acetaldehyde	Ave	0.4060	0.5072		12.6	10.1	24.9	30.0
Vinyl chloride	Ave	1.207	1.477		2.45	2.00	22.4	30.0
1,3-Butadiene	Ave	0.9739	1.169		2.40	2.00	20.1	30.0
Butane	Ave	1.902	2.478		2.61	2.00	30.3*	30.0
Bromomethane	Ave	1.152	1.238		2.15	2.00	7.5	30.0
Chloroethane	Ave	0.6412	0.7035		2.20	2.00	9.7	30.0
Ethanol	Ave	0.3997	0.4415		11.2	10.1	10.5	30.0
Vinyl bromide	Ave	1.088	1.168		2.15	2.00	7.4	30.0
2-Methylbutane	Ave	1.389	1.631		2.35	2.00	17.4	30.0
Acrolein	Ave	0.3114	0.3275		2.10	2.00	5.2	30.0
Trichlorofluoromethane	Ave	3.318	3.973		2.40	2.00	19.8	30.0
Acetonitrile	Ave	0.3691	0.4868		2.64	2.00	31.9*	30.0
Acetone	Ave	0.4215	0.4670		6.65	6.00	10.8	30.0
Isopropyl alcohol	Ave	1.426	1.620		6.82	6.00	13.6	30.0
Pentane	Ave	0.2036	0.2175		2.14	2.00	6.8	30.0
Ethyl ether	Ave	0.8402	1.163		2.77	2.00	38.4*	30.0
1,1-Dichloroethene	Ave	0.9780	1.061		2.17	2.00	8.5	30.0
Acrylonitrile	Ave	0.5284	0.6355		2.41	2.00	20.3	30.0
tert-Butyl alcohol	Ave	1.499	1.746		2.33	2.00	16.5	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.097	2.356		2.25	2.00	12.3	30.0
Methylene Chloride	Ave	0.8508	0.8622		2.03	2.00	1.3	30.0
3-Chloropropene	Ave	0.8422	1.041		2.47	2.00	23.6	30.0
Carbon disulfide	Ave	3.196	3.263		2.04	2.00	2.1	30.0
trans-1,2-Dichloroethene	Ave	1.149	1.248		2.17	2.00	8.6	30.0
2-Methylpentane	Ave	2.476	3.190		2.60	2.02	28.8	30.0
Methyl tert-butyl ether	Ave	2.730	3.456		2.53	2.00	26.6	30.0
1,1-Dichloroethane	Ave	2.159	2.630		2.44	2.00	21.8	30.0
Vinyl acetate	Ave	2.684	3.865		2.88	2.00	44.0*	30.0
2-Butanone (MEK)	Ave	0.4737	0.5263		2.22	2.00	11.1	30.0
Hexane	Ave	0.9508	1.147		2.41	2.00	20.6	30.0
Isopropyl ether	Ave	3.411	4.808		2.82	2.00	40.9*	30.0
cis-1,2-Dichloroethene	Ave	1.166	1.322		2.27	2.00	13.3	30.0
Ethyl acetate	Ave	2.116	2.961		2.80	2.00	40.0*	30.0
Chloroform	Ave	2.509	3.001		2.39	2.00	19.6	30.0
Tert-butyl ethyl ether	Ave	2.966	3.975		2.68	2.00	34.0*	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1

SDG No.:

Lab Sample ID: CCVIS 140-7415/2 Calibration Date: 12/19/2016 10:19

Instrument ID: MG Calib Start Date: 12/08/2016 19:58

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 12/09/2016 01:38

Lab File ID: GCCVL19.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.092	1.536		2.81	2.00	40.6*	30.0
1,1,1-Trichloroethane	Ave	2.737	3.353		2.45	2.00	22.5	30.0
1,2-Dichloroethane	Ave	0.3729	0.4329		2.32	2.00	16.1	30.0
1-Butanol	Ave	0.0875	0.0933		2.13	2.00	6.7	30.0
Benzene	Ave	0.7195	0.7464		2.08	2.00	3.7	30.0
Cyclohexane	Ave	0.1326	0.1327		2.00	2.00	0.0	30.0
Carbon tetrachloride	Ave	0.6424	0.7107		2.21	2.00	10.6	30.0
2,3-Dimethylpentane	Ave	0.1859	0.1880		2.04	2.02	1.1	30.0
Thiophene	Ave	0.4306	0.4318		2.03	2.02	0.3	30.0
Tert-amyl methyl ether	Ave	0.6436	0.7163		2.23	2.00	11.3	30.0
2,2,4-Trimethylpentane	Ave	1.305	1.415		2.17	2.00	8.5	30.0
Heptane	Ave	0.2889	0.2949		2.04	2.00	2.1	30.0
1,2-Dichloropropane	Ave	0.2726	0.3022		2.22	2.00	10.9	30.0
Trichloroethene	Ave	0.4186	0.3772		1.80	2.00	-9.9	30.0
Dibromomethane	Ave	0.3316	0.3374		2.04	2.00	1.7	30.0
Bromodichloromethane	Ave	0.5762	0.6332		2.20	2.00	9.9	30.0
1,4-Dioxane	Ave	0.0965	0.0894		1.85	2.00	-7.4	30.0
Methyl methacrylate	Ave	0.2946	0.3610		2.45	2.00	22.5	30.0
Methylcyclohexane	Ave	0.5953	0.5880		1.99	2.02	-1.2	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4897	0.5585		2.28	2.00	14.1	30.0
cis-1,3-Dichloropropene	Ave	0.4307	0.4798		2.23	2.00	11.4	30.0
trans-1,3-Dichloropropene	Ave	0.3859	0.4404		2.28	2.00	14.1	30.0
Toluene	Ave	0.7999	0.8584		2.15	2.00	7.3	30.0
1,1,2-Trichloroethane	Ave	0.2359	0.2515		2.13	2.00	6.6	30.0
2-Methylthiophene	Ave	0.6747	0.6913		2.07	2.02	2.5	30.0
3-Methylthiophene	Ave	0.6573	0.6890		2.12	2.02	4.8	30.0
2-Hexanone	Ave	0.2348	0.2410		2.05	2.00	2.6	30.0
Octane	Ave	0.3146	0.3222		2.05	2.00	2.4	30.0
Dibromochloromethane	Ave	0.5428	0.5781		2.13	2.00	6.5	30.0
1,2-Dibromoethane (EDB)	Ave	0.4640	0.4968		2.14	2.00	7.1	30.0
Tetrachloroethene	Ave	0.3510	0.3391		1.93	2.00	-3.4	30.0
Chlorobenzene	Ave	0.6640	0.6871		2.07	2.00	3.5	30.0
2,3-Dimethylheptane	Ave	0.7928	0.9501		2.42	2.02	19.8	30.0
Ethylbenzene	Ave	1.049	1.185		2.26	2.00	13.0	30.0
2-Ethylthiophene	Ave	0.7845	0.8813		2.27	2.02	12.3	30.0
m-Xylene & p-Xylene	Ave	0.8084	0.9150		4.53	4.00	13.2	30.0
Bromoform	Ave	0.4996	0.5635		2.26	2.00	12.8	30.0
Nonane	Ave	0.5241	0.6122		2.34	2.00	16.8	30.0
Styrene	Ave	0.5743	0.6485		2.26	2.00	12.9	30.0
o-Xylene	Ave	0.8521	0.9524		2.24	2.00	11.8	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5626	0.6405		2.28	2.00	13.8	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1

SDG No.:

Lab Sample ID: CCVIS 140-7415/2 Calibration Date: 12/19/2016 10:19

Instrument ID: MG Calib Start Date: 12/08/2016 19:58

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 12/09/2016 01:38

Lab File ID: GCCVL19.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1853	0.2063		2.23	2.00	11.3	30.0
Isopropylbenzene	Ave	1.199	1.293		2.16	2.00	7.9	30.0
Propylbenzene	Ave	0.3264	0.3495		2.14	2.00	7.1	30.0
2-Chlorotoluene	Ave	0.3015	0.3176		2.11	2.00	5.3	30.0
4-Ethyltoluene	Ave	1.156	1.277		2.21	2.00	10.4	30.0
1,3,5-Trimethylbenzene	Ave	0.5561	0.5854		2.11	2.00	5.3	30.0
Alpha Methyl Styrene	Ave	0.4587	0.5067		2.21	2.00	10.5	30.0
Decane	Ave	0.6186	0.7423		2.40	2.00	20.0	30.0
tert-Butylbenzene	Ave	1.078	1.163		2.16	2.00	7.9	30.0
1,2,4-Trimethylbenzene	Ave	0.9689	1.075		2.22	2.00	10.9	30.0
1,3-Dichlorobenzene	Ave	0.7000	0.7301		2.09	2.00	4.3	30.0
sec-Butylbenzene	Ave	1.402	1.534		2.19	2.00	9.5	30.0
Benzyl chloride	Ave	0.7737	0.9336		2.41	2.00	20.7	30.0
1,4-Dichlorobenzene	Ave	0.6842	0.7124		2.08	2.00	4.1	30.0
4-Isopropyltoluene	Ave	1.194	1.289		2.16	2.00	8.0	30.0
1,2,3-Trimethylbenzene	Ave	0.7450	0.8186		2.22	2.02	9.9	30.0
Butylcyclohexane	Ave	0.7496	0.8176		2.20	2.02	9.1	30.0
1,2-Dichlorobenzene	Ave	0.6689	0.7001		2.09	2.00	4.7	30.0
Indane	Ave	0.9021	0.9668		2.16	2.02	7.2	30.0
Indene	Lin1		0.7106		1.90	2.02	-6.0	30.0
Butylbenzene	Ave	1.038	1.194		2.30	2.00	15.0	30.0
Undecane	Ave	0.6532	0.7788		2.39	2.00	19.2	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.8658	0.9096		2.12	2.02	5.1	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2810	0.2808		2.00	2.00	-0.0	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.018	1.088		2.16	2.02	6.9	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.6220	0.6636		2.15	2.02	6.7	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.8407	0.8889		2.14	2.02	5.7	30.0
Dodecane	Ave	0.5779	0.6018		2.08	2.00	4.1	30.0
1,2,4-Trichlorobenzene	Ave	0.4650	0.4930		2.12	2.00	6.0	30.0
Naphthalene	Ave	0.9864	1.083		2.20	2.00	9.8	30.0
Benzo(b)thiophene	Ave	0.5407	0.5450		2.04	2.02	0.8	30.0
Hexachlorobutadiene	Ave	0.7142	0.6910		1.94	2.00	-3.2	30.0
1,2,3-Trichlorobenzene	Ave	0.4535	0.4601		2.03	2.00	1.4	30.0
2-Methylnaphthalene	Ave	0.1438	0.1336		5.81	6.25	-7.0	50.0
1-Methylnaphthalene	Ave	0.1465	0.1358		5.80	6.25	-7.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6615	0.7100		4.29	4.00	7.3	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GCCVL19.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 19-Dec-2016 10:19:30 ALS Bottle#: 15 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003721-002
Misc. Info.: P28
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Dec-2016 15:29:54 Calib Date: 09-Dec-2016 12:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: tajh Date: 19-Dec-2016 15:29:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.055	8.055	0.000	97	342576	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.229	10.229	0.000	96	1699783	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.082	15.082	0.000	88	1743044	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.753	16.753	0.000	96	1237525	4.00	4.29	
6 Chlorodifluoromethane	67	3.477	3.477	0.000	97	74684	2.00	2.66	
7 Propene	41	3.488	3.488	0.000	99	236829	2.00	2.53	
8 Dichlorodifluoromethane	85	3.531	3.531	0.000	100	758843	2.00	2.59	
9 Chloromethane	52	3.682	3.682	0.000	98	75763	2.00	2.41	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.693	3.693	0.000	92	452127	2.00	2.33	
11 Acetaldehyde	44	3.812	3.812	0.000	95	438645	10.1	12.6	
12 Vinyl chloride	62	3.828	3.828	0.000	99	253056	2.00	2.45	
13 Butadiene	54	3.903	3.903	0.000	87	200393	2.00	2.40	
14 Butane	43	3.903	3.903	0.000	93	424682	2.00	2.61	
15 Bromomethane	94	4.173	4.173	0.000	99	212168	2.00	2.15	
16 Chloroethane	64	4.292	4.292	0.000	96	120573	2.00	2.20	
17 Ethanol	31	4.383	4.383	0.000	98	381763	10.1	11.2	
18 Vinyl bromide	106	4.545	4.545	0.000	98	200219	2.00	2.15	
19 2-Methylbutane	43	4.594	4.594	0.000	92	279477	2.00	2.35	
21 Acrolein	56	4.777	4.777	0.000	97	56131	2.00	2.10	
20 Trichlorofluoromethane	101	4.777	4.777	0.000	99	680913	2.00	2.40	
22 Acetonitrile	40	4.831	4.831	0.000	95	83426	2.00	2.64	
23 Acetone	58	4.874	4.874	0.000	99	240111	6.00	6.65	
25 Isopropyl alcohol	45	4.971	4.971	0.000	92	832950	6.00	6.82	
24 Pentane	72	4.976	4.976	0.000	95	37278	2.00	2.14	
26 Ethyl ether	31	5.111	5.111	0.000	94	199358	2.00	2.77	
27 1,1-Dichloroethene	96	5.397	5.397	0.000	95	181765	2.00	2.17	
28 Acrylonitrile	53	5.478	5.478	0.000	94	108904	2.00	2.41	
29 2-Methyl-2-propanol	59	5.499	5.499	0.000	94	299312	2.00	2.33	
30 1,1,2-Trichloro-1,2,2-trif	101	5.564	5.564	0.000	97	403763	2.00	2.25	
31 Methylene Chloride	84	5.704	5.704	0.000	98	147770	2.00	2.03	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.721	5.721	0.000	97	178455	2.00	2.47	
33 Carbon disulfide	76	5.845	5.845	0.000	100	559184	2.00	2.04	
34 trans-1,2-Dichloroethene	96	6.443	6.443	0.000	95	213927	2.00	2.17	
35 2-Methylpentane	43	6.475	6.475	0.000	96	551706	2.02	2.60	
36 Methyl tert-butyl ether	73	6.562	6.562	0.000	97	592346	2.00	2.53	
37 1,1-Dichloroethane	63	6.826	6.826	0.000	100	450686	2.00	2.44	
38 Vinyl acetate	43	6.934	6.934	0.000	100	662312	2.00	2.88	
39 2-Butanone (MEK)	72	7.333	7.333	0.000	98	90190	2.00	2.22	
40 Hexane	56	7.387	7.387	0.000	90	196566	2.00	2.41	
41 Isopropyl ether	45	7.532	7.532	0.000	97	824130	2.00	2.82	
42 cis-1,2-Dichloroethene	96	7.748	7.748	0.000	97	226504	2.00	2.27	
43 Ethyl acetate	43	7.931	7.931	0.000	98	507538	2.00	2.80	
44 Chloroform	83	8.077	8.077	0.000	98	514390	2.00	2.39	
45 Tert-butyl ethyl ether	59	8.174	8.174	0.000	96	681332	2.00	2.68	
46 Tetrahydrofuran	42	8.444	8.444	0.000	94	263179	2.00	2.81	
47 1,1,1-Trichloroethane	97	9.058	9.058	0.000	95	574663	2.00	2.45	
48 1,2-Dichloroethane	62	9.150	9.150	0.000	98	368112	2.00	2.32	
51 n-Butanol	31	9.646	9.646	0.000	68	79328	2.00	2.13	
49 Benzene	78	9.646	9.646	0.000	98	634699	2.00	2.08	
50 Cyclohexane	69	9.652	9.652	0.000	92	112801	2.00	2.00	
52 Carbon tetrachloride	117	9.679	9.679	0.000	98	604378	2.00	2.21	
53 2,3-Dimethylpentane	71	9.797	9.797	0.000	91	161308	2.02	2.04	
54 Thiophene	84	9.921	9.921	0.000	97	370572	2.02	2.03	
55 Tert-amyl methyl ether	73	10.158	10.158	0.000	97	609133	2.00	2.23	
56 Isooctane	57	10.471	10.471	0.000	97	1203425	2.00	2.17	
57 n-Heptane	71	10.870	10.870	0.000	94	250777	2.00	2.04	
58 1,2-Dichloropropane	63	10.908	10.908	0.000	87	256955	2.00	2.22	
59 Trichloroethene	130	10.957	10.957	0.000	95	320765	2.00	1.80	
60 Dibromomethane	93	11.027	11.027	0.000	96	286898	2.00	2.04	
61 Dichlorobromomethane	83	11.188	11.188	0.000	99	538456	2.00	2.20	
62 1,4-Dioxane	88	11.205	11.205	0.000	95	75989	2.00	1.85	
63 Methyl methacrylate	41	11.312	11.312	0.000	94	306969	2.00	2.45	
64 Methylcyclohexane	83	11.760	11.760	0.000	93	504620	2.02	1.99	
65 4-Methyl-2-pentanone (MIBK	43	12.181	12.181	0.000	97	474878	2.00	2.28	
66 cis-1,3-Dichloropropene	75	12.229	12.229	0.000	97	407982	2.00	2.23	
67 trans-1,3-Dichloropropene	75	12.952	12.952	0.000	97	384030	2.00	2.28	
68 Toluene	91	13.076	13.076	0.000	93	748517	2.00	2.15	
69 1,1,2-Trichloroethane	83	13.146	13.146	0.000	98	219283	2.00	2.13	
70 2-Methylthiophene	97	13.227	13.227	0.000	98	608389	2.02	2.07	
71 3-Methylthiophene	97	13.432	13.432	0.000	100	606341	2.02	2.12	
72 2-Hexanone	58	13.561	13.561	0.000	91	210113	2.00	2.05	
73 n-Octane	85	13.825	13.825	0.000	95	280975	2.00	2.05	
74 Chlorodibromomethane	129	13.852	13.852	0.000	98	504069	2.00	2.13	
75 Ethylene Dibromide	107	14.143	14.143	0.000	98	433181	2.00	2.14	
76 Tetrachloroethene	129	14.246	14.246	0.000	95	295647	2.00	1.93	
77 Chlorobenzene	112	15.130	15.130	0.000	91	599153	2.00	2.07	
78 2,3-Dimethylheptane	43	15.195	15.195	0.000	96	836105	2.02	2.42	
79 Ethylbenzene	91	15.438	15.438	0.000	99	1033548	2.00	2.26	
80 2-Ethylthiophene	97	15.535	15.535	0.000	98	775549	2.02	2.27	
81 m-Xylene & p-Xylene	91	15.605	15.605	0.000	99	1595663	4.00	4.53	
83 Bromoform	173	16.025	16.025	0.000	96	491391	2.00	2.26	
82 n-Nonane	57	16.069	16.069	0.000	93	533841	2.00	2.34	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.069	16.069	0.000	97	565467	2.00	2.26	
85 o-Xylene	91	16.133	16.133	0.000	98	830519	2.00	2.24	
86 1,1,2,2-Tetrachloroethane	83	16.457	16.457	0.000	99	558509	2.00	2.28	
87 1,2,3-Trichloropropane	110	16.613	16.613	0.000	96	179868	2.00	2.23	
88 Isopropylbenzene	105	16.732	16.732	0.000	97	1127293	2.00	2.16	
89 N-Propylbenzene	120	17.287	17.287	0.000	99	304715	2.00	2.14	
90 2-Chlorotoluene	126	17.320	17.320	0.000	97	276898	2.00	2.11	
91 4-Ethyltoluene	105	17.449	17.449	0.000	99	1113398	2.00	2.21	
92 1,3,5-Trimethylbenzene	120	17.530	17.530	0.000	92	510434	2.00	2.11	
93 Alpha Methyl Styrene	118	17.772	17.772	0.000	88	441825	2.00	2.21	
94 n-Decane	57	17.870	17.870	0.000	90	647251	2.00	2.40	
95 tert-Butylbenzene	119	17.977	17.977	0.000	91	1014151	2.00	2.16	
96 1,2,4-Trimethylbenzene	105	17.994	17.994	0.000	96	937039	2.00	2.22	
98 1,3-Dichlorobenzene	146	18.263	18.263	0.000	66	636644	2.00	2.09	
97 sec-Butylbenzene	105	18.263	18.263	0.000	98	1338008	2.00	2.19	
99 Benzyl chloride	91	18.339	18.339	0.000	98	814078	2.00	2.41	
100 1,4-Dichlorobenzene	146	18.355	18.355	0.000	95	621184	2.00	2.08	
101 4-Isopropyltoluene	119	18.436	18.436	0.000	97	1123964	2.00	2.16	
102 1,2,3-Trimethylbenzene	105	18.479	18.479	0.000	98	720406	2.02	2.22	
103 Butylcyclohexane	83	18.554	18.554	0.000	91	719514	2.02	2.20	
104 1,2-Dichlorobenzene	146	18.727	18.727	0.000	93	610517	2.00	2.09	
105 2,3-Dihydroindene	117	18.732	18.732	0.000	94	850794	2.02	2.16	
106 Indene	116	18.862	18.862	0.000	93	625361	2.02	1.90	
107 n-Butylbenzene	91	18.889	18.889	0.000	98	1041173	2.00	2.30	
108 Undecane	57	19.239	19.239	0.000	96	679070	2.00	2.39	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.272	19.272	0.000	97	800414	2.02	2.12	
110 1,2-Dibromo-3-Chloropropan	157	19.347	19.347	0.000	97	244879	2.00	2.00	
111 1,2,4,5-Tetramethylbenzene	119	19.665	19.665	0.000	97	957611	2.02	2.16	
112 1,2,3,5-Tetramethylbenzene	119	19.719	19.719	0.000	95	583926	2.02	2.15	
113 1,2,3,4-Tetramethylbenzene	119	20.113	20.113	0.000	97	782252	2.02	2.14	
114 Dodecane	57	20.307	20.307	0.000	94	524740	2.00	2.08	
115 1,2,4-Trichlorobenzene	180	20.453	20.453	0.000	94	429874	2.00	2.12	
116 Naphthalene	128	20.582	20.582	0.000	99	944111	2.00	2.20	
117 Benzo(b)thiophene	134	20.679	20.679	0.000	99	479622	2.02	2.04	
118 Hexachlorobutadiene	225	20.808	20.808	0.000	95	602531	2.00	1.94	
119 1,2,3-Trichlorobenzene	180	20.857	20.857	0.000	94	401179	2.00	2.03	
120 2-Methylnaphthalene	142	21.655	21.655	0.000	100	364215	6.25	5.81	
121 1-Methylnaphthalene	142	21.833	21.833	0.000	100	370188	6.25	5.80	
A 124 Toluene Range	1	13.071	(13.036-13.106)		0	1918708	2.00	2.22	
A 125 C8 Range	1	13.830	(13.815-13.845)		0	3549526	2.00	2.65	M
S 126 Xylenes, Total	100				0		6.00	6.77	
S 127 1,2-Dichloroethene, Total	1				0		4.00	4.44	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40CV101S_00028	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

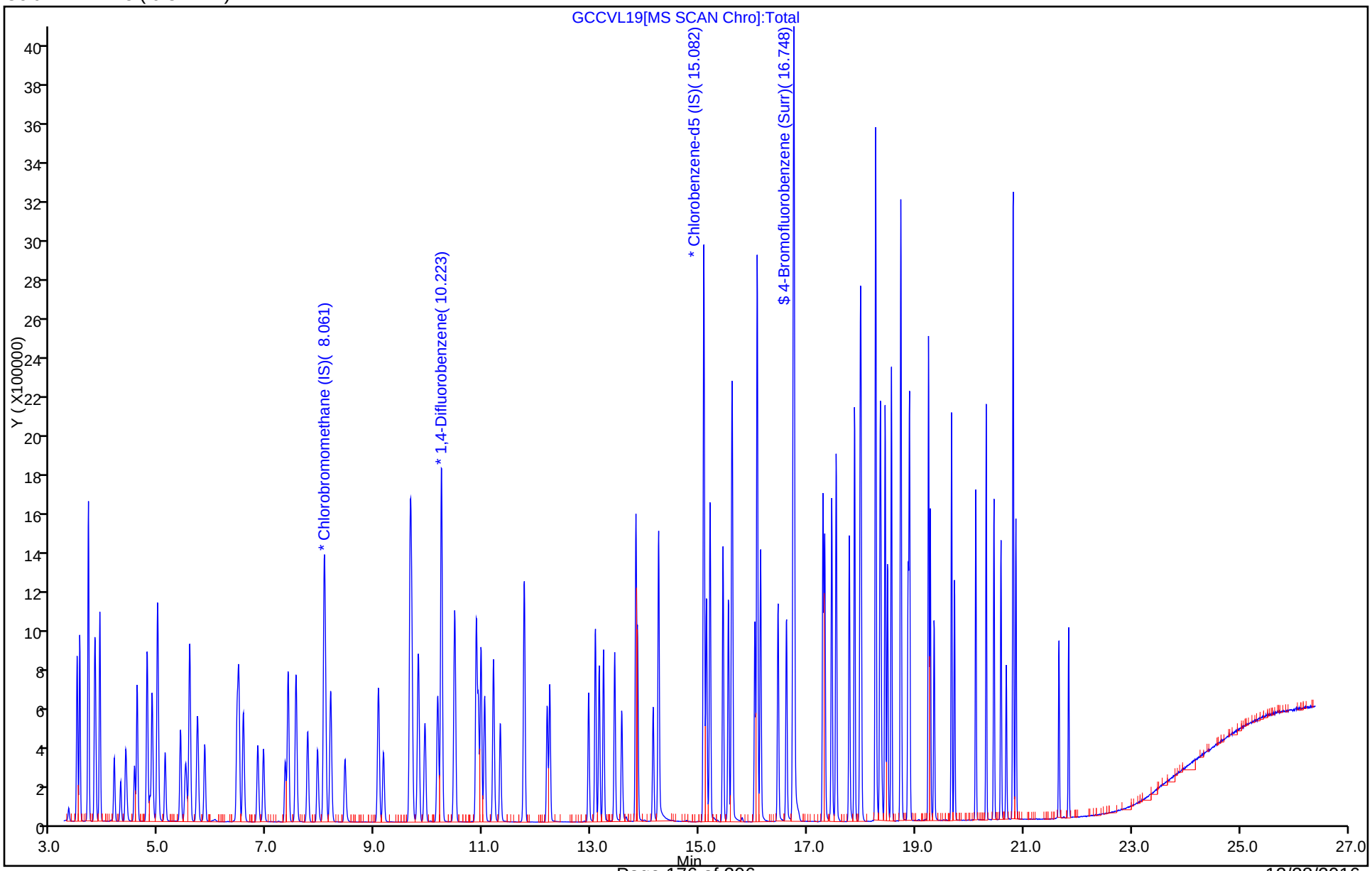
Report Date: 19-Dec-2016 15:29:55 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GCCVL19.D

Injection Date:	19-Dec-2016 10:19:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxBFBL08.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	08-Dec-2016 19:26:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003696-001				
Misc. Info.:	BFB				
Operator ID:	403648	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	09-Dec-2016 15:01:18	Calib Date:	09-Dec-2016 12:54:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK006				
First Level Reviewer: barlozhetskayaa		Date:	09-Dec-2016 15:01:18		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.755	4.755	0.000	0	657457	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

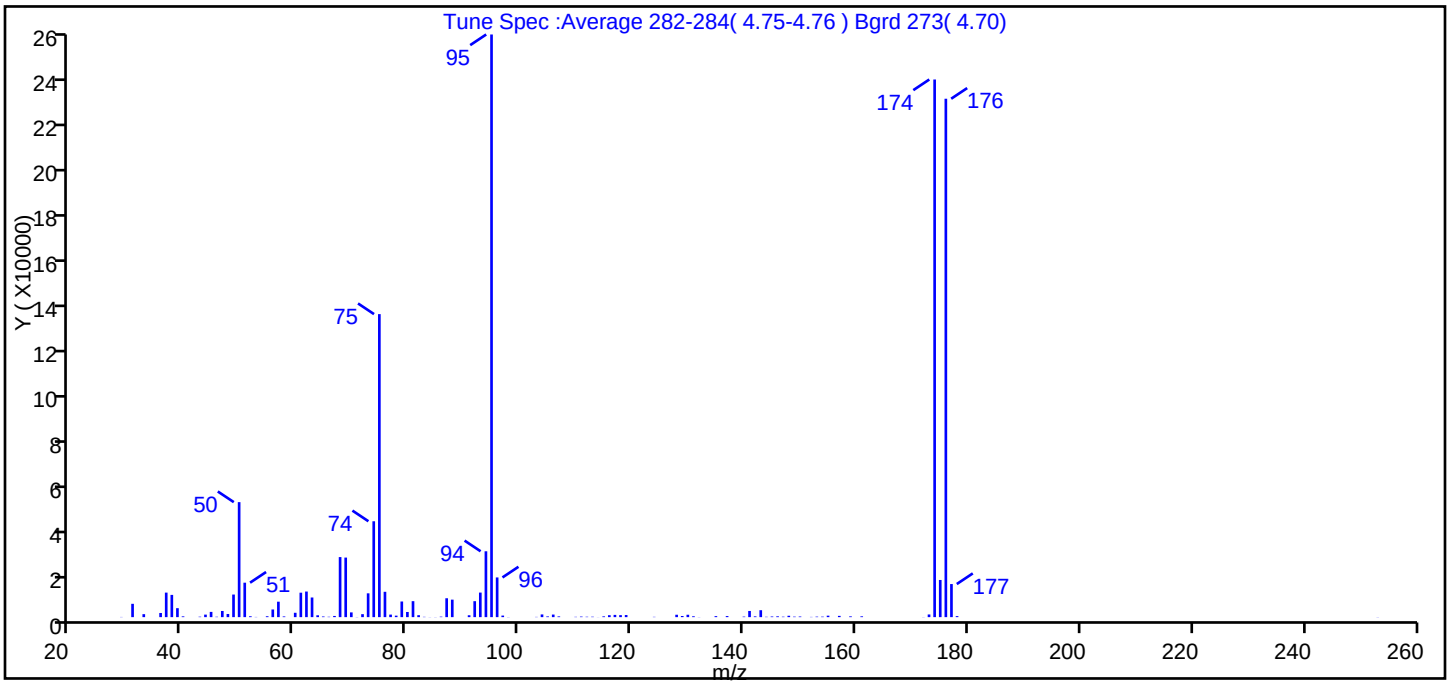
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxBFBL08.D
Injection Date: 08-Dec-2016 19:26:30 Instrument ID: MG
Lims ID: BFB
Client ID:
Operator ID: 403648 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	19.7
75	30 to 60% of m/z 95	52.0
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.5 (0.5)
174	50 to 120% of m/z 95	92.3
175	5 to 9% of m/z 174	6.4 (6.9)
176	Greater than 95% but less than 101% of m/z 174	89.0 (96.4)
177	5 to 9% of m/z 176	5.7 (6.4)

Data File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxBFBL08.D\MG_TO15.rslt\spectra.d
Injection Date: 08-Dec-2016 19:26:30
Spectrum: Tune Spec :Average 282-284(4.75-4.76) Bgrd 273(4.70)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 109

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	83	65.00	282	95.00	251840	141.00	2671
31.00	5761	66.00	160	96.00	17160	142.00	334
33.00	1289	67.00	511	97.00	675	143.00	2997
36.00	1796	68.00	25960	98.00	57	144.00	155
37.00	10602	69.00	25744	103.00	107	145.00	281
38.00	9616	70.00	2052	104.00	1170	146.00	353
39.00	3881	71.00	65	105.00	312	147.00	197
40.00	333	72.00	1291	106.00	1120	148.00	598
43.00	193	73.00	10294	107.00	315	149.00	219
44.00	1093	74.00	41440	110.00	136	150.00	274
45.00	2271	75.00	130976	111.00	247	152.00	103
46.00	169	76.00	10957	112.00	177	153.00	221
47.00	2665	77.00	1097	113.00	185	154.00	216
48.00	1366	78.00	647	114.00	35	155.00	638
49.00	9770	79.00	6762	115.00	334	157.00	549
50.00	49704	80.00	2228	116.00	842	159.00	334
51.00	14891	81.00	6906	117.00	972	161.00	350
52.00	372	82.00	844	118.00	863	172.00	54
53.00	86	83.00	133	119.00	908	173.00	1154
55.00	388	84.00	48	124.00	128	174.00	232384
56.00	3315	85.00	53	128.00	1035	175.00	16065
57.00	6681	86.00	218	129.00	493	176.00	224064
58.00	304	87.00	8165	130.00	1038	177.00	14304
60.00	1885	88.00	7564	131.00	370	178.00	441
61.00	10569	91.00	815	132.00	55	253.00	57
62.00	11068	92.00	6899	135.00	438		
63.00	8492	93.00	10617	137.00	467		
64.00	798	94.00	28472	140.00	229		

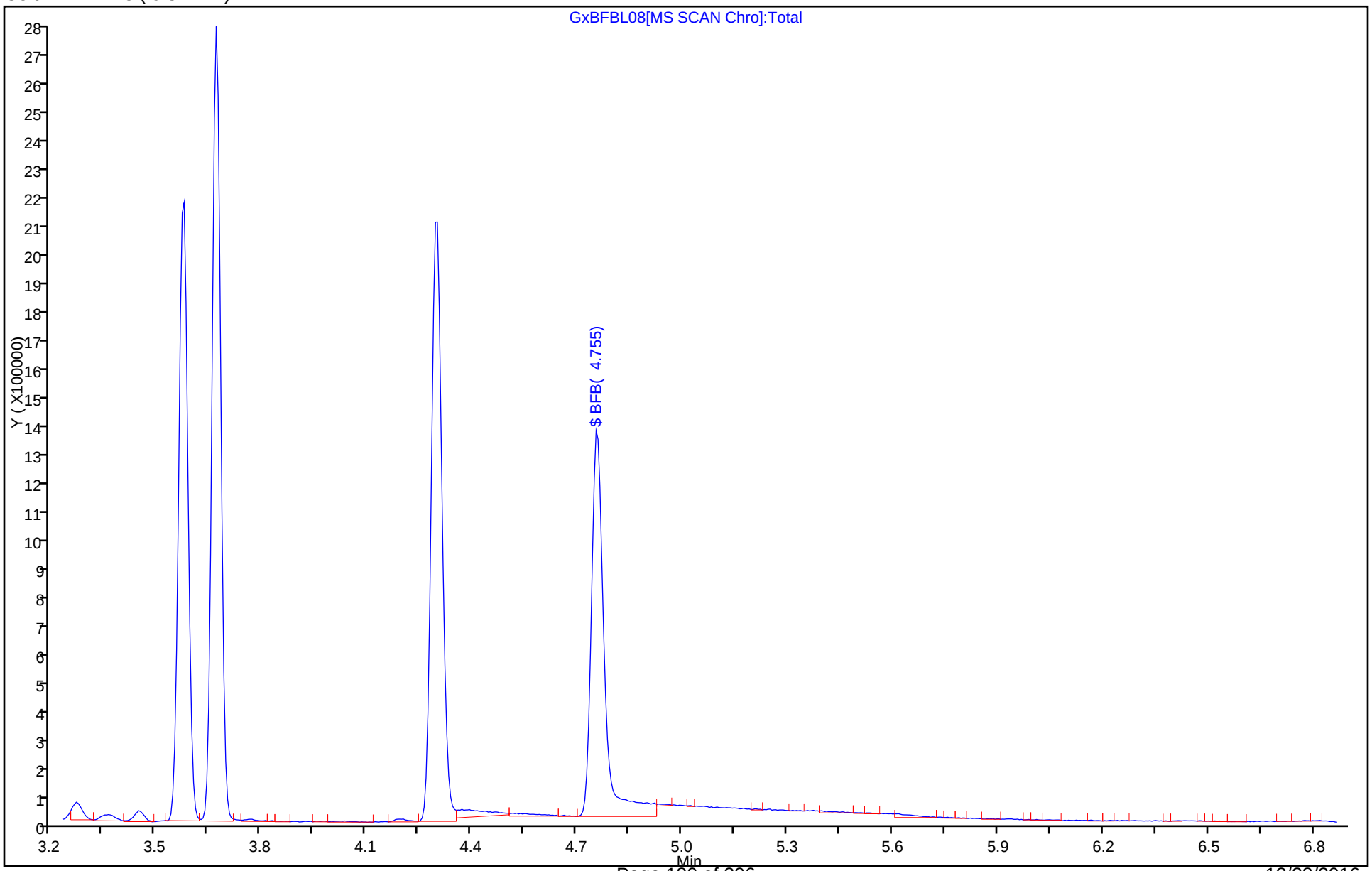
Report Date: 09-Dec-2016 15:01:19 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxBFBL08.D

Injection Date:	08-Dec-2016 19:26:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GBFBL19.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	19-Dec-2016 09:48:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003721-001				
Misc. Info.:	BFB				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	19-Dec-2016 15:27:28	Calib Date:	09-Dec-2016 12:54:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK004				
First Level Reviewer: tajh		Date:	19-Dec-2016 15:27:28		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.744	4.744	0.000	0	818180	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

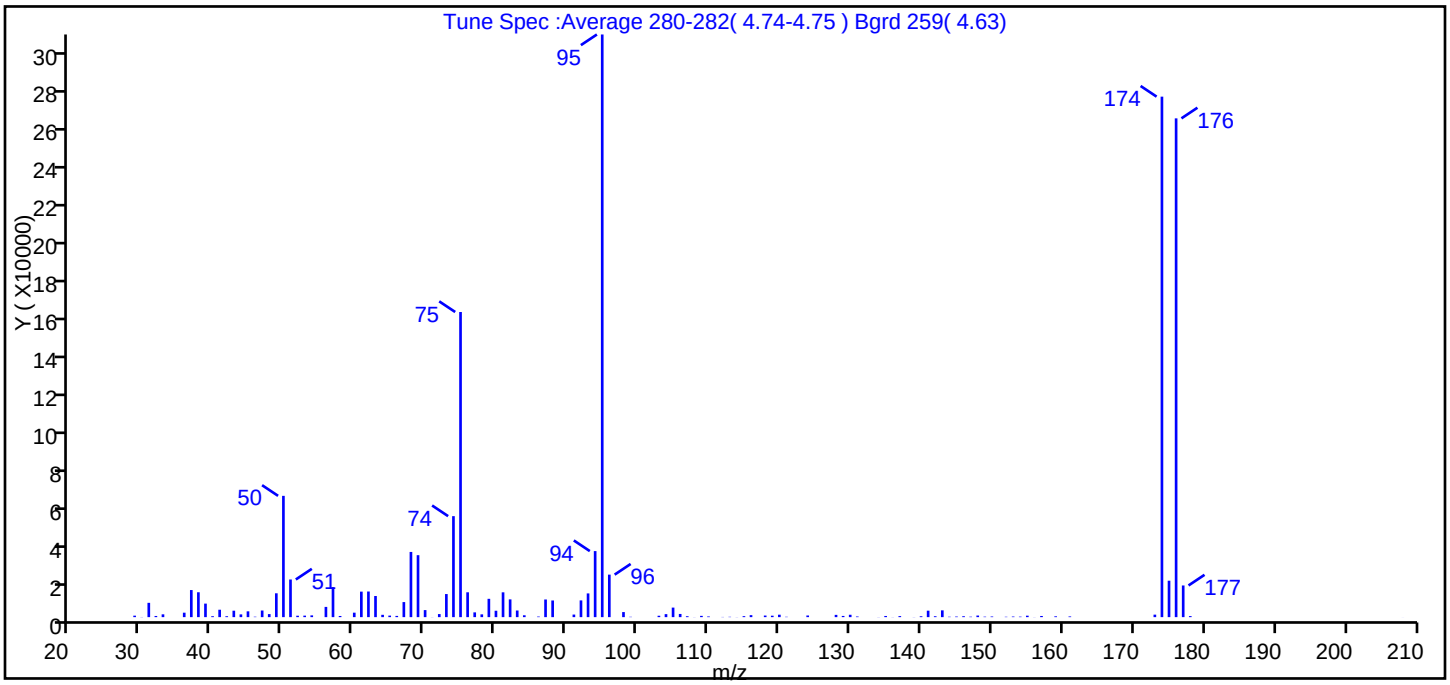
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GBFBL19.D
Injection Date: 19-Dec-2016 09:48:30 Instrument ID: MG
Lims ID: BFB
Client ID:
Operator ID: 7126 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	20.8
75	30 to 60% of m/z 95	52.4
96	5 to 9% of m/z 95	7.3
173	Less than 2% of m/z 174	0.4 (0.5)
174	50 to 120% of m/z 95	89.3
175	5 to 9% of m/z 174	6.3 (7.0)
176	Greater than 95% but less than 101% of m/z 174	85.6 (95.8)
177	5 to 9% of m/z 176	5.4 (6.3)

Data File: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GBFBL19.D\MG_TO15.rslt\spectra.d
Injection Date: 19-Dec-2016 09:48:30
Spectrum: Tune Spec :Average 280-282(4.74-4.75) Bgrd 259(4.63)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 117

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	774	63.00	11029	95.00	304064	139.00	57
30.00	81	64.00	1215	96.00	22184	140.00	458
31.00	7467	65.00	805	98.00	2646	141.00	3375
32.00	611	66.00	645	99.00	177	142.00	471
33.00	1472	67.00	7858	103.00	729	143.00	3543
36.00	2326	68.00	34024	104.00	1569	144.00	215
37.00	14141	69.00	32336	105.00	4981	145.00	309
38.00	12985	70.00	3679	106.00	1664	146.00	472
39.00	7063	71.00	50	107.00	479	147.00	234
40.00	486	72.00	1603	108.00	50	148.00	833
41.00	3871	73.00	12052	109.00	672	149.00	250
42.00	477	74.00	52704	110.00	347	150.00	334
43.00	3362	75.00	159232	112.00	103	152.00	198
44.00	1438	76.00	12968	113.00	175	153.00	314
45.00	3033	77.00	2493	114.00	53	154.00	262
46.00	224	78.00	1455	115.00	511	155.00	760
47.00	3460	79.00	9563	116.00	1036	156.00	50
48.00	1595	80.00	3337	118.00	832	157.00	607
49.00	12446	81.00	12950	119.00	754	159.00	430
50.00	63296	82.00	9267	120.00	1278	161.00	367
51.00	19648	83.00	3464	121.00	187	173.00	1304
52.00	741	84.00	975	124.00	858	174.00	271616
53.00	788	86.00	306	128.00	1183	175.00	19016
54.00	923	87.00	9215	129.00	628	176.00	260288
56.00	5344	88.00	8696	130.00	1247	177.00	16528
57.00	15627	89.00	2	131.00	331	178.00	533
58.00	607	91.00	1352	134.00	57	208.00	18
60.00	2334	92.00	8738	135.00	609		
61.00	13316	93.00	12383	136.00	55		
62.00	13376	94.00	34464	137.00	541		

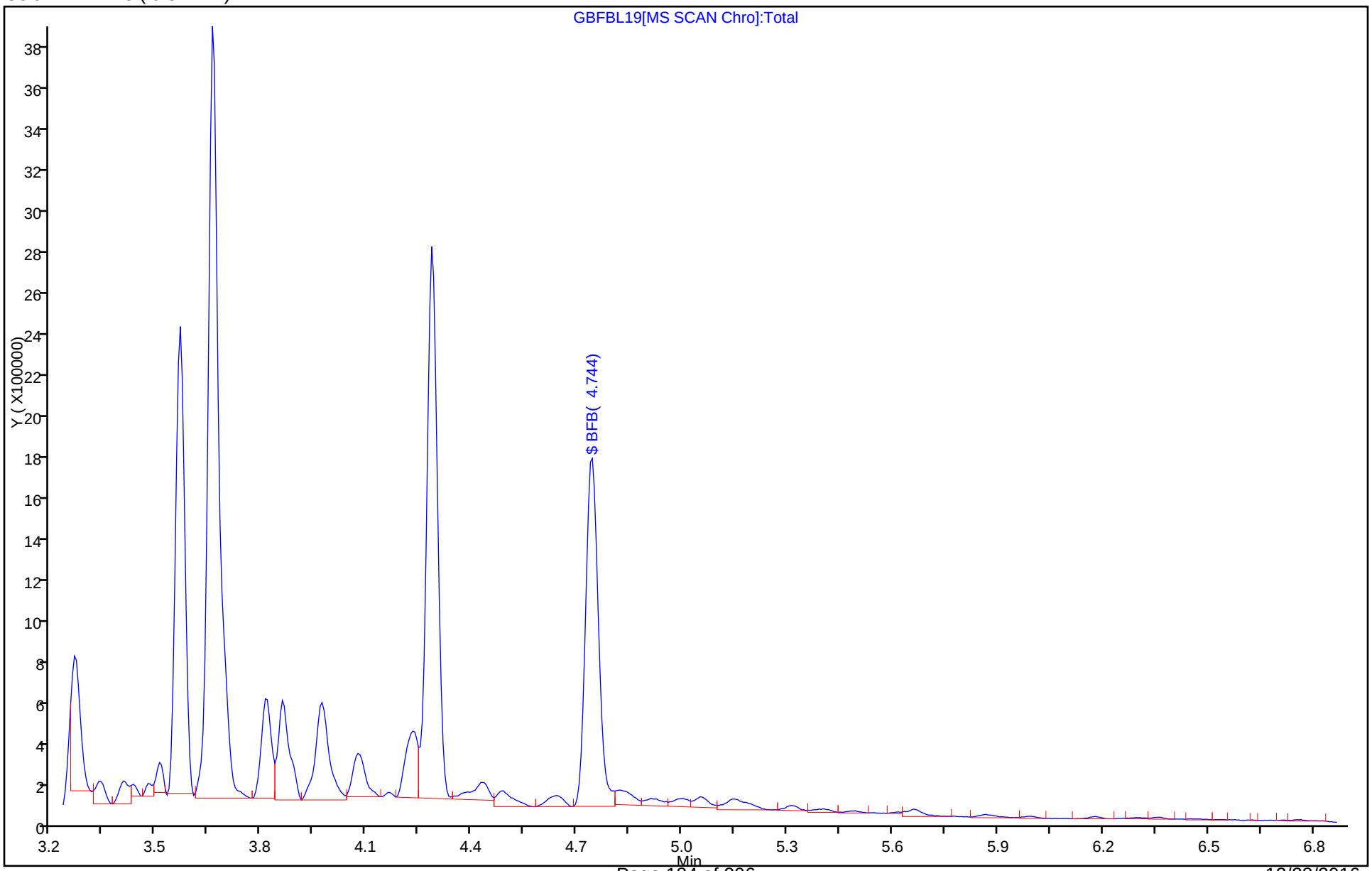
Report Date: 19-Dec-2016 15:27:28 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GBFBL19.D

Injection Date:	19-Dec-2016 09:48:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6564-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-7415/4

Matrix: Air | Lab File ID: GMB500L19.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 12/19/2016 12:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7415 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6564-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-7415/4

Matrix: Air | Lab File ID: GMB500L19.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 12/19/2016 12:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7415 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GMB500L19.D
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 19-Dec-2016 12:46:30 ALS Bottle#: 16 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003721-004
Misc. Info.: 500ML BLK
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Dec-2016 15:29:54 Calib Date: 09-Dec-2016 12:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: tajh Date: 19-Dec-2016 13:26:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.050	8.055	-0.005	98	333718	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.218	10.229	-0.011	96	1516833	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.082	15.082	0.000	88	1534759	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.748	16.753	-0.005	92	1064470	4.00	4.19	
31 Methylene Chloride	84	5.699	5.704	-0.005	98	5254		0.0740	
65 4-Methyl-2-pentanone (MIBK	43	12.208	12.181	0.027	99	13198		0.0711	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

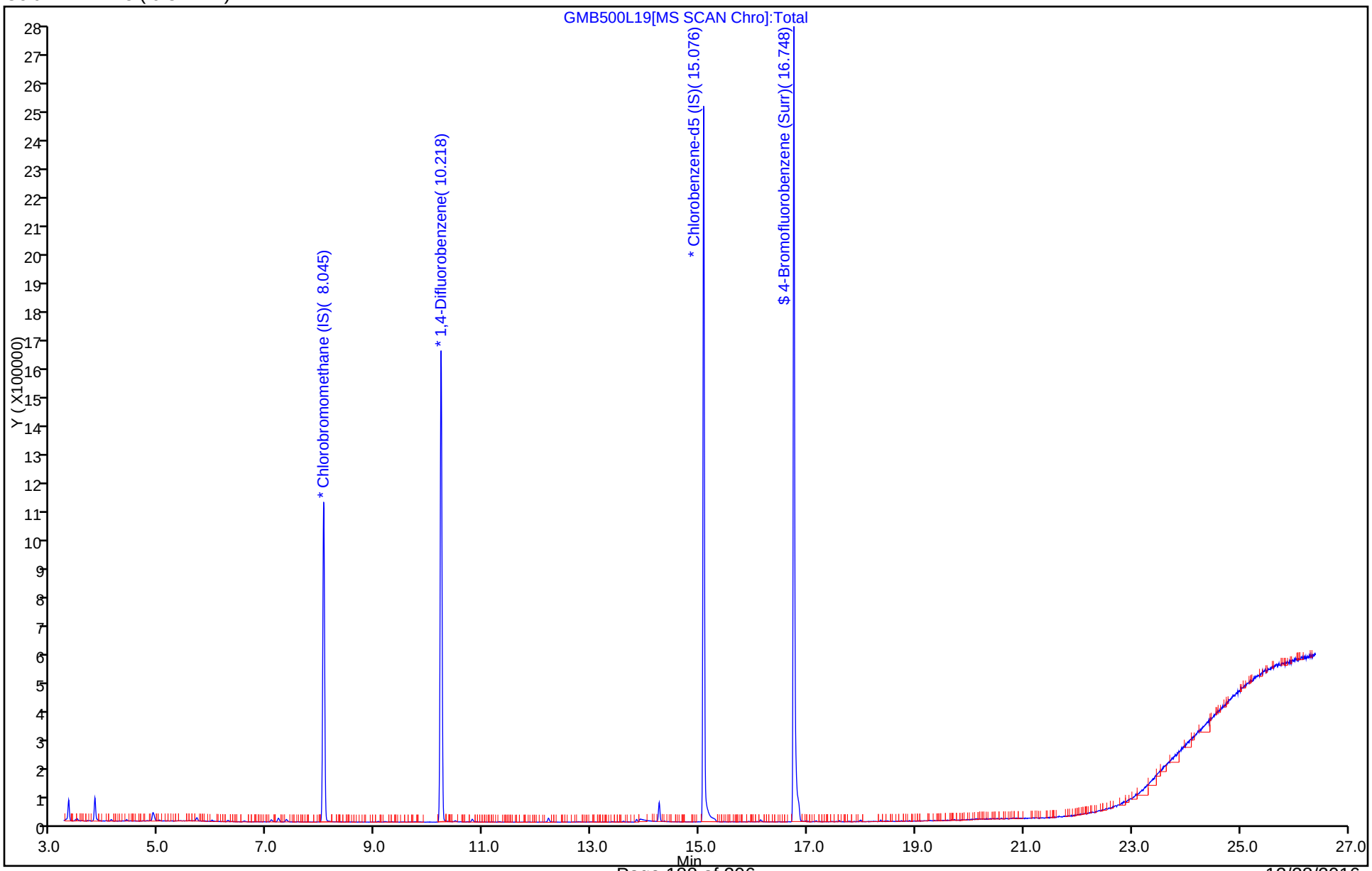
Report Date: 19-Dec-2016 15:29:59 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GMB500L19.D

Injection Date:	19-Dec-2016 12:46:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	mb			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GMB500L19.D				
Lims ID:	mb				
Client ID:					
Sample Type:	MB				
Inject. Date:	19-Dec-2016 12:46:30	ALS Bottle#:	16	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003721-004				
Misc. Info.:	500ML BLK				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	19-Dec-2016 15:29:54	Calib Date:	09-Dec-2016 12:54:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK004				

First Level Reviewer: tajh Date: 19-Dec-2016 13:26:41

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.19	104.84

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 140-7415/1002

Matrix: Air Lab File ID: GCCVL19-LCS.d

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 12/19/2016 10:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7415 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.08		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.21		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.66		0.080	0.015
67-66-3	Chloroform	119.38	2.39		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.27		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.59		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.44		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.32		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.17		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.26		0.080	0.027
75-09-2	Methylene Chloride	84.93	2.03		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	2.53		0.40	0.068
91-20-3	Naphthalene	128.17	2.20		0.040	0.040
127-18-4	Tetrachloroethene	165.83	1.93		0.080	0.016
108-88-3	Toluene	92.14	2.15		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.17		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	2.12		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.45		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.13		0.080	0.021
79-01-6	Trichloroethene	131.39	1.80		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.22		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.22		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	2.11		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.45		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.77		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GCCVL19-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 19-Dec-2016 10:19:30 ALS Bottle#: 15 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003721-002
Misc. Info.: P28
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Dec-2016 15:29:54 Calib Date: 09-Dec-2016 12:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: tajh Date: 19-Dec-2016 15:29:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.055	8.055	0.000	97	342576	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.229	10.229	0.000	96	1699783	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.082	15.082	0.000	88	1743044	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.753	16.753	0.000	96	1237525	4.00	4.29	
6 Chlorodifluoromethane	67	3.477	3.477	0.000	97	74684	2.00	2.66	
7 Propene	41	3.488	3.488	0.000	99	236829	2.00	2.53	
8 Dichlorodifluoromethane	85	3.531	3.531	0.000	100	758843	2.00	2.59	
9 Chloromethane	52	3.682	3.682	0.000	98	75763	2.00	2.41	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.693	3.693	0.000	92	452127	2.00	2.33	
11 Acetaldehyde	44	3.812	3.812	0.000	95	438645	10.1	12.6	
12 Vinyl chloride	62	3.828	3.828	0.000	99	253056	2.00	2.45	
13 Butadiene	54	3.903	3.903	0.000	87	200393	2.00	2.40	
14 Butane	43	3.903	3.903	0.000	93	424682	2.00	2.61	
15 Bromomethane	94	4.173	4.173	0.000	99	212168	2.00	2.15	
16 Chloroethane	64	4.292	4.292	0.000	96	120573	2.00	2.20	
17 Ethanol	31	4.383	4.383	0.000	98	381763	10.1	11.2	
18 Vinyl bromide	106	4.545	4.545	0.000	98	200219	2.00	2.15	
19 2-Methylbutane	43	4.594	4.594	0.000	92	279477	2.00	2.35	
21 Acrolein	56	4.777	4.777	0.000	97	56131	2.00	2.10	
20 Trichlorofluoromethane	101	4.777	4.777	0.000	99	680913	2.00	2.40	
22 Acetonitrile	40	4.831	4.831	0.000	95	83426	2.00	2.64	
23 Acetone	58	4.874	4.874	0.000	99	240111	6.00	6.65	
25 Isopropyl alcohol	45	4.971	4.971	0.000	92	832950	6.00	6.82	
24 Pentane	72	4.976	4.976	0.000	95	37278	2.00	2.14	
26 Ethyl ether	31	5.111	5.111	0.000	94	199358	2.00	2.77	
27 1,1-Dichloroethene	96	5.397	5.397	0.000	95	181765	2.00	2.17	
28 Acrylonitrile	53	5.478	5.478	0.000	94	108904	2.00	2.41	
29 2-Methyl-2-propanol	59	5.499	5.499	0.000	94	299312	2.00	2.33	
30 1,1,2-Trichloro-1,2,2-trif	101	5.564	5.564	0.000	97	403763	2.00	2.25	
31 Methylene Chloride	84	5.704	5.704	0.000	98	147770	2.00	2.03	
32 3-Chloro-1-propene	39	5.721	5.721	0.000	97	178455	2.00	2.47	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.845	5.845	0.000	100	559184	2.00	2.04	
34 trans-1,2-Dichloroethene	96	6.443	6.443	0.000	95	213927	2.00	2.17	
35 2-Methylpentane	43	6.475	6.475	0.000	96	551706	2.02	2.60	
36 Methyl tert-butyl ether	73	6.562	6.562	0.000	97	592346	2.00	2.53	
37 1,1-Dichloroethane	63	6.826	6.826	0.000	100	450686	2.00	2.44	
38 Vinyl acetate	43	6.934	6.934	0.000	100	662312	2.00	2.88	
39 2-Butanone (MEK)	72	7.333	7.333	0.000	98	90190	2.00	2.22	
40 Hexane	56	7.387	7.387	0.000	90	196566	2.00	2.41	
41 Isopropyl ether	45	7.532	7.532	0.000	97	824130	2.00	2.82	
42 cis-1,2-Dichloroethene	96	7.748	7.748	0.000	97	226504	2.00	2.27	
43 Ethyl acetate	43	7.931	7.931	0.000	98	507538	2.00	2.80	
44 Chloroform	83	8.077	8.077	0.000	98	514390	2.00	2.39	
45 Tert-butyl ethyl ether	59	8.174	8.174	0.000	96	681332	2.00	2.68	
46 Tetrahydrofuran	42	8.444	8.444	0.000	94	263179	2.00	2.81	
47 1,1,1-Trichloroethane	97	9.058	9.058	0.000	95	574663	2.00	2.45	
48 1,2-Dichloroethane	62	9.150	9.150	0.000	98	368112	2.00	2.32	
51 n-Butanol	31	9.646	9.646	0.000	68	79328	2.00	2.13	
49 Benzene	78	9.646	9.646	0.000	98	634699	2.00	2.08	
50 Cyclohexane	69	9.652	9.652	0.000	92	112801	2.00	2.00	
52 Carbon tetrachloride	117	9.679	9.679	0.000	98	604378	2.00	2.21	
53 2,3-Dimethylpentane	71	9.797	9.797	0.000	91	161308	2.02	2.04	
54 Thiophene	84	9.921	9.921	0.000	97	370572	2.02	2.03	
55 Tert-amyl methyl ether	73	10.158	10.158	0.000	97	609133	2.00	2.23	
56 Isooctane	57	10.471	10.471	0.000	97	1203425	2.00	2.17	
57 n-Heptane	71	10.870	10.870	0.000	94	250777	2.00	2.04	
58 1,2-Dichloropropane	63	10.908	10.908	0.000	87	256955	2.00	2.22	
59 Trichloroethene	130	10.957	10.957	0.000	95	320765	2.00	1.80	
60 Dibromomethane	93	11.027	11.027	0.000	96	286898	2.00	2.04	
61 Dichlorobromomethane	83	11.188	11.188	0.000	99	538456	2.00	2.20	
62 1,4-Dioxane	88	11.205	11.205	0.000	95	75989	2.00	1.85	
63 Methyl methacrylate	41	11.312	11.312	0.000	94	306969	2.00	2.45	
64 Methylcyclohexane	83	11.760	11.760	0.000	93	504620	2.02	1.99	
65 4-Methyl-2-pentanone (MIBK	43	12.181	12.181	0.000	97	474878	2.00	2.28	
66 cis-1,3-Dichloropropene	75	12.229	12.229	0.000	97	407982	2.00	2.23	
67 trans-1,3-Dichloropropene	75	12.952	12.952	0.000	97	384030	2.00	2.28	
68 Toluene	91	13.076	13.076	0.000	93	748517	2.00	2.15	
69 1,1,2-Trichloroethane	83	13.146	13.146	0.000	98	219283	2.00	2.13	
70 2-Methylthiophene	97	13.227	13.227	0.000	98	608389	2.02	2.07	
71 3-Methylthiophene	97	13.432	13.432	0.000	100	606341	2.02	2.12	
72 2-Hexanone	58	13.561	13.561	0.000	91	210113	2.00	2.05	
73 n-Octane	85	13.825	13.825	0.000	95	280975	2.00	2.05	
74 Chlorodibromomethane	129	13.852	13.852	0.000	98	504069	2.00	2.13	
75 Ethylene Dibromide	107	14.143	14.143	0.000	98	433181	2.00	2.14	
76 Tetrachloroethene	129	14.246	14.246	0.000	95	295647	2.00	1.93	
77 Chlorobenzene	112	15.130	15.130	0.000	91	599153	2.00	2.07	
78 2,3-Dimethylheptane	43	15.195	15.195	0.000	96	836105	2.02	2.42	
79 Ethylbenzene	91	15.438	15.438	0.000	99	1033548	2.00	2.26	
80 2-Ethylthiophene	97	15.535	15.535	0.000	98	775549	2.02	2.27	
81 m-Xylene & p-Xylene	91	15.605	15.605	0.000	99	1595663	4.00	4.53	
83 Bromoform	173	16.025	16.025	0.000	96	491391	2.00	2.26	
82 n-Nonane	57	16.069	16.069	0.000	93	533841	2.00	2.34	
84 Styrene	104	16.069	16.069	0.000	97	565467	2.00	2.26	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	16.133	16.133	0.000	98	830519	2.00	2.24	
86 1,1,2,2-Tetrachloroethane	83	16.457	16.457	0.000	99	558509	2.00	2.28	
87 1,2,3-Trichloropropane	110	16.613	16.613	0.000	96	179868	2.00	2.23	
88 Isopropylbenzene	105	16.732	16.732	0.000	97	1127293	2.00	2.16	
89 N-Propylbenzene	120	17.287	17.287	0.000	99	304715	2.00	2.14	
90 2-Chlorotoluene	126	17.320	17.320	0.000	97	276898	2.00	2.11	
91 4-Ethyltoluene	105	17.449	17.449	0.000	99	1113398	2.00	2.21	
92 1,3,5-Trimethylbenzene	120	17.530	17.530	0.000	92	510434	2.00	2.11	
93 Alpha Methyl Styrene	118	17.772	17.772	0.000	88	441825	2.00	2.21	
94 n-Decane	57	17.870	17.870	0.000	90	647251	2.00	2.40	
95 tert-Butylbenzene	119	17.977	17.977	0.000	91	1014151	2.00	2.16	
96 1,2,4-Trimethylbenzene	105	17.994	17.994	0.000	96	937039	2.00	2.22	
98 1,3-Dichlorobenzene	146	18.263	18.263	0.000	66	636644	2.00	2.09	
97 sec-Butylbenzene	105	18.263	18.263	0.000	98	1338008	2.00	2.19	
99 Benzyl chloride	91	18.339	18.339	0.000	98	814078	2.00	2.41	
100 1,4-Dichlorobenzene	146	18.355	18.355	0.000	95	621184	2.00	2.08	
101 4-Isopropyltoluene	119	18.436	18.436	0.000	97	1123964	2.00	2.16	
102 1,2,3-Trimethylbenzene	105	18.479	18.479	0.000	98	720406	2.02	2.22	
103 Butylcyclohexane	83	18.554	18.554	0.000	91	719514	2.02	2.20	
104 1,2-Dichlorobenzene	146	18.727	18.727	0.000	93	610517	2.00	2.09	
105 2,3-Dihydroindene	117	18.732	18.732	0.000	94	850794	2.02	2.16	
106 Indene	116	18.862	18.862	0.000	93	625361	2.02	1.90	
107 n-Butylbenzene	91	18.889	18.889	0.000	98	1041173	2.00	2.30	
108 Undecane	57	19.239	19.239	0.000	96	679070	2.00	2.39	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.272	19.272	0.000	97	800414	2.02	2.12	
110 1,2-Dibromo-3-Chloropropan	157	19.347	19.347	0.000	97	244879	2.00	2.00	
111 1,2,4,5-Tetramethylbenzene	119	19.665	19.665	0.000	97	957611	2.02	2.16	
112 1,2,3,5-Tetramethylbenzene	119	19.719	19.719	0.000	95	583926	2.02	2.15	
113 1,2,3,4-Tetramethylbenzene	119	20.113	20.113	0.000	97	782252	2.02	2.14	
114 Dodecane	57	20.307	20.307	0.000	94	524740	2.00	2.08	
115 1,2,4-Trichlorobenzene	180	20.453	20.453	0.000	94	429874	2.00	2.12	
116 Naphthalene	128	20.582	20.582	0.000	99	944111	2.00	2.20	
117 Benzo(b)thiophene	134	20.679	20.679	0.000	99	479622	2.02	2.04	
118 Hexachlorobutadiene	225	20.808	20.808	0.000	95	602531	2.00	1.94	
119 1,2,3-Trichlorobenzene	180	20.857	20.857	0.000	94	401179	2.00	2.03	
120 2-Methylnaphthalene	142	21.655	21.655	0.000	100	364215	6.25	5.81	
121 1-Methylnaphthalene	142	21.833	21.833	0.000	100	370188	6.25	5.80	
A 124 Toluene Range	1	13.071	(13.036-13.106)		0	1918708	2.00	2.22	
A 125 C8 Range	1	13.830	(13.815-13.845)		0	3549526	2.00	2.65	M
S 126 Xylenes, Total	100				0		6.00	6.77	
S 127 1,2-Dichloroethene, Total	1				0		4.00	4.44	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40CV101S_00028	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

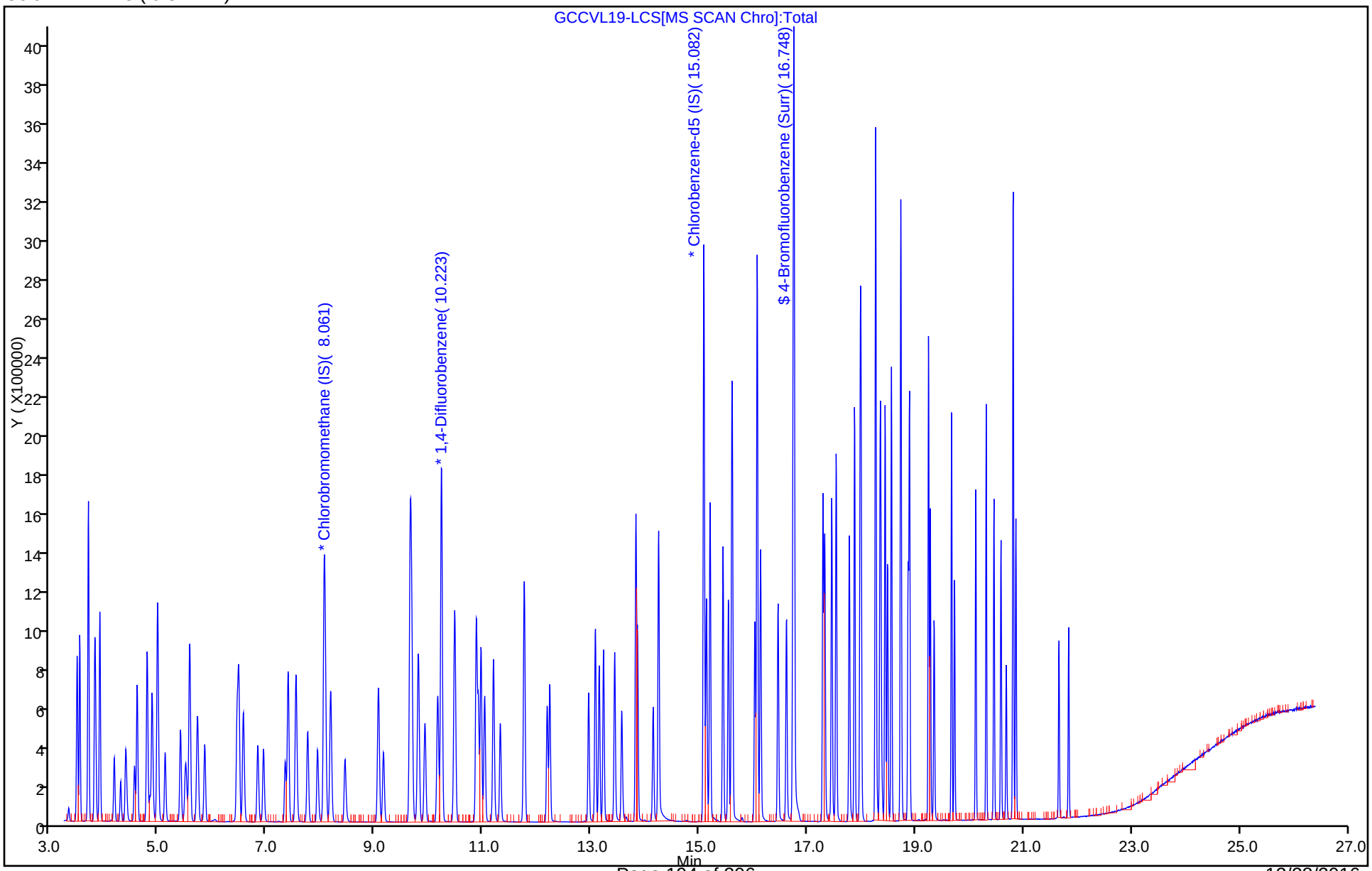
Report Date: 19-Dec-2016 15:29:57 Chrom Revision: 2.2 05-Dec-2016 12:37:22

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GCCVL19-LCS.d

Injection Date:	19-Dec-2016 10:19:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	LCS			Worklist Smp#:	1002
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\GCCVL19-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 19-Dec-2016 10:19:30 ALS Bottle#: 15 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003721-002
Misc. Info.: P28
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20161213-3721.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Dec-2016 15:29:54 Calib Date: 09-Dec-2016 12:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: tajh Date: 19-Dec-2016 15:29:41

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.29	107.32

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1

SDG No.:

Instrument ID: MG Start Date: 12/08/2016 19:26

Analysis Batch Number: 7384 End Date: 12/09/2016 12:54

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-7384/1		12/08/2016 19:26	1	GxBFBL08.D	RTX-5 0.32(mm)
IC 140-7384/3		12/08/2016 19:58	1	GxL08IC01.D	RTX-5 0.32(mm)
140-6463-A-1 MDLV		12/08/2016 19:58	1		RTX-5 0.32(mm)
IC 140-7384/4		12/08/2016 20:42	1	GxL08IC02.D	RTX-5 0.32(mm)
140-6463-A-2 MDLV		12/08/2016 20:42	1		RTX-5 0.32(mm)
IC 140-7384/5		12/08/2016 21:25	1	GxL08IC03.D	RTX-5 0.32(mm)
140-6463-A-3 MDLV		12/08/2016 21:25	1		RTX-5 0.32(mm)
IC 140-7384/6		12/08/2016 22:07	1	GxL08IC04.D	RTX-5 0.32(mm)
140-6463-A-4 MDLV		12/08/2016 22:07	1		RTX-5 0.32(mm)
IC 140-7384/7		12/08/2016 22:50	1	GxL08IC05.D	RTX-5 0.32(mm)
140-6463-A-5 MDLV		12/08/2016 22:50	1		RTX-5 0.32(mm)
ICIS 140-7384/8		12/08/2016 23:31	1	GxL08IC06.D	RTX-5 0.32(mm)
IC 140-7384/9		12/09/2016 00:14	1	GxL08IC07.D	RTX-5 0.32(mm)
IC 140-7384/10		12/09/2016 00:56	1	GxL08IC08.D	RTX-5 0.32(mm)
IC 140-7384/11		12/09/2016 01:38	1	GxL08IC09.D	RTX-5 0.32(mm)
ICV 140-7384/13		12/09/2016 03:01	1	GxL08ICV.D	RTX-5 0.32(mm)
ZZZZZ		12/09/2016 04:19	1		RTX-5 0.32(mm)
ZZZZZ		12/09/2016 06:27	1		RTX-5 0.32(mm)
IC 140-7384/28		12/09/2016 10:00	1		RTX-5 0.32(mm)
IC 140-7384/29		12/09/2016 10:42	1		RTX-5 0.32(mm)
IC 140-7384/30		12/09/2016 11:26	1		RTX-5 0.32(mm)
IC 140-7384/31		12/09/2016 12:09	1		RTX-5 0.32(mm)
IC 140-7384/32		12/09/2016 12:54	1		RTX-5 0.32(mm)

161208.zzz

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
CLEAN	16 - 201 mL	32.4	12/8/2016	6:55:40 PM
BFB	16 - 101 mL	32.5	12/8/2016	7:26:24 PM
ICAL01	1 - 101 mL	28.1	12/8/2016	7:58:57 PM
ICAL02	1 - 201 mL	27.1	12/8/2016	8:42:09 PM
ICAL03	2 - 201 mL	26.3	12/8/2016	9:25:29 PM
ICAL04	3 - 201 mL	22.4	12/8/2016	10:07:57 PM
ICAL05	4 - 201 mL	30.5	12/8/2016	10:50:34 PM
ICAL06	5 - 201 mL	30.4	12/8/2016	11:31:52 PM
ICAL07	6 - 201 mL	29.5	12/9/2016	12:14:55 AM
ICAL08	7 - 201 mL	23.8	12/9/2016	12:56:50 AM
ICAL09	8 - 201 mL	27.5	12/9/2016	1:38:42 AM
DNUPRIME	9 - 22 mL	36.2	12/9/2016	2:19:54 AM
ICV	9 - 102 mL	35.7	12/9/2016	3:01:43 AM
DNUCLEAN	16 - 100 mL	32.3	12/9/2016	3:43:27 AM
BLANK	16 - 500 mL	31.2	12/9/2016	4:19:41 AM
MDL	1 - 51 mL	27.8	12/9/2016	5:01:33 AM
TEST	10 - 101 mL	24.7	12/9/2016	5:43:19 AM
TPH	11 - 201 mL	34.9	12/9/2016	6:27:11 AM
LCS	12 - 101 mL	35.6	12/9/2016	7:08:57 AM
EXPSTD13	13 - 51 mL	25.6	12/9/2016	7:50:17 AM
EXPSTD14	14 - 51 mL	22.7	12/9/2016	8:31:56 AM
BLANK	16 - 501 mL	30	12/9/2016	9:19:16 AM
EOICL04	15 - 21 mL	23.1	12/9/2016	10:00:40 AM
EOICL05	15 - 51 mL	22.8	12/9/2016	10:42:41 AM
EOICL06	15 - 101 mL	22.2	12/9/2016	11:26:20 AM
EOICL07	15 - 201 mL	21.3	12/9/2016	12:09:10 PM
EOICL08	15 - 501 mL	18.4	12/9/2016	12:54:24 PM
BLANK	16 - 500 mL	30.3	12/9/2016	1:40:43 PM

MG WL 3696

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist

Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

802 eth. oxide

Analysis Date:	12/8/16	Instrument:	MG	Chrom WL #:	3696	TALS Batch & Event #	TO14/15: 7384 (798)	AFCEE: 7387 801
							DOD: 7386 / 800	OHIO: 7385 / 799

Chrom/Worklist Review	1st	Comments	2nd
1. Re-read each Limit Group [method editor-limit groups]	✓		
2. Verify LODV in Chrom [method editor -> edit -> MDL]	✓		
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]	✓		✓
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]	✓		✓
5. Did BFB meet tune criteria? [F8]	✓		✓
6. Were all standards injected within 24 hr of BFB? [F7]	✓		✓
7. High point checked for saturation and point removed if so? [Chrom]	✓		✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]	✓	#55 IVL 2,3 C8 IVL 4,5,6 split peak	✓
9. RT for each IS ±20 sec avg. RT? [F6 IstdRec]	✓		✓
10. Area for each IS ± 40% avg. area? [F6 IstdRec]	✓		✓
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]	✓		✓
12. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3-, 1,4-, and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4- and 1,2,3-trichlorobenzenes	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration? DNM TPH as Hexane	✓	C8 (M) #4.5.6, ICV.	✓

MLG Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50% [F6 Σ]	✓	→	→	→	124 TCLE 35%	✓	✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]	✓	→	→	→		✓	✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]	✓	→	→	→		✓	✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? Note: Ohio does not allow quad [F6]	✓	→	→	→	Indene (TO15)	✓	✓	✓	✓
18. If curves were used, is correlation coefficient ≥0.990? [F6]	✓	NA	→	→		✓	✓	✓	✓
19. Is the intercept less than the RL for each curve? [F6]	✓	NA	→	→		✓	✓	✓	✓
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]	✓	NA →				NA →			
21. Is the second source analysis within limits? [F8 - icv]	✓	→	→	→		✓	✓	✓	✓
22. Analyst/Date:					2nd Level Reviewer/Date:				

Comments: Ethylene Oxide (4pt) ✓ 5pt Cont ID 802 — jhs 12/9/16 — jhs 12/9/16

TALS Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
23. Upload ICAL			✓						
24. Graphics uploaded? [Sample List Tab]	✓	✓	✓	✓		✓	✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events –'Fix ICAL linkage' if needed]	✓	✓	✓	✓		✓	✓	✓	✓
26. Runs linked to BFB? [QC Links]	✓	✓	✓	✓		✓	✓	✓	✓
27. If criteria not met, was a NCM generated? NA →						NA →			
28. After review in TALS, approve the method in TALS.	✓	✓	✓	✓		✓	✓	✓	✓
29. After verifying TALS is correct, lock method in Chrom <resolve any error issues>	✓	✓	✓	✓		✓			
30. Checklist & Entech report scanned, attached & assigned properly?						✓	✓	✓	✓

Analyst: jhs	Date: 12/9/16	2nd Level Reviewer:	Date: 12/9/16
Comments: UR Bromoform (8)		Comments:	

MS017r41, 5/25/2016

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-6564-1

SDG No.:

Instrument ID: MG Start Date: 12/19/2016 09:48

Analysis Batch Number: 7415 End Date: 12/20/2016 04:09

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-7415/1		12/19/2016 09:48	1	GBFBL19.D	RTX-5 0.32(mm)
CCVIS 140-7415/2		12/19/2016 10:19	1	GCCVL19.D	RTX-5 0.32(mm)
LCS 140-7415/1002		12/19/2016 10:19	1	GCCVL19-LCS.d	RTX-5 0.32(mm)
MB 140-7415/4		12/19/2016 12:46	1	GMB500L19.D	RTX-5 0.32(mm)
140-6564-3		12/19/2016 13:29	1	GL19P101.D	RTX-5 0.32(mm)
140-6564-1		12/19/2016 14:12	1	GL19P102.D	RTX-5 0.32(mm)
140-6564-2		12/19/2016 14:56	1	GL19P103.D	RTX-5 0.32(mm)
ZZZZZ		12/19/2016 15:41	1		RTX-5 0.32(mm)
ZZZZZ		12/19/2016 16:26	1		RTX-5 0.32(mm)
ZZZZZ		12/19/2016 17:12	1		RTX-5 0.32(mm)
ZZZZZ		12/19/2016 17:56	1		RTX-5 0.32(mm)
ZZZZZ		12/19/2016 18:41	1		RTX-5 0.32(mm)
ZZZZZ		12/19/2016 19:26	1		RTX-5 0.32(mm)
ZZZZZ		12/19/2016 20:11	1		RTX-5 0.32(mm)
ZZZZZ		12/19/2016 20:56	1		RTX-5 0.32(mm)
ZZZZZ		12/19/2016 21:41	1		RTX-5 0.32(mm)
ZZZZZ		12/19/2016 22:23	1		RTX-5 0.32(mm)
ZZZZZ		12/19/2016 23:06	1		RTX-5 0.32(mm)
ZZZZZ		12/19/2016 23:51	1		RTX-5 0.32(mm)
ZZZZZ		12/20/2016 00:36	1		RTX-5 0.32(mm)
ZZZZZ		12/20/2016 01:19	7.87		RTX-5 0.32(mm)
ZZZZZ		12/20/2016 02:02	28.96		RTX-5 0.32(mm)
ZZZZZ		12/20/2016 02:45	30.82		RTX-5 0.32(mm)
140-6564-2 DL		12/20/2016 03:26	1	GL19P103DL.D	RTX-5 0.32(mm)
140-6564-1 DL		12/20/2016 04:09	1	GL19P204DL.D	RTX-5 0.32(mm)

161219.ZZZ

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 101 mL	24.9	12/19/2016	9:48:19 AM
CCV	15 - 100 mL	26.5	12/19/2016	10:19:38 AM
DNULEAK	16 - 21 mL	25.1	12/19/2016	12:09:27 PM
BLANK	16 - 501 mL	22.1	12/19/2016	12:46:09 PM
6564-03	1 - 26 mL	12.8	12/19/2016	1:29:42 PM
6564-01	2 - 101 mL	10.6	12/19/2016	2:12:52 PM
6564-02	3 - 100 mL	11.1	12/19/2016	2:56:23 PM
6587-01	4 - 501 mL	4.4	12/19/2016	3:41:48 PM
6587-02	5 - 500 mL	8.9	12/19/2016	4:26:41 PM
6587-03	6 - 500 mL	6	12/19/2016	5:12:03 PM
6587-04	7 - 500 mL	6.6	12/19/2016	5:56:47 PM
6588-01	8 - 502 mL	5.4	12/19/2016	6:41:27 PM
6588-02	9 - 500 mL	7.4	12/19/2016	7:26:43 PM
6588-03	10 - 501 mL	4.8	12/19/2016	8:11:38 PM
6588-04	11 - 500 mL	7	12/19/2016	8:56:32 PM
6588-04D	11 - 500 mL	5.2	12/19/2016	9:41:00 PM
6566-04	12 - 200 mL	9.3	12/19/2016	10:23:27 PM
6573-11	13 - 26 mL	10.5	12/19/2016	11:06:00 PM
6573-12	14 - 500 mL	1.5	12/19/2016	11:51:45 PM
6573-13	15 - 500 mL	6	12/20/2016	12:36:33 AM
6573-08	16 - 81 mL	11.9	12/20/2016	1:19:30 AM
6573-10	1 - 56 mL	14.8	12/20/2016	2:02:24 AM
6573-14	2 - 46 mL	14.6	12/20/2016	2:45:24 AM
6564-02	3 - 21 mL	12	12/20/2016	3:26:14 AM
6564-01	4 - 25 mL	10.1	12/20/2016	4:09:29 AM

MG WL 3721

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Instrument/Date	MG 1/19/16	Routine	AFCEE	DOD	OHIO
CCAL Chrom WL #	3781	CCAL Batch #	7415		
ICAL Chrom WL #	3696	ICAL Batch # / Event #	7384 / 798	/	/

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		✓
2. Did BFB meet tune criteria? [F8]	✓	□ [Failed TO-14A, but passes TO-15] (NCM#_____)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
4. Is the %D ≤ 30% for all target analytes? [≤ 40% for AFCEE non-table analytes] [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab] CDFM -	✓	☑ CCV - %D - LCS criteria met (NCM# 5602) □ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#_____)	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓		MB
7. Has the RT been updated to the method?	✓		✓
Analyst: CM **Date:** 1/20/16		**2nd Level Reviewer :** ✓ **Date:** 1/22/16	
Comments:		**Comments:**	
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓		✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#_____) □ Method Blank – Report, 10X (NCM#_____)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample / Reason / Sample / Reason	✓	□ (1) Surrogate – Matrix (NCM#_____) □ (2) Surrogate – High, ND (NCM#_____) □ (3) ISTD – RA/RA Concurs (NCM#_____) □ (4) Surrogate –RX concur, Report both (NCM#_____) □ (5) ISTD – Matrix, DL required (NCM#_____)	✓
15. Samples outside calibration range scheduled for dilution? *Samples:*	✓	□ ICAL – Range Exceeded; Minimum Dilution	✓
Chrom Review	**1st**	**If No, why is data reportable?**	**2nd**
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample / Reason / Sample / Reason	✓	□ (1) Reporting Limit – Dilution, Matrix (NCM#_____) □ (2) Reporting Limit – Dilution, Non-Target (NCM#_____) □ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	✓		MB
18. Obvious non-TPH peaks excluded?	✓		✓

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

19. Individual TPH peak area < octane high point area?	N/A		N/A
TALS Review	**1st**	**If No, why is data reportable?**	**2nd**
20. Graphics uploaded? [Sample List Tab]	✓		✓
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	✓		
22. Sample special instructions verified?	✓		✓
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	✓	□ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) □ LCS/LCSD - %R High (NCM#_____)	✓
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]	✓		✓
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	✓		✓
26. Analytes over calibration range set to secondary [Conditions Review Tab]	✓		✓
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	✓		✓
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*	✓		✓
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	✓	**500 mL blank ID:** 4 **200 mL blank ID:** —	✓
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	✓		✓
31. Correct ICV linked to each MB? [QC Links]	✓		✓
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	✓		✓
33. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
34. QC checker run and items addressed?			✓
35. Checklist & Entech report scanned, attached & assigned properly?			✓

Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed
>90	5
71 - 90	4
51 - 70	3
31 - 50	2
11 - 30	1
< 11	0

Analyst:	**Date:** 11/10/16
Comments:	
Example Calculation: 6573-8 TE	
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF	
1.7645 x 80 mL x 7.87 = 80.79	

2nd Level Reviewer :	**Date:** 12/20/16
Comments:	

MS017r41, 5/25/2016

Shipping and Receiving Documents

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

BALTIMORE

Canister Samples Chain of Custody Record

180325

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	**Project Manager:** Peter Rich	**Sampled By:** J. Michael Wilkes	___ of ___ COCs
Company: Tetra Tech, Inc	**Phone:** 410-990-4697		
Address: 51 Franklin St	**Site Contact:**		
City/State/Zip Annapolis, MD / 21401	**TAL Contact:**		
Phone: 410-990-4607			
FAX:			
Project Name: LMZ MRAS	**Analysis Turnaround Time**		
Site/location: BLDG-A / Middle River	Standard (Specify)_____		
PO #	Rush (Specify)_____		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
BLDG-A EFFLUENT	12-14-16	1250	1252	28	0	10901	09639	✓											
BLDG-A MIDGAL	12-14-16	1254	1256	30	0	85660	09738	✓											
BLDG-A INFLUENT	12-14-16	1258	1300	#29		10930	11163	✓											

Sampled by :

Temperature (Fahrenheit)			
	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)			
	Interior	Ambient	
Start			
Stop			

Received @ ambient, 1 box
FedEx Sot, trk# 7779 5415 2601
Custody seal intact, KW 12/15/16

140-6564 Chain of Custody

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:	
Samples Relinquished by: J. Michael Wilkes	Date/Time: 12/14/2016 / 1455	Received by:	
Relinquished by:	Date/Time: 12-14-2016 / 1600	Received by:	12/15/16 1000

J Cam
J KR

12/28/2016

Loc: 140
6564

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	/			☐ **Containers, Broken**
2. Were ambient air containers received intact?			/	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?	/			☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			/	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	/			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	/			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	/			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	/			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	/			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	/			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	/			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	/			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	/			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	/			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	/			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			/	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			/	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			/	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			/	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			/	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: 140092921 PM Instructions: _____

Sample Receiving Associate: _____ Date: 12/15/11

QA026R30.doc, 080916

Page 205 of 206

12/28/2016

140-6564

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 12/15/2016

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
seg	140-6564-a-1	09639	6252	B	1	0.8	1331	
seg	140-6564-a-2	09738	6252	B	1	1.3	1331	
seg	140-6564-a-3	11163	6252	B	1	1.0	1332	

TestAmerica
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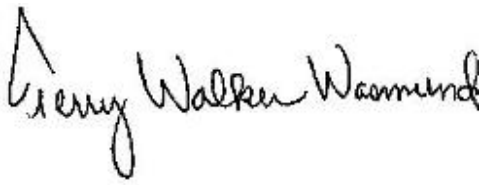
ANALYTICAL REPORT

Job Number: 140-6811-1

Job Description: LMC - MRC/Building C

For:
Tetra Tech GEO
51 Franklin Street
Suite 400
Annapolis, MD 21401

Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
1/23/2017 1:00 PM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
01/23/2017

cc: Belssi Chang
Amy Thomson
Michael Wilks

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Table of Contents

Cover Title Page 1

Data Summaries 4

Definitions 4

Case Narrative 5

Detection Summary 6

Client Sample Results 10

Default Detection Limits 22

Surrogate Summary 23

QC Sample Results 24

QC Association 30

Chronicle 31

Method Summary 33

Sample Summary 34

Organic Sample Data 35

Air - GC/MS VOA 35

Method TO15 Low Level 35

Method TO15 Low Level QC Summary 36

Method TO15 Low Level Sample Data 49

Standards Data 153

Method TO15 Low Level ICAL Data 153

Method TO15 Low Level CCAL Data 280

Raw QC Data 308

Method TO15 Low Level Tune Data 308

Method TO15 Low Level Blank Data 325

Method TO15 Low Level LCS/LCSD Data 335

Method TO15 Low Level Run Logs 347

Table of Contents

Air Canister Dilution 359
Clean Canister Certification 360
Clean Canister Data 360
Shipping and Receiving Documents 396
Client Chain of Custody 397
Sample Receipt Checklist 399

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-6811-1

Receipt
The samples were received on 1/16/2017 at 1:10 PM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA
Method(s) D1946, TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

Method(s) TO 15 LL: The continuing calibration verification (CCV) associated with batch 140-7893 exhibited % difference of > 30% for Naphthalene; however, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

Method(s) TO 15 LL: The continuing calibration verification (CCV) and Laboratory Control Sample (LCS) associated with batch 140-7893 recovered above the upper control limit for 1,2,4-Trichlorobenzene. The samples associated with this CCV/LCS were non-detects for the affected analytes; therefore, the data have been reported.

Method(s) TO 15 LL, TO-15: Can Certification Comments:
Due to the large number of analytes in the CCV, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for several analytes to recover outside criteria for this method when analyzing for a full list. The CCV associated with the can cleaning batches had analytes outside control limits. These results have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments
No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LMC - MRC/Building C

TestAmerica Job ID: 140-6811-1

Client Sample ID: BLDG-L EFFLUENT — Lab Sample ID: 140-6811-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.6		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.7		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.10	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.41		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.50		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.13	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.24	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	3.5		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	5.6		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.18	J	0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.65		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.29	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.1		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5.2		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	5.9		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.50	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.0		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	2.0		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.50	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	1.0	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	12		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	21		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.90	J	2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	3.2		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.4	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	4.8		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-L MID-GAC — Lab Sample ID: 140-6811-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.8		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.6		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.11	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.29	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.40		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.20	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.6		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	3.0		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.81		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.62	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5.8		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	5.8		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.56	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	1.2	J	1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.0		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.80	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	5.5		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	11		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-L MID-GAC (Continued) — Lab Sample ID: 140-6811-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	4.4		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.7	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-L INFLUENT — Lab Sample ID: 140-6811-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.61		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.8		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.16	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.49		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.39	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.21	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.8		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.14	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	5.3		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.26	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	6.1		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.41		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.0		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.0		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	6.3		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.78	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	1.9		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.9	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.90	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	6.2		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.92	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	20		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	1.4	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	33		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	2.0		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.91	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	4.5		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A EFFFLUENT — Lab Sample ID: 140-6811-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	1.5		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.15	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	2.0		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.18	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.53	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	5.2		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	1.0	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	7.4		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.97	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.3	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LMC - MRC/Building C

TestAmerica Job ID: 140-6811-1

Client Sample ID: BLDG-A MID-GAC — Lab Sample ID: 140-6811-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.32	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	30		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.50		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	7.4		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	39		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.4		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.7		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.45		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	110	E	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.0		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Vinyl chloride	0.45		0.20	0.15	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.28	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane - DL	74		1.6	0.24	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.5	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	120		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.5		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	30		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	160		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	8.5		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	6.3		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	1.8		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	610	E	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	5.5		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Vinyl chloride	1.2		0.51	0.37	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	1.2	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane - DL	400		8.7	1.3	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A INFLUENT — Lab Sample ID: 140-6811-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5.3		5.0	1.4	ppb v/v	2.5		TO 15 LL	Total/NA
Chloroform	1.7	J	5.0	0.94	ppb v/v	2.5		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	110		5.0	1.5	ppb v/v	2.5		TO 15 LL	Total/NA
1,1-Dichloroethane	20		5.0	0.63	ppb v/v	2.5		TO 15 LL	Total/NA
1,1-Dichloroethene	94		5.0	0.88	ppb v/v	2.5		TO 15 LL	Total/NA
Methylene Chloride	38		13	8.1	ppb v/v	2.5		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	2.3	J	5.0	1.3	ppb v/v	2.5		TO 15 LL	Total/NA
1,1,1-Trichloroethane	360		5.0	0.75	ppb v/v	2.5		TO 15 LL	Total/NA
Trichloroethene	680		2.5	0.88	ppb v/v	2.5		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	17		16	4.6	ug/m3	2.5		TO 15 LL	Total/NA
Chloroform	8.4	J	24	4.6	ug/m3	2.5		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	440		20	5.9	ug/m3	2.5		TO 15 LL	Total/NA
1,1-Dichloroethane	81		20	2.5	ug/m3	2.5		TO 15 LL	Total/NA
1,1-Dichloroethene	370		20	3.5	ug/m3	2.5		TO 15 LL	Total/NA
Methylene Chloride	130		43	28	ug/m3	2.5		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	9.3	J	20	5.0	ug/m3	2.5		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-A INFLUENT (Continued)

Lab Sample ID: 140-6811-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	2000		27	4.1	ug/m3	2.5		TO 15 LL	Total/NA
Trichloroethene	3600		13	4.7	ug/m3	2.5		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-L EFFLUENT

Lab Sample ID: 140-6811-1

Date Collected: 01/12/17 12:56

Matrix: Air

Date Received: 01/16/17 13:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.6**		0.40	0.12	ppb v/v			01/19/17 23:34	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			01/19/17 23:34	1
Chlorodifluoromethane	**1.7**		0.40	0.075	ppb v/v			01/19/17 23:34	1
Chloroform	**0.10**	**J**	0.40	0.075	ppb v/v			01/19/17 23:34	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			01/19/17 23:34	1
Dichlorodifluoromethane	**0.41**		0.40	0.14	ppb v/v			01/19/17 23:34	1
1,1-Dichloroethane	**0.50**		0.40	0.050	ppb v/v			01/19/17 23:34	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			01/19/17 23:34	1
1,1-Dichloroethene	**0.13**	**J**	0.40	0.070	ppb v/v			01/19/17 23:34	1
Ethylbenzene	**0.24**	**J**	0.40	0.14	ppb v/v			01/19/17 23:34	1
Methylene Chloride	**3.5**		1.0	0.65	ppb v/v			01/19/17 23:34	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			01/19/17 23:34	1
Naphthalene	ND		0.20	0.20	ppb v/v			01/19/17 23:34	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			01/19/17 23:34	1
Toluene	**5.6**		0.60	0.60	ppb v/v			01/19/17 23:34	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			01/19/17 23:34	1
1,2,4-Trichlorobenzene	ND	*	0.40	0.20	ppb v/v			01/19/17 23:34	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			01/19/17 23:34	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			01/19/17 23:34	1
Trichloroethene	ND		0.20	0.070	ppb v/v			01/19/17 23:34	1
1,2,3-Trimethylbenzene	**0.18**	**J**	0.40	0.17	ppb v/v			01/19/17 23:34	1
1,2,4-Trimethylbenzene	**0.65**		0.40	0.13	ppb v/v			01/19/17 23:34	1
1,3,5-Trimethylbenzene	**0.29**	**J**	0.40	0.13	ppb v/v			01/19/17 23:34	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			01/19/17 23:34	1
Xylenes, Total	**1.1**		0.80	0.12	ppb v/v			01/19/17 23:34	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**5.2**		1.3	0.37	ug/m3			01/19/17 23:34	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			01/19/17 23:34	1
Chlorodifluoromethane	**5.9**		1.4	0.27	ug/m3			01/19/17 23:34	1
Chloroform	**0.50**	**J**	2.0	0.37	ug/m3			01/19/17 23:34	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			01/19/17 23:34	1
Dichlorodifluoromethane	**2.0**		2.0	0.67	ug/m3			01/19/17 23:34	1
1,1-Dichloroethane	**2.0**		1.6	0.20	ug/m3			01/19/17 23:34	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			01/19/17 23:34	1
1,1-Dichloroethene	**0.50**	**J**	1.6	0.28	ug/m3			01/19/17 23:34	1
Ethylbenzene	**1.0**	**J**	1.7	0.59	ug/m3			01/19/17 23:34	1
Methylene Chloride	**12**		3.5	2.3	ug/m3			01/19/17 23:34	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			01/19/17 23:34	1
Naphthalene	ND		1.0	1.0	ug/m3			01/19/17 23:34	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			01/19/17 23:34	1
Toluene	**21**		2.3	2.3	ug/m3			01/19/17 23:34	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			01/19/17 23:34	1
1,2,4-Trichlorobenzene	ND	*	3.0	1.4	ug/m3			01/19/17 23:34	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			01/19/17 23:34	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			01/19/17 23:34	1
Trichloroethene	ND		1.1	0.38	ug/m3			01/19/17 23:34	1
1,2,3-Trimethylbenzene	**0.90**	**J**	2.0	0.84	ug/m3			01/19/17 23:34	1
1,2,4-Trimethylbenzene	**3.2**		2.0	0.61	ug/m3			01/19/17 23:34	1

Client Sample ID: BLDG-L EFFLUENT

Lab Sample ID: 140-6811-1

Date Collected: 01/12/17 12:56

Matrix: Air

Date Received: 01/16/17 13:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	**1.4**	**J**	2.0	0.64	ug/m3			01/19/17 23:34	1
Vinyl chloride	ND		0.51	0.37	ug/m3			01/19/17 23:34	1
Xylenes, Total	**4.8**		3.5	0.52	ug/m3			01/19/17 23:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*60 - 140*		*01/19/17 23:34*	*1*

Client Sample ID: BLDG-L MID-GAC

Date Collected: 01/12/17 12:59
Date Received: 01/16/17 13:10
Sample Container: Summa Canister 1L

Lab Sample ID: 140-6811-2

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.8**		0.40	0.12	ppb v/v			01/19/17 20:28	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			01/19/17 20:28	1
Chlorodifluoromethane	**1.6**		0.40	0.075	ppb v/v			01/19/17 20:28	1
Chloroform	**0.11**	**J**	0.40	0.075	ppb v/v			01/19/17 20:28	1
cis-1,2-Dichloroethene	**0.29**	**J**	0.40	0.12	ppb v/v			01/19/17 20:28	1
Dichlorodifluoromethane	**0.40**		0.40	0.14	ppb v/v			01/19/17 20:28	1
1,1-Dichloroethane	**0.20**	**J**	0.40	0.050	ppb v/v			01/19/17 20:28	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			01/19/17 20:28	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			01/19/17 20:28	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			01/19/17 20:28	1
Methylene Chloride	**1.6**		1.0	0.65	ppb v/v			01/19/17 20:28	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			01/19/17 20:28	1
Naphthalene	ND		0.20	0.20	ppb v/v			01/19/17 20:28	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			01/19/17 20:28	1
Toluene	**3.0**		0.60	0.60	ppb v/v			01/19/17 20:28	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			01/19/17 20:28	1
1,2,4-Trichlorobenzene	ND	*	0.40	0.20	ppb v/v			01/19/17 20:28	1
1,1,1-Trichloroethane	**0.81**		0.40	0.060	ppb v/v			01/19/17 20:28	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			01/19/17 20:28	1
Trichloroethene	ND		0.20	0.070	ppb v/v			01/19/17 20:28	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			01/19/17 20:28	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			01/19/17 20:28	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			01/19/17 20:28	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			01/19/17 20:28	1
Xylenes, Total	**0.62**	**J**	0.80	0.12	ppb v/v			01/19/17 20:28	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**5.8**		1.3	0.37	ug/m3			01/19/17 20:28	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			01/19/17 20:28	1
Chlorodifluoromethane	**5.8**		1.4	0.27	ug/m3			01/19/17 20:28	1
Chloroform	**0.56**	**J**	2.0	0.37	ug/m3			01/19/17 20:28	1
cis-1,2-Dichloroethene	**1.2**	**J**	1.6	0.48	ug/m3			01/19/17 20:28	1
Dichlorodifluoromethane	**2.0**		2.0	0.67	ug/m3			01/19/17 20:28	1
1,1-Dichloroethane	**0.80**	**J**	1.6	0.20	ug/m3			01/19/17 20:28	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			01/19/17 20:28	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			01/19/17 20:28	1
Ethylbenzene	ND		1.7	0.59	ug/m3			01/19/17 20:28	1
Methylene Chloride	**5.5**		3.5	2.3	ug/m3			01/19/17 20:28	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			01/19/17 20:28	1
Naphthalene	ND		1.0	1.0	ug/m3			01/19/17 20:28	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			01/19/17 20:28	1
Toluene	**11**		2.3	2.3	ug/m3			01/19/17 20:28	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			01/19/17 20:28	1
1,2,4-Trichlorobenzene	ND	*	3.0	1.4	ug/m3			01/19/17 20:28	1
1,1,1-Trichloroethane	**4.4**		2.2	0.33	ug/m3			01/19/17 20:28	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			01/19/17 20:28	1
Trichloroethene	ND		1.1	0.38	ug/m3			01/19/17 20:28	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			01/19/17 20:28	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			01/19/17 20:28	1

Client Sample ID: BLDG-L MID-GAC

Date Collected: 01/12/17 12:59
Date Received: 01/16/17 13:10
Sample Container: Summa Canister 1L

Lab Sample ID: 140-6811-2

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			01/19/17 20:28	1
Vinyl chloride	ND		0.51	0.37	ug/m3			01/19/17 20:28	1
Xylenes, Total	**2.7**	**J**	3.5	0.52	ug/m3			01/19/17 20:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*60 - 140*		*01/19/17 20:28*	*1*

Client Sample ID: BLDG-L INFLUENT

Lab Sample ID: 140-6811-3

Date Collected: 01/12/17 13:02

Matrix: Air

Date Received: 01/16/17 13:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.61**		0.40	0.12	ppb v/v			01/19/17 21:14	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			01/19/17 21:14	1
Chlorodifluoromethane	**1.8**		0.40	0.075	ppb v/v			01/19/17 21:14	1
Chloroform	**0.16**	**J**	0.40	0.075	ppb v/v			01/19/17 21:14	1
cis-1,2-Dichloroethene	**0.49**		0.40	0.12	ppb v/v			01/19/17 21:14	1
Dichlorodifluoromethane	**0.39**	**J**	0.40	0.14	ppb v/v			01/19/17 21:14	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			01/19/17 21:14	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			01/19/17 21:14	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			01/19/17 21:14	1
Ethylbenzene	**0.21**	**J**	0.40	0.14	ppb v/v			01/19/17 21:14	1
Methylene Chloride	**1.8**		1.0	0.65	ppb v/v			01/19/17 21:14	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			01/19/17 21:14	1
Naphthalene	ND		0.20	0.20	ppb v/v			01/19/17 21:14	1
Tetrachloroethene	**0.14**	**J**	0.40	0.080	ppb v/v			01/19/17 21:14	1
Toluene	**5.3**		0.60	0.60	ppb v/v			01/19/17 21:14	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			01/19/17 21:14	1
1,2,4-Trichlorobenzene	ND	*	0.40	0.20	ppb v/v			01/19/17 21:14	1
1,1,1-Trichloroethane	**0.26**	**J**	0.40	0.060	ppb v/v			01/19/17 21:14	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			01/19/17 21:14	1
Trichloroethene	**6.1**		0.20	0.070	ppb v/v			01/19/17 21:14	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			01/19/17 21:14	1
1,2,4-Trimethylbenzene	**0.41**		0.40	0.13	ppb v/v			01/19/17 21:14	1
1,3,5-Trimethylbenzene	**0.19**	**J**	0.40	0.13	ppb v/v			01/19/17 21:14	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			01/19/17 21:14	1
Xylenes, Total	**1.0**		0.80	0.12	ppb v/v			01/19/17 21:14	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2.0**		1.3	0.37	ug/m3			01/19/17 21:14	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			01/19/17 21:14	1
Chlorodifluoromethane	**6.3**		1.4	0.27	ug/m3			01/19/17 21:14	1
Chloroform	**0.78**	**J**	2.0	0.37	ug/m3			01/19/17 21:14	1
cis-1,2-Dichloroethene	**1.9**		1.6	0.48	ug/m3			01/19/17 21:14	1
Dichlorodifluoromethane	**1.9**	**J**	2.0	0.67	ug/m3			01/19/17 21:14	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			01/19/17 21:14	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			01/19/17 21:14	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			01/19/17 21:14	1
Ethylbenzene	**0.90**	**J**	1.7	0.59	ug/m3			01/19/17 21:14	1
Methylene Chloride	**6.2**		3.5	2.3	ug/m3			01/19/17 21:14	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			01/19/17 21:14	1
Naphthalene	ND		1.0	1.0	ug/m3			01/19/17 21:14	1
Tetrachloroethene	**0.92**	**J**	2.7	0.54	ug/m3			01/19/17 21:14	1
Toluene	**20**		2.3	2.3	ug/m3			01/19/17 21:14	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			01/19/17 21:14	1
1,2,4-Trichlorobenzene	ND	*	3.0	1.4	ug/m3			01/19/17 21:14	1
1,1,1-Trichloroethane	**1.4**	**J**	2.2	0.33	ug/m3			01/19/17 21:14	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			01/19/17 21:14	1
Trichloroethene	**33**		1.1	0.38	ug/m3			01/19/17 21:14	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			01/19/17 21:14	1
1,2,4-Trimethylbenzene	**2.0**		2.0	0.61	ug/m3			01/19/17 21:14	1

Client Sample ID: BLDG-L INFLUENT

Lab Sample ID: 140-6811-3

Date Collected: 01/12/17 13:02

Matrix: Air

Date Received: 01/16/17 13:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	**0.91**	**J**	2.0	0.64	ug/m3			01/19/17 21:14	1
Vinyl chloride	ND		0.51	0.37	ug/m3			01/19/17 21:14	1
Xylenes, Total	**4.5**		3.5	0.52	ug/m3			01/19/17 21:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*60 - 140*		*01/19/17 21:14*	*1*

Client Sample ID: BLDG-A EFFFLUENT

Lab Sample ID: 140-6811-4

Date Collected: 01/13/17 13:41
Matrix: Air
Date Received: 01/16/17 13:10
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			01/19/17 01:49	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			01/19/17 01:49	1
Chlorodifluoromethane	ND		0.40	0.075	ppb v/v			01/19/17 01:49	1
Chloroform	ND		0.40	0.075	ppb v/v			01/19/17 01:49	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			01/19/17 01:49	1
Dichlorodifluoromethane	ND		0.40	0.14	ppb v/v			01/19/17 01:49	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			01/19/17 01:49	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			01/19/17 01:49	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			01/19/17 01:49	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			01/19/17 01:49	1
Methylene Chloride	**1.5**		1.0	0.65	ppb v/v			01/19/17 01:49	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			01/19/17 01:49	1
Naphthalene	ND		0.20	0.20	ppb v/v			01/19/17 01:49	1
Tetrachloroethene	**0.15**	**J**	0.40	0.080	ppb v/v			01/19/17 01:49	1
Toluene	**2.0**		0.60	0.60	ppb v/v			01/19/17 01:49	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			01/19/17 01:49	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			01/19/17 01:49	1
1,1,1-Trichloroethane	**0.18**	**J**	0.40	0.060	ppb v/v			01/19/17 01:49	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			01/19/17 01:49	1
Trichloroethene	ND		0.20	0.070	ppb v/v			01/19/17 01:49	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			01/19/17 01:49	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			01/19/17 01:49	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			01/19/17 01:49	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			01/19/17 01:49	1
Xylenes, Total	**0.53**	**J**	0.80	0.12	ppb v/v			01/19/17 01:49	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			01/19/17 01:49	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			01/19/17 01:49	1
Chlorodifluoromethane	ND		1.4	0.27	ug/m3			01/19/17 01:49	1
Chloroform	ND		2.0	0.37	ug/m3			01/19/17 01:49	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			01/19/17 01:49	1
Dichlorodifluoromethane	ND		2.0	0.67	ug/m3			01/19/17 01:49	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			01/19/17 01:49	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			01/19/17 01:49	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			01/19/17 01:49	1
Ethylbenzene	ND		1.7	0.59	ug/m3			01/19/17 01:49	1
Methylene Chloride	**5.2**		3.5	2.3	ug/m3			01/19/17 01:49	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			01/19/17 01:49	1
Naphthalene	ND		1.0	1.0	ug/m3			01/19/17 01:49	1
Tetrachloroethene	**1.0**	**J**	2.7	0.54	ug/m3			01/19/17 01:49	1
Toluene	**7.4**		2.3	2.3	ug/m3			01/19/17 01:49	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			01/19/17 01:49	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			01/19/17 01:49	1
1,1,1-Trichloroethane	**0.97**	**J**	2.2	0.33	ug/m3			01/19/17 01:49	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			01/19/17 01:49	1
Trichloroethene	ND		1.1	0.38	ug/m3			01/19/17 01:49	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			01/19/17 01:49	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			01/19/17 01:49	1

Client Sample ID: BLDG-A EFFFLUENT

Lab Sample ID: 140-6811-4

Date Collected: 01/13/17 13:41

Matrix: Air

Date Received: 01/16/17 13:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			01/19/17 01:49	1
Vinyl chloride	ND		0.51	0.37	ug/m3			01/19/17 01:49	1
Xylenes, Total	**2.3**	**J**	3.5	0.52	ug/m3			01/19/17 01:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*60 - 140*		*01/19/17 01:49*	*1*

Client Sample ID: BLDG-A MID-GAC

Lab Sample ID: 140-6811-5

Date Collected: 01/13/17 13:46

Matrix: Air

Date Received: 01/16/17 13:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			01/19/17 04:14	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			01/19/17 04:14	1
Chlorodifluoromethane	**0.34**	**J**	0.40	0.075	ppb v/v			01/19/17 04:14	1
Chloroform	**0.32**	**J**	0.40	0.075	ppb v/v			01/19/17 04:14	1
cis-1,2-Dichloroethene	**30**		0.40	0.12	ppb v/v			01/19/17 04:14	1
Dichlorodifluoromethane	**0.50**		0.40	0.14	ppb v/v			01/19/17 04:14	1
1,1-Dichloroethane	**7.4**		0.40	0.050	ppb v/v			01/19/17 04:14	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			01/19/17 04:14	1
1,1-Dichloroethene	**39**		0.40	0.070	ppb v/v			01/19/17 04:14	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			01/19/17 04:14	1
Methylene Chloride	**2.4**		1.0	0.65	ppb v/v			01/19/17 04:14	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			01/19/17 04:14	1
Naphthalene	ND		0.20	0.20	ppb v/v			01/19/17 04:14	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			01/19/17 04:14	1
Toluene	**1.7**		0.60	0.60	ppb v/v			01/19/17 04:14	1
trans-1,2-Dichloroethene	**0.45**		0.40	0.10	ppb v/v			01/19/17 04:14	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			01/19/17 04:14	1
1,1,1-Trichloroethane	**110**	**E**	0.40	0.060	ppb v/v			01/19/17 04:14	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			01/19/17 04:14	1
Trichloroethene	**1.0**		0.20	0.070	ppb v/v			01/19/17 04:14	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			01/19/17 04:14	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			01/19/17 04:14	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			01/19/17 04:14	1
Vinyl chloride	**0.45**		0.20	0.15	ppb v/v			01/19/17 04:14	1
Xylenes, Total	**0.28**	**J**	0.80	0.12	ppb v/v			01/19/17 04:14	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			01/19/17 04:14	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			01/19/17 04:14	1
Chlorodifluoromethane	**1.2**	**J**	1.4	0.27	ug/m3			01/19/17 04:14	1
Chloroform	**1.5**	**J**	2.0	0.37	ug/m3			01/19/17 04:14	1
cis-1,2-Dichloroethene	**120**		1.6	0.48	ug/m3			01/19/17 04:14	1
Dichlorodifluoromethane	**2.5**		2.0	0.67	ug/m3			01/19/17 04:14	1
1,1-Dichloroethane	**30**		1.6	0.20	ug/m3			01/19/17 04:14	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			01/19/17 04:14	1
1,1-Dichloroethene	**160**		1.6	0.28	ug/m3			01/19/17 04:14	1
Ethylbenzene	ND		1.7	0.59	ug/m3			01/19/17 04:14	1
Methylene Chloride	**8.5**		3.5	2.3	ug/m3			01/19/17 04:14	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			01/19/17 04:14	1
Naphthalene	ND		1.0	1.0	ug/m3			01/19/17 04:14	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			01/19/17 04:14	1
Toluene	**6.3**		2.3	2.3	ug/m3			01/19/17 04:14	1
trans-1,2-Dichloroethene	**1.8**		1.6	0.40	ug/m3			01/19/17 04:14	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			01/19/17 04:14	1
1,1,1-Trichloroethane	**610**	**E**	2.2	0.33	ug/m3			01/19/17 04:14	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			01/19/17 04:14	1
Trichloroethene	**5.5**		1.1	0.38	ug/m3			01/19/17 04:14	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			01/19/17 04:14	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			01/19/17 04:14	1

Client Sample ID: BLDG-A MID-GAC

Date Collected: 01/13/17 13:46
Date Received: 01/16/17 13:10
Sample Container: Summa Canister 1L

Lab Sample ID: 140-6811-5

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			01/19/17 04:14	1
Vinyl chloride	**1.2**		0.51	0.37	ug/m3			01/19/17 04:14	1
Xylenes, Total	**1.2**	**J**	3.5	0.52	ug/m3			01/19/17 04:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*60 - 140*		*01/19/17 04:14*	*1*

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**74**		1.6	0.24	ppb v/v			01/19/17 22:00	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**400**		8.7	1.3	ug/m3			01/19/17 22:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*60 - 140*		*01/19/17 22:00*	*1*

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-6811-6

Date Collected: 01/13/17 13:51
Matrix: Air
Date Received: 01/16/17 13:10
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**5.3**		5.0	1.4	ppb v/v			01/19/17 22:47	2.5
Carbon tetrachloride	ND		5.0	0.94	ppb v/v			01/19/17 22:47	2.5
Chlorodifluoromethane	ND		5.0	0.94	ppb v/v			01/19/17 22:47	2.5
Chloroform	**1.7**	**J**	5.0	0.94	ppb v/v			01/19/17 22:47	2.5
cis-1,2-Dichloroethene	**110**		5.0	1.5	ppb v/v			01/19/17 22:47	2.5
Dichlorodifluoromethane	ND		5.0	1.7	ppb v/v			01/19/17 22:47	2.5
1,1-Dichloroethane	**20**		5.0	0.63	ppb v/v			01/19/17 22:47	2.5
1,2-Dichloroethane	ND		5.0	1.2	ppb v/v			01/19/17 22:47	2.5
1,1-Dichloroethene	**94**		5.0	0.88	ppb v/v			01/19/17 22:47	2.5
Ethylbenzene	ND		5.0	1.7	ppb v/v			01/19/17 22:47	2.5
Methylene Chloride	**38**		13	8.1	ppb v/v			01/19/17 22:47	2.5
Methyl tert-butyl ether	ND		25	4.3	ppb v/v			01/19/17 22:47	2.5
Naphthalene	ND		2.5	2.5	ppb v/v			01/19/17 22:47	2.5
Tetrachloroethene	ND		5.0	1.0	ppb v/v			01/19/17 22:47	2.5
Toluene	ND		7.5	7.5	ppb v/v			01/19/17 22:47	2.5
trans-1,2-Dichloroethene	**2.3**	**J**	5.0	1.3	ppb v/v			01/19/17 22:47	2.5
1,2,4-Trichlorobenzene	ND	*	5.0	2.4	ppb v/v			01/19/17 22:47	2.5
1,1,1-Trichloroethane	**360**		5.0	0.75	ppb v/v			01/19/17 22:47	2.5
1,1,2-Trichloroethane	ND		5.0	1.3	ppb v/v			01/19/17 22:47	2.5
Trichloroethene	**680**		2.5	0.88	ppb v/v			01/19/17 22:47	2.5
1,2,3-Trimethylbenzene	ND		5.0	2.1	ppb v/v			01/19/17 22:47	2.5
1,2,4-Trimethylbenzene	ND		5.0	1.6	ppb v/v			01/19/17 22:47	2.5
1,3,5-Trimethylbenzene	ND		5.0	1.6	ppb v/v			01/19/17 22:47	2.5
Vinyl chloride	ND		2.5	1.8	ppb v/v			01/19/17 22:47	2.5
Xylenes, Total	ND		10	1.5	ppb v/v			01/19/17 22:47	2.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**17**		16	4.6	ug/m3			01/19/17 22:47	2.5
Carbon tetrachloride	ND		31	5.9	ug/m3			01/19/17 22:47	2.5
Chlorodifluoromethane	ND		18	3.3	ug/m3			01/19/17 22:47	2.5
Chloroform	**8.4**	**J**	24	4.6	ug/m3			01/19/17 22:47	2.5
cis-1,2-Dichloroethene	**440**		20	5.9	ug/m3			01/19/17 22:47	2.5
Dichlorodifluoromethane	ND		25	8.3	ug/m3			01/19/17 22:47	2.5
1,1-Dichloroethane	**81**		20	2.5	ug/m3			01/19/17 22:47	2.5
1,2-Dichloroethane	ND		20	4.8	ug/m3			01/19/17 22:47	2.5
1,1-Dichloroethene	**370**		20	3.5	ug/m3			01/19/17 22:47	2.5
Ethylbenzene	ND		22	7.3	ug/m3			01/19/17 22:47	2.5
Methylene Chloride	**130**		43	28	ug/m3			01/19/17 22:47	2.5
Methyl tert-butyl ether	ND		90	15	ug/m3			01/19/17 22:47	2.5
Naphthalene	ND		13	13	ug/m3			01/19/17 22:47	2.5
Tetrachloroethene	ND		34	6.8	ug/m3			01/19/17 22:47	2.5
Toluene	ND		28	28	ug/m3			01/19/17 22:47	2.5
trans-1,2-Dichloroethene	**9.3**	**J**	20	5.0	ug/m3			01/19/17 22:47	2.5
1,2,4-Trichlorobenzene	ND	*	37	18	ug/m3			01/19/17 22:47	2.5
1,1,1-Trichloroethane	**2000**		27	4.1	ug/m3			01/19/17 22:47	2.5
1,1,2-Trichloroethane	ND		27	7.2	ug/m3			01/19/17 22:47	2.5
Trichloroethene	**3600**		13	4.7	ug/m3			01/19/17 22:47	2.5
1,2,3-Trimethylbenzene	ND		25	10	ug/m3			01/19/17 22:47	2.5
1,2,4-Trimethylbenzene	ND		25	7.7	ug/m3			01/19/17 22:47	2.5

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-6811-6

Date Collected: 01/13/17 13:51

Matrix: Air

Date Received: 01/16/17 13:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		25	8.0	ug/m3			01/19/17 22:47	2.5
Vinyl chloride	ND		6.4	4.6	ug/m3			01/19/17 22:47	2.5
Xylenes, Total	ND		43	6.5	ug/m3			01/19/17 22:47	2.5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*60 - 140*		*01/19/17 22:47*	*2.5*

Default Detection Limits

Client: Tetra Tech GEO
Project/Site: LMC - MRC/Building C

TestAmerica Job ID: 140-6811-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.20	0.13	ppb v/v	TO 15 LL
Methylene Chloride	0.69	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: LMC - MRC/Building C

TestAmerica Job ID: 140-6811-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(60-140)
140-6811-1	BLDG-L EFFLUENT	90
140-6811-2	BLDG-L MID-GAC	95
140-6811-3	BLDG-L INFLUENT	93
140-6811-4	BLDG-A EFFFLUENT	98
140-6811-5 - DL	BLDG-A MID-GAC	88
140-6811-5	BLDG-A MID-GAC	98
140-6811-6	BLDG-A INFLUENT	85
LCS 140-7893/1002	Lab Control Sample	78
LCS 140-7907/1002	Lab Control Sample	102
MB 140-7893/4	Method Blank	86
MB 140-7907/6	Method Blank	98

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-7893/4
Matrix: Air
Analysis Batch: 7893

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			01/19/17 14:11	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			01/19/17 14:11	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			01/19/17 14:11	1
Chloroform	ND		0.080	0.015	ppb v/v			01/19/17 14:11	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			01/19/17 14:11	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			01/19/17 14:11	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			01/19/17 14:11	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			01/19/17 14:11	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			01/19/17 14:11	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			01/19/17 14:11	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			01/19/17 14:11	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			01/19/17 14:11	1
Naphthalene	ND		0.040	0.040	ppb v/v			01/19/17 14:11	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			01/19/17 14:11	1
Toluene	ND		0.12	0.12	ppb v/v			01/19/17 14:11	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			01/19/17 14:11	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			01/19/17 14:11	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			01/19/17 14:11	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			01/19/17 14:11	1
Trichloroethene	ND		0.040	0.014	ppb v/v			01/19/17 14:11	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			01/19/17 14:11	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			01/19/17 14:11	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			01/19/17 14:11	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			01/19/17 14:11	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			01/19/17 14:11	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			01/19/17 14:11	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			01/19/17 14:11	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			01/19/17 14:11	1
Chloroform	ND		0.39	0.073	ug/m3			01/19/17 14:11	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			01/19/17 14:11	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			01/19/17 14:11	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			01/19/17 14:11	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			01/19/17 14:11	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			01/19/17 14:11	1
Ethylbenzene	ND		0.35	0.12	ug/m3			01/19/17 14:11	1
Methylene Chloride	ND		0.69	0.45	ug/m3			01/19/17 14:11	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			01/19/17 14:11	1
Naphthalene	ND		0.21	0.21	ug/m3			01/19/17 14:11	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			01/19/17 14:11	1
Toluene	ND		0.45	0.45	ug/m3			01/19/17 14:11	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			01/19/17 14:11	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			01/19/17 14:11	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			01/19/17 14:11	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			01/19/17 14:11	1
Trichloroethene	ND		0.21	0.075	ug/m3			01/19/17 14:11	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			01/19/17 14:11	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-7893/4
Matrix: Air
Analysis Batch: 7893

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			01/19/17 14:11	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			01/19/17 14:11	1
Vinyl chloride	ND		0.10	0.074	ug/m3			01/19/17 14:11	1
Xylenes, Total	ND		0.69	0.10	ug/m3			01/19/17 14:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*60 - 140*		*01/19/17 14:11*	*1*

Lab Sample ID: LCS 140-7893/1002
Matrix: Air
Analysis Batch: 7893

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	1.53		ppb v/v		77	70 - 130
Carbon tetrachloride	2.00	1.92		ppb v/v		96	70 - 130
Chlorodifluoromethane	2.00	1.72		ppb v/v		86	60 - 140
Chloroform	2.00	1.71		ppb v/v		85	70 - 130
cis-1,2-Dichloroethene	2.00	1.76		ppb v/v		88	70 - 130
Dichlorodifluoromethane	2.00	1.83		ppb v/v		91	60 - 140
1,1-Dichloroethane	2.00	1.79		ppb v/v		89	70 - 130
1,2-Dichloroethane	2.00	1.58		ppb v/v		79	70 - 130
1,1-Dichloroethene	2.00	1.92		ppb v/v		96	70 - 130
Ethylbenzene	2.00	1.70		ppb v/v		85	70 - 130
Methylene Chloride	2.00	1.81		ppb v/v		91	70 - 130
Methyl tert-butyl ether	2.00	1.56		ppb v/v		78	60 - 140
Naphthalene	2.00	2.62		ppb v/v		131	60 - 140
Tetrachloroethene	2.00	1.81		ppb v/v		90	70 - 130
Toluene	2.00	1.67		ppb v/v		84	70 - 130
trans-1,2-Dichloroethene	2.00	1.89		ppb v/v		95	70 - 130
1,2,4-Trichlorobenzene	2.00	3.34	*	ppb v/v		167	60 - 140
1,1,1-Trichloroethane	2.00	1.71		ppb v/v		85	70 - 130
1,1,2-Trichloroethane	2.00	1.61		ppb v/v		80	70 - 130
Trichloroethene	2.00	1.86		ppb v/v		93	70 - 130
1,2,3-Trimethylbenzene	2.00	1.70		ppb v/v		85	70 - 130
1,2,4-Trimethylbenzene	2.00	1.69		ppb v/v		84	70 - 130
1,3,5-Trimethylbenzene	2.00	1.75		ppb v/v		87	70 - 130
Vinyl chloride	2.00	2.02		ppb v/v		101	70 - 130
Xylenes, Total	6.00	5.20		ppb v/v		87	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	4.90		ug/m3		77	70 - 130
Carbon tetrachloride	13	12.1		ug/m3		96	70 - 130
Chlorodifluoromethane	7.1	6.07		ug/m3		86	60 - 140
Chloroform	9.8	8.34		ug/m3		85	70 - 130
cis-1,2-Dichloroethene	7.9	6.97		ug/m3		88	70 - 130
Dichlorodifluoromethane	9.9	9.04		ug/m3		91	60 - 140
1,1-Dichloroethane	8.1	7.24		ug/m3		89	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-7893/1002
Matrix: Air
Analysis Batch: 7893

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	8.1	6.39		ug/m3		79	70 - 130
1,1-Dichloroethene	7.9	7.61		ug/m3		96	70 - 130
Ethylbenzene	8.7	7.38		ug/m3		85	70 - 130
Methylene Chloride	7.0	6.30		ug/m3		91	70 - 130
Methyl tert-butyl ether	7.2	5.64		ug/m3		78	60 - 140
Naphthalene	10	13.7		ug/m3		131	60 - 140
Tetrachloroethene	14	12.3		ug/m3		90	70 - 130
Toluene	7.5	6.30		ug/m3		84	70 - 130
trans-1,2-Dichloroethene	7.9	7.50		ug/m3		95	70 - 130
1,2,4-Trichlorobenzene	15	24.8	*	ug/m3		167	60 - 140
1,1,1-Trichloroethane	11	9.32		ug/m3		85	70 - 130
1,1,2-Trichloroethane	11	8.78		ug/m3		80	70 - 130
Trichloroethene	11	10.0		ug/m3		93	70 - 130
1,2,3-Trimethylbenzene	9.8	8.37		ug/m3		85	70 - 130
1,2,4-Trimethylbenzene	9.8	8.29		ug/m3		84	70 - 130
1,3,5-Trimethylbenzene	9.8	8.60		ug/m3		87	70 - 130
Vinyl chloride	5.1	5.17		ug/m3		101	70 - 130
Xylenes, Total	26	22.6		ug/m3		87	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	78		60 - 140

Lab Sample ID: MB 140-7907/6
Matrix: Air
Analysis Batch: 7907

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			01/18/17 15:17	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			01/18/17 15:17	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			01/18/17 15:17	1
Chloroform	ND		0.080	0.015	ppb v/v			01/18/17 15:17	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			01/18/17 15:17	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			01/18/17 15:17	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			01/18/17 15:17	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			01/18/17 15:17	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			01/18/17 15:17	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			01/18/17 15:17	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			01/18/17 15:17	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			01/18/17 15:17	1
Naphthalene	ND		0.040	0.040	ppb v/v			01/18/17 15:17	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			01/18/17 15:17	1
Toluene	ND		0.12	0.12	ppb v/v			01/18/17 15:17	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			01/18/17 15:17	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			01/18/17 15:17	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			01/18/17 15:17	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			01/18/17 15:17	1
Trichloroethene	ND		0.040	0.014	ppb v/v			01/18/17 15:17	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-7907/6
Matrix: Air
Analysis Batch: 7907

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			01/18/17 15:17	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			01/18/17 15:17	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			01/18/17 15:17	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			01/18/17 15:17	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			01/18/17 15:17	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			01/18/17 15:17	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			01/18/17 15:17	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			01/18/17 15:17	1
Chloroform	ND		0.39	0.073	ug/m3			01/18/17 15:17	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			01/18/17 15:17	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			01/18/17 15:17	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			01/18/17 15:17	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			01/18/17 15:17	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			01/18/17 15:17	1
Ethylbenzene	ND		0.35	0.12	ug/m3			01/18/17 15:17	1
Methylene Chloride	ND		0.69	0.45	ug/m3			01/18/17 15:17	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			01/18/17 15:17	1
Naphthalene	ND		0.21	0.21	ug/m3			01/18/17 15:17	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			01/18/17 15:17	1
Toluene	ND		0.45	0.45	ug/m3			01/18/17 15:17	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			01/18/17 15:17	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			01/18/17 15:17	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			01/18/17 15:17	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			01/18/17 15:17	1
Trichloroethene	ND		0.21	0.075	ug/m3			01/18/17 15:17	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			01/18/17 15:17	1
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			01/18/17 15:17	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			01/18/17 15:17	1
Vinyl chloride	ND		0.10	0.074	ug/m3			01/18/17 15:17	1
Xylenes, Total	ND		0.69	0.10	ug/m3			01/18/17 15:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*60 - 140*		*01/18/17 15:17*	*1*

Lab Sample ID: LCS 140-7907/1002
Matrix: Air
Analysis Batch: 7907

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	2.06		ppb v/v		103	70 - 130
Carbon tetrachloride	2.00	2.05		ppb v/v		102	70 - 130
Chlorodifluoromethane	2.00	2.02		ppb v/v		101	60 - 140
Chloroform	2.00	1.95		ppb v/v		97	70 - 130
cis-1,2-Dichloroethene	2.00	2.05		ppb v/v		102	70 - 130
Dichlorodifluoromethane	2.00	2.44		ppb v/v		122	60 - 140

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-7907/1002
Matrix: Air
Analysis Batch: 7907

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	2.00	1.90		ppb v/v		95	70 - 130
1,2-Dichloroethane	2.00	1.98		ppb v/v		99	70 - 130
1,1-Dichloroethene	2.00	1.91		ppb v/v		96	70 - 130
Ethylbenzene	2.00	2.04		ppb v/v		102	70 - 130
Methylene Chloride	2.00	1.83		ppb v/v		92	70 - 130
Methyl tert-butyl ether	2.00	1.98		ppb v/v		99	60 - 140
Naphthalene	2.00	1.66		ppb v/v		83	60 - 140
Tetrachloroethene	2.00	2.04		ppb v/v		102	70 - 130
Toluene	2.00	2.18		ppb v/v		109	70 - 130
trans-1,2-Dichloroethene	2.00	1.87		ppb v/v		94	70 - 130
1,2,4-Trichlorobenzene	2.00	1.68		ppb v/v		84	60 - 140
1,1,1-Trichloroethane	2.00	1.94		ppb v/v		97	70 - 130
1,1,2-Trichloroethane	2.00	2.01		ppb v/v		100	70 - 130
Trichloroethene	2.00	2.05		ppb v/v		103	70 - 130
1,2,3-Trimethylbenzene	2.02	2.26		ppb v/v		112	70 - 130
1,2,4-Trimethylbenzene	2.00	2.16		ppb v/v		108	70 - 130
1,3,5-Trimethylbenzene	2.00	2.17		ppb v/v		108	70 - 130
Vinyl chloride	2.00	2.30		ppb v/v		115	70 - 130
Xylenes, Total	6.00	6.23		ppb v/v		104	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	6.60		ug/m3		103	70 - 130
Carbon tetrachloride	13	12.9		ug/m3		102	70 - 130
Chlorodifluoromethane	7.1	7.15		ug/m3		101	60 - 140
Chloroform	9.8	9.50		ug/m3		97	70 - 130
cis-1,2-Dichloroethene	7.9	8.12		ug/m3		102	70 - 130
Dichlorodifluoromethane	9.9	12.1		ug/m3		122	60 - 140
1,1-Dichloroethane	8.1	7.70		ug/m3		95	70 - 130
1,2-Dichloroethane	8.1	8.00		ug/m3		99	70 - 130
1,1-Dichloroethene	7.9	7.58		ug/m3		96	70 - 130
Ethylbenzene	8.7	8.88		ug/m3		102	70 - 130
Methylene Chloride	6.9	6.36		ug/m3		92	70 - 130
Methyl tert-butyl ether	7.2	7.13		ug/m3		99	60 - 140
Naphthalene	10	8.71		ug/m3		83	60 - 140
Tetrachloroethene	14	13.8		ug/m3		102	70 - 130
Toluene	7.5	8.22		ug/m3		109	70 - 130
trans-1,2-Dichloroethene	7.9	7.43		ug/m3		94	70 - 130
1,2,4-Trichlorobenzene	15	12.4		ug/m3		84	60 - 140
1,1,1-Trichloroethane	11	10.6		ug/m3		97	70 - 130
1,1,2-Trichloroethane	11	10.9		ug/m3		100	70 - 130
Trichloroethene	11	11.0		ug/m3		103	70 - 130
1,2,3-Trimethylbenzene	9.9	11.1		ug/m3		112	70 - 130
1,2,4-Trimethylbenzene	9.8	10.6		ug/m3		108	70 - 130
1,3,5-Trimethylbenzene	9.8	10.7		ug/m3		108	70 - 130
Vinyl chloride	5.1	5.89		ug/m3		115	70 - 130
Xylenes, Total	26	27.1		ug/m3		104	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-7907/1002
Matrix: Air
Analysis Batch: 7907

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		60 - 140

QC Association Summary

Client: Tetra Tech GEO
Project/Site: LMC - MRC/Building C

TestAmerica Job ID: 140-6811-1

Air - GC/MS VOA

Analysis Batch: 7893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-6811-1	BLDG-L EFFLUENT	Total/NA	Air	TO 15 LL	
140-6811-2	BLDG-L MID-GAC	Total/NA	Air	TO 15 LL	
140-6811-3	BLDG-L INFLUENT	Total/NA	Air	TO 15 LL	
140-6811-5 - DL	BLDG-A MID-GAC	Total/NA	Air	TO 15 LL	
140-6811-6	BLDG-A INFLUENT	Total/NA	Air	TO 15 LL	
MB 140-7893/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-7893/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 7907

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-6811-4	BLDG-A EFFFLUENT	Total/NA	Air	TO 15 LL	
140-6811-5	BLDG-A MID-GAC	Total/NA	Air	TO 15 LL	
MB 140-7907/6	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-7907/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Client Sample ID: BLDG-L EFFLUENT
Lab Sample ID: 140-6811-1
Date Collected: 01/12/17 12:56
Matrix: Air
Date Received: 01/16/17 13:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	7893	01/19/17 23:34	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: BLDG-L MID-GAC
Lab Sample ID: 140-6811-2
Date Collected: 01/12/17 12:59
Matrix: Air
Date Received: 01/16/17 13:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	7893	01/19/17 20:28	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: BLDG-L INFLUENT
Lab Sample ID: 140-6811-3
Date Collected: 01/12/17 13:02
Matrix: Air
Date Received: 01/16/17 13:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	7893	01/19/17 21:14	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: BLDG-A EFFFLUENT
Lab Sample ID: 140-6811-4
Date Collected: 01/13/17 13:41
Matrix: Air
Date Received: 01/16/17 13:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	7907	01/19/17 01:49	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: BLDG-A MID-GAC
Lab Sample ID: 140-6811-5
Date Collected: 01/13/17 13:46
Matrix: Air
Date Received: 01/16/17 13:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL	DL	1	25 mL	500 mL	7893	01/19/17 22:00	HMT	TAL KNX
	Instrument ID: MJ									
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	7907	01/19/17 04:14	HMT	TAL KNX
	Instrument ID: MR									

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: LMC - MRC/Building C

TestAmerica Job ID: 140-6811-1

Client Sample ID: BLDG-A INFLUENT
Date Collected: 01/13/17 13:51
Date Received: 01/16/17 13:10

Lab Sample ID: 140-6811-6
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		2.5	20 mL	500 mL	7893	01/19/17 22:47	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: Method Blank
Date Collected: N/A
Date Received: N/A

Lab Sample ID: MB 140-7893/4
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	7893	01/19/17 14:11	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: Method Blank
Date Collected: N/A
Date Received: N/A

Lab Sample ID: MB 140-7907/6
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	7907	01/18/17 15:17	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 140-7893/1002
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	7893	01/19/17 12:03	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 140-7907/1002
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	7907	01/18/17 10:18	HMT	TAL KNX
	Instrument ID: MR									

Laboratory References:
TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: LMC - MRC/Building C

TestAmerica Job ID: 140-6811-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: LMC - MRC/Building C

TestAmerica Job ID: 140-6811-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-6811-1	BLDG-L EFFLUENT	Air	01/12/17 12:56	01/16/17 13:10
140-6811-2	BLDG-L MID-GAC	Air	01/12/17 12:59	01/16/17 13:10
140-6811-3	BLDG-L INFLUENT	Air	01/12/17 13:02	01/16/17 13:10
140-6811-4	BLDG-A EFFFLUENT	Air	01/13/17 13:41	01/16/17 13:10
140-6811-5	BLDG-A MID-GAC	Air	01/13/17 13:46	01/16/17 13:10
140-6811-6	BLDG-A INFLUENT	Air	01/13/17 13:51	01/16/17 13:10

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
BLDG-L EFFLUENT	140-6811-1	90
BLDG-L MID-GAC	140-6811-2	95
BLDG-L INFLUENT	140-6811-3	93
BLDG-A EFFFLUENT	140-6811-4	98
BLDG-A MID-GAC	140-6811-5	98
BLDG-A MID-GAC DL	140-6811-5 DL	88
BLDG-A INFLUENT	140-6811-6	85
	MB 140-7893/4	86
	MB 140-7907/6	98
	LCS 140-7893/1002	78
	LCS 140-7907/1002	102

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Matrix: Air Level: Low Lab File ID: JCCVA19-LCS.d

Lab ID: LCS 140-7893/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.53	77	70-130	
Carbon tetrachloride	2.00	1.92	96	70-130	
Chlorodifluoromethane	2.00	1.72	86	60-140	
Chloroform	2.00	1.71	85	70-130	
cis-1,2-Dichloroethene	2.00	1.76	88	70-130	
Dichlorodifluoromethane	2.00	1.83	91	60-140	
1,1-Dichloroethane	2.00	1.79	89	70-130	
1,2-Dichloroethane	2.00	1.58	79	70-130	
1,1-Dichloroethene	2.00	1.92	96	70-130	
Ethylbenzene	2.00	1.70	85	70-130	
Methylene Chloride	2.00	1.81	91	70-130	
Methyl tert-butyl ether	2.00	1.56	78	60-140	
Naphthalene	2.00	2.62	131	60-140	
Tetrachloroethene	2.00	1.81	90	70-130	
Toluene	2.00	1.67	84	70-130	
trans-1,2-Dichloroethene	2.00	1.89	95	70-130	
1,2,4-Trichlorobenzene	2.00	3.34	167	60-140	*
1,1,1-Trichloroethane	2.00	1.71	85	70-130	
1,1,2-Trichloroethane	2.00	1.61	80	70-130	
Trichloroethene	2.00	1.86	93	70-130	
1,2,3-Trimethylbenzene	2.00	1.70	85	70-130	
1,2,4-Trimethylbenzene	2.00	1.69	84	70-130	
1,3,5-Trimethylbenzene	2.00	1.75	87	70-130	
Vinyl chloride	2.00	2.02	101	70-130	
Xylenes, Total	6.00	5.20	87	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Matrix: Air Level: Low Lab File ID: RA18CCV-LCS.d

Lab ID: LCS 140-7907/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.06	103	70-130	
Carbon tetrachloride	2.00	2.05	102	70-130	
Chlorodifluoromethane	2.00	2.02	101	60-140	
Chloroform	2.00	1.95	97	70-130	
cis-1,2-Dichloroethene	2.00	2.05	102	70-130	
Dichlorodifluoromethane	2.00	2.44	122	60-140	
1,1-Dichloroethane	2.00	1.90	95	70-130	
1,2-Dichloroethane	2.00	1.98	99	70-130	
1,1-Dichloroethene	2.00	1.91	96	70-130	
Ethylbenzene	2.00	2.04	102	70-130	
Methylene Chloride	2.00	1.83	92	70-130	
Methyl tert-butyl ether	2.00	1.98	99	60-140	
Naphthalene	2.00	1.66	83	60-140	
Tetrachloroethene	2.00	2.04	102	70-130	
Toluene	2.00	2.18	109	70-130	
trans-1,2-Dichloroethene	2.00	1.87	94	70-130	
1,2,4-Trichlorobenzene	2.00	1.68	84	60-140	
1,1,1-Trichloroethane	2.00	1.94	97	70-130	
1,1,2-Trichloroethane	2.00	2.01	100	70-130	
Trichloroethene	2.00	2.05	103	70-130	
1,2,3-Trimethylbenzene	2.02	2.26	112	70-130	
1,2,4-Trimethylbenzene	2.00	2.16	108	70-130	
1,3,5-Trimethylbenzene	2.00	2.17	108	70-130	
Vinyl chloride	2.00	2.30	115	70-130	
Xylenes, Total	6.00	6.23	104	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Lab File ID: J500BA19.D Lab Sample ID: MB 140-7893/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MJ Date Analyzed: 01/19/2017 14:11

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-7893/1002	JCCVA19-LCS.d	01/19/2017 12:03
BLDG-L MID-GAC	140-6811-2	JA19P107.D	01/19/2017 20:28
BLDG-L INFLUENT	140-6811-3	JA19P108.D	01/19/2017 21:14
BLDG-A MID-GAC DL	140-6811-5 DL	JA19P109.D	01/19/2017 22:00
BLDG-A INFLUENT	140-6811-6	JA19P110.D	01/19/2017 22:47
BLDG-L EFFLUENT	140-6811-1	JA19P103R.D	01/19/2017 23:34

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Lab File ID: RBK500A18.D Lab Sample ID: MB 140-7907/6

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MR Date Analyzed: 01/18/2017 15:17

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-7907/1002	RA18CCV-LCS.d	01/18/2017 10:18
BLDG-A EFFFLUENT	140-6811-4	RA18P112.D	01/19/2017 01:49
BLDG-A MID-GAC	140-6811-5	RA18P114.D	01/19/2017 04:14

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Lab File ID: JBFBK25X.D BFB Injection Date: 11/25/2016

Instrument ID: MJ BFB Injection Time: 18:19

Analysis Batch No.: 7241

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	23.8	
75	30.0 - 60.0 % of mass 95	45.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	98.9	
175	5.0 - 9.0 % of mass 174	7.8	(7.9) 1
176	95.0 - 101.0 % of mass 174	97.9	(99.0) 1
177	5.0 - 9.0 % of mass 176	6.5	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-7241/2	JK25IC01X.D	11/25/2016	18:47
	IC 140-7241/3	JK25IC02X.D	11/25/2016	19:41
	IC 140-7241/4	JK25IC03X.D	11/25/2016	20:34
	IC 140-7241/5	JK25IC04X.D	11/25/2016	21:29
	IC 140-7241/6	JK25IC05X.D	11/25/2016	22:23
	ICIS 140-7241/7	JK25IC06X.D	11/25/2016	23:17
	IC 140-7241/8	JK25IC07X.D	11/26/2016	00:11
	IC 140-7241/9	JK25IC08X.D	11/26/2016	01:05
	IC 140-7241/10	JK25IC09X.D	11/26/2016	01:58
	ICV 140-7241/23	JK25ICVX.D	11/26/2016	12:43

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Lab File ID: JBFBA19.D BFB Injection Date: 01/19/2017

Instrument ID: MJ BFB Injection Time: 11:35

Analysis Batch No.: 7893

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	27.1	
75	30.0 - 60.0 % of mass 95	49.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	97.5	
175	5.0 - 9.0 % of mass 174	8.0	(8.2) 1
176	95.0 - 101.0 % of mass 174	95.9	(98.4) 1
177	5.0 - 9.0 % of mass 176	6.3	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-7893/2	JCCVA19.D	01/19/2017	12:03
	LCS 140-7893/1002	JCCVA19-LCS.d	01/19/2017	12:03
	MB 140-7893/4	J500BA19.D	01/19/2017	14:11
BLDG-L MID-GAC	140-6811-2	JA19P107.D	01/19/2017	20:28
BLDG-L INFLUENT	140-6811-3	JA19P108.D	01/19/2017	21:14
BLDG-A MID-GAC DL	140-6811-5 DL	JA19P109.D	01/19/2017	22:00
BLDG-A INFLUENT	140-6811-6	JA19P110.D	01/19/2017	22:47
BLDG-L EFFLUENT	140-6811-1	JA19P103R.D	01/19/2017	23:34

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Lab File ID: RBFBA16.D BFB Injection Date: 01/16/2017

Instrument ID: MR BFB Injection Time: 16:55

Analysis Batch No.: 7852

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.1	
75	30.0 - 60.0 % of mass 95	45.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.4	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	105.5	
175	5.0 - 9.0 % of mass 174	7.7	(7.3) 1
176	95.0 - 101.0 % of mass 174	102.4	(97.0) 1
177	5.0 - 9.0 % of mass 176	6.5	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-7852/4	RA16IC02.D	01/16/2017	18:15
	IC 140-7852/5	RA16IC03.D	01/16/2017	19:03
	IC 140-7852/6	RA16IC04.D	01/16/2017	19:50
	IC 140-7852/7	RA16IC05.D	01/16/2017	20:38
	ICIS 140-7852/8	RA16IC06.D	01/16/2017	21:26
	IC 140-7852/9	RA16IC07.D	01/16/2017	22:14
	IC 140-7852/10	RA16IC08.D	01/16/2017	23:01
	IC 140-7852/11	RA16IC09.D	01/16/2017	23:49
	ICV 140-7852/13	RA16ICV.D	01/17/2017	01:21
	IC 140-7852/24	RA16IC01R.D	01/17/2017	10:29

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Lab File ID: RA18BFB.D BFB Injection Date: 01/18/2017

Instrument ID: MR BFB Injection Time: 09:47

Analysis Batch No.: 7907

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.6	
75	30.0 - 60.0 % of mass 95	45.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.4	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	102.4	
175	5.0 - 9.0 % of mass 174	7.2	(7.0) 1
176	95.0 - 101.0 % of mass 174	98.3	(96.0) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-7907/2	RA18CCV.D	01/18/2017	10:18
	LCS 140-7907/1002	RA18CCV-LCS.d	01/18/2017	10:18
	MB 140-7907/6	RBK500A18.D	01/18/2017	15:17
BLDG-A EFFFLUENT	140-6811-4	RA18P112.D	01/19/2017	01:49
BLDG-A MID-GAC	140-6811-5	RA18P114.D	01/19/2017	04:14

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Sample No.: ICIS 140-7241/7 Date Analyzed: 11/25/2016 23:17

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JK25IC06X.D Heated Purge: (Y/N) N

Calibration ID: 790

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		356777	8.64	1567971	10.84	1332891	15.61
UPPER LIMIT		499488	8.97	2195159	11.17	1866047	15.94
LOWER LIMIT		214066	8.31	940783	10.51	799735	15.28
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-7241/23		319485	8.63	1407958	10.83	1180826	15.61

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Sample No.: CCVIS 140-7893/2 Date Analyzed: 01/19/2017 12:03

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JCCVA19.D Heated Purge: (Y/N) N

Calibration ID: 790

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		281267	8.60	1150447	10.80	982820	15.57
UPPER LIMIT		393774	8.93	1610626	11.13	1375948	15.90
LOWER LIMIT		168760	8.27	690268	10.47	589692	15.24
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-7893/1002		281267	8.60	1150447	10.80	982820	15.57
MB 140-7893/4		340064	8.60	1506113	10.80	1207007	15.57
140-6811-2	BLDG-L MID-GAC	316910	8.59	1420606	10.80	1260327	15.57
140-6811-3	BLDG-L INFLUENT	317669	8.60	1414351	10.80	1184098	15.58
140-6811-5 DL	BLDG-A MID-GAC DL	327630	8.60	1536494	10.80	1301340	15.58
140-6811-6	BLDG-A INFLUENT	266542	8.60	1140254	10.80	884623	15.57
140-6811-1	BLDG-L EFFLUENT	296032	8.61	1320042	10.80	1122605	15.57

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Sample No.: ICIS 140-7852/8 Date Analyzed: 01/16/2017 21:26

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RA16IC06.D Heated Purge: (Y/N) N

Calibration ID: 857

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		414061	8.24	2023869	10.41	1725846	15.30
UPPER LIMIT		579685	8.57	2833417	10.74	2416184	15.63
LOWER LIMIT		248437	7.91	1214321	10.08	1035508	14.97
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-7852/13		453735	8.24	2225824	10.41	1915858	15.30

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Sample No.: CCVIS 140-7907/2 Date Analyzed: 01/18/2017 10:18

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RA18CCV.D Heated Purge: (Y/N) N

Calibration ID: 857

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		355315	8.25	1742464	10.41	1516979	15.30
UPPER LIMIT		497441	8.58	2439450	10.74	2123771	15.63
LOWER LIMIT		213189	7.92	1045478	10.08	910187	14.97
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-7907/1002		355315	8.25	1742464	10.41	1516979	15.30
MB 140-7907/6		334217	8.24	1644151	10.40	1365616	15.29
140-6811-4	BLDG-A EFFFLUENT	291286	8.24	1498796	10.40	1337869	15.30
140-6811-5	BLDG-A MID-GAC	315830	8.24	1629780	10.41	1397104	15.29

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Client Sample ID: BLDG-L EFFLUENT Lab Sample ID: 140-6811-1

Matrix: Air Lab File ID: JA19P103R.D

Analysis Method: TO 15 LL Date Collected: 01/12/2017 12:56

Sample wt/vol: 100(mL) Date Analyzed: 01/19/2017 23:34

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7893 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.6		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.7		0.40	0.075
67-66-3	Chloroform	119.38	0.10	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.50		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.13	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.24	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	3.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	5.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND	*	0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.18	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.65		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.29	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	90		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Client Sample ID: BLDG-L EFFLUENT Lab Sample ID: 140-6811-1

Matrix: Air Lab File ID: JA19P103R.D

Analysis Method: TO 15 LL Date Collected: 01/12/2017 12:56

Sample wt/vol: 100(mL) Date Analyzed: 01/19/2017 23:34

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7893 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	5.2		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.9		1.4	0.27
67-66-3	Chloroform	119.38	0.50	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	2.0		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.50	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	1.0	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	12		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	21		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND	*	3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	0.90	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	3.2		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.4	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.8		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	90		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P103R.D				
Lims ID:	140-6811-A-1				
Client ID:	BLDG-L EFFLUENT				
Sample Type:	Client				
Inject. Date:	19-Jan-2017 23:34:30	ALS Bottle#:	3	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003854-022				
Misc. Info.:	140-6811-a-1				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Jan-2017 10:54:07	Calib Date:	26-Nov-2016 01:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				
First Level Reviewer: barlozhetskayaa		Date:	20-Jan-2017 09:40:43		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.606	8.597	0.009	99	296032	4.00	
* 2 1,4-Difluorobenzene	114	10.801	10.803	-0.002	95	1320042	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.572	15.574	-0.002	88	1122605	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.218	17.220	-0.002	95	641561	3.61	
6 Chlorodifluoromethane	67	3.565	3.562	0.003	97	8887	0.3328	
8 Dichlorodifluoromethane	85	3.624	3.621	0.003	98	19604	0.0818	
27 1,1-Dichloroethene	96	5.739	5.735	0.004	96	2241	0.0252	
31 Methylene Chloride	84	6.083	6.079	0.004	95	61136	0.7007	
37 1,1-Dichloroethane	63	7.293	7.290	0.003	99	16986	0.0998	
44 Chloroform	83	8.622	8.613	0.009	41	3796	0.0204	
51 Benzene	78	10.247	10.243	0.004	98	77409	0.3228	
68 Toluene	91	13.593	13.589	0.004	93	272257	1.13	
79 Ethylbenzene	91	15.911	15.913	-0.002	97	13568	0.0474	
81 m-Xylene & p-Xylene	91	16.073	16.074	-0.001	99	35566	0.1684	
85 o-Xylene	91	16.600	16.602	-0.002	98	12183	0.0535	
92 1,3,5-Trimethylbenzene	120	17.961	17.963	-0.002	83	7566	0.0582	
96 1,2,4-Trimethylbenzene	105	18.402	18.404	-0.002	97	29232	0.1304	
102 1,2,3-Trimethylbenzene	105	18.881	18.877	0.004	96	6155	0.0365	
S 126 Xylenes, Total	100				0		0.2218	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

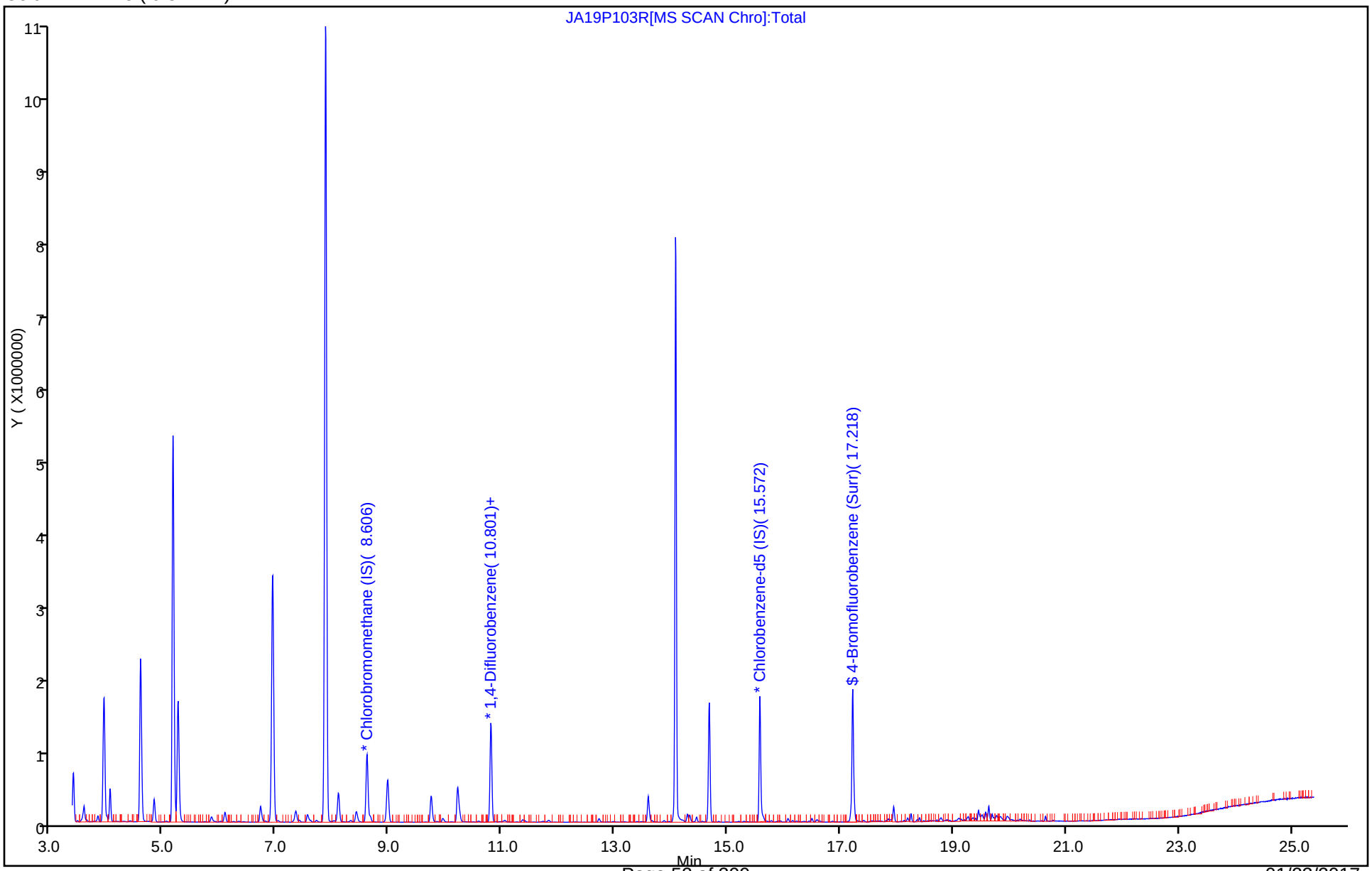
Report Date: 20-Jan-2017 10:55:26 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P103R.D

Injection Date:	19-Jan-2017 23:34:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-6811-A-1	Lab Sample ID:	140-6811-1	Worklist Smp#:	22
Client ID:	BLDG-L EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



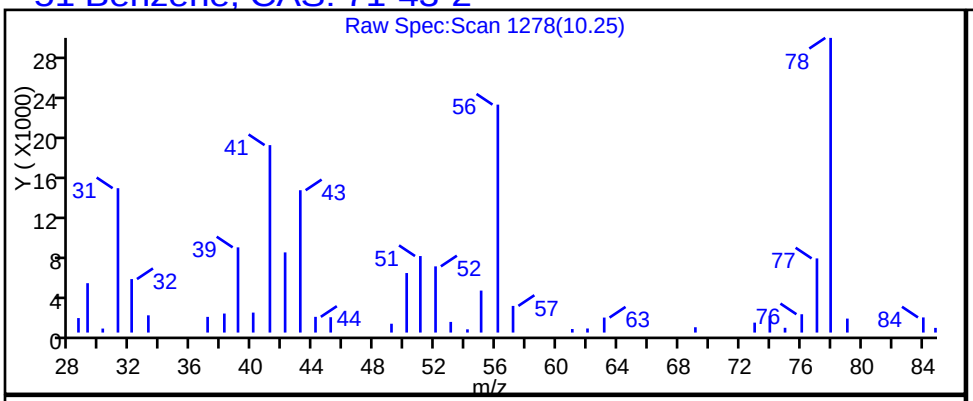
TestAmerica Knoxville
Recovery Report

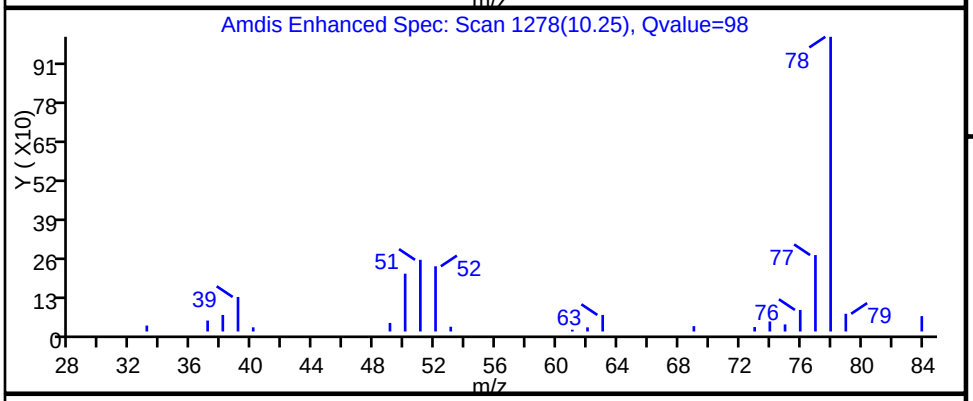
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P103R.D				
Lims ID:	140-6811-A-1				
Client ID:	BLDG-L EFFLUENT				
Sample Type:	Client				
Inject. Date:	19-Jan-2017 23:34:30	ALS Bottle#:	3	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003854-022				
Misc. Info.:	140-6811-a-1				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Jan-2017 10:54:07	Calib Date:	26-Nov-2016 01:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				
First Level Reviewer: barlozhetskayaa		Date:	20-Jan-2017 09:40:43		

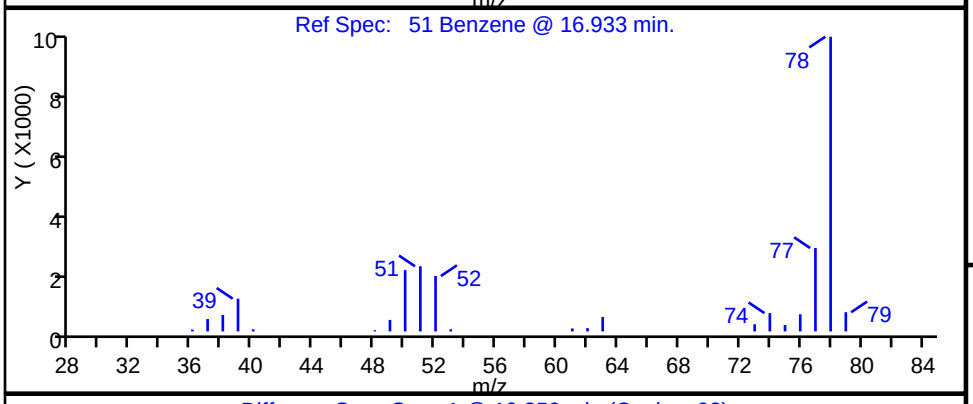
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.61	90.23

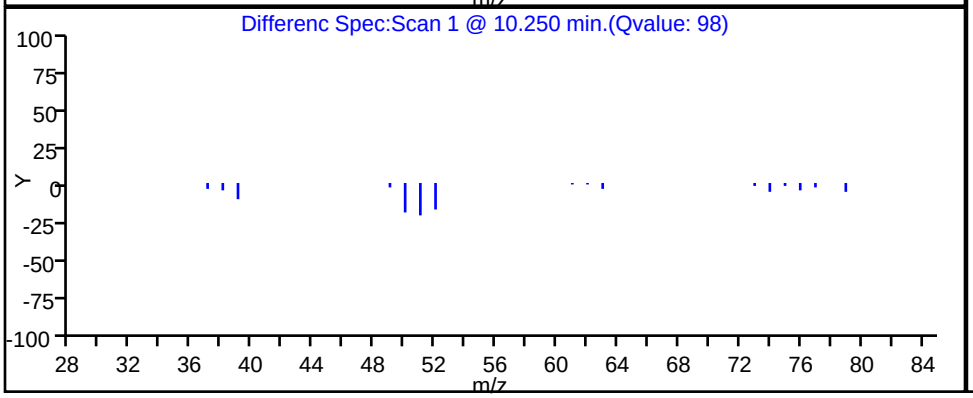
Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P103R.D
Injection Date: 19-Jan-2017 23:34:30 Instrument ID: MJ
Lims ID: 140-6811-A-1 Lab Sample ID: 140-6811-1
Client ID: BLDG-L EFFLUENT
Operator ID: 7126 ALS Bottle#: 3 Worklist Smp#: 22
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

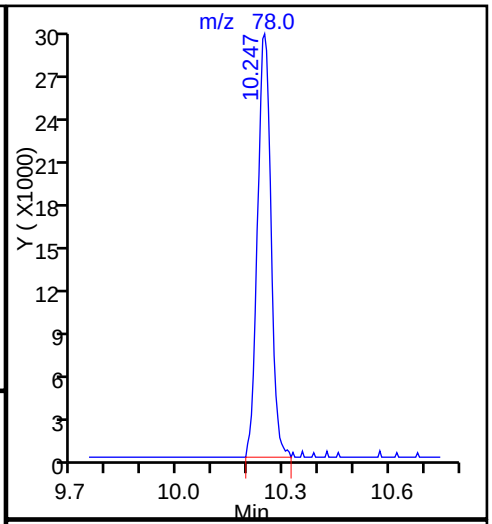
51 Benzene, CAS: 71-43-2

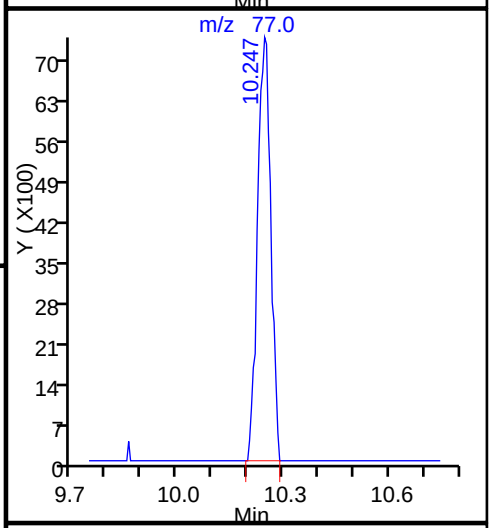


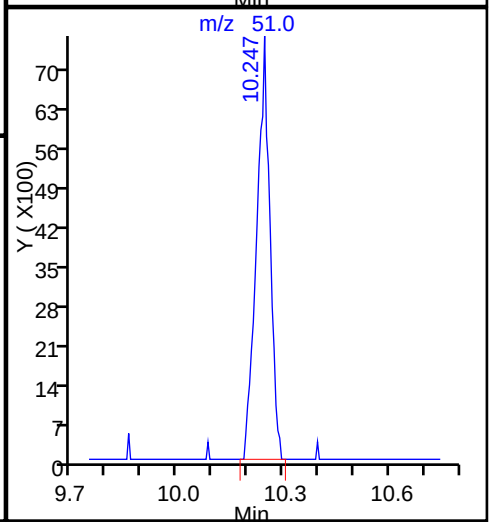












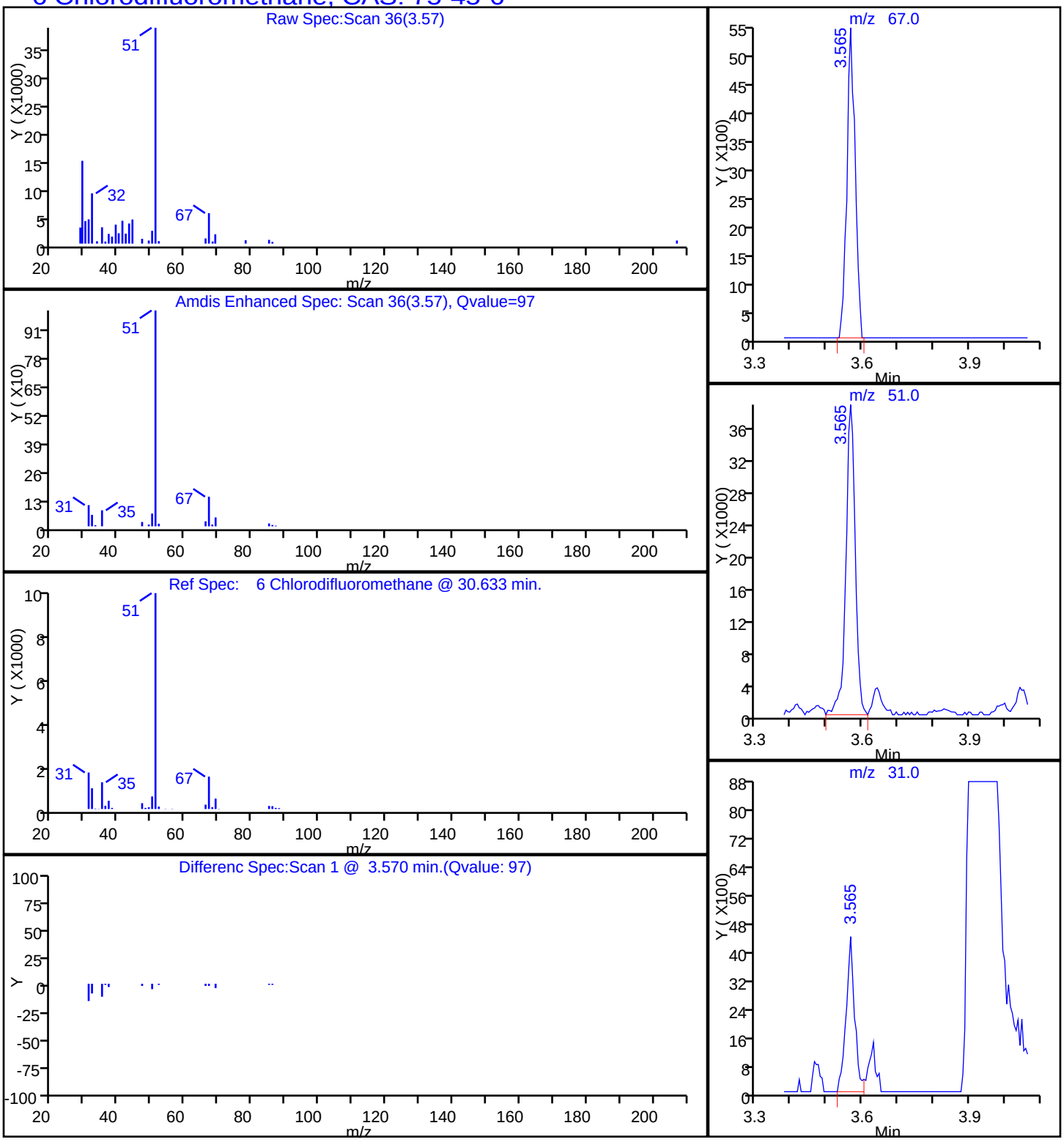
Report Date: 20-Jan-2017 10:55:26 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P103R.D

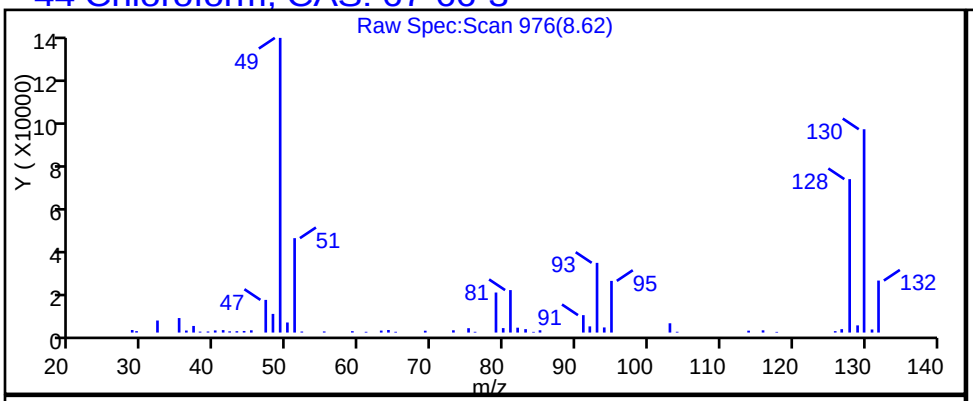
Injection Date:	19-Jan-2017 23:34:30	Instrument ID:	MJ		
Lims ID:	140-6811-A-1	Lab Sample ID:	140-6811-1		
Client ID:	BLDG-L EFFLUENT				
Operator ID:	7126	ALS Bottle#:	3	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

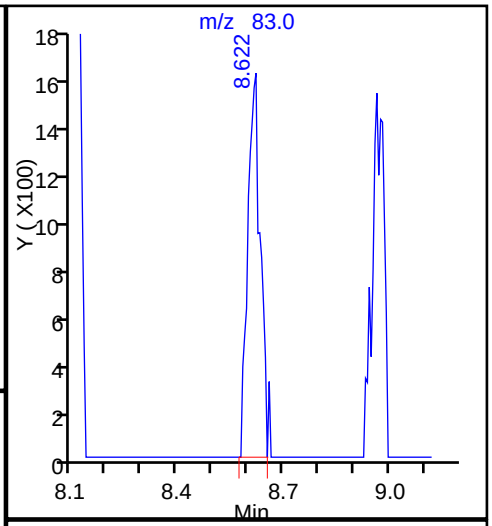
6 Chlorodifluoromethane, CAS: 75-45-6

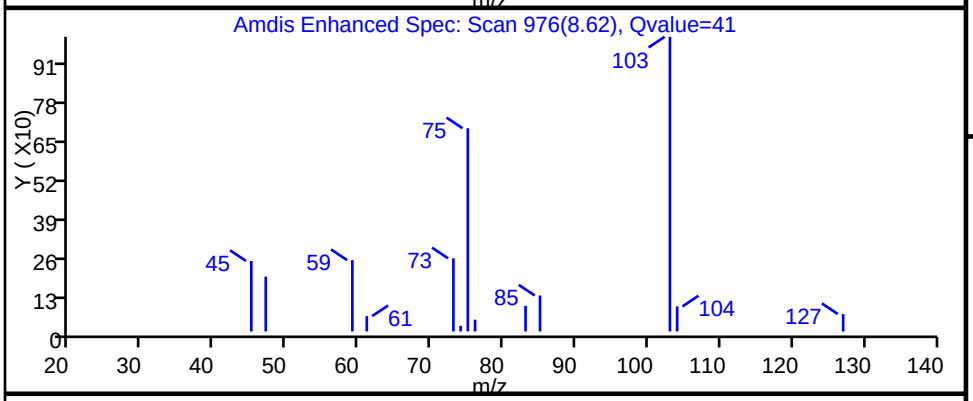


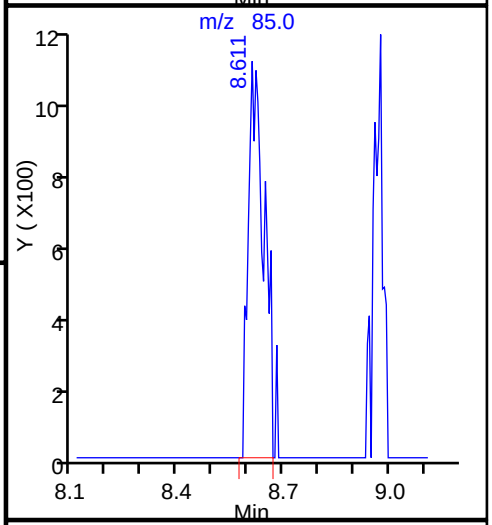
Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P103R.D
Injection Date: 19-Jan-2017 23:34:30 Instrument ID: MJ
Lims ID: 140-6811-A-1 Lab Sample ID: 140-6811-1
Client ID: BLDG-L EFFLUENT
Operator ID: 7126 ALS Bottle#: 3 Worklist Smp#: 22
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

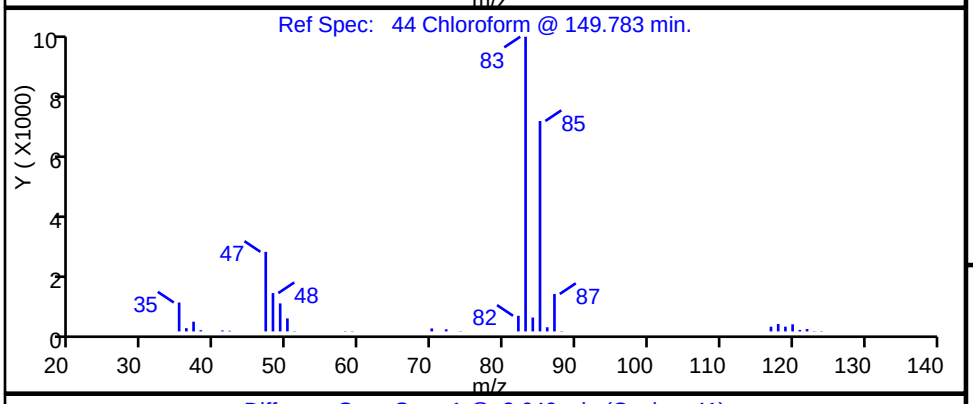
44 Chloroform, CAS: 67-66-3

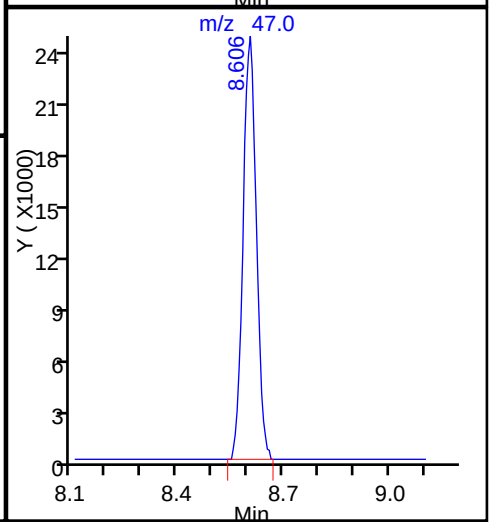


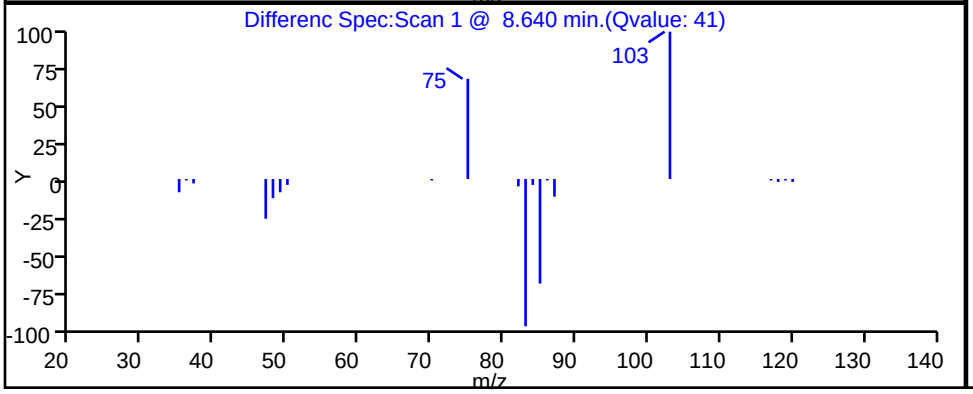








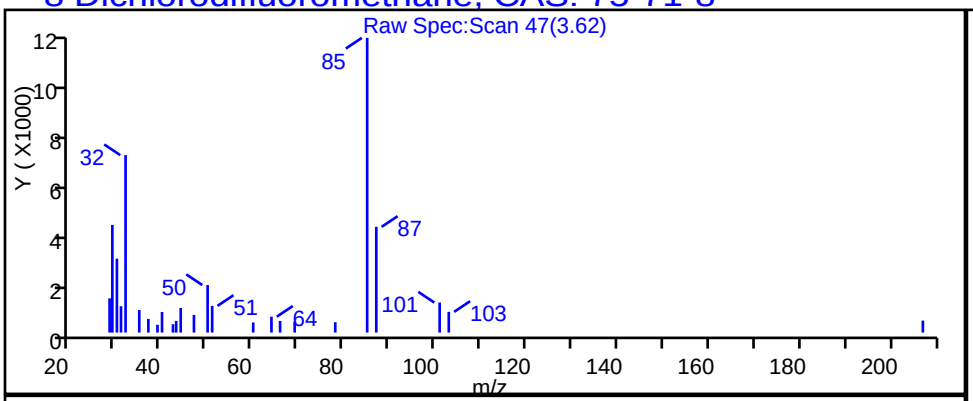


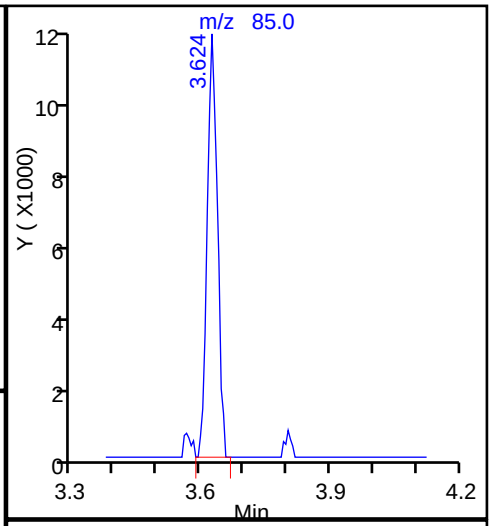


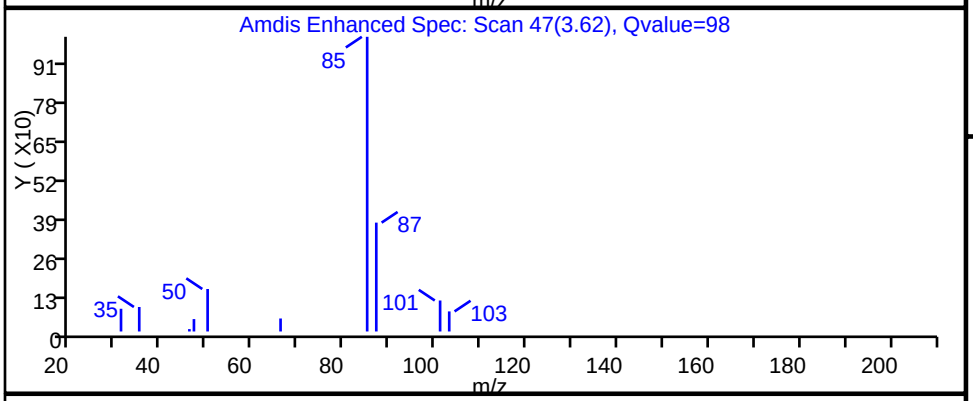
TestAmerica Knoxville

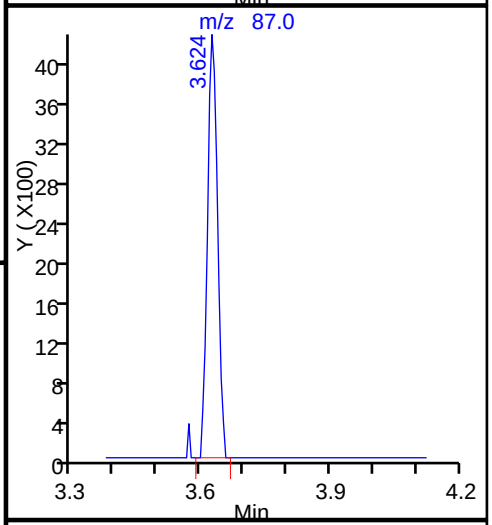
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P103R.D		
Injection Date:	19-Jan-2017 23:34:30	Instrument ID:	MJ
Lims ID:	140-6811-A-1	Lab Sample ID:	140-6811-1
Client ID:	BLDG-L EFFLUENT		
Operator ID:	7126	ALS Bottle#:	3 Worklist Smp#: 22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

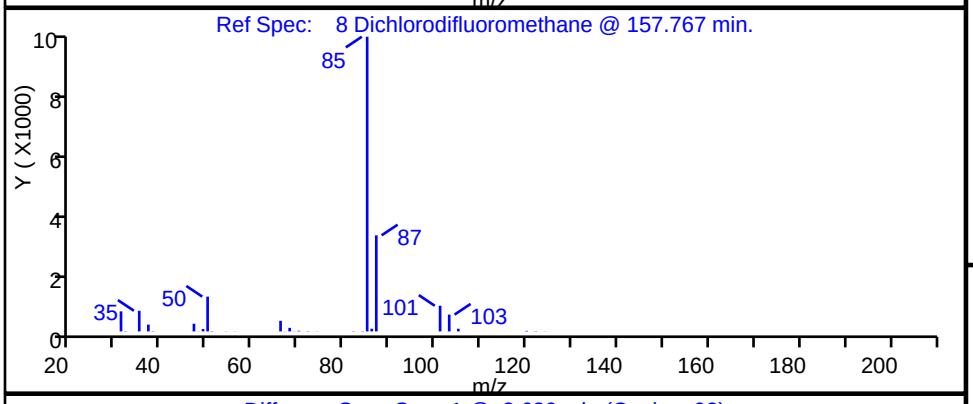
8 Dichlorodifluoromethane, CAS: 75-71-8

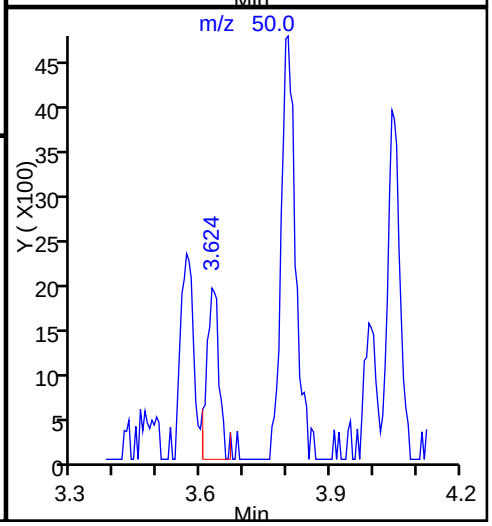


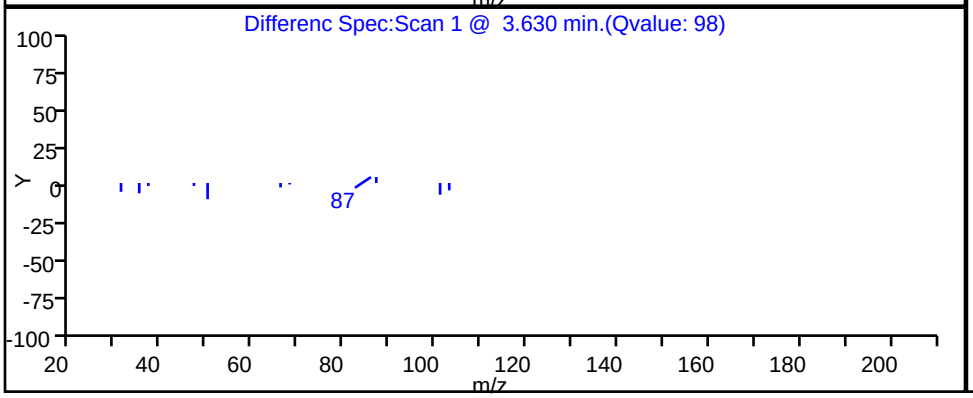








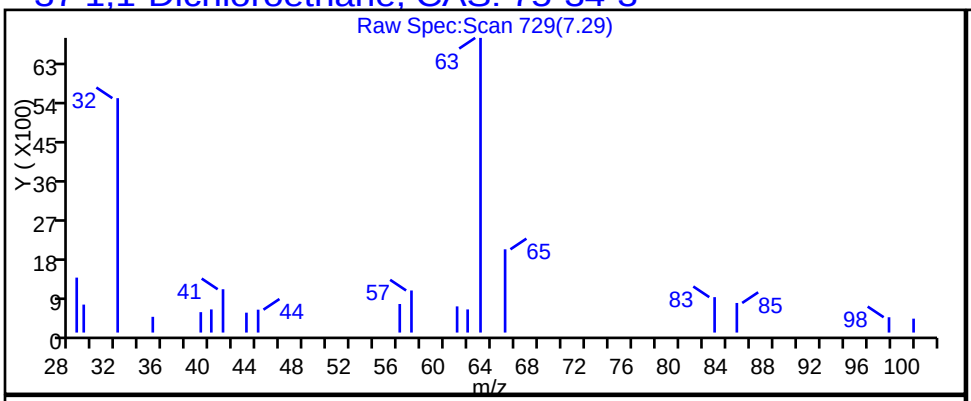


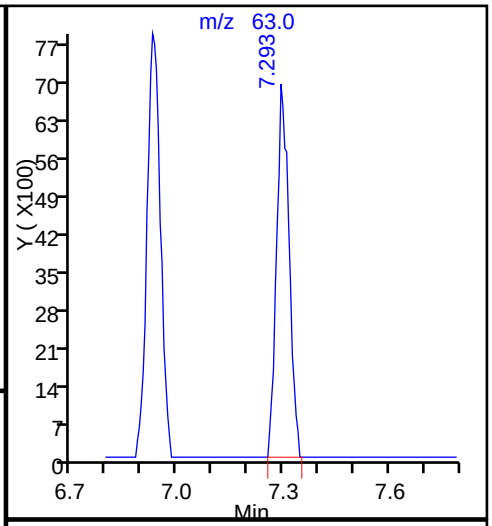


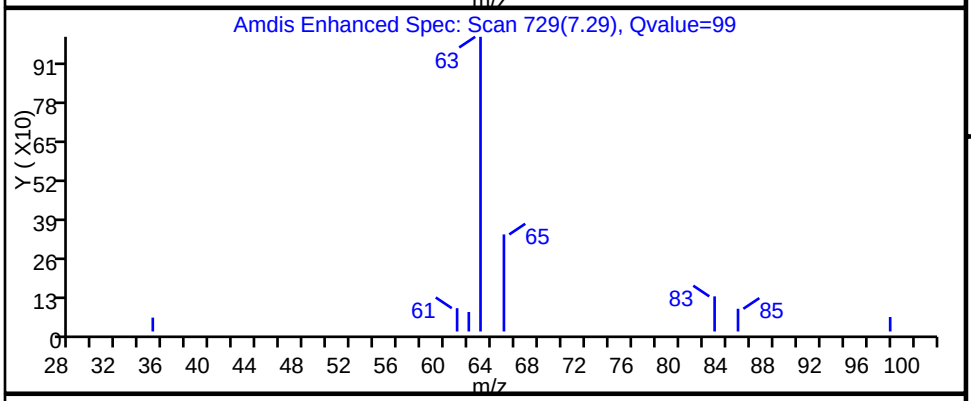
TestAmerica Knoxville

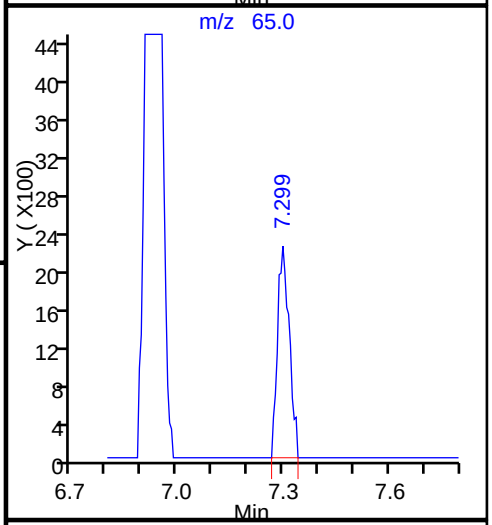
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P103R.D		
Injection Date:	19-Jan-2017 23:34:30	Instrument ID:	MJ
Lims ID:	140-6811-A-1	Lab Sample ID:	140-6811-1
Client ID:	BLDG-L EFFLUENT		
Operator ID:	7126	ALS Bottle#:	3 Worklist Smp#: 22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

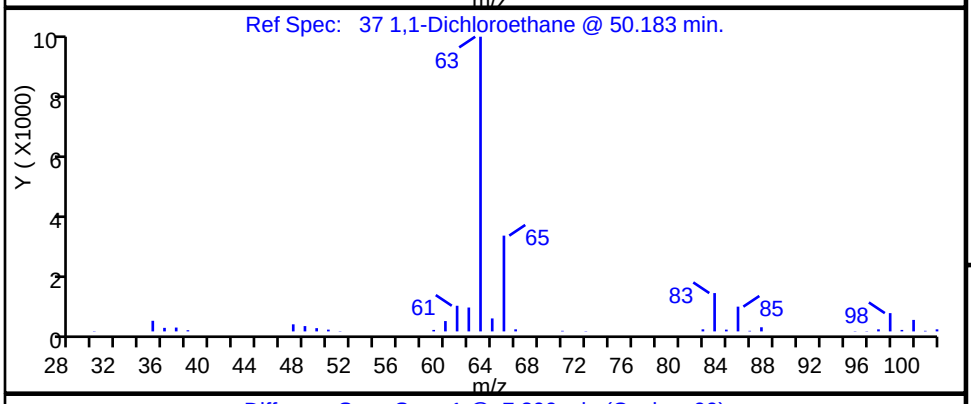
37 1,1-Dichloroethane, CAS: 75-34-3

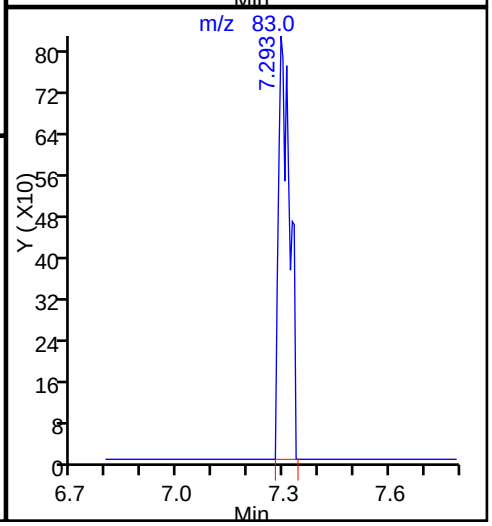


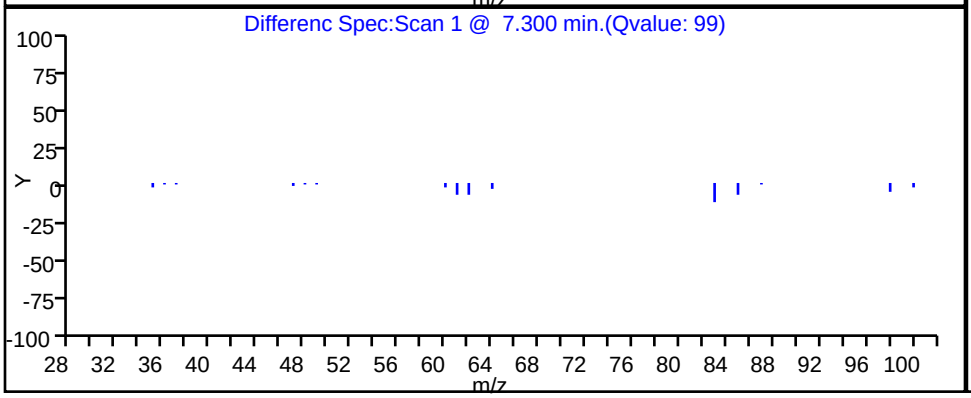






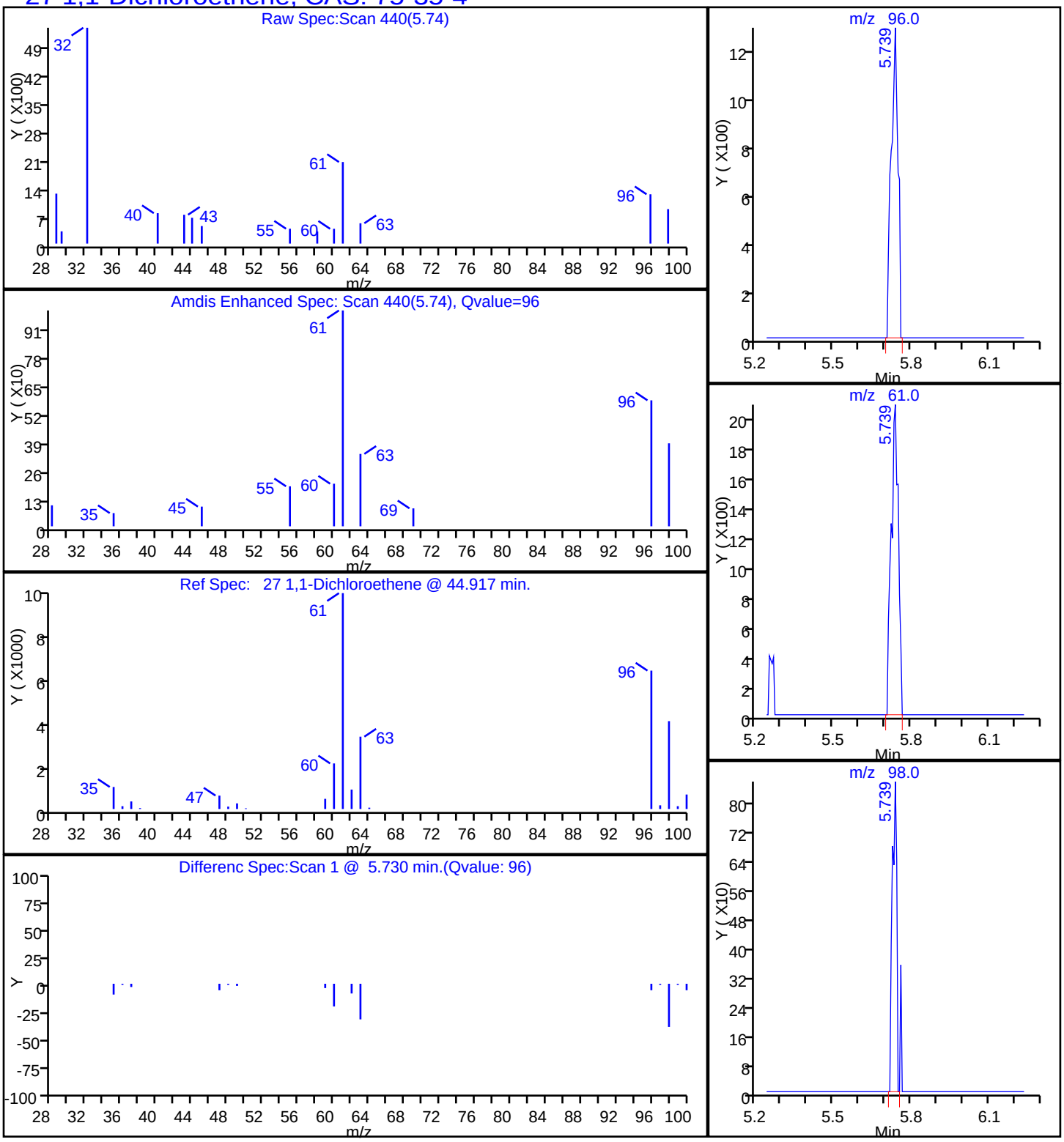






Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P103R.D
Injection Date: 19-Jan-2017 23:34:30 Instrument ID: MJ
Lims ID: 140-6811-A-1 Lab Sample ID: 140-6811-1
Client ID: BLDG-L EFFLUENT
Operator ID: 7126 ALS Bottle#: 3 Worklist Smp#: 22
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

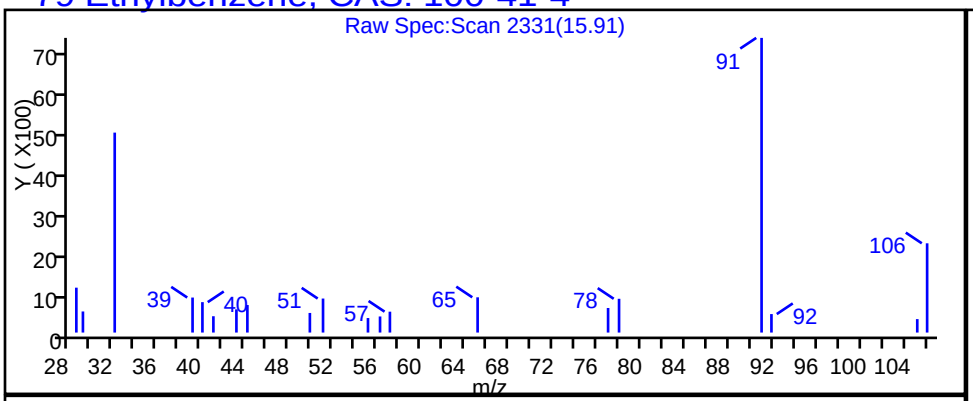
27 1,1-Dichloroethene, CAS: 75-35-4

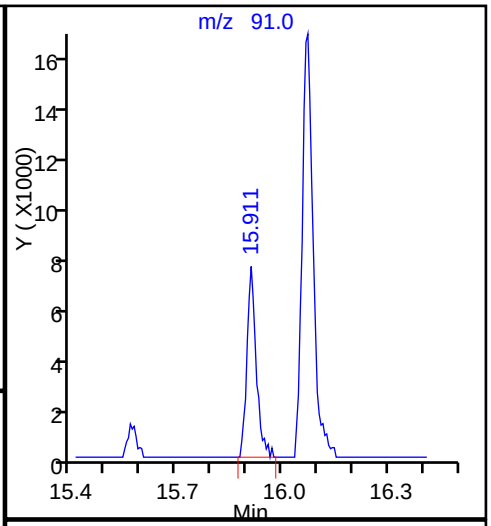


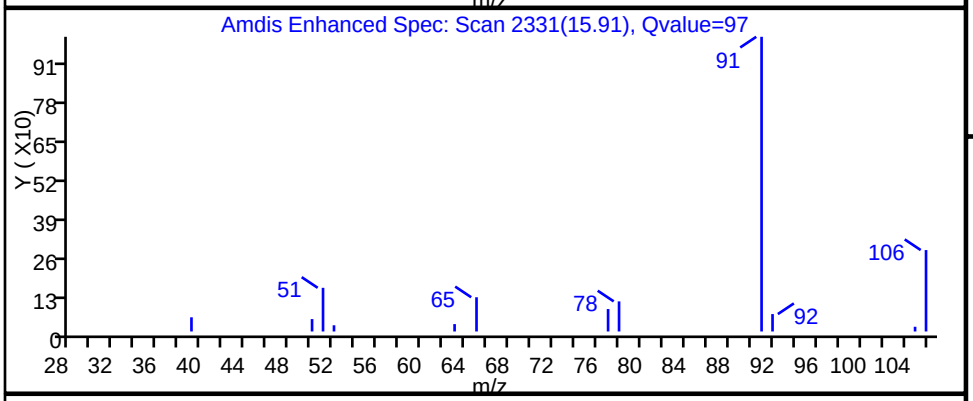
TestAmerica Knoxville

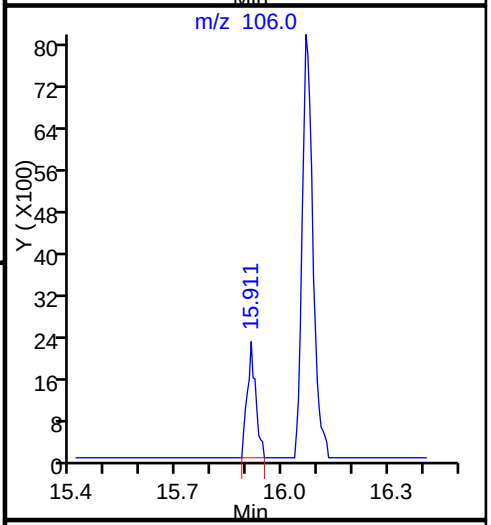
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P103R.D		
Injection Date:	19-Jan-2017 23:34:30	Instrument ID:	MJ
Lims ID:	140-6811-A-1	Lab Sample ID:	140-6811-1
Client ID:	BLDG-L EFFLUENT		
Operator ID:	7126	ALS Bottle#:	3 Worklist Smp#: 22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

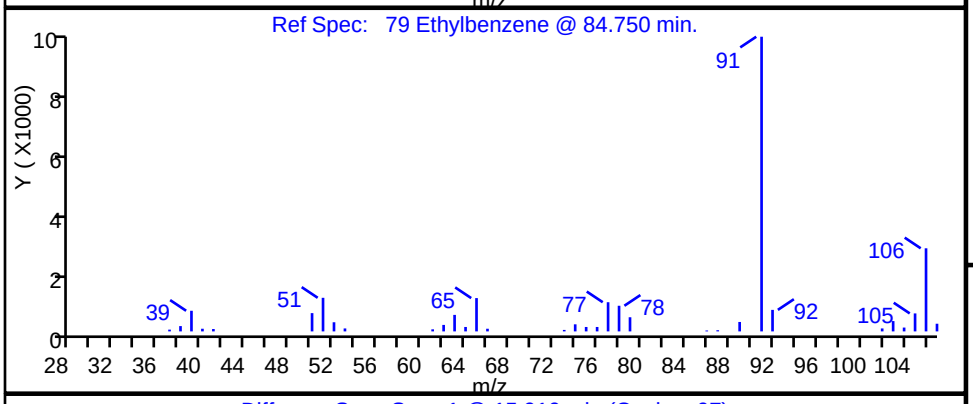
79 Ethylbenzene, CAS: 100-41-4

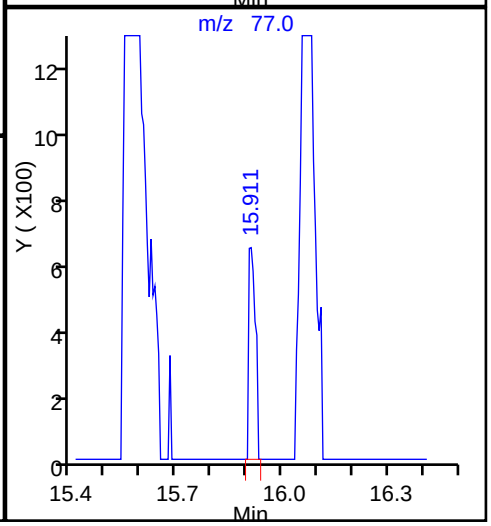


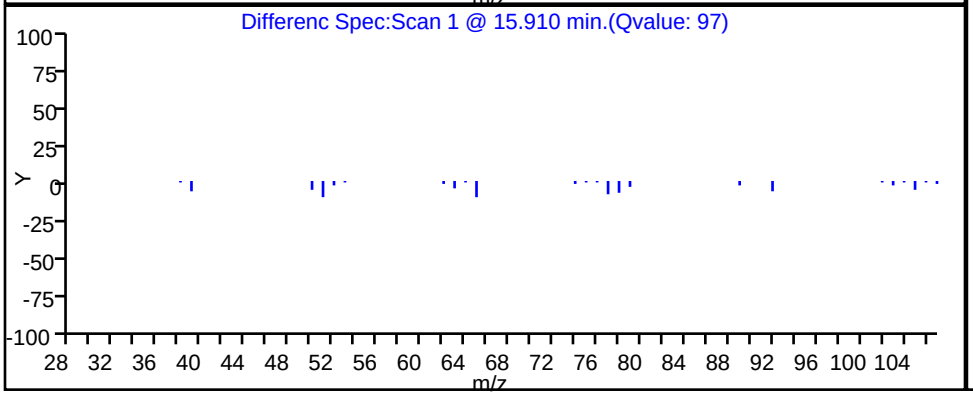








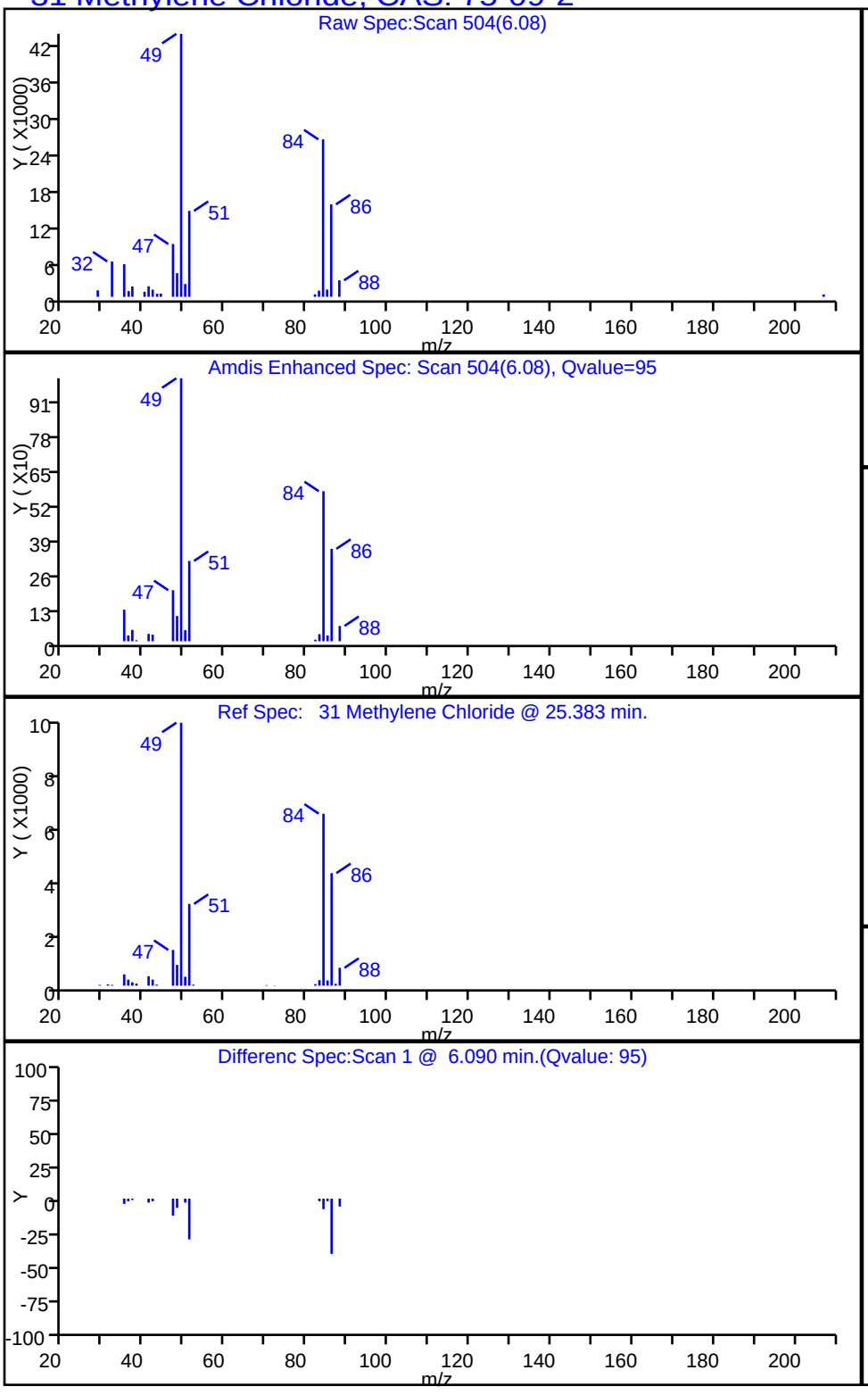


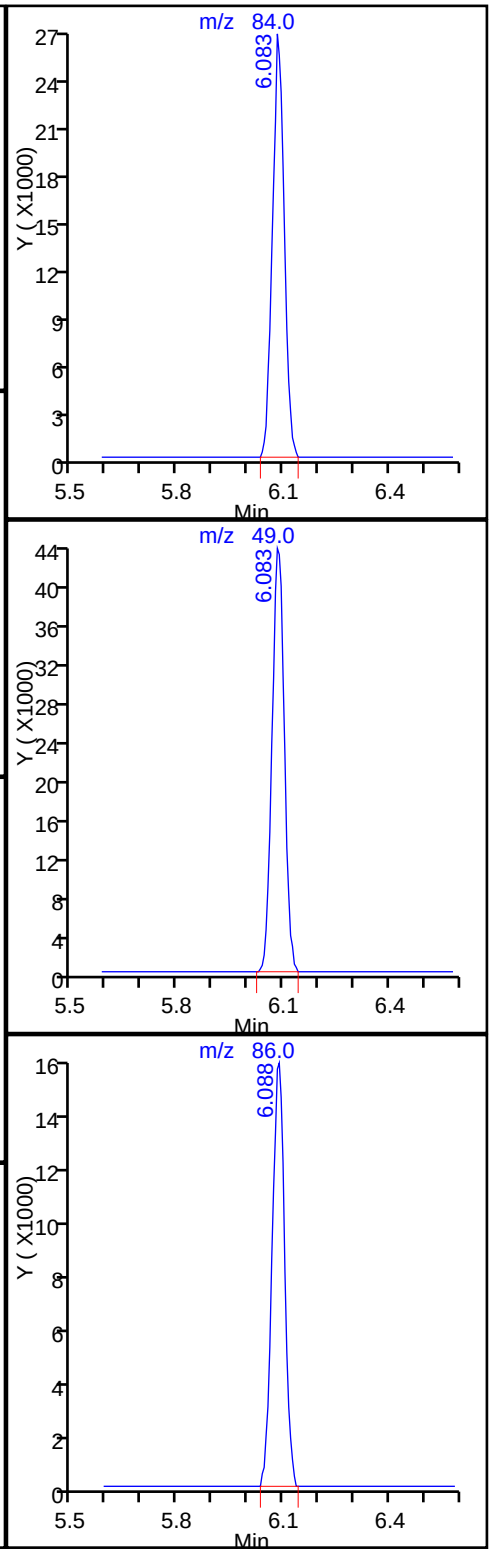


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P103R.D		
Injection Date:	19-Jan-2017 23:34:30	Instrument ID:	MJ
Lims ID:	140-6811-A-1	Lab Sample ID:	140-6811-1
Client ID:	BLDG-L EFFLUENT		
Operator ID:	7126	ALS Bottle#:	3 Worklist Smp#: 22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

31 Methylene Chloride, CAS: 75-09-2



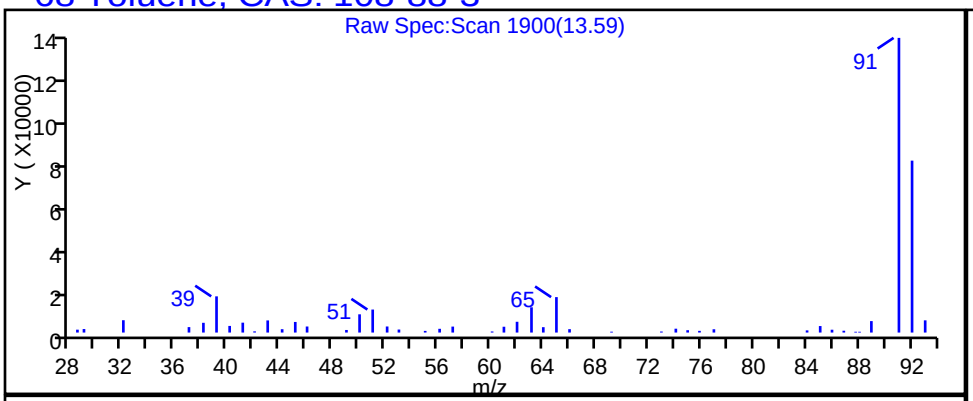


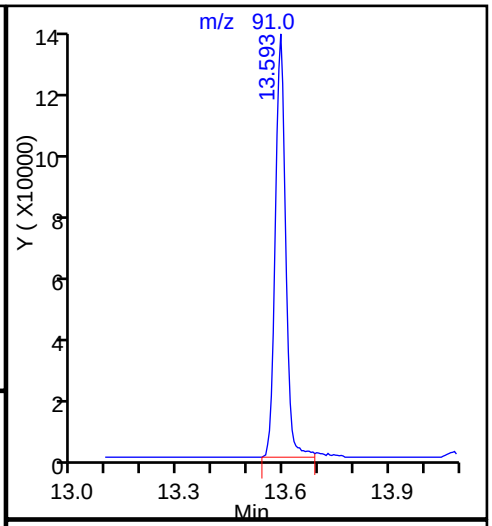
Report Date: 20-Jan-2017 10:55:26 Chrom Revision: 2.2 18-Jan-2017 10:40:14

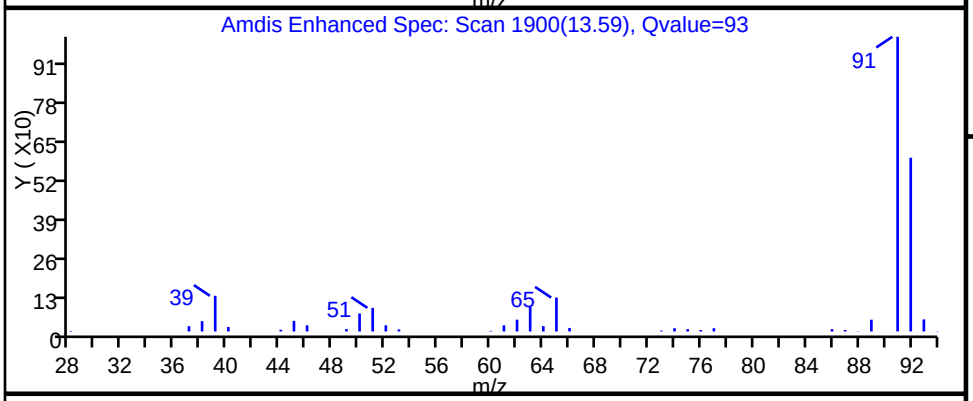
TestAmerica Knoxville

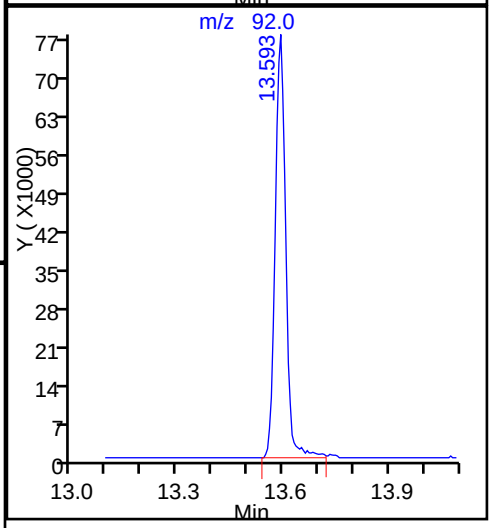
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P103R.D		
Injection Date:	19-Jan-2017 23:34:30	Instrument ID:	MJ
Lims ID:	140-6811-A-1	Lab Sample ID:	140-6811-1
Client ID:	BLDG-L EFFLUENT		
Operator ID:	7126	ALS Bottle#:	3 Worklist Smp#: 22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

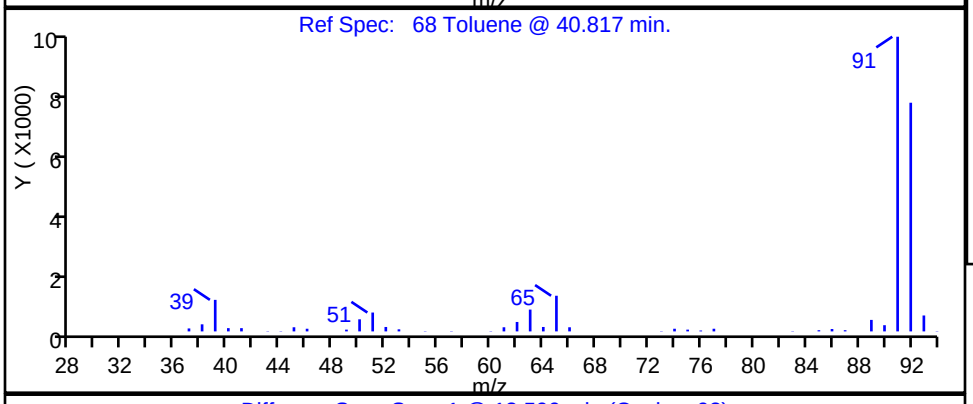
68 Toluene, CAS: 108-88-3

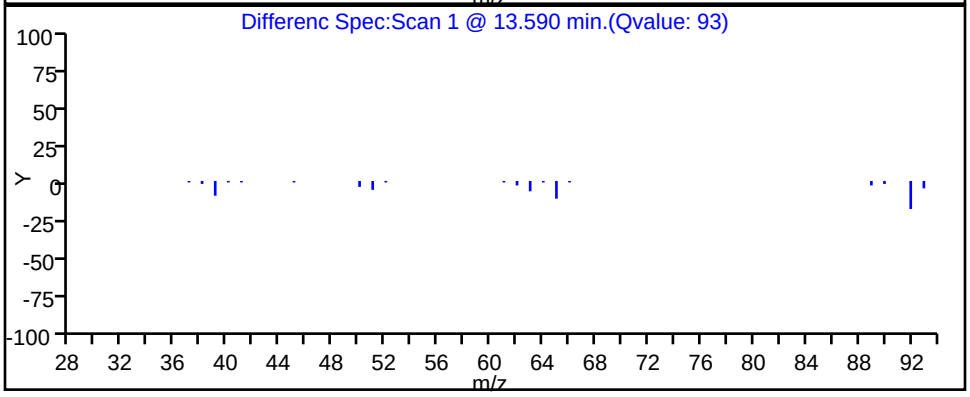








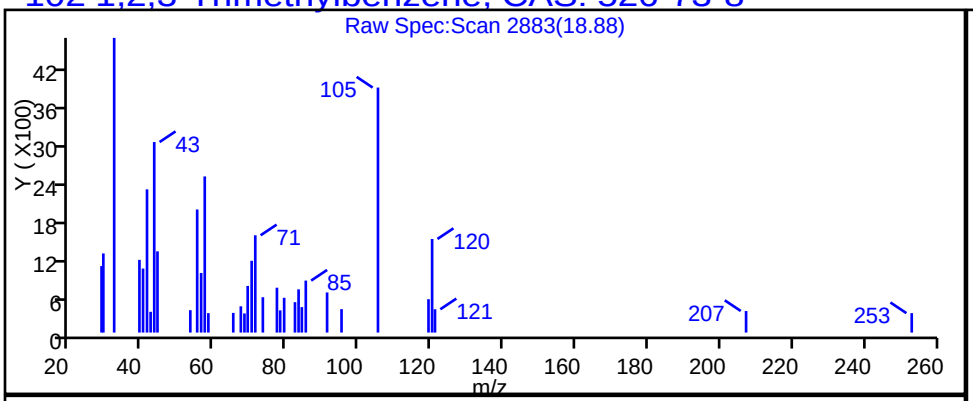


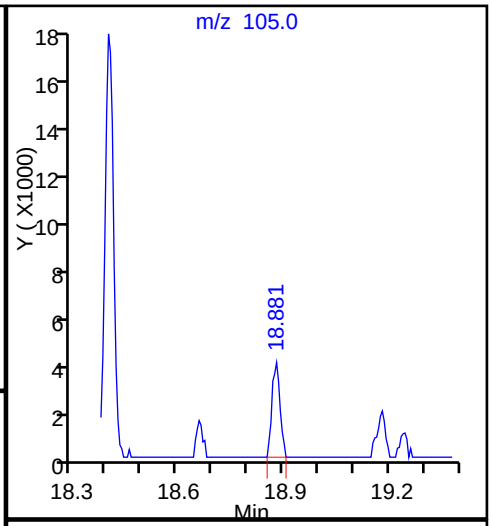


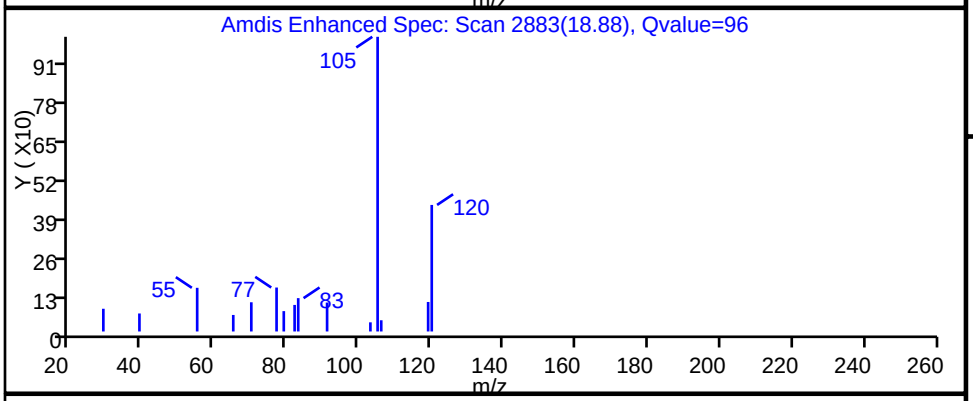
TestAmerica Knoxville

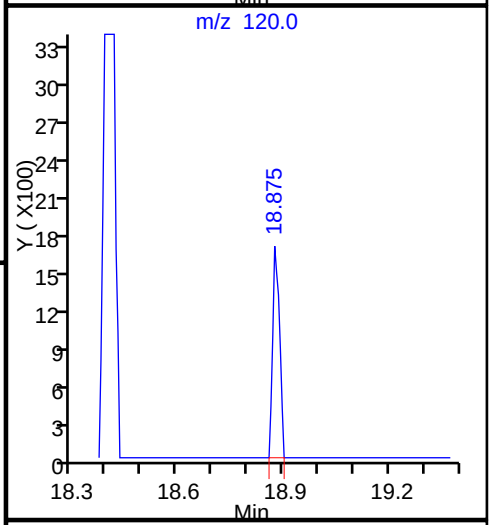
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P103R.D				
Injection Date:	19-Jan-2017 23:34:30	Instrument ID:	MJ		
Lims ID:	140-6811-A-1	Lab Sample ID:	140-6811-1		
Client ID:	BLDG-L EFFLUENT				
Operator ID:	7126	ALS Bottle#:	3	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

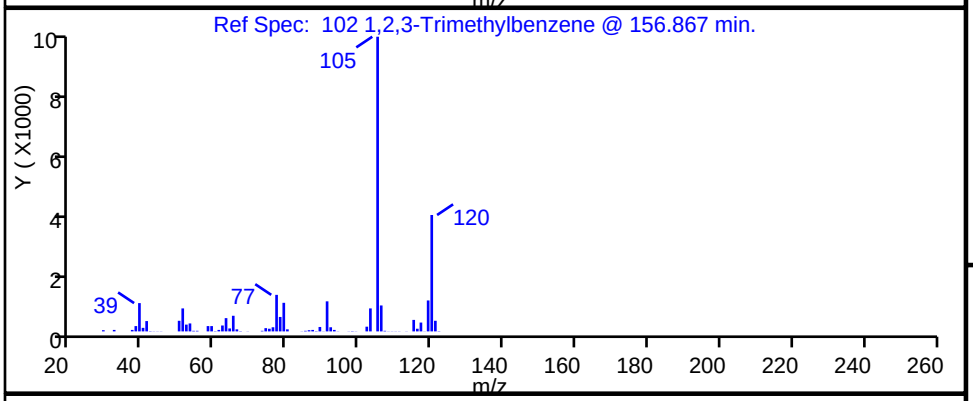
102 1,2,3-Trimethylbenzene, CAS: 526-73-8

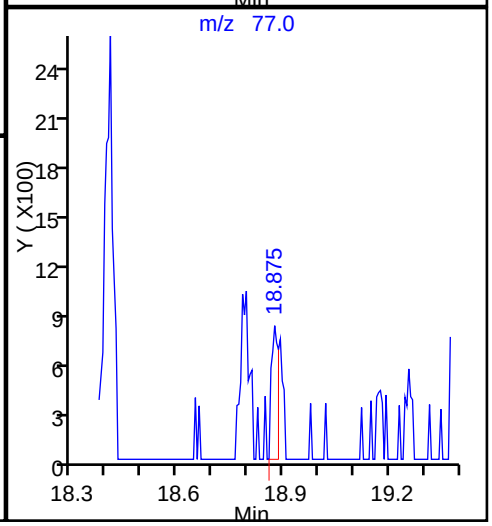


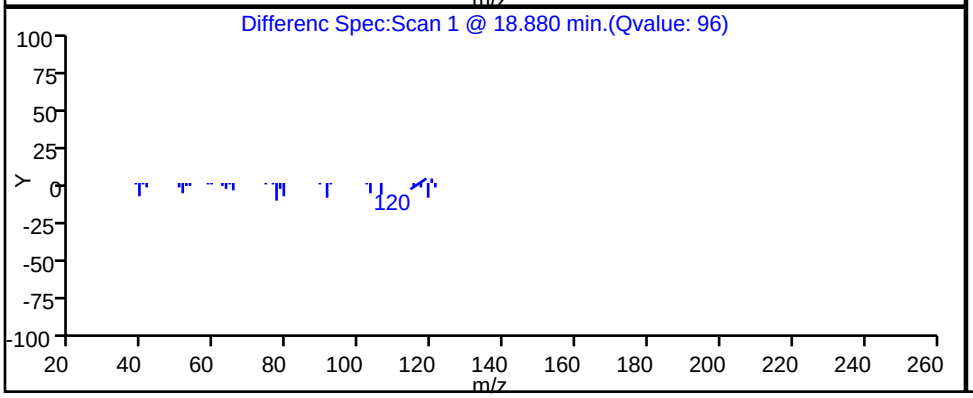






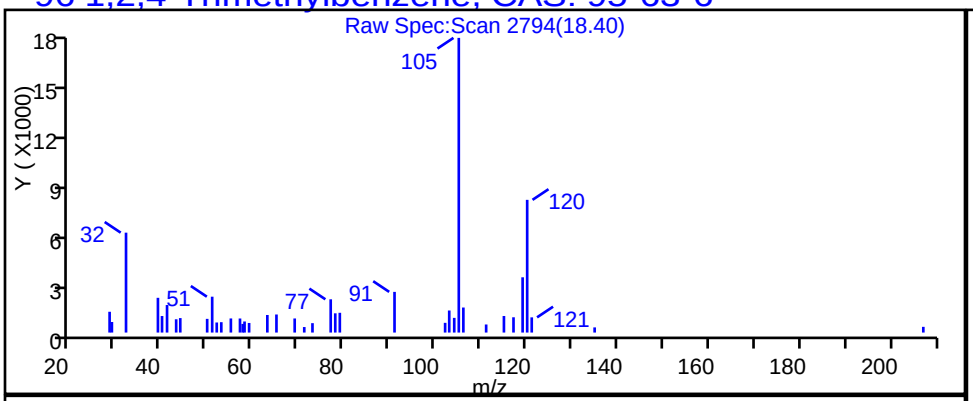


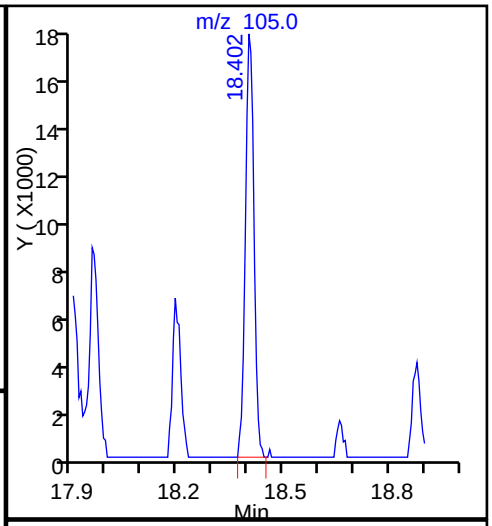


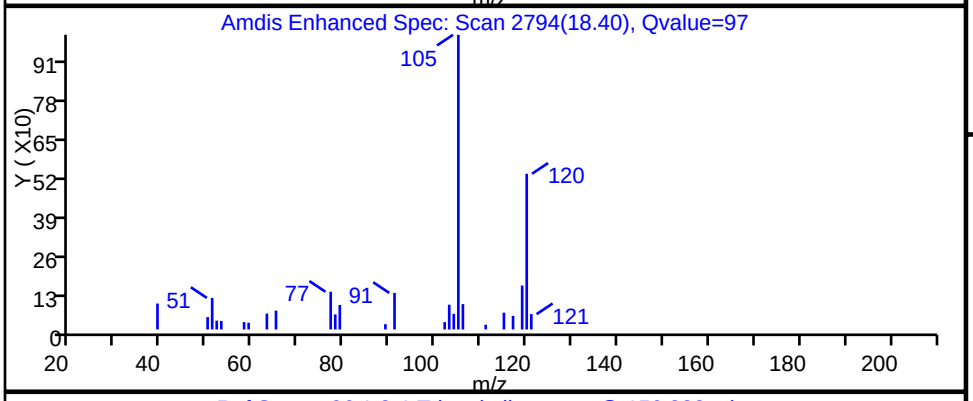


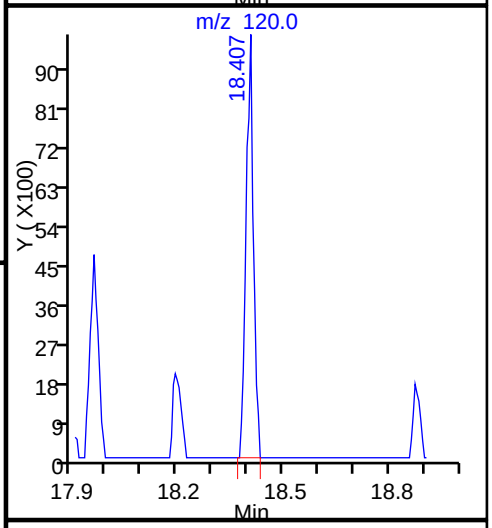
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P103R.D		
Injection Date:	19-Jan-2017 23:34:30	Instrument ID:	MJ
Lims ID:	140-6811-A-1	Lab Sample ID:	140-6811-1
Client ID:	BLDG-L EFFLUENT		
Operator ID:	7126	ALS Bottle#:	3 Worklist Smp#: 22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

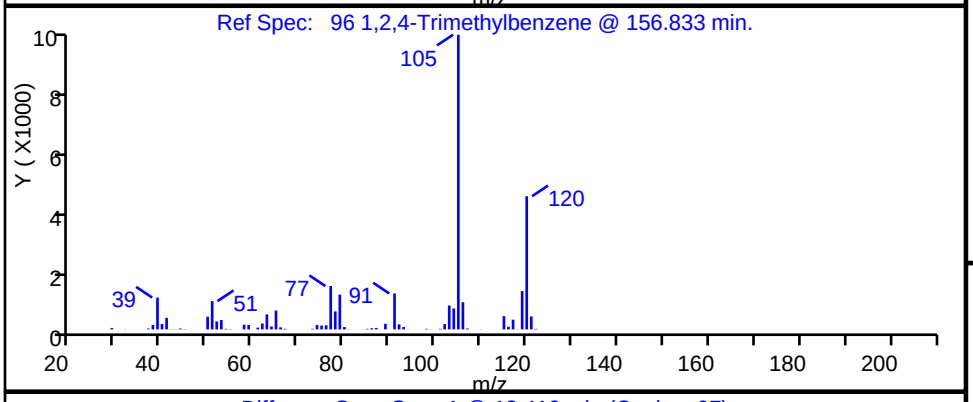
96 1,2,4-Trimethylbenzene, CAS: 95-63-6

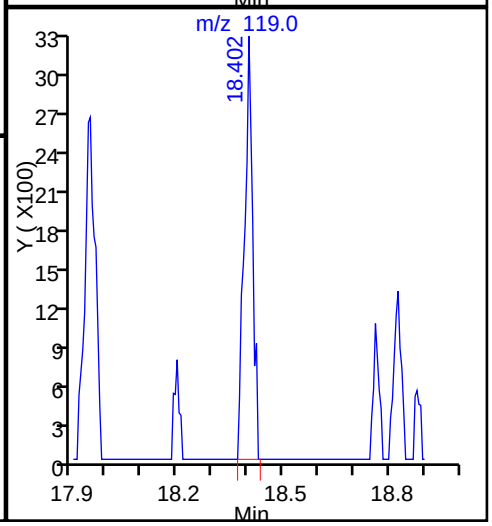


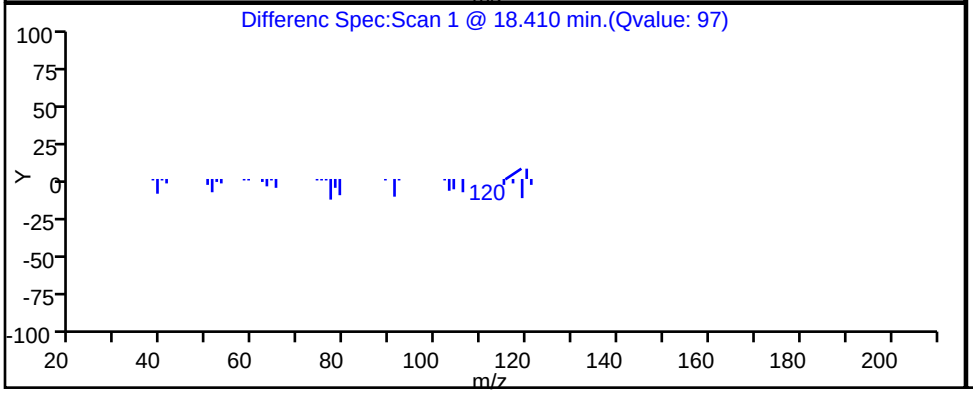








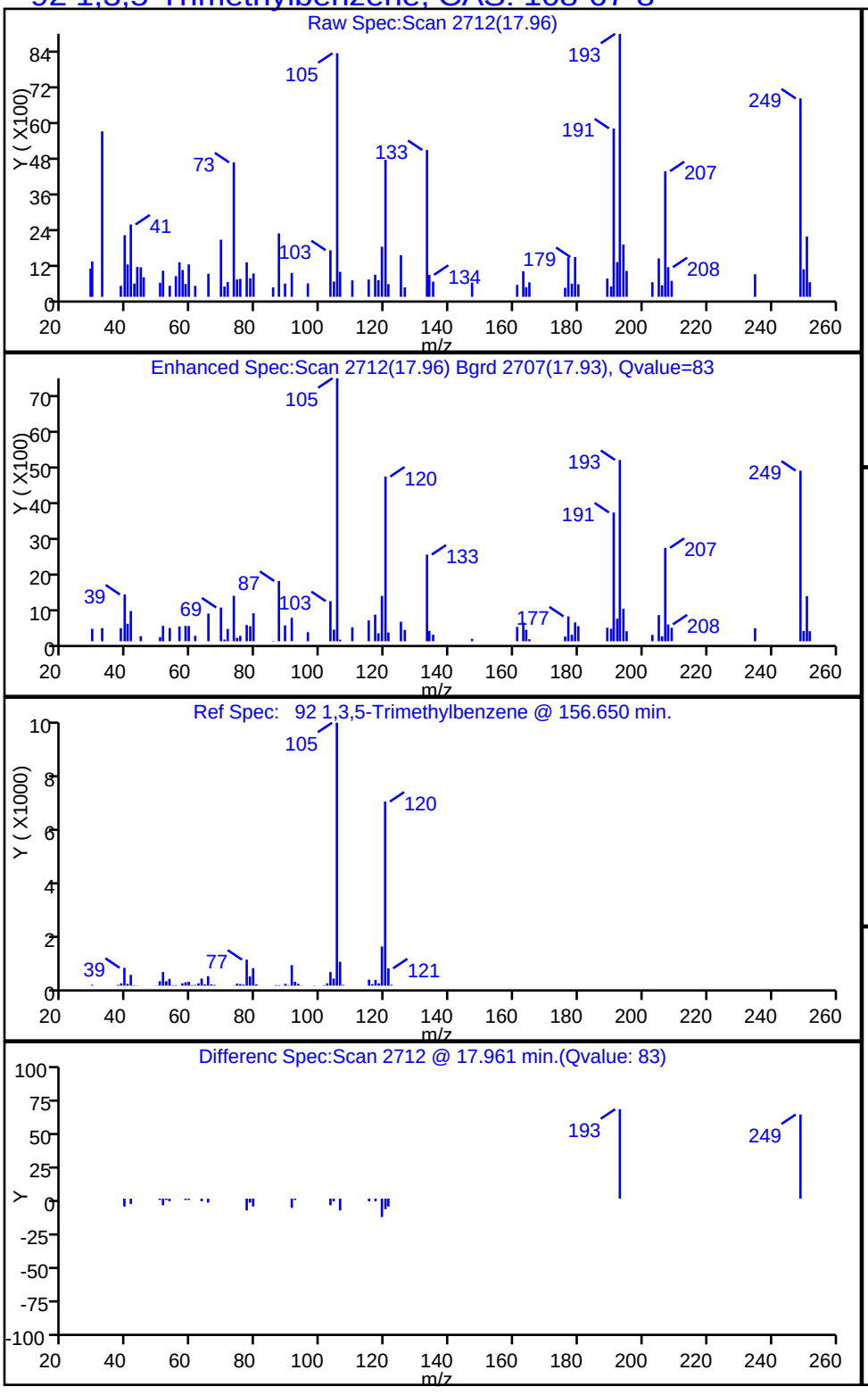


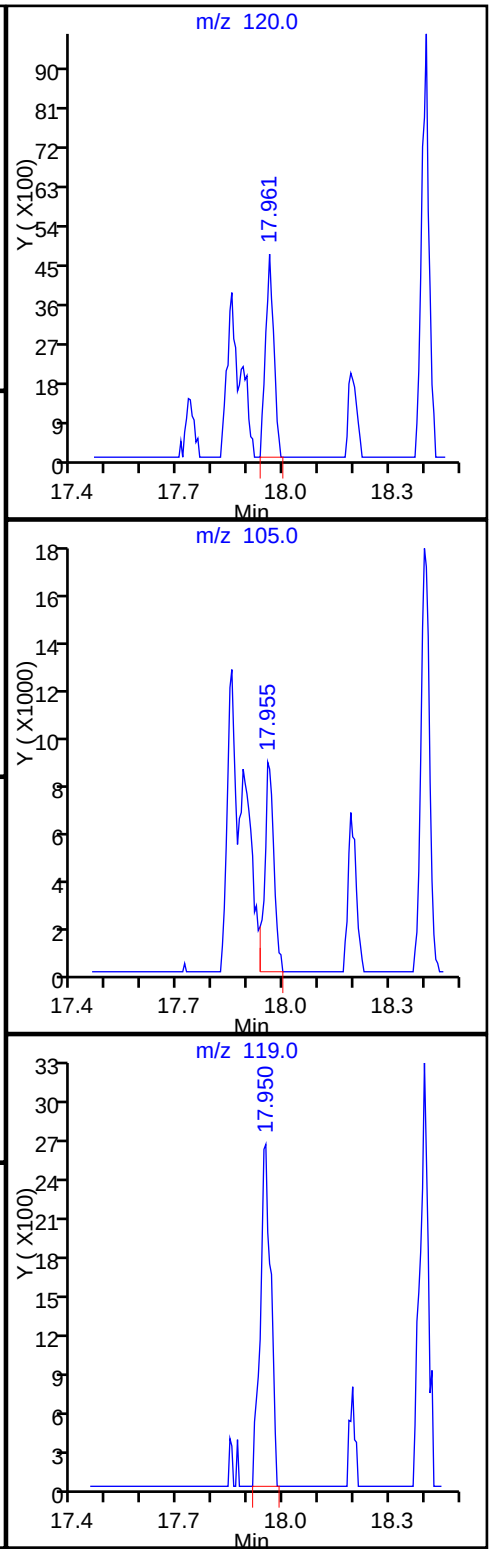


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P103R.D		
Injection Date:	19-Jan-2017 23:34:30	Instrument ID:	MJ
Lims ID:	140-6811-A-1	Lab Sample ID:	140-6811-1
Client ID:	BLDG-L EFFLUENT		
Operator ID:	7126	ALS Bottle#:	3 Worklist Smp#: 22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

92 1,3,5-Trimethylbenzene, CAS: 108-67-8

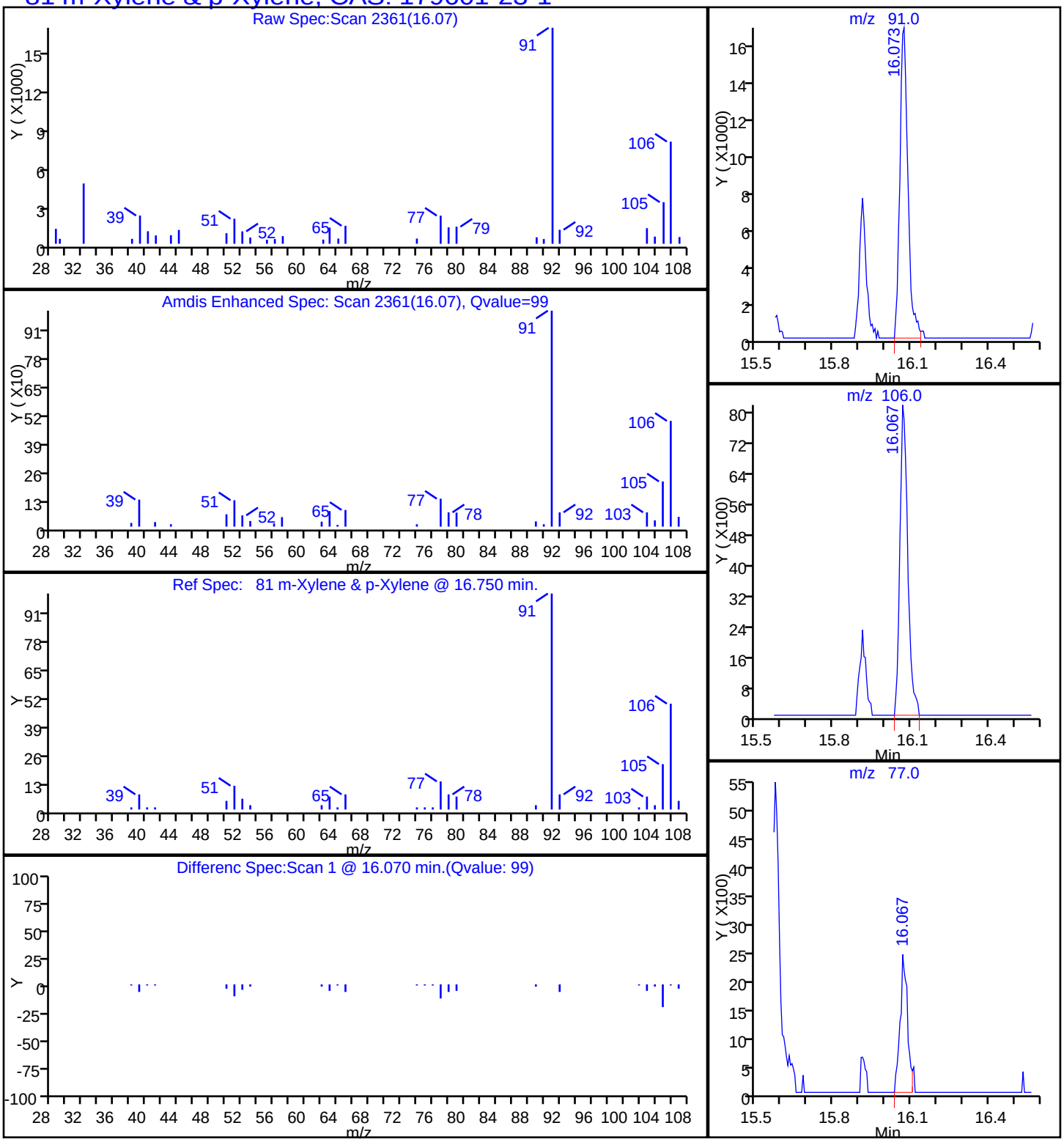




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P103R.D				
Injection Date:	19-Jan-2017 23:34:30	Instrument ID:	MJ		
Lims ID:	140-6811-A-1	Lab Sample ID:	140-6811-1		
Client ID:	BLDG-L EFFLUENT				
Operator ID:	7126	ALS Bottle#:	3	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

81 m-Xylene & p-Xylene, CAS: 179601-23-1



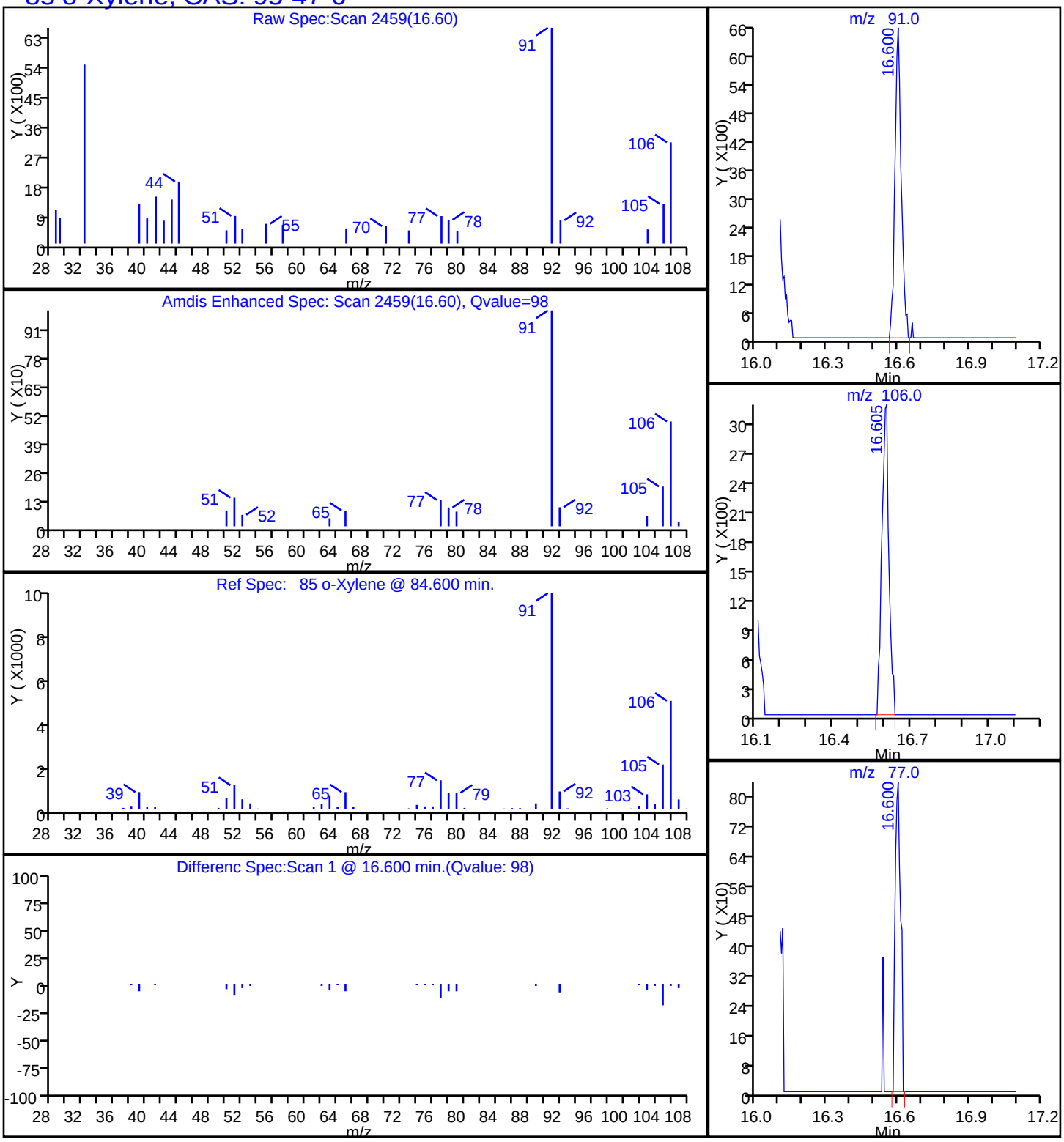
Report Date: 20-Jan-2017 10:55:26 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P103R.D

Injection Date:	19-Jan-2017 23:34:30	Instrument ID:	MJ
Lims ID:	140-6811-A-1	Lab Sample ID:	140-6811-1
Client ID:	BLDG-L EFFLUENT		
Operator ID:	7126	ALS Bottle#:	3 Worklist Smp#: 22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

85 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6811-1

SDG No.:

Client Sample ID: BLDG-L MID-GAC | Lab Sample ID: 140-6811-2

Matrix: Air | Lab File ID: JA19P107.D

Analysis Method: TO 15 LL | Date Collected: 01/12/2017 12:59

Sample wt/vol: 100(mL) | Date Analyzed: 01/19/2017 20:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.8		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.6		0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.29	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.40		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.20	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.6		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	3.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND	*	0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.81		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.62	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6811-1

SDG No.:

Client Sample ID: BLDG-L MID-GAC | Lab Sample ID: 140-6811-2

Matrix: Air | Lab File ID: JA19P107.D

Analysis Method: TO 15 LL | Date Collected: 01/12/2017 12:59

Sample wt/vol: 100(mL) | Date Analyzed: 01/19/2017 20:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7893 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	5.8		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.8		1.4	0.27
67-66-3	Chloroform	119.38	0.56	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	1.2	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.80	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.5		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	11		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND	*	3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	4.4		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.7	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P107.D				
Lims ID:	140-6811-A-2				
Client ID:	BLDG-L MID-GAC				
Sample Type:	Client				
Inject. Date:	19-Jan-2017 20:28:30	ALS Bottle#:	7	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003854-012				
Misc. Info.:	140-6811-a-2				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Jan-2017 10:54:07	Calib Date:	26-Nov-2016 01:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				
First Level Reviewer: barlozhetskayaa		Date:	20-Jan-2017 09:40:22		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.594	8.597	-0.003	98	316910	4.00	
* 2 1,4-Difluorobenzene	114	10.800	10.803	-0.003	95	1420606	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.572	15.574	-0.002	88	1260327	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.218	17.220	-0.002	96	754532	3.78	
6 Chlorodifluoromethane	67	3.565	3.562	0.003	96	9354	0.3273	
8 Dichlorodifluoromethane	85	3.624	3.621	0.003	99	20645	0.0805	
27 1,1-Dichloroethene	96	5.738	5.735	0.003	87	1314	0.0138	
31 Methylene Chloride	84	6.077	6.079	-0.002	95	29666	0.3176	
37 1,1-Dichloroethane	63	7.287	7.290	-0.003	95	7235	0.0397	
42 cis-1,2-Dichloroethene	96	8.266	8.269	-0.003	95	5490	0.0581	
44 Chloroform	83	8.611	8.613	-0.002	33	4540	0.0228	
47 1,1,1-Trichloroethane	97	9.638	9.635	0.003	96	33238	0.1620	
51 Benzene	78	10.241	10.243	-0.002	98	93902	0.3639	
68 Toluene	91	13.592	13.589	0.003	93	161198	0.5949	
81 m-Xylene & p-Xylene	91	16.072	16.074	-0.002	98	22214	0.0937	
85 o-Xylene	91	16.599	16.602	-0.003	93	7626	0.0298	
S 126 Xylenes, Total	100				0		0.1235	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

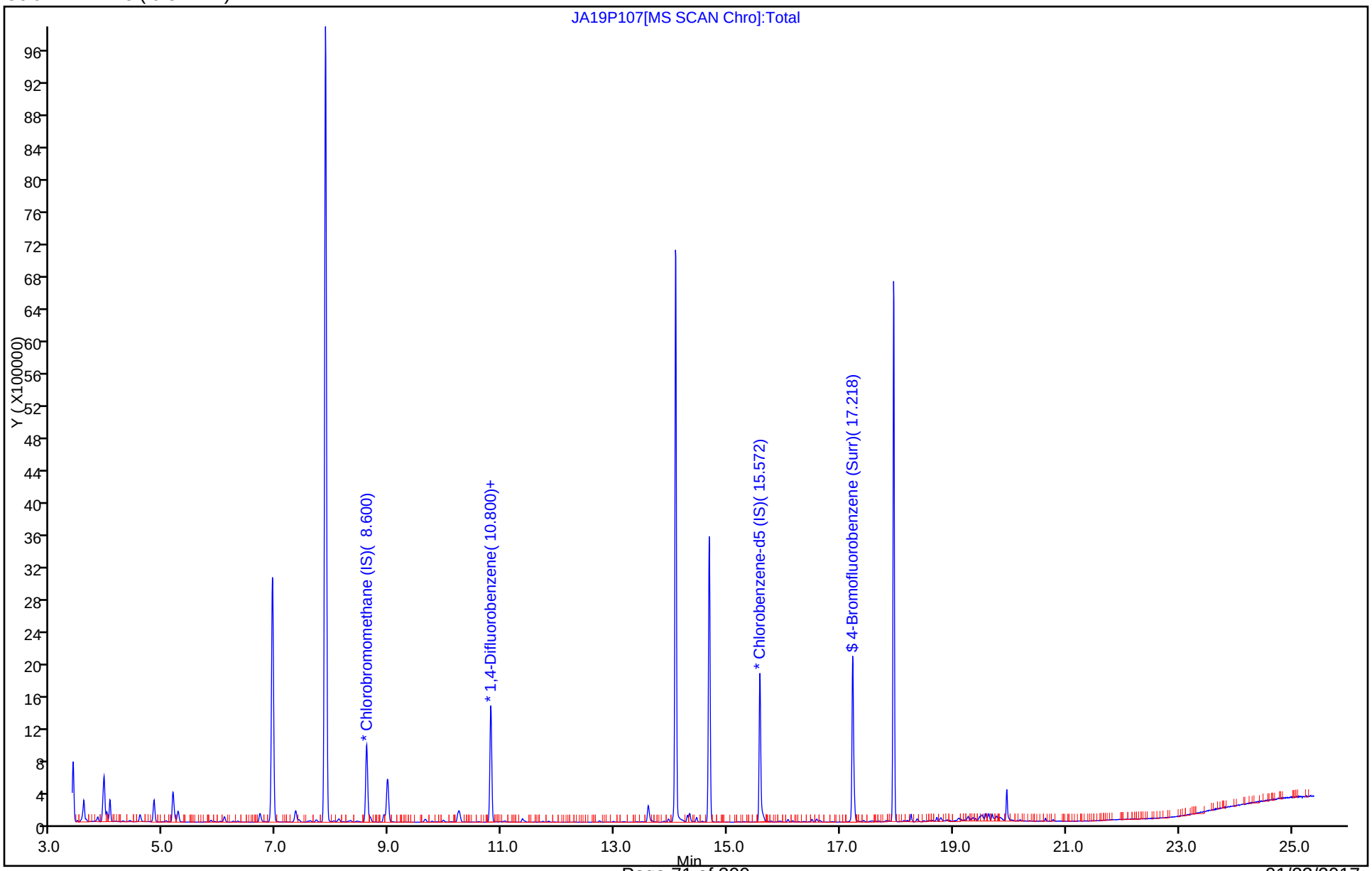
Report Date: 20-Jan-2017 10:55:20 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P107.D

Injection Date:	19-Jan-2017 20:28:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-6811-A-2	Lab Sample ID:	140-6811-2	Worklist Smp#:	12
Client ID:	BLDG-L MID-GAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P107.D				
Lims ID:	140-6811-A-2				
Client ID:	BLDG-L MID-GAC				
Sample Type:	Client				
Inject. Date:	19-Jan-2017 20:28:30	ALS Bottle#:	7	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003854-012				
Misc. Info.:	140-6811-a-2				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Jan-2017 10:54:07	Calib Date:	26-Nov-2016 01:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				
First Level Reviewer: barlozhetskayaa		Date:	20-Jan-2017 09:40:22		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.78	94.52

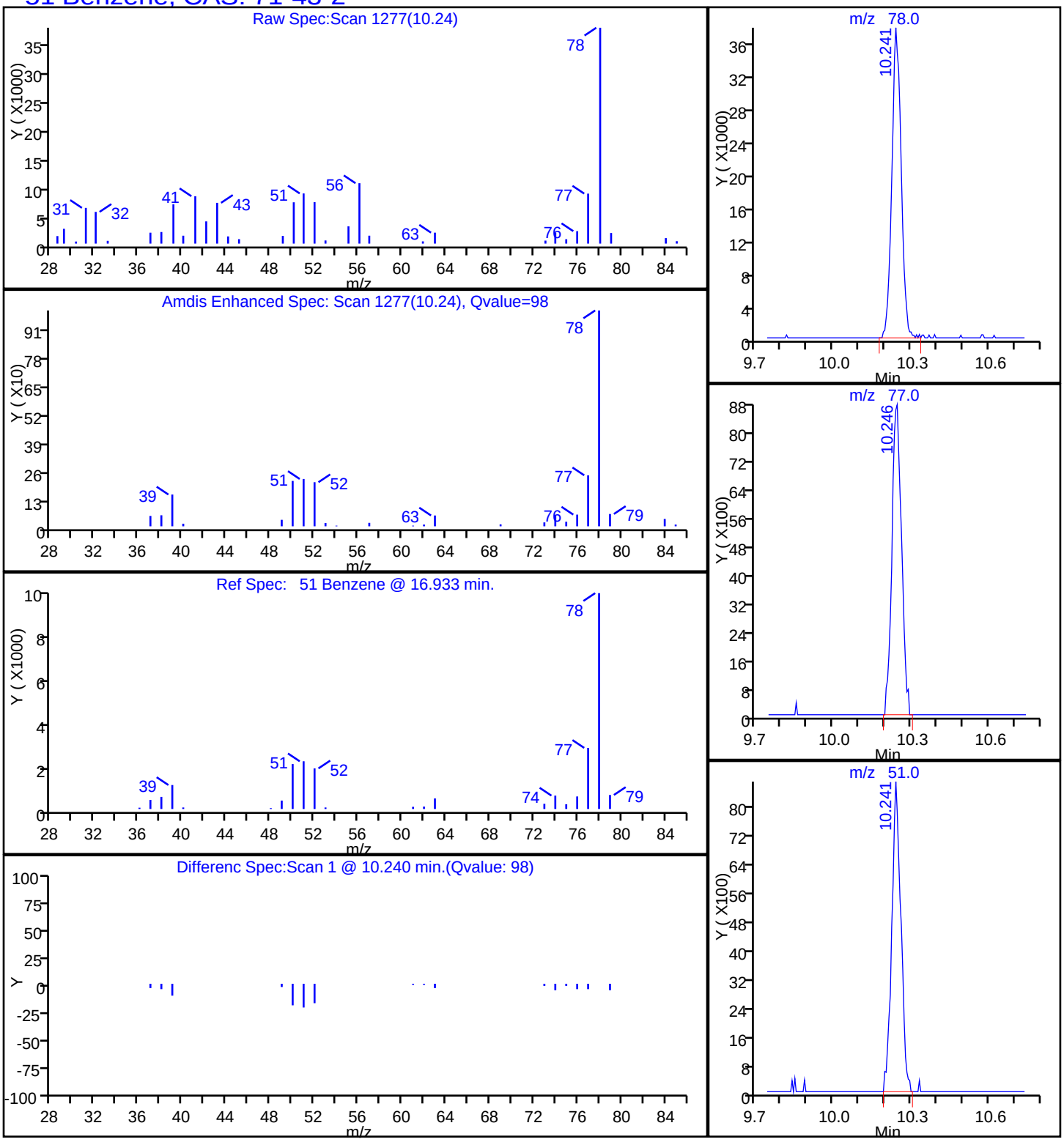
Report Date: 20-Jan-2017 10:55:20 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P107.D

Injection Date:	19-Jan-2017 20:28:30	Instrument ID:	MJ		
Lims ID:	140-6811-A-2	Lab Sample ID:	140-6811-2		
Client ID:	BLDG-L MID-GAC				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

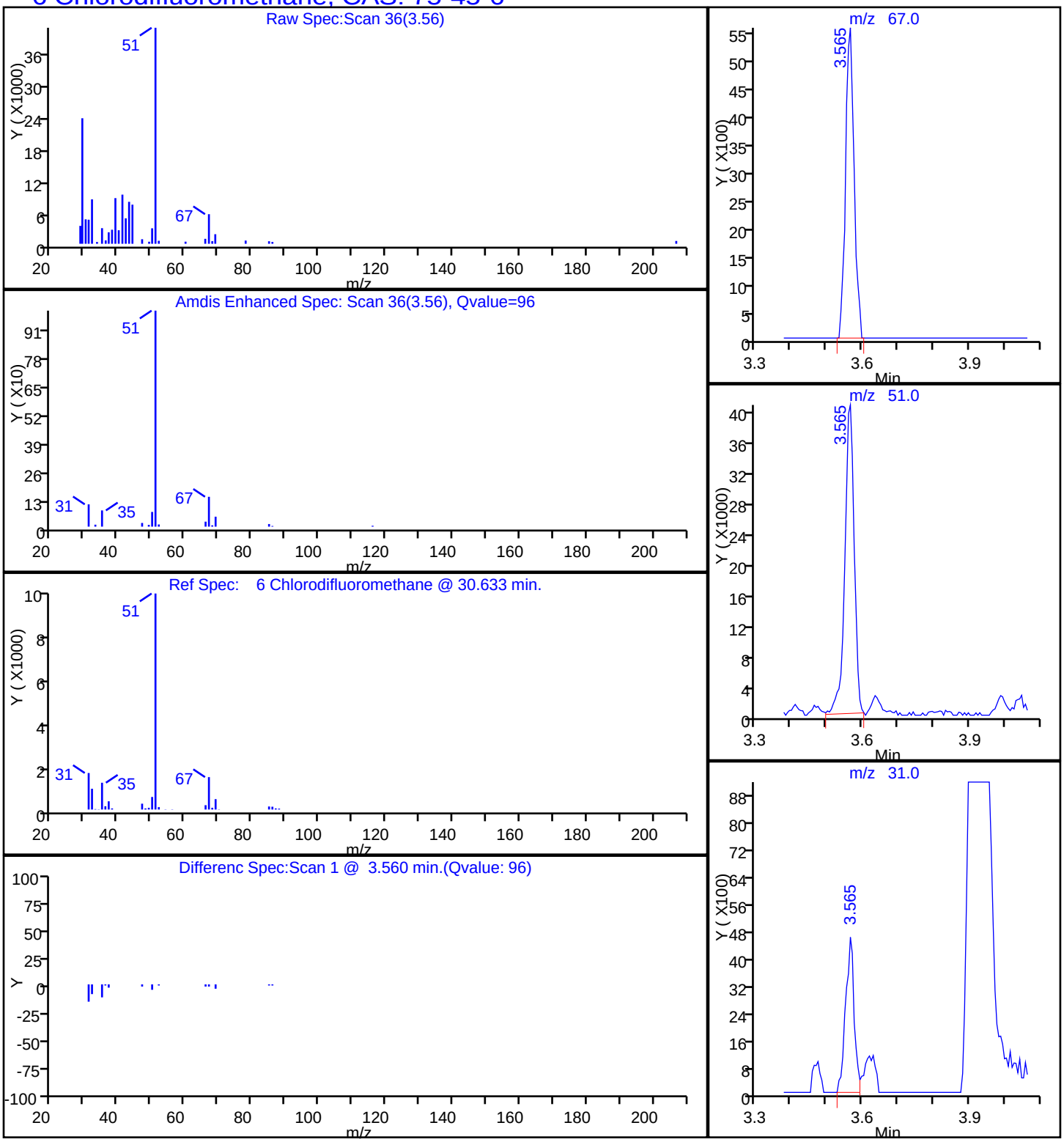
51 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P107.D		
Injection Date:	19-Jan-2017 20:28:30	Instrument ID:	MJ
Lims ID:	140-6811-A-2	Lab Sample ID:	140-6811-2
Client ID:	BLDG-L MID-GAC		
Operator ID:	7126	ALS Bottle#:	7 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

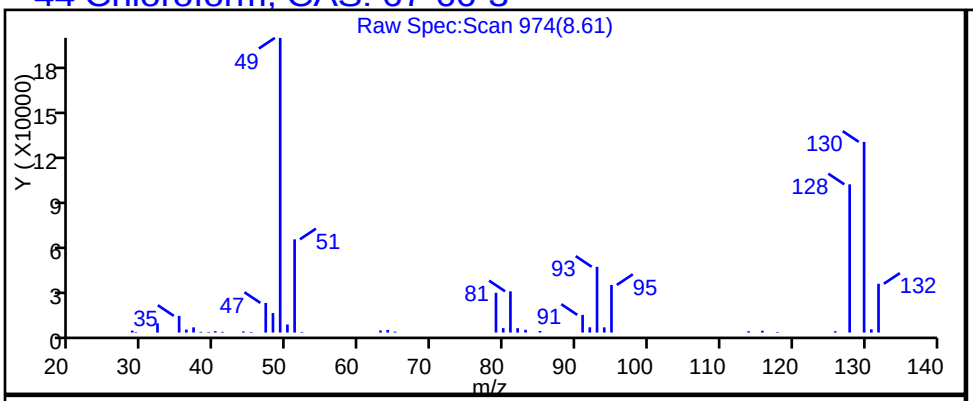


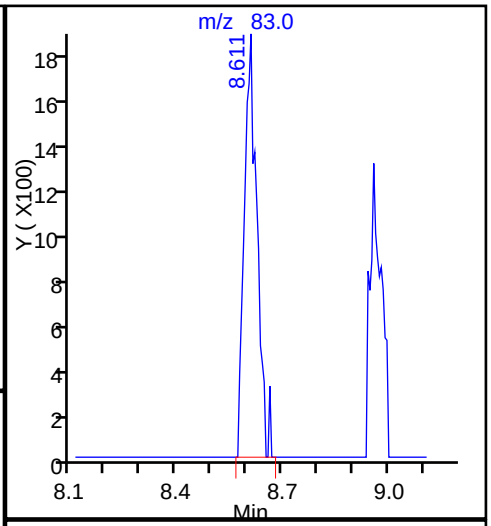
TestAmerica Knoxville

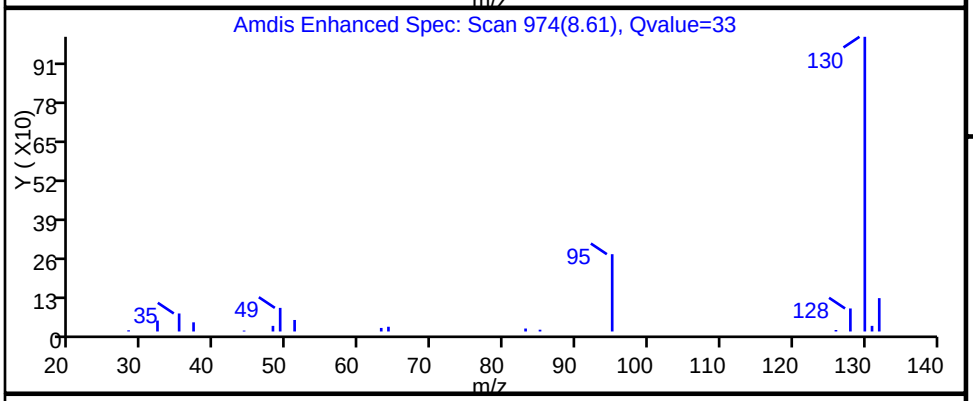
Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P107.D

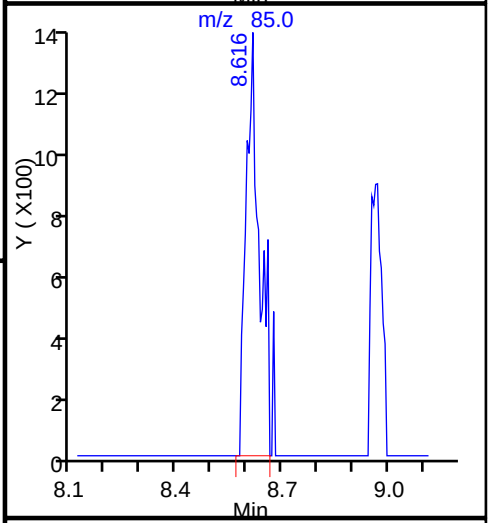
Injection Date:	19-Jan-2017 20:28:30	Instrument ID:	MJ
Lims ID:	140-6811-A-2	Lab Sample ID:	140-6811-2
Client ID:	BLDG-L MID-GAC		
Operator ID:	7126	ALS Bottle#:	7 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

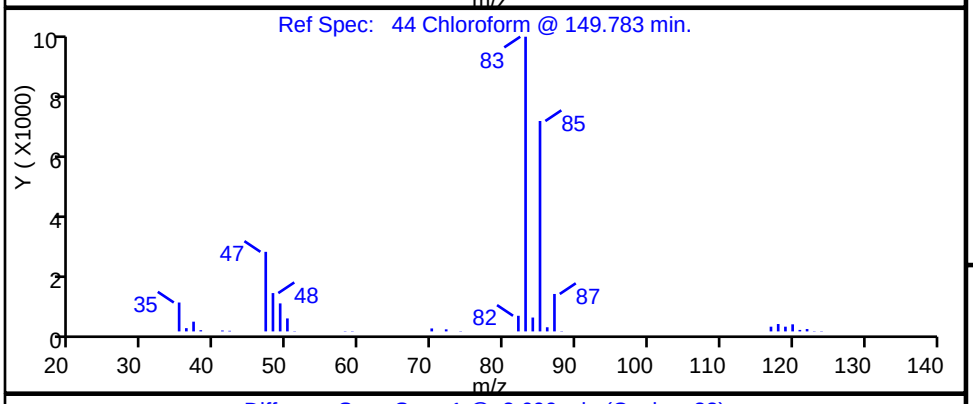
44 Chloroform, CAS: 67-66-3

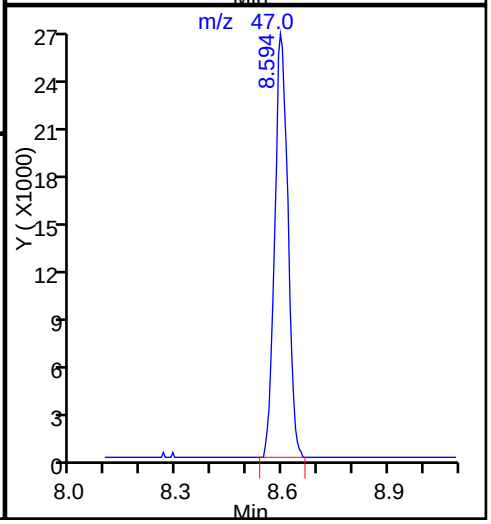


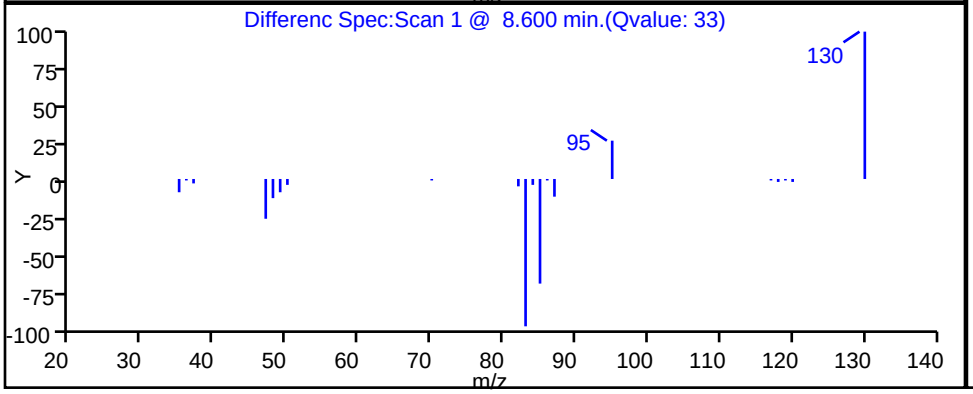










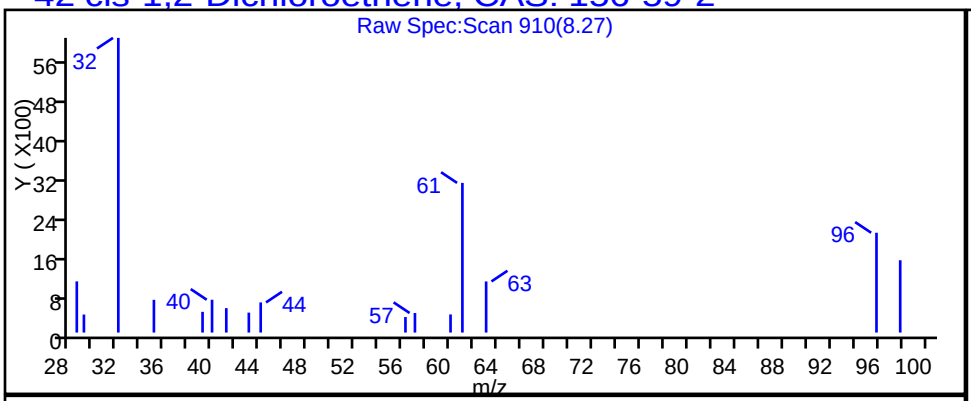


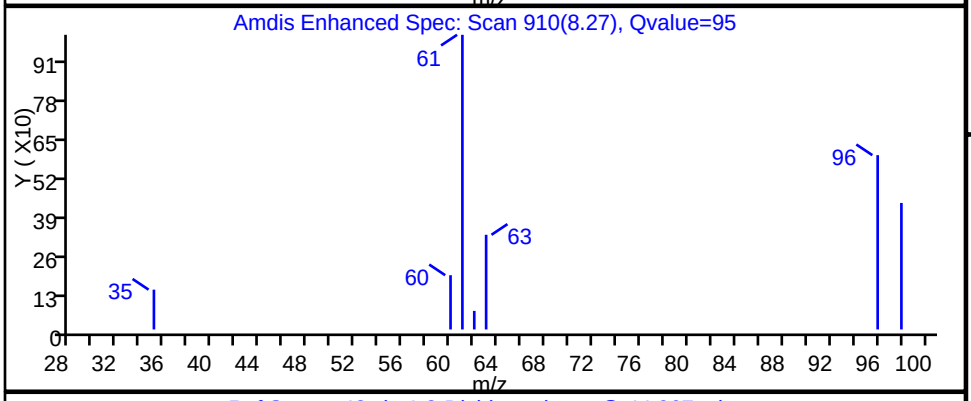
Report Date: 20-Jan-2017 10:55:20 Chrom Revision: 2.2 18-Jan-2017 10:40:14

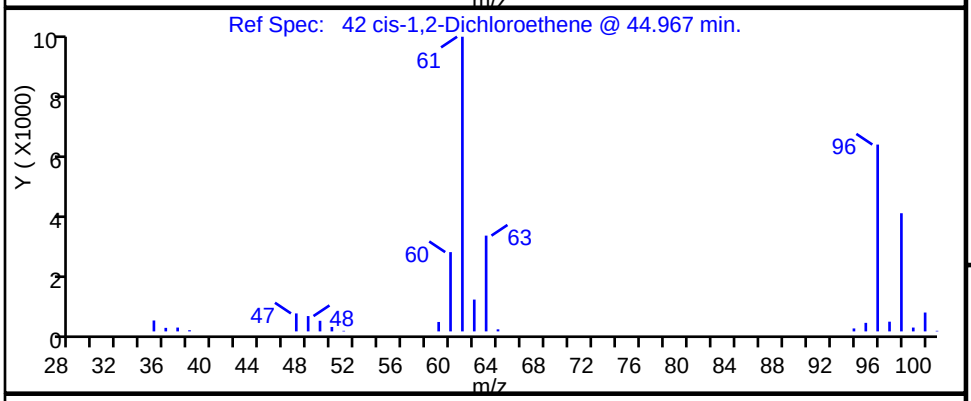
TestAmerica Knoxville

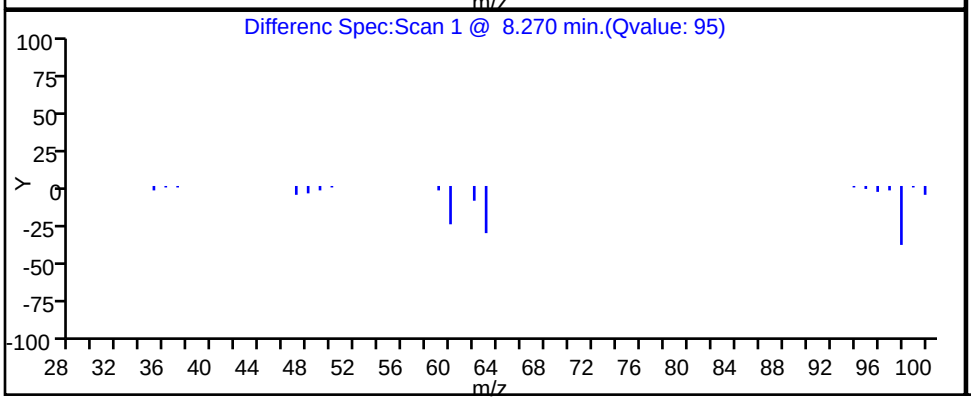
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P107.D				
Injection Date:	19-Jan-2017 20:28:30	Instrument ID:	MJ		
Lims ID:	140-6811-A-2	Lab Sample ID:	140-6811-2		
Client ID:	BLDG-L MID-GAC				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

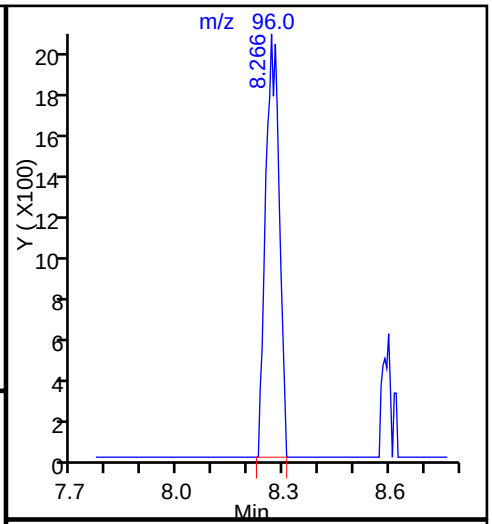
42 cis-1,2-Dichloroethene, CAS: 156-59-2

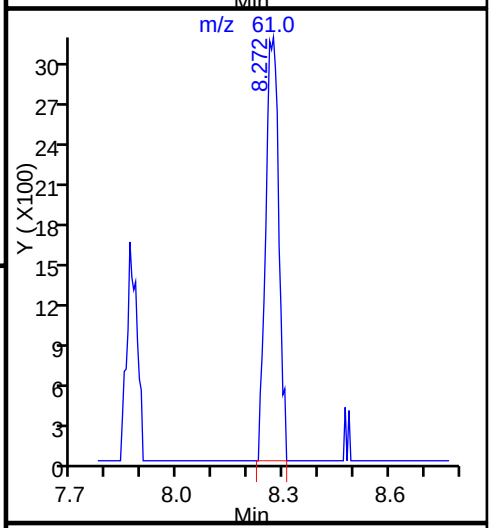


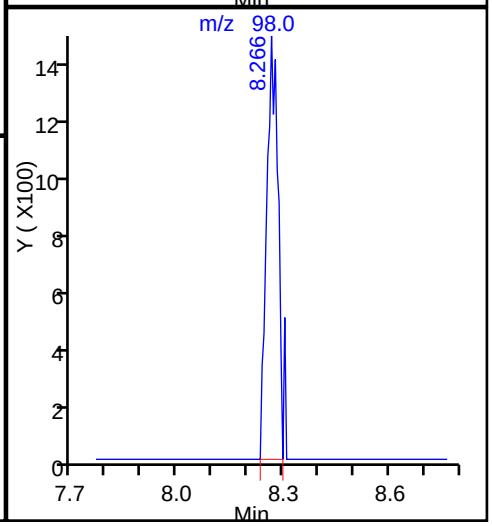








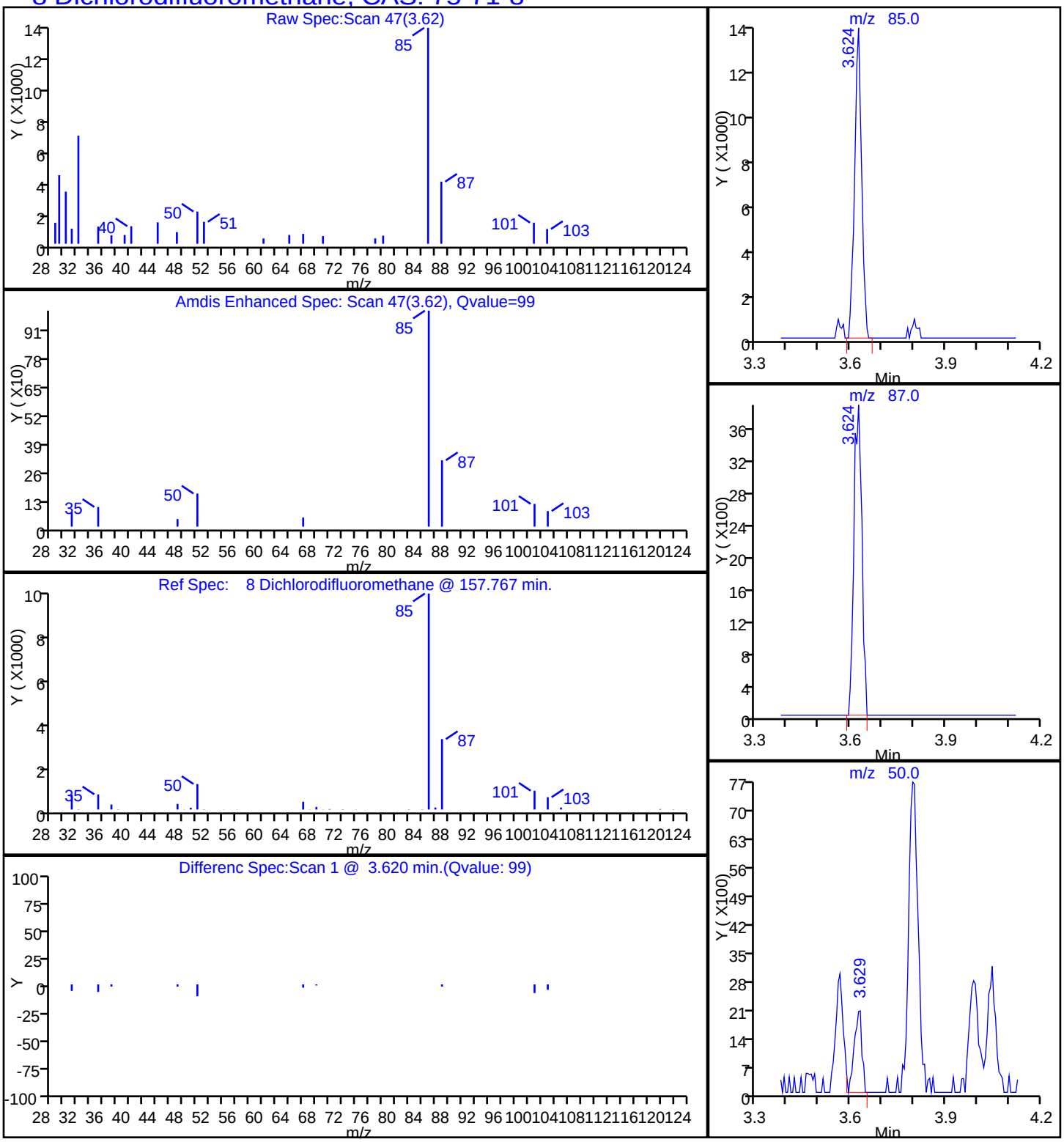




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P107.D		
Injection Date:	19-Jan-2017 20:28:30	Instrument ID:	MJ
Lims ID:	140-6811-A-2	Lab Sample ID:	140-6811-2
Client ID:	BLDG-L MID-GAC		
Operator ID:	7126	ALS Bottle#:	7 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

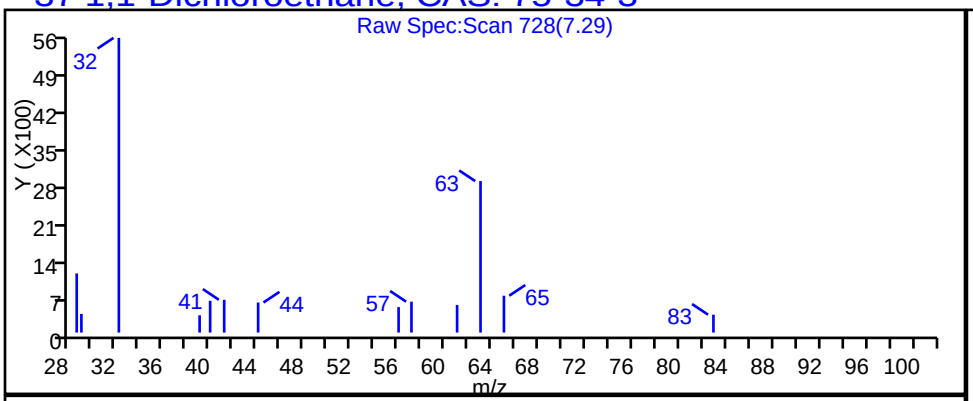
8 Dichlorodifluoromethane, CAS: 75-71-8

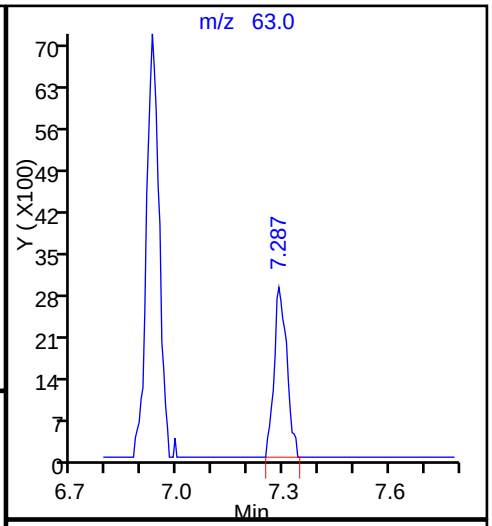


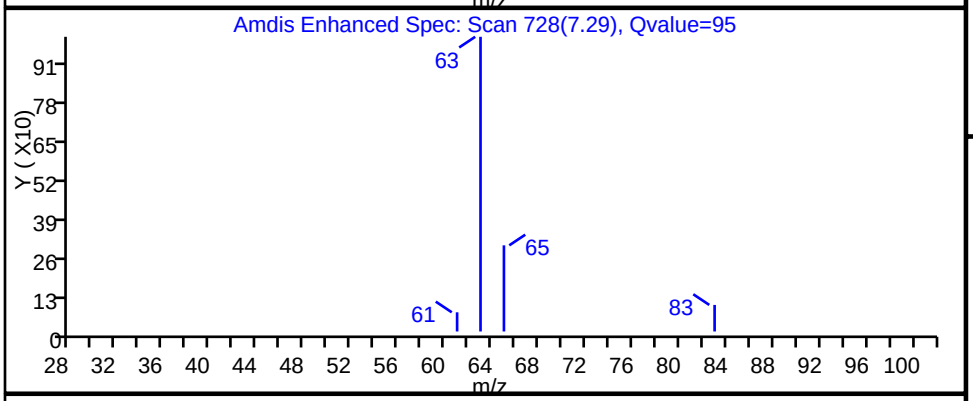
TestAmerica Knoxville

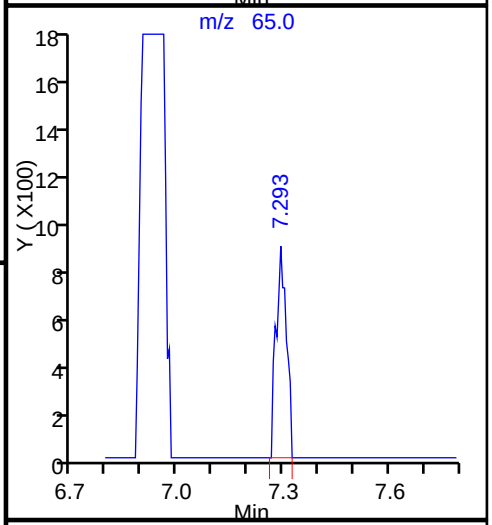
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P107.D		
Injection Date:	19-Jan-2017 20:28:30	Instrument ID:	MJ
Lims ID:	140-6811-A-2	Lab Sample ID:	140-6811-2
Client ID:	BLDG-L MID-GAC		
Operator ID:	7126	ALS Bottle#:	7 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

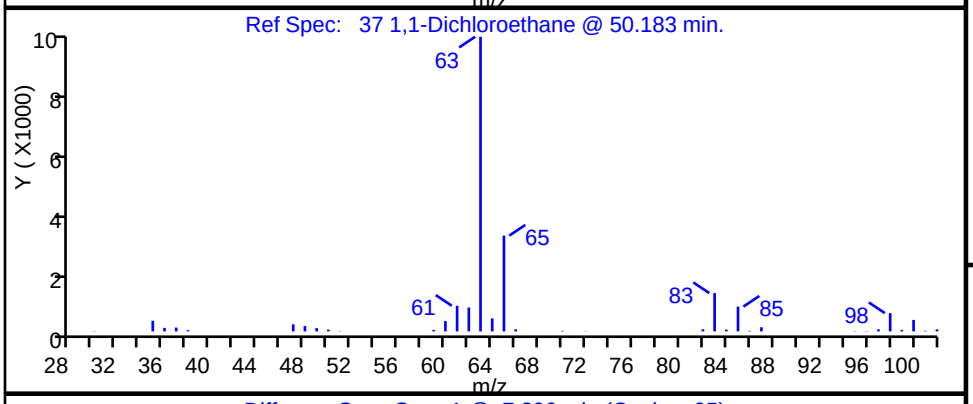
37 1,1-Dichloroethane, CAS: 75-34-3

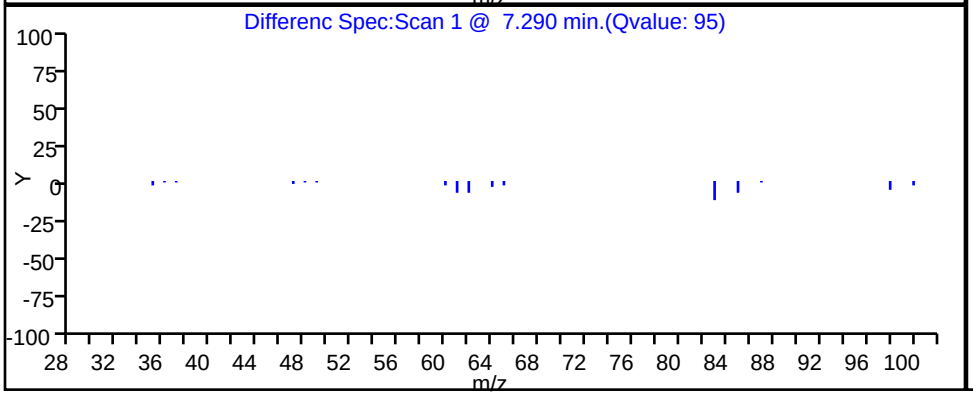


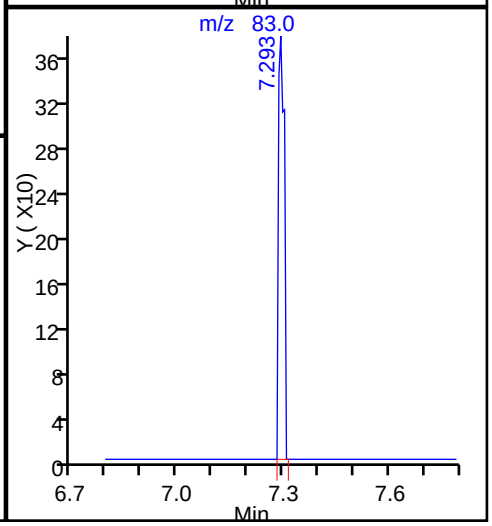








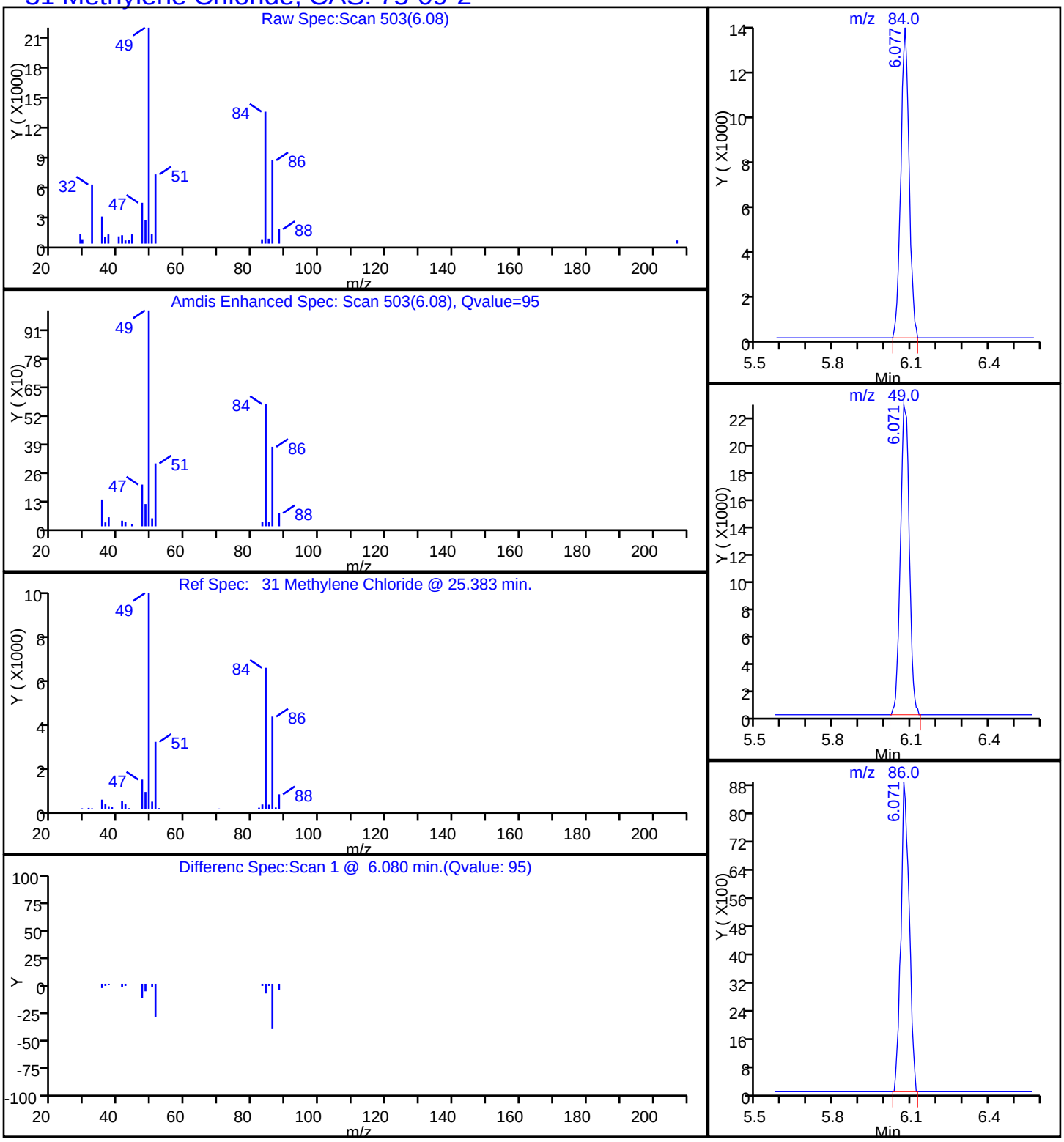




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P107.D		
Injection Date:	19-Jan-2017 20:28:30	Instrument ID:	MJ
Lims ID:	140-6811-A-2	Lab Sample ID:	140-6811-2
Client ID:	BLDG-L MID-GAC		
Operator ID:	7126	ALS Bottle#:	7 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

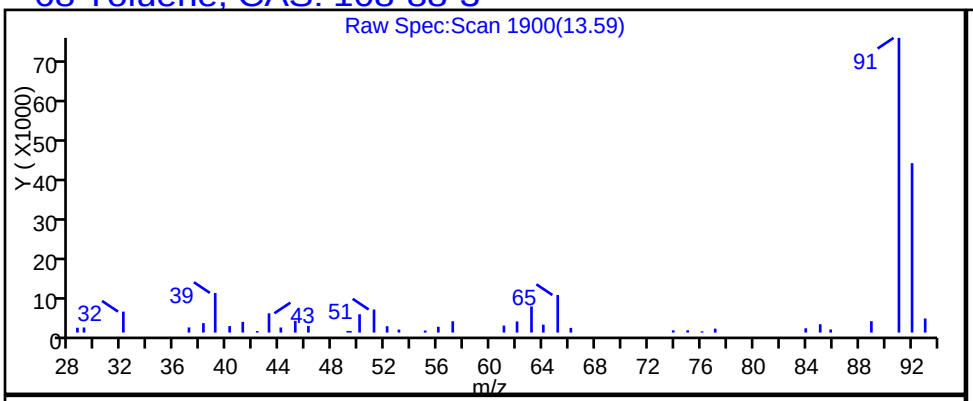
31 Methylene Chloride, CAS: 75-09-2

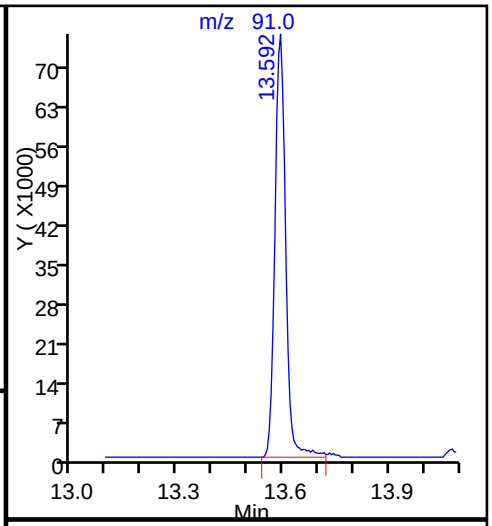


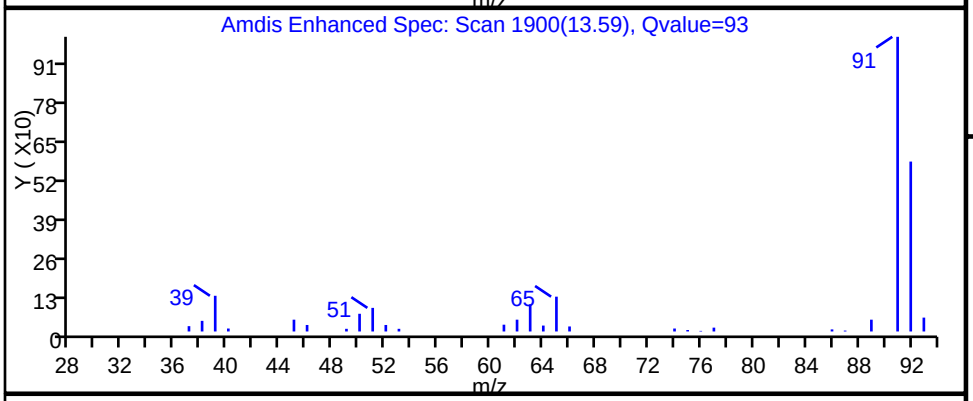
TestAmerica Knoxville

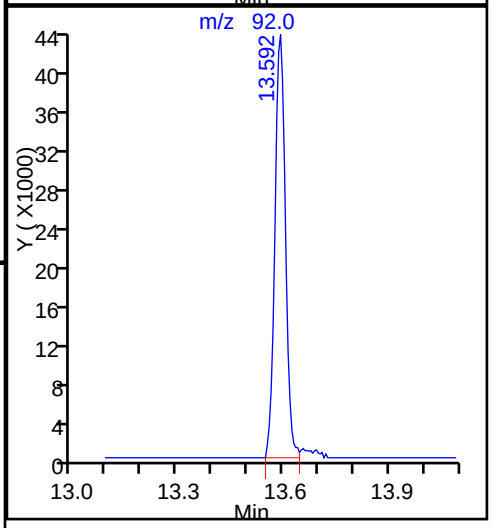
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P107.D				
Injection Date:	19-Jan-2017 20:28:30	Instrument ID:	MJ		
Lims ID:	140-6811-A-2	Lab Sample ID:	140-6811-2		
Client ID:	BLDG-L MID-GAC				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

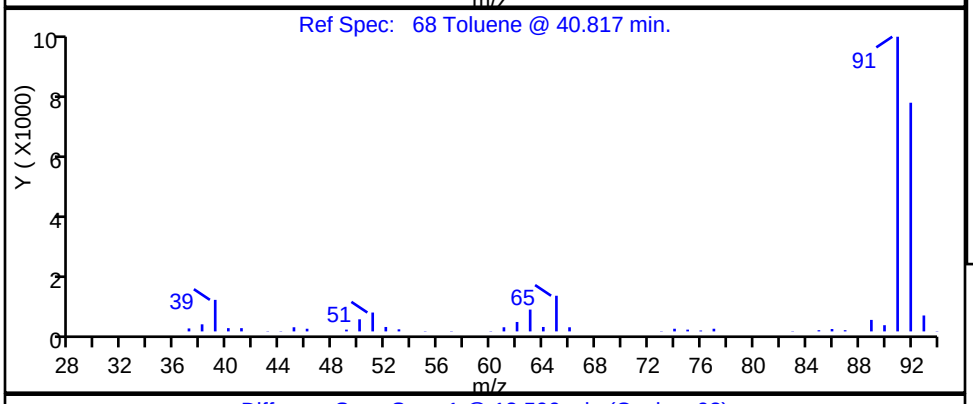
68 Toluene, CAS: 108-88-3

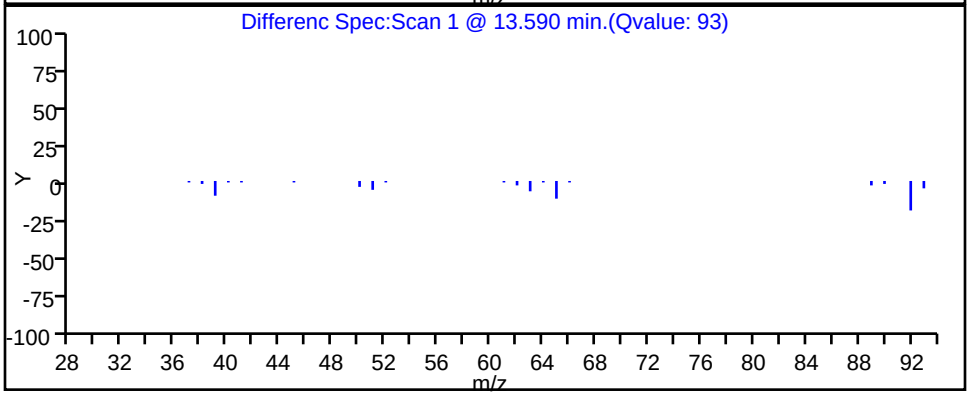










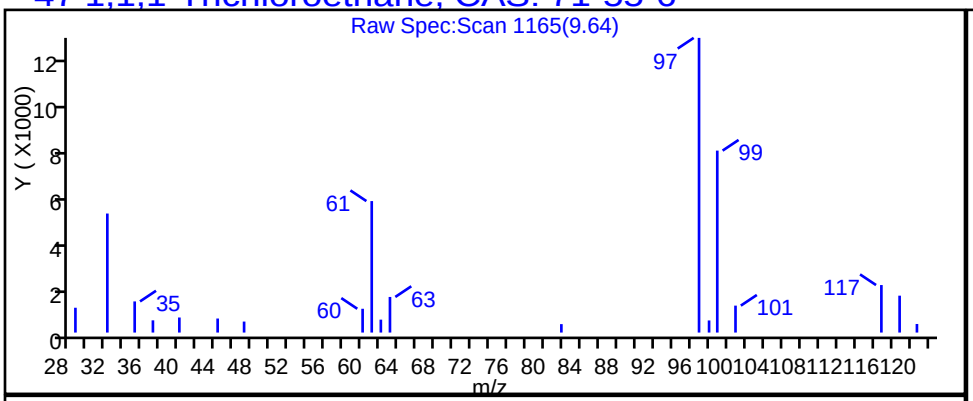


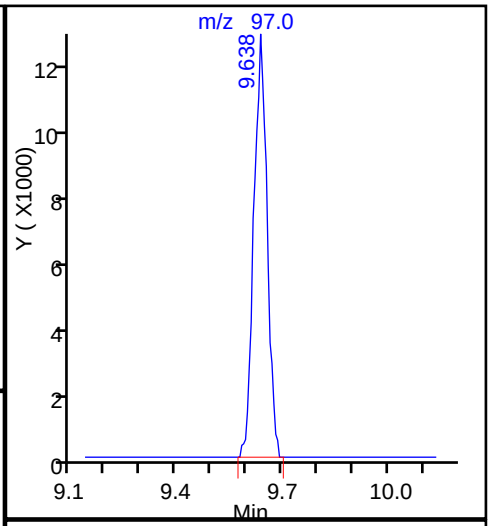
Report Date: 20-Jan-2017 10:55:20 Chrom Revision: 2.2 18-Jan-2017 10:40:14

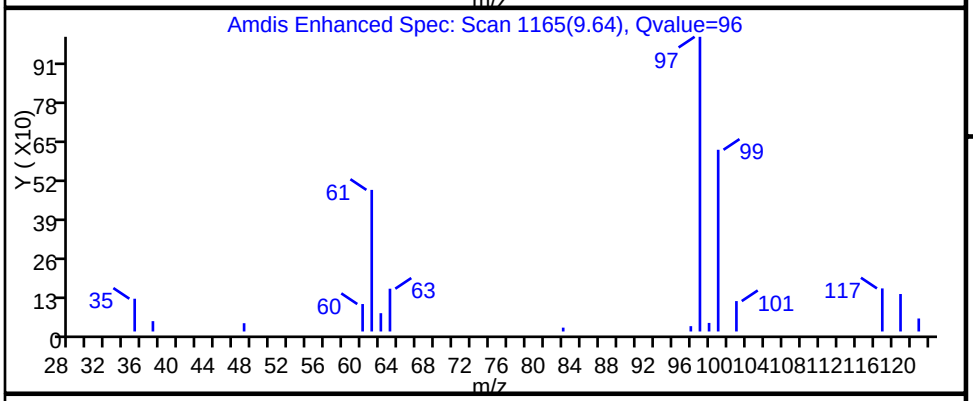
TestAmerica Knoxville

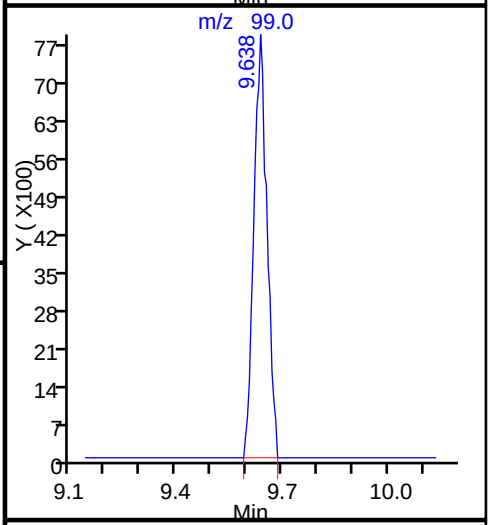
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P107.D		
Injection Date:	19-Jan-2017 20:28:30	Instrument ID:	MJ
Lims ID:	140-6811-A-2	Lab Sample ID:	140-6811-2
Client ID:	BLDG-L MID-GAC		
Operator ID:	7126	ALS Bottle#:	7 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

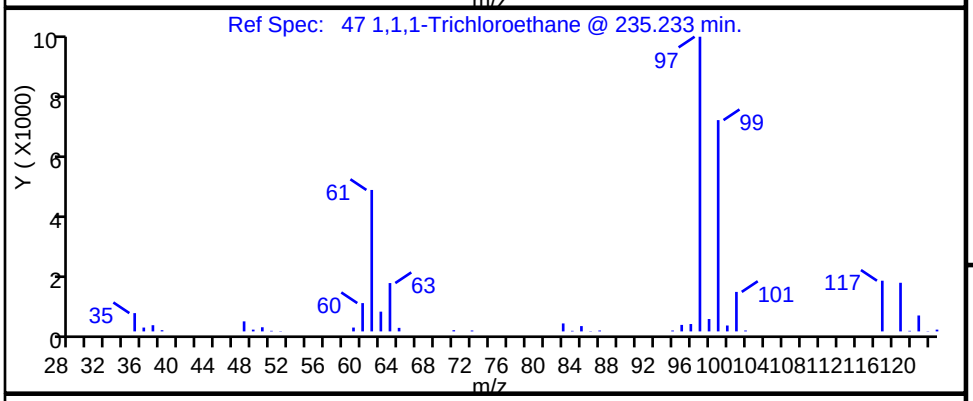
47 1,1,1-Trichloroethane, CAS: 71-55-6

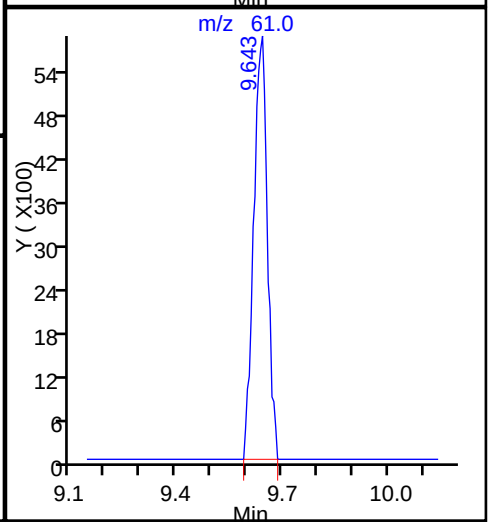


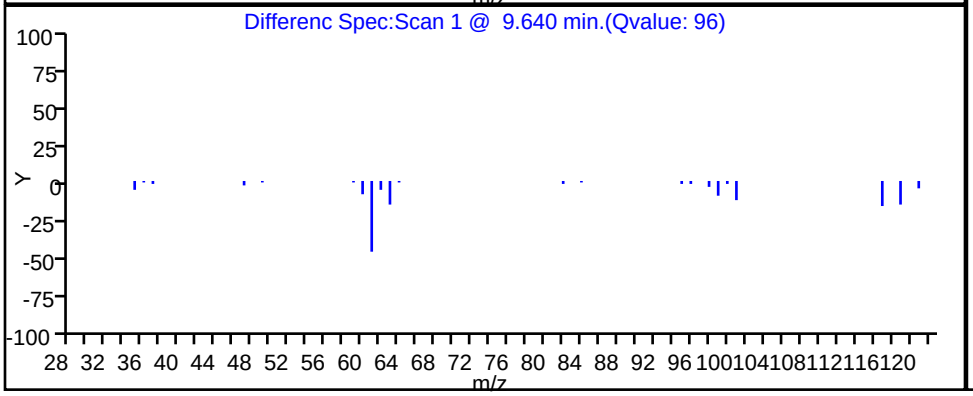










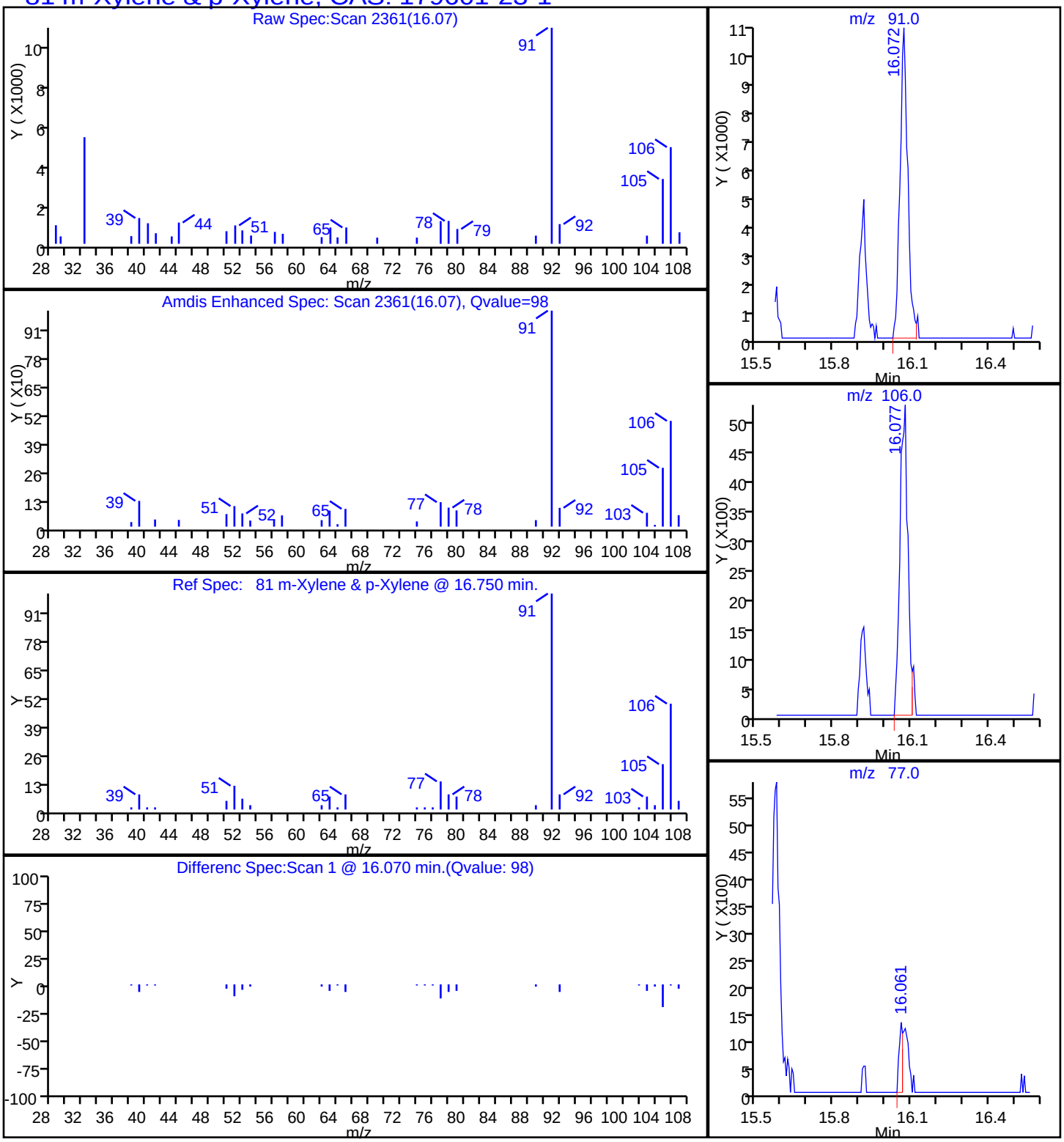


Report Date: 20-Jan-2017 10:55:20 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P107.D				
Injection Date:	19-Jan-2017 20:28:30	Instrument ID:	MJ		
Lims ID:	140-6811-A-2	Lab Sample ID:	140-6811-2		
Client ID:	BLDG-L MID-GAC				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

81 m-Xylene & p-Xylene, CAS: 179601-23-1

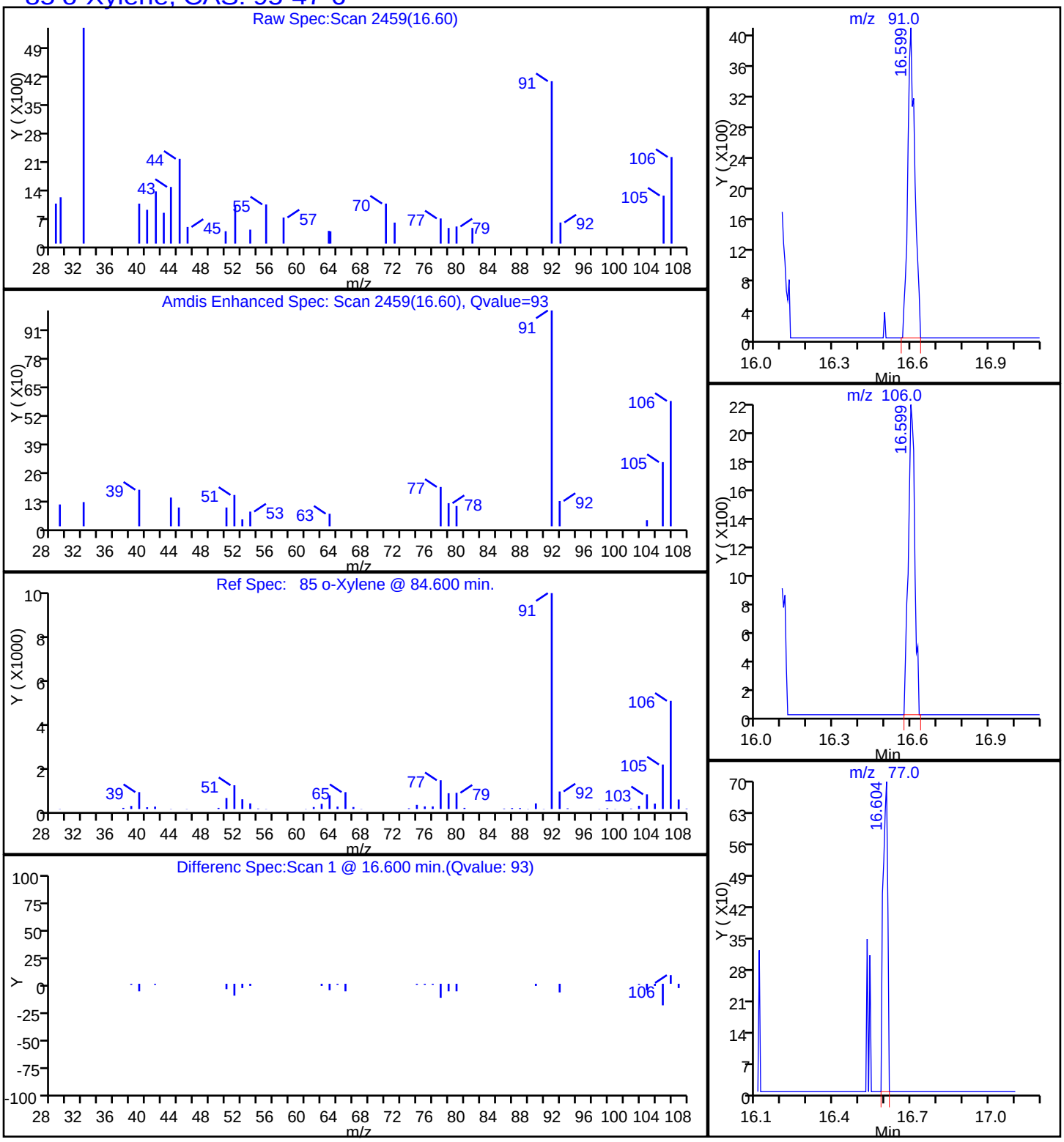


Report Date: 20-Jan-2017 10:55:20 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P107.D		
Injection Date:	19-Jan-2017 20:28:30	Instrument ID:	MJ
Lims ID:	140-6811-A-2	Lab Sample ID:	140-6811-2
Client ID:	BLDG-L MID-GAC		
Operator ID:	7126	ALS Bottle#:	7 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

85 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6811-1

SDG No.:

Client Sample ID: BLDG-L INFLUENT | Lab Sample ID: 140-6811-3

Matrix: Air | Lab File ID: JA19P108.D

Analysis Method: TO 15 LL | Date Collected: 01/12/2017 13:02

Sample wt/vol: 100(mL) | Date Analyzed: 01/19/2017 21:14

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.61		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.8		0.40	0.075
67-66-3	Chloroform	119.38	0.16	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.49		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.39	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.21	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.8		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.14	J	0.40	0.080
108-88-3	Toluene	92.14	5.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND	*	0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.26	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	6.1		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.41		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.19	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	93		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6811-1

SDG No.:

Client Sample ID: BLDG-L INFLUENT | Lab Sample ID: 140-6811-3

Matrix: Air | Lab File ID: JA19P108.D

Analysis Method: TO 15 LL | Date Collected: 01/12/2017 13:02

Sample wt/vol: 100(mL) | Date Analyzed: 01/19/2017 21:14

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7893 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.0		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	6.3		1.4	0.27
67-66-3	Chloroform	119.38	0.78	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	1.9		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.9	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.90	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	6.2		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.92	J	2.7	0.54
108-88-3	Toluene	92.14	20		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND	*	3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.4	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	33		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.0		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.91	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	93		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P108.D				
Lims ID:	140-6811-A-3				
Client ID:	BLDG-L INFLUENT				
Sample Type:	Client				
Inject. Date:	19-Jan-2017 21:14:30	ALS Bottle#:	8	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003854-013				
Misc. Info.:	140-6811-a-3				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Jan-2017 10:54:07	Calib Date:	26-Nov-2016 01:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				
First Level Reviewer: tajh		Date:	20-Jan-2017 10:51:29		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.598	8.597	0.001	99	317669	4.00	
* 2 1,4-Difluorobenzene	114	10.804	10.803	0.001	95	1414351	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.575	15.574	0.001	87	1184098	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.216	17.220	-0.004	95	695362	3.71	
6 Chlorodifluoromethane	67	3.563	3.562	0.001	97	10186	0.3555	
8 Dichlorodifluoromethane	85	3.627	3.621	0.006	99	20217	0.0786	
31 Methylene Chloride	84	6.080	6.079	0.001	95	33298	0.3557	
42 cis-1,2-Dichloroethene	96	8.270	8.269	0.001	96	9280	0.0980	
44 Chloroform	83	8.609	8.613	-0.004	31	6402	0.0321	
47 1,1,1-Trichloroethane	97	9.636	9.635	0.001	96	10869	0.0529	
51 Benzene	78	10.249	10.243	0.006	97	31566	0.1229	
59 Trichloroethene	130	11.519	11.523	-0.004	97	146437	1.21	
68 Toluene	91	13.590	13.589	0.001	93	268355	1.05	
76 Tetrachloroethene	129	14.741	14.740	0.001	91	3027	0.0271	
79 Ethylbenzene	91	15.914	15.913	0.001	96	12579	0.0417	
81 m-Xylene & p-Xylene	91	16.075	16.074	0.001	98	33471	0.1502	
85 o-Xylene	91	16.603	16.602	0.001	98	13917	0.0579	
92 1,3,5-Trimethylbenzene	120	17.958	17.963	-0.005	49	5088	0.0371	
96 1,2,4-Trimethylbenzene	105	18.405	18.404	0.001	98	19526	0.0826	
S 126 Xylenes, Total	100				0		0.2081	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

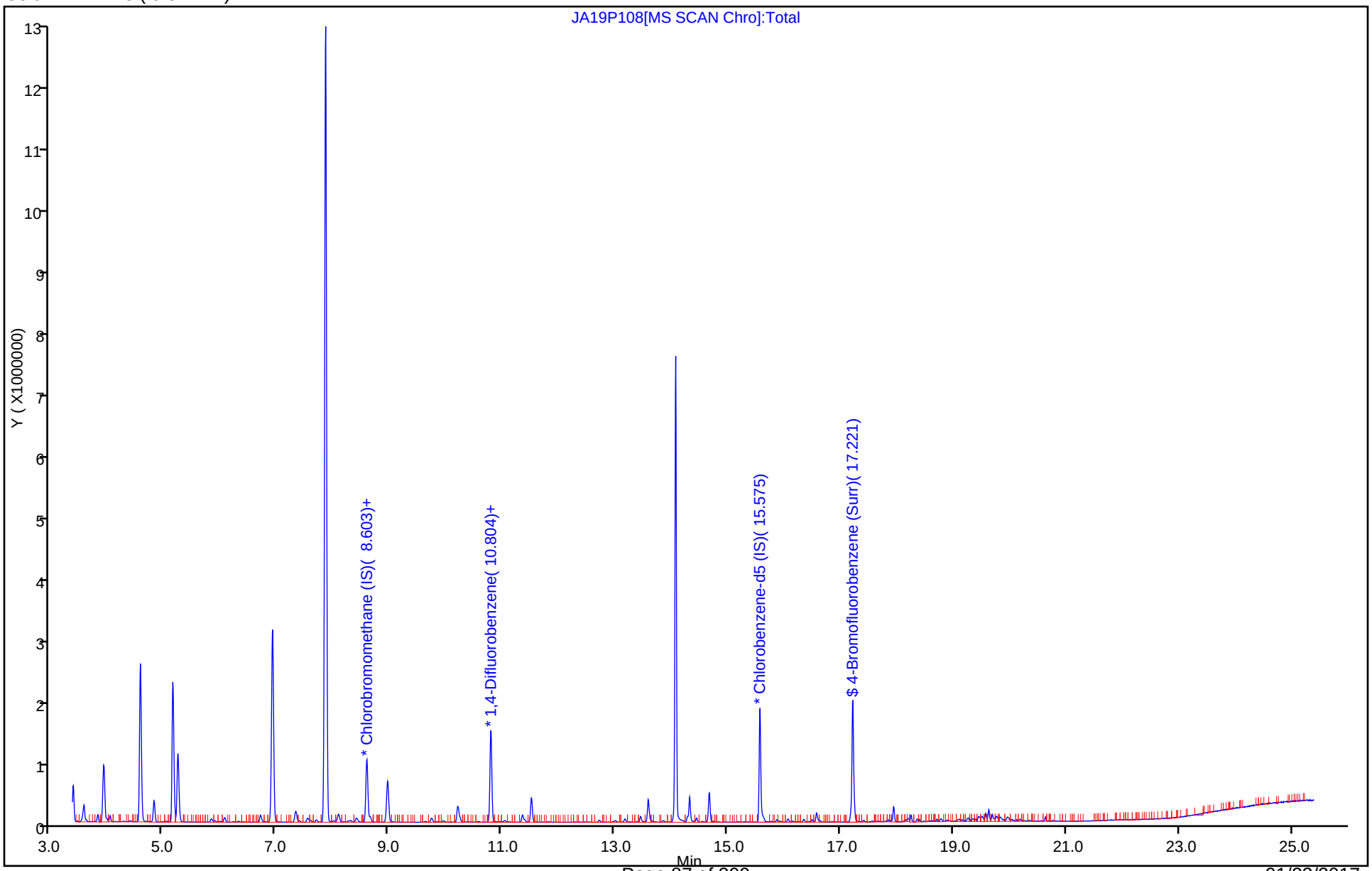
Report Date: 20-Jan-2017 10:55:21 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P108.D

Injection Date:	19-Jan-2017 21:14:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-6811-A-3	Lab Sample ID:	140-6811-3	Worklist Smp#:	13
Client ID:	BLDG-L INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P108.D				
Lims ID:	140-6811-A-3				
Client ID:	BLDG-L INFLUENT				
Sample Type:	Client				
Inject. Date:	19-Jan-2017 21:14:30	ALS Bottle#:	8	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003854-013				
Misc. Info.:	140-6811-a-3				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Jan-2017 10:54:07	Calib Date:	26-Nov-2016 01:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				
First Level Reviewer: tajh		Date:	20-Jan-2017 10:51:29		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.71	92.72

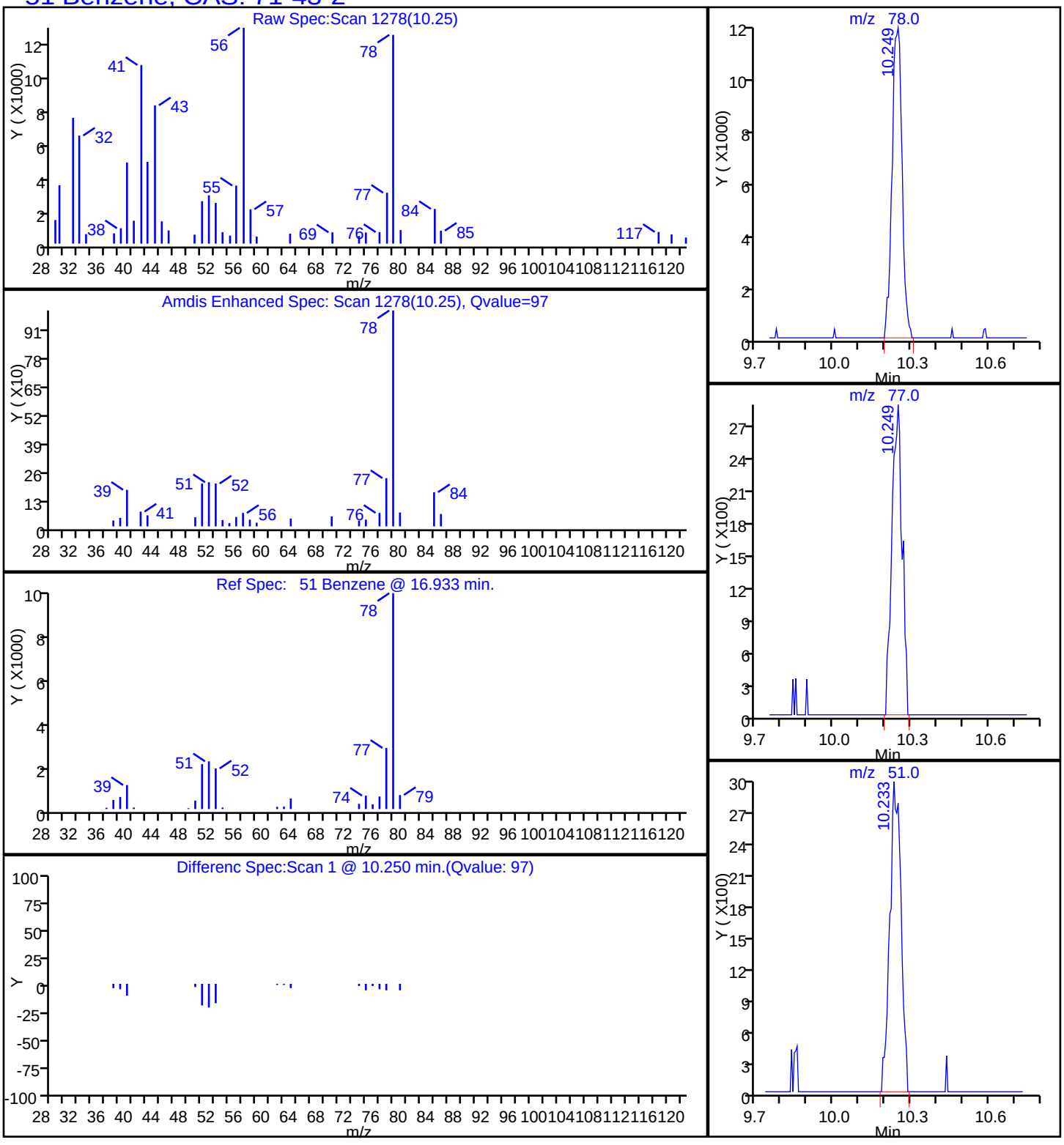
Report Date: 20-Jan-2017 10:55:22 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P108.D

Injection Date:	19-Jan-2017 21:14:30	Instrument ID:	MJ		
Lims ID:	140-6811-A-3	Lab Sample ID:	140-6811-3		
Client ID:	BLDG-L INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

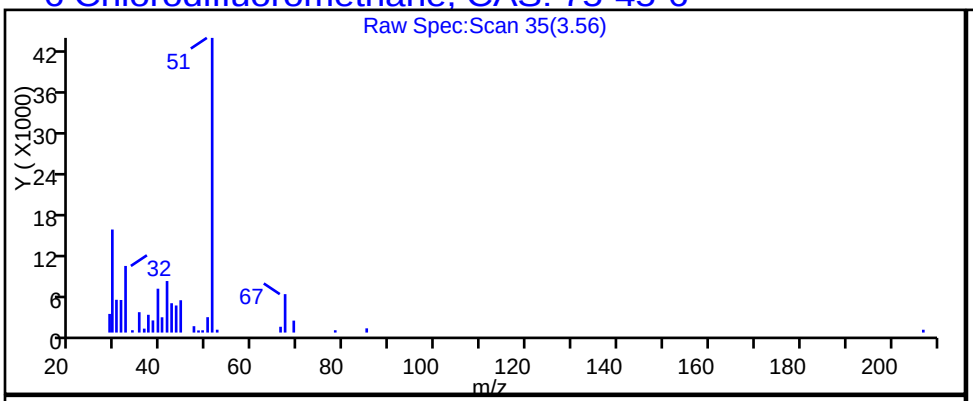
51 Benzene, CAS: 71-43-2

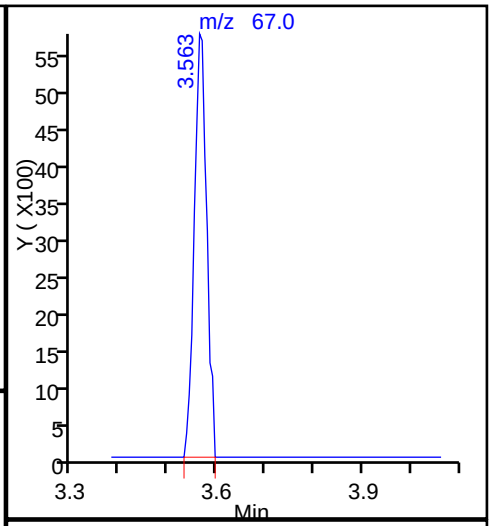


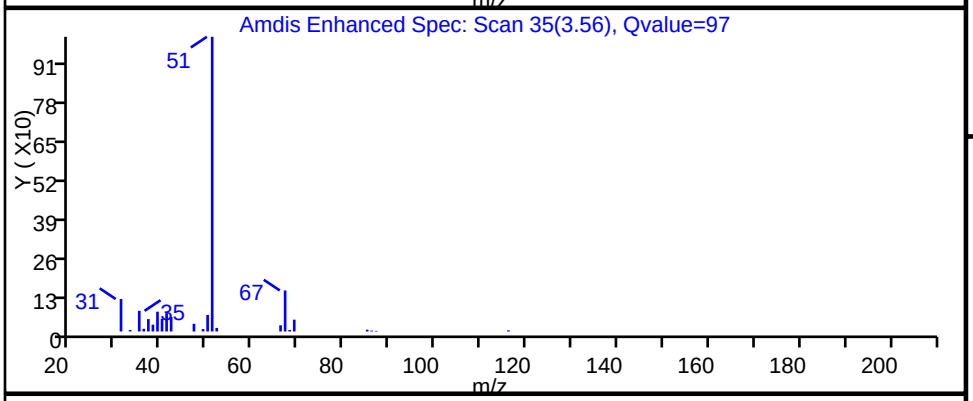
TestAmerica Knoxville

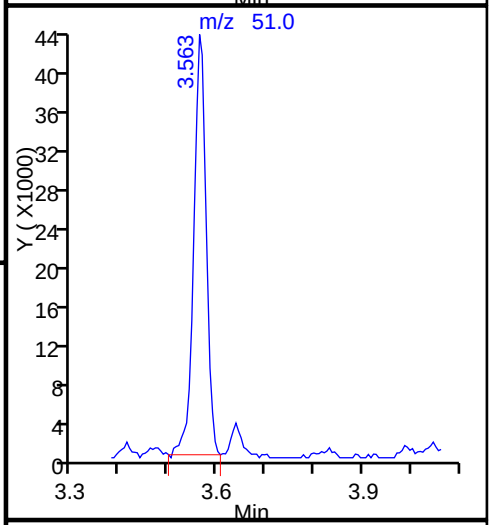
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P108.D				
Injection Date:	19-Jan-2017 21:14:30	Instrument ID:	MJ		
Lims ID:	140-6811-A-3	Lab Sample ID:	140-6811-3		
Client ID:	BLDG-L INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

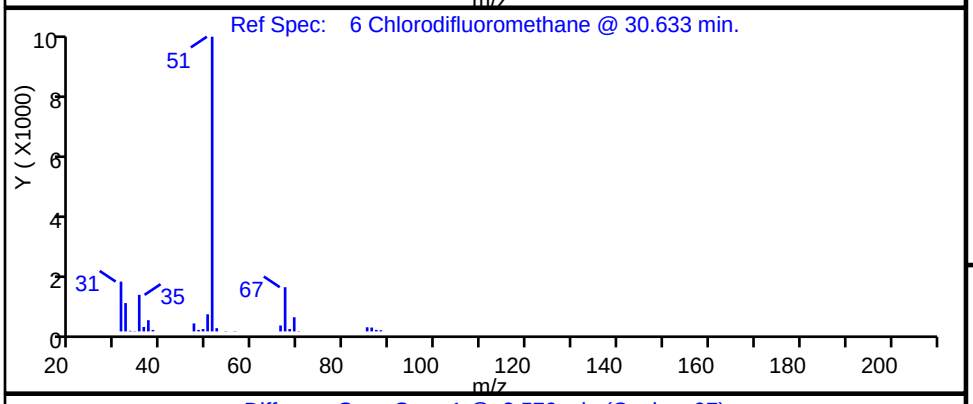
6 Chlorodifluoromethane, CAS: 75-45-6

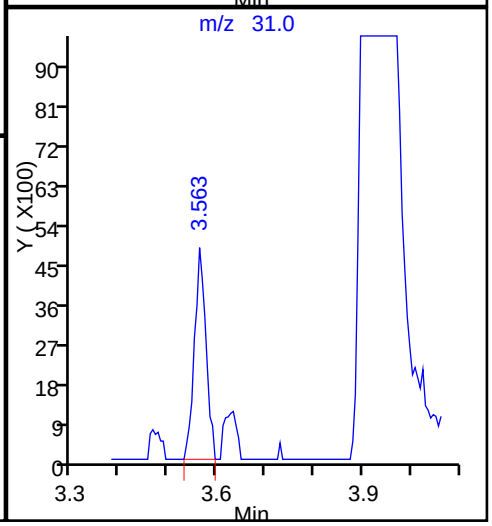


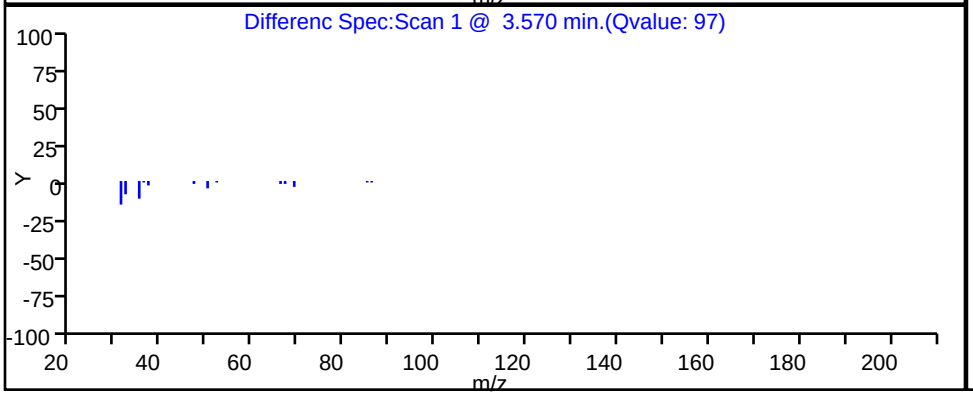






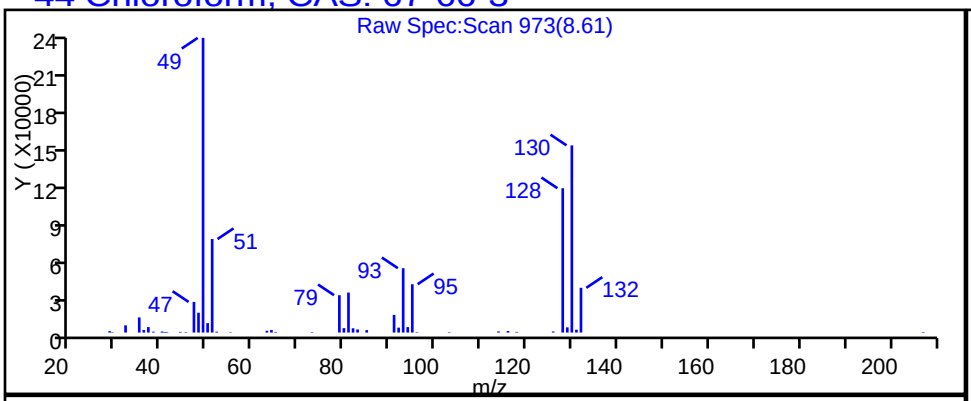


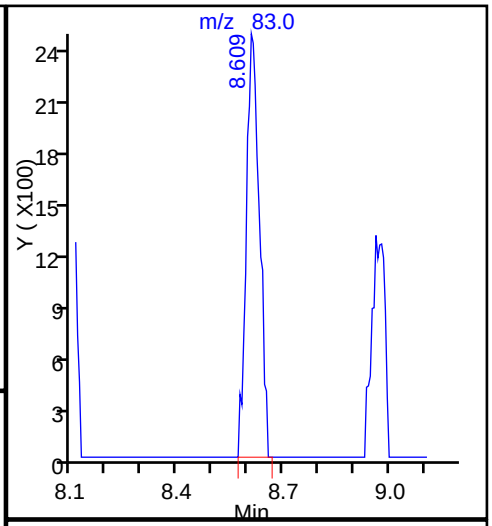


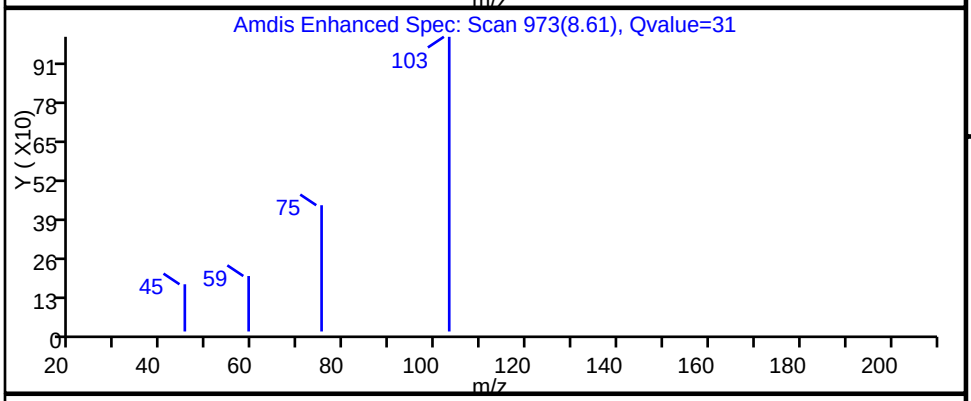


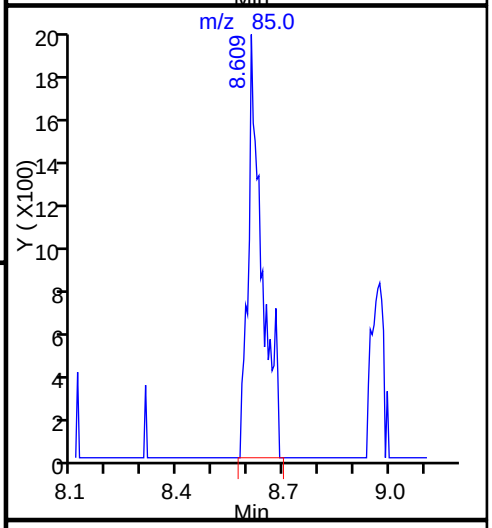
Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P108.D
Injection Date: 19-Jan-2017 21:14:30 Instrument ID: MJ
Lims ID: 140-6811-A-3 Lab Sample ID: 140-6811-3
Client ID: BLDG-L INFLUENT
Operator ID: 7126 ALS Bottle#: 8 Worklist Smp#: 13
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

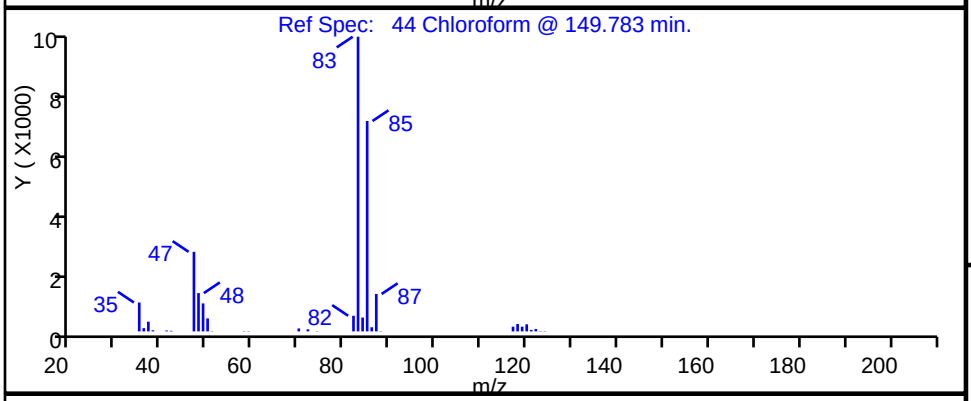
44 Chloroform, CAS: 67-66-3

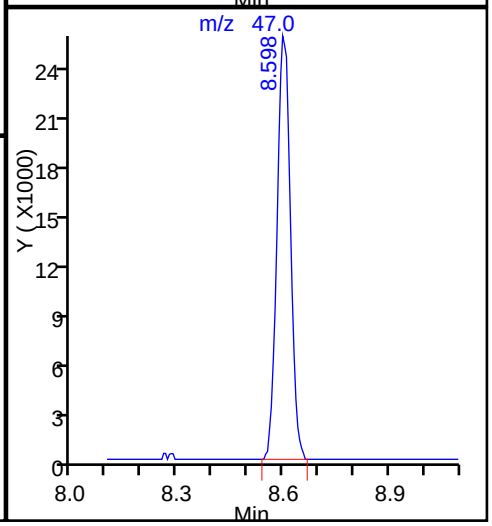


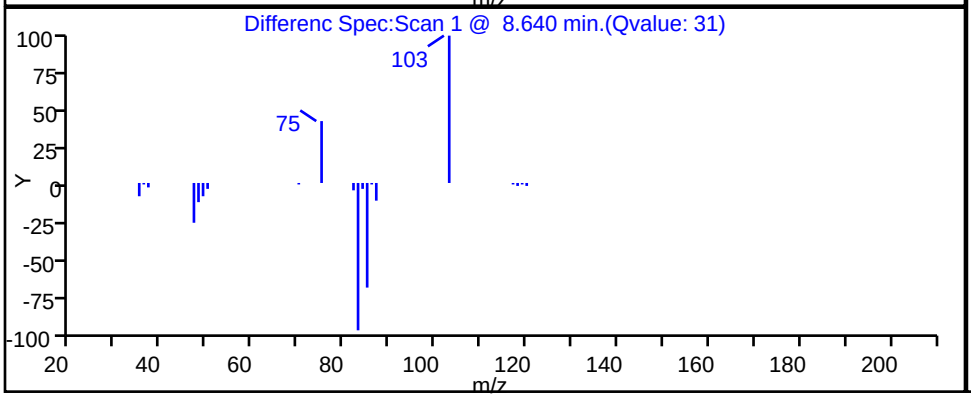








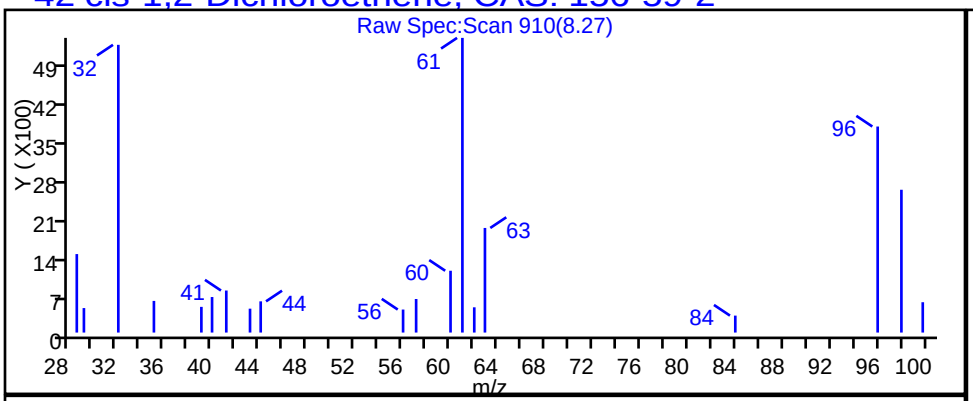


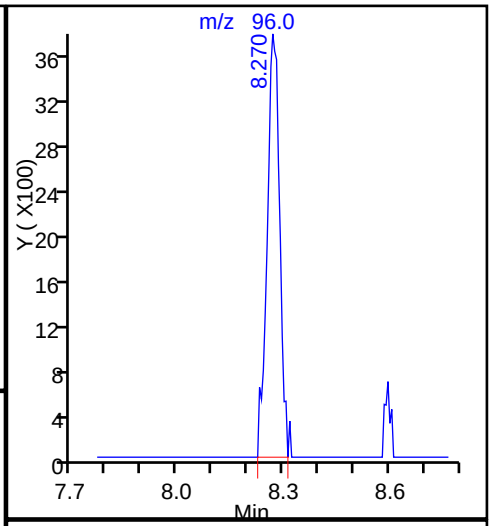


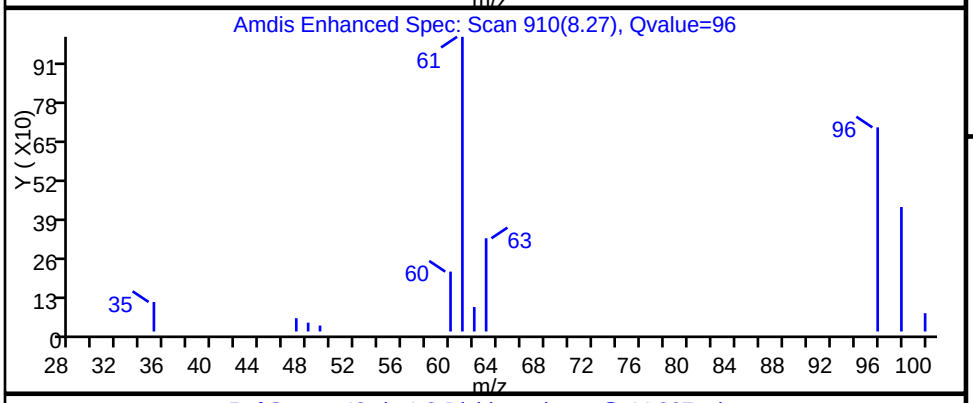
TestAmerica Knoxville

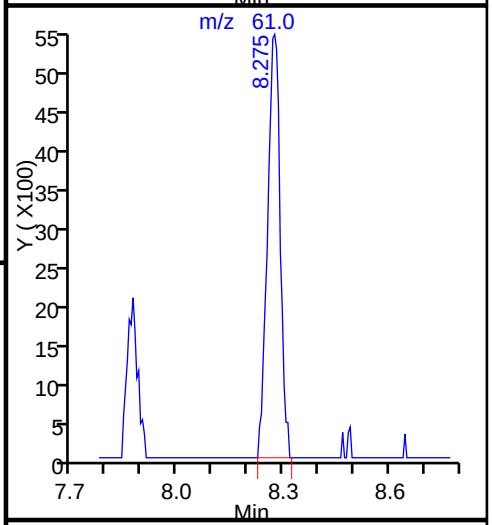
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P108.D		
Injection Date:	19-Jan-2017 21:14:30	Instrument ID:	MJ
Lims ID:	140-6811-A-3	Lab Sample ID:	140-6811-3
Client ID:	BLDG-L INFLUENT		
Operator ID:	7126	ALS Bottle#:	8 Worklist Smp#: 13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

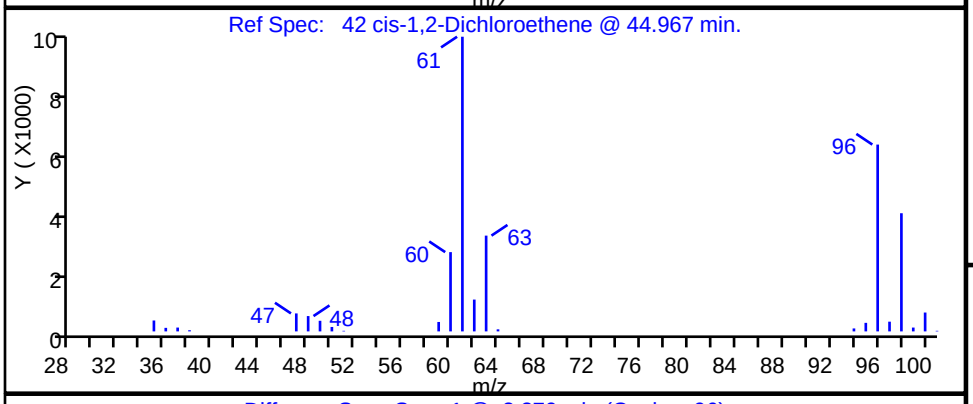
42 cis-1,2-Dichloroethene, CAS: 156-59-2

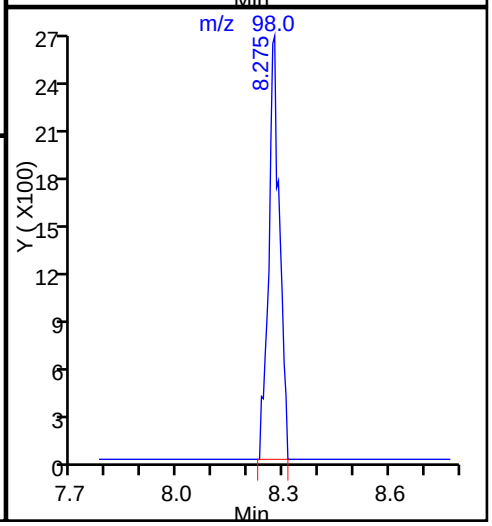


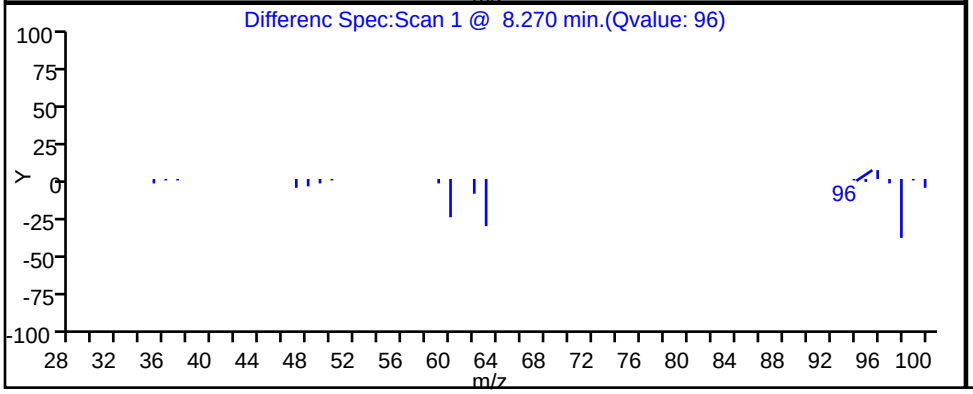












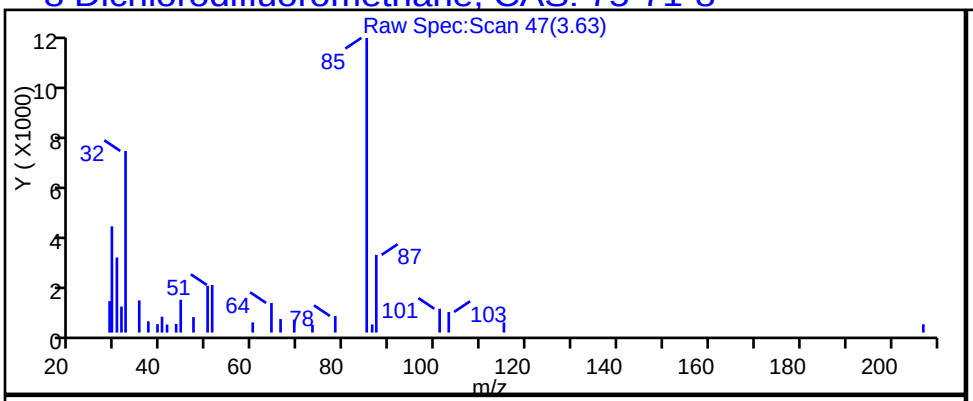
Report Date: 20-Jan-2017 10:55:22 Chrom Revision: 2.2 18-Jan-2017 10:40:14

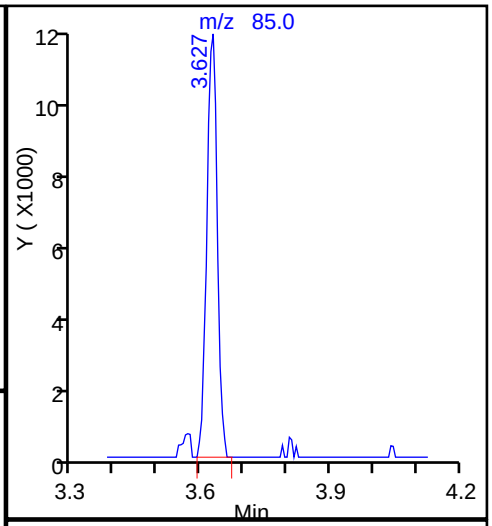
TestAmerica Knoxville

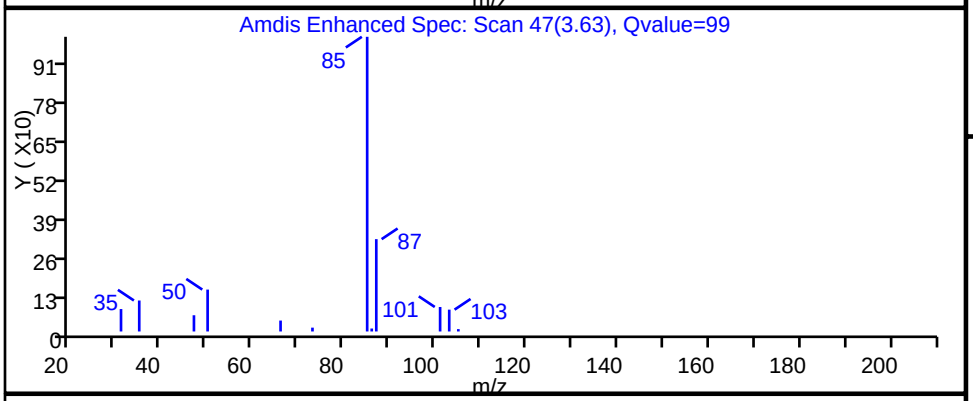
Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P108.D

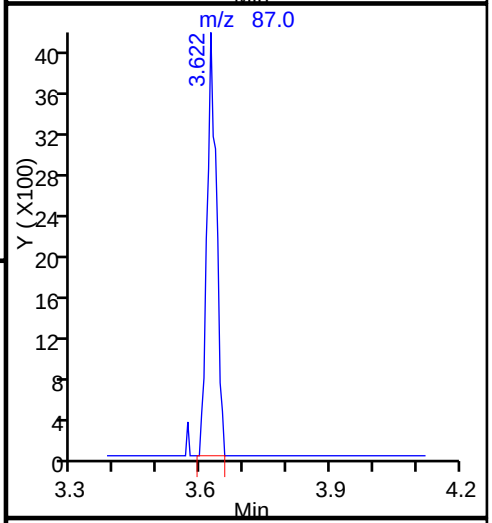
Injection Date:	19-Jan-2017 21:14:30	Instrument ID:	MJ		
Lims ID:	140-6811-A-3	Lab Sample ID:	140-6811-3		
Client ID:	BLDG-L INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

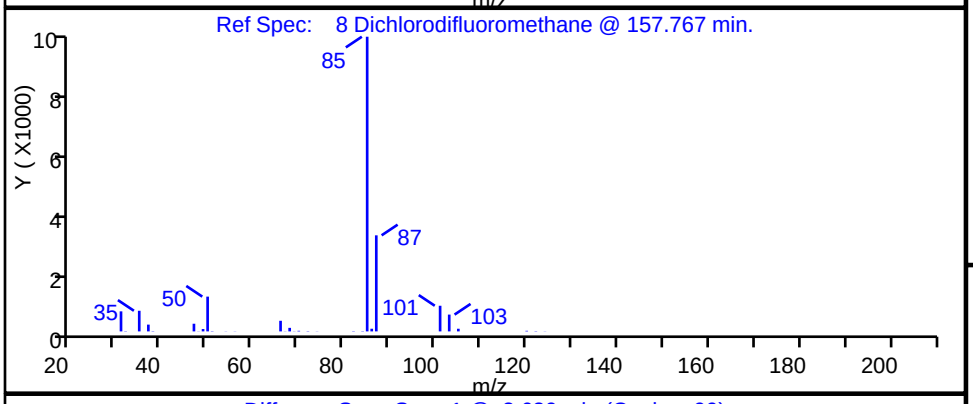
8 Dichlorodifluoromethane, CAS: 75-71-8

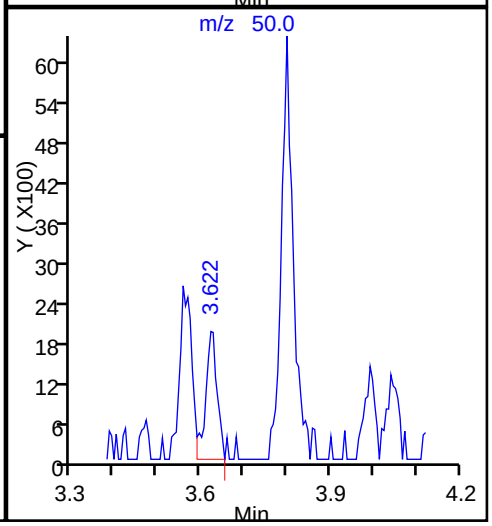


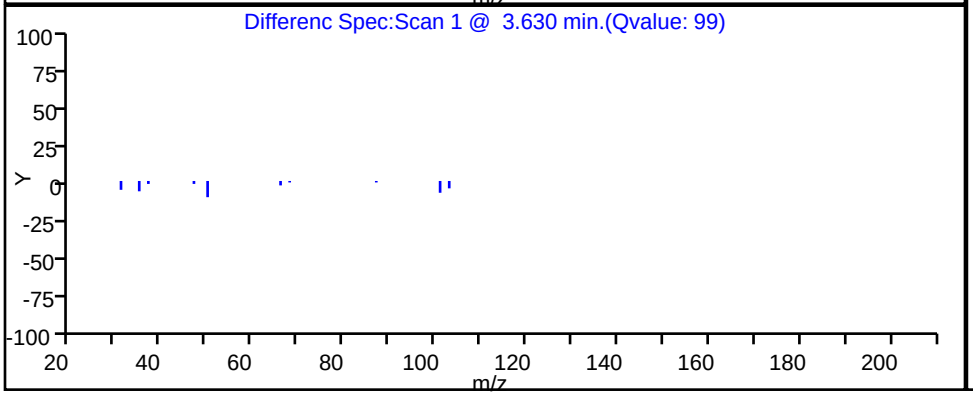












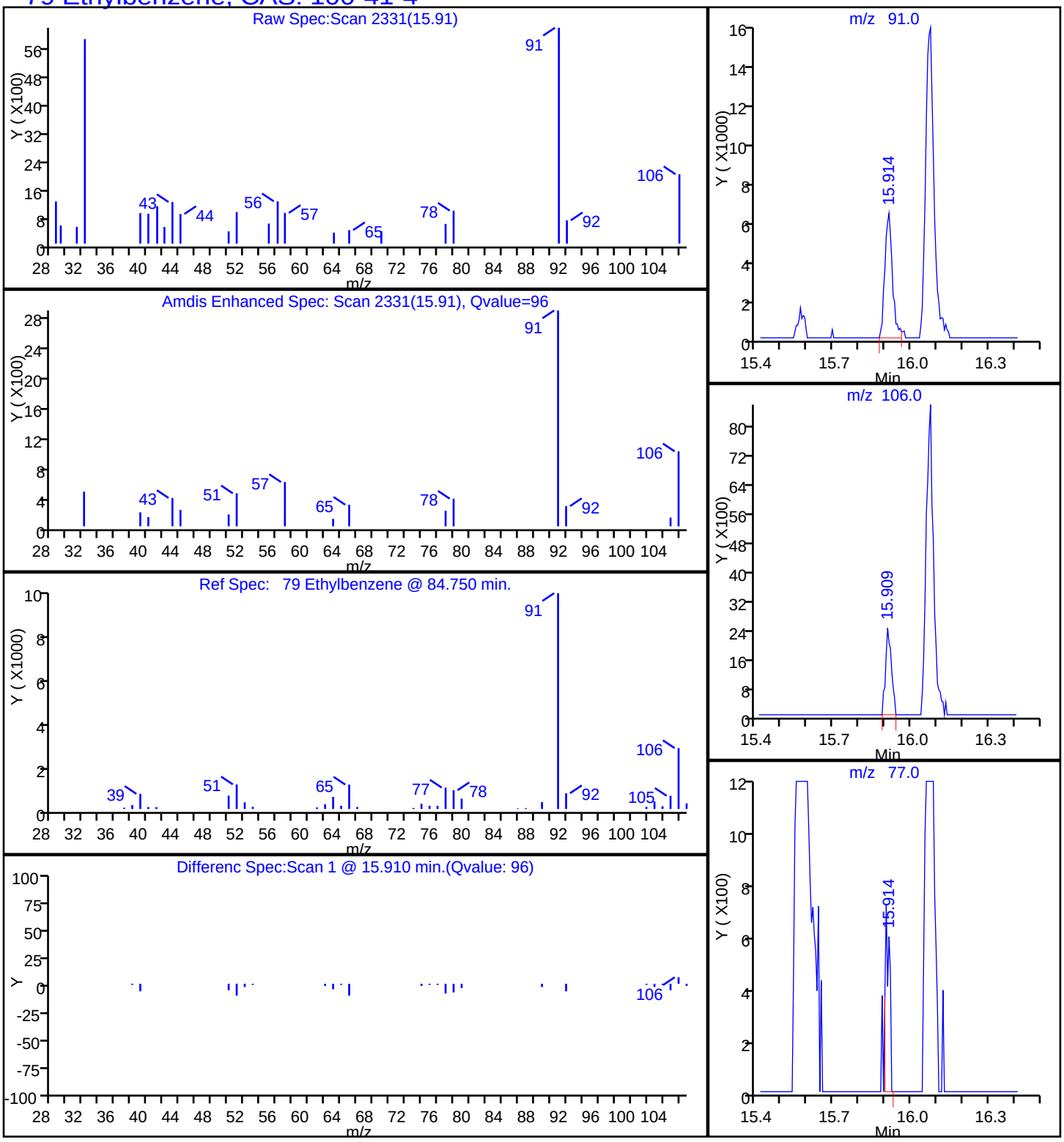
Report Date: 20-Jan-2017 10:55:22 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P108.D

Injection Date:	19-Jan-2017 21:14:30	Instrument ID:	MJ		
Lims ID:	140-6811-A-3	Lab Sample ID:	140-6811-3		
Client ID:	BLDG-L INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

79 Ethylbenzene, CAS: 100-41-4



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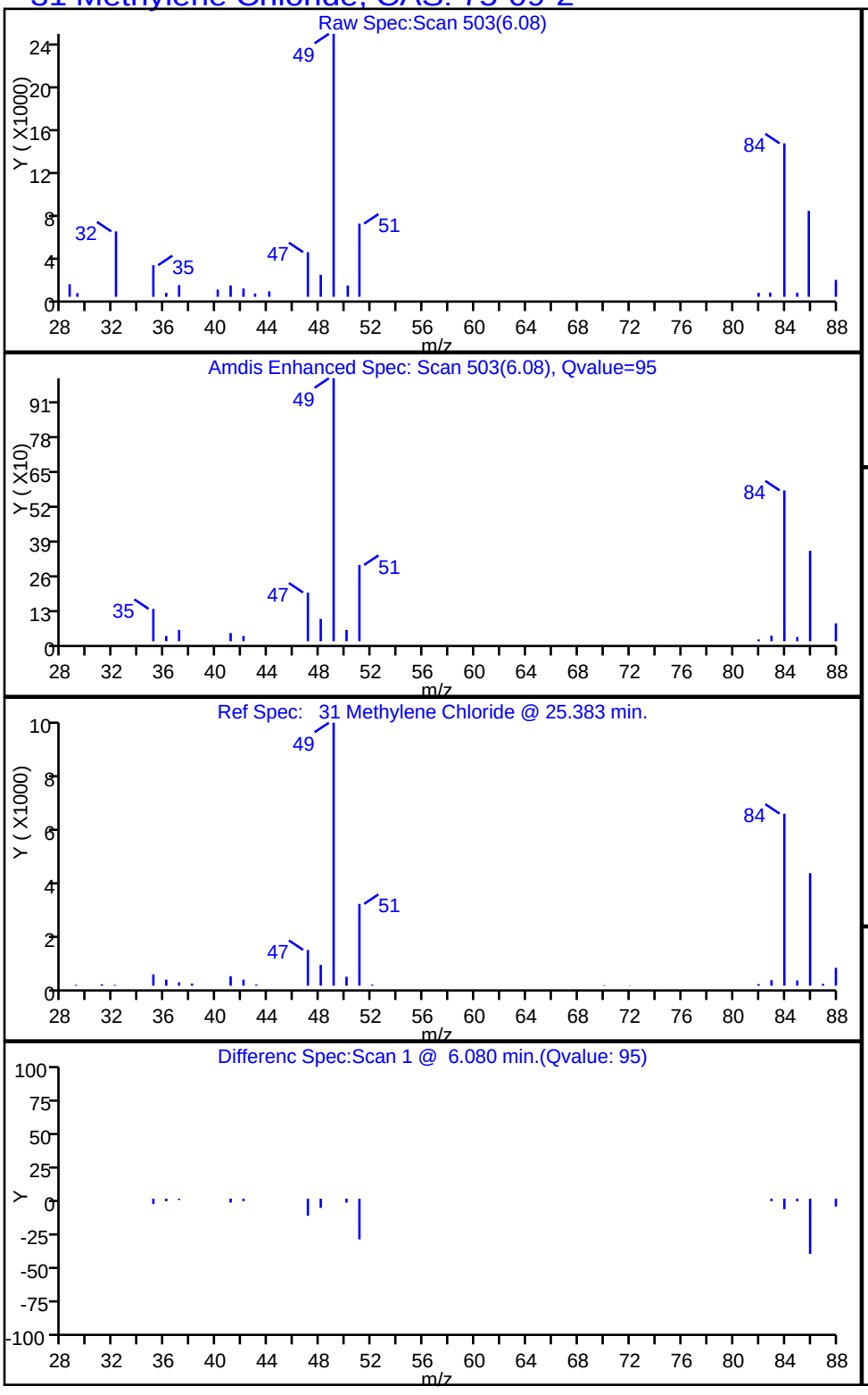
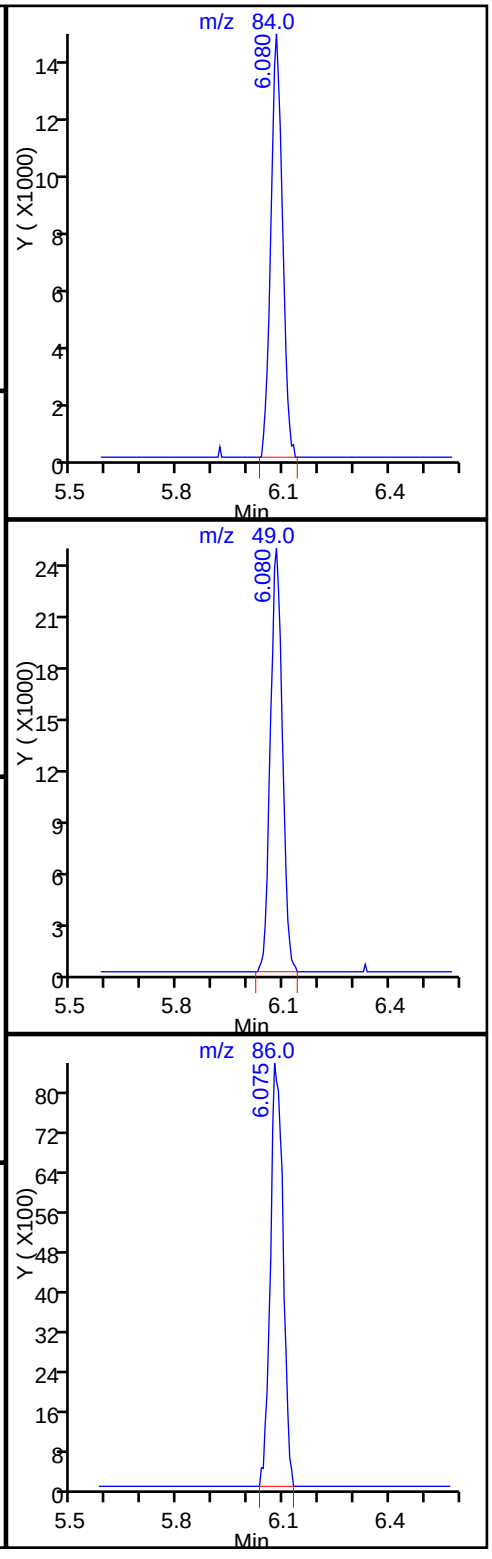
Injection Date: 19-Jan-2017 21:14:30 Instrument ID: MJ
Lims ID: 140-6811-A-3 Lab Sample ID: 140-6811-3
Client ID: BLDG-L INFLUENT
Operator ID: 7126 ALS Bottle#: 8 Worklist Smp#: 13
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

31 Methylene Chloride, CAS: 75-09-2

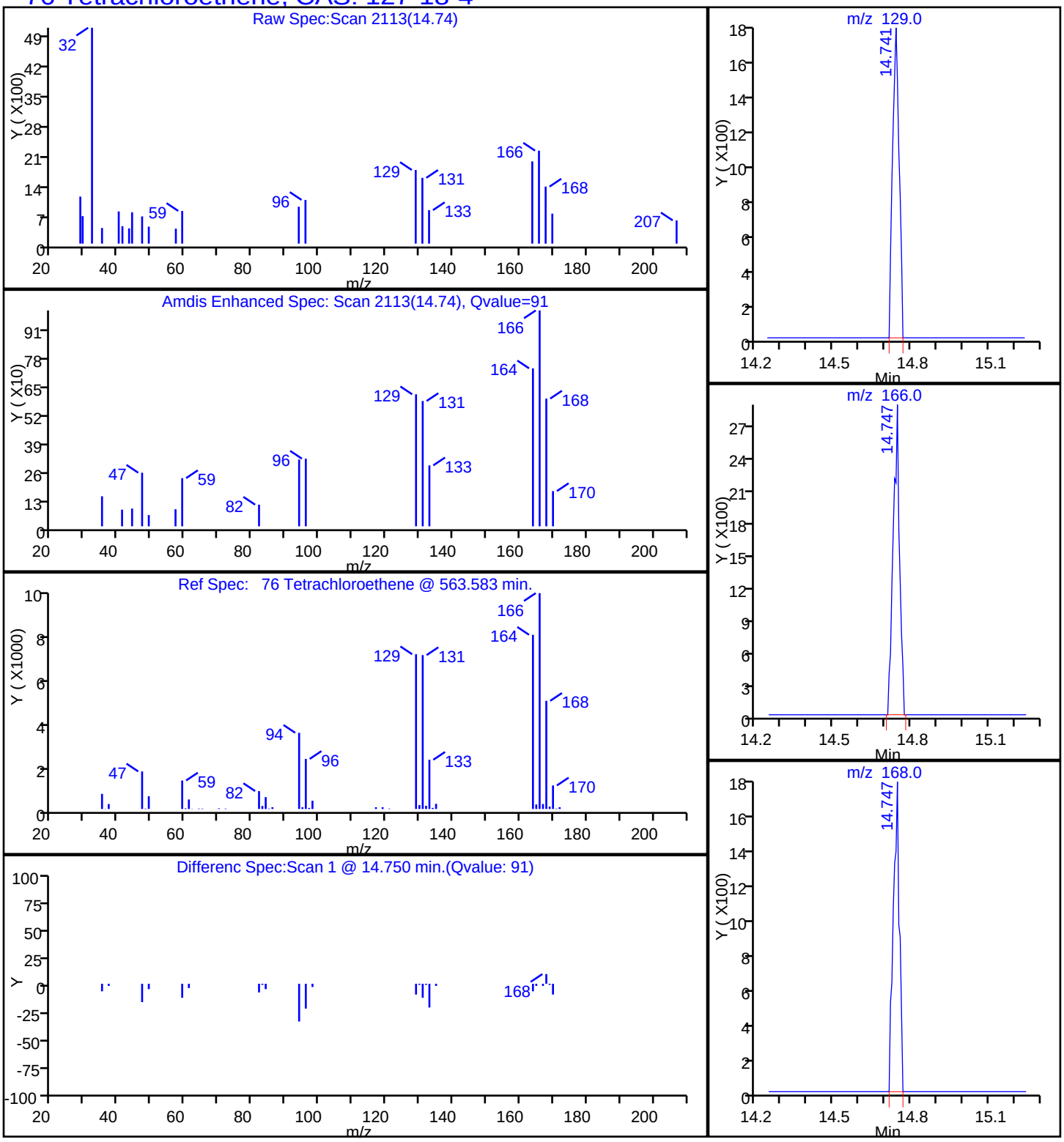




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P108.D		
Injection Date:	19-Jan-2017 21:14:30	Instrument ID:	MJ
Lims ID:	140-6811-A-3	Lab Sample ID:	140-6811-3
Client ID:	BLDG-L INFLUENT		
Operator ID:	7126	ALS Bottle#:	8 Worklist Smp#: 13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

76 Tetrachloroethene, CAS: 127-18-4

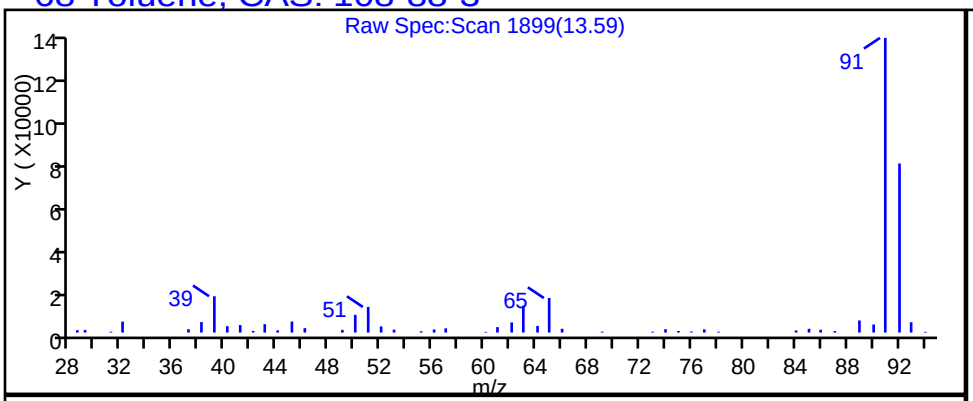


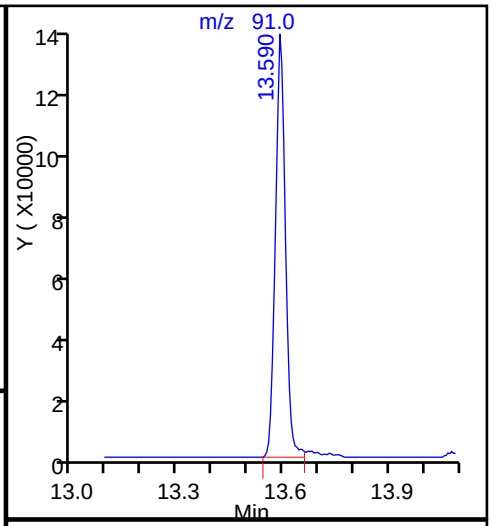
Report Date: 20-Jan-2017 10:55:22 Chrom Revision: 2.2 18-Jan-2017 10:40:14

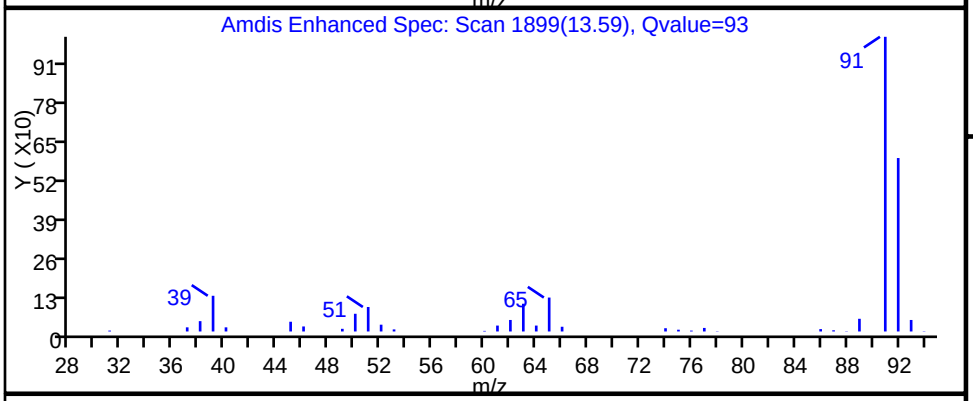
TestAmerica Knoxville

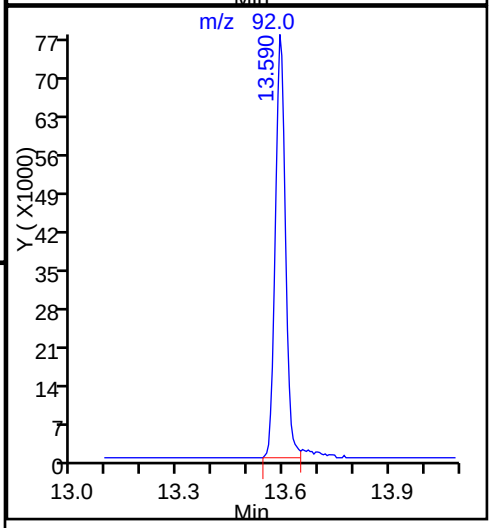
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P108.D				
Injection Date:	19-Jan-2017 21:14:30	Instrument ID:	MJ		
Lims ID:	140-6811-A-3	Lab Sample ID:	140-6811-3		
Client ID:	BLDG-L INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

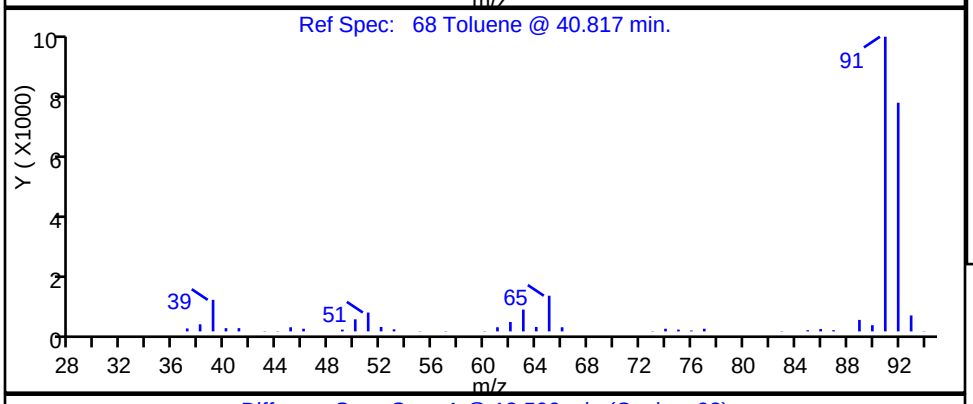
68 Toluene, CAS: 108-88-3

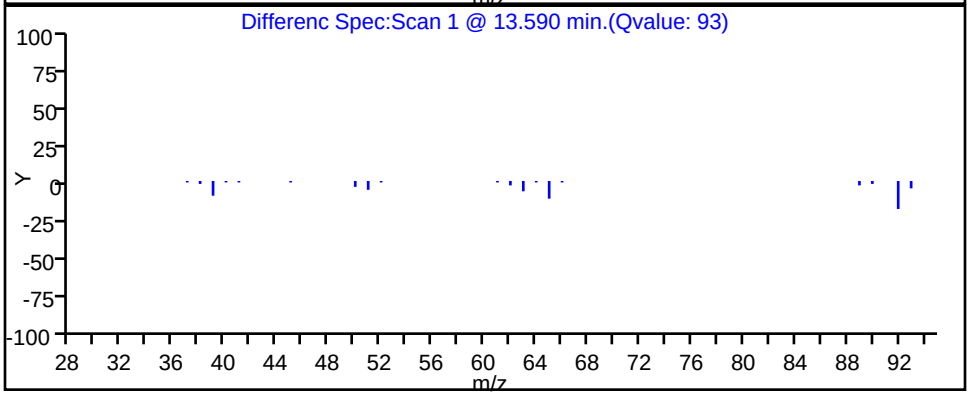








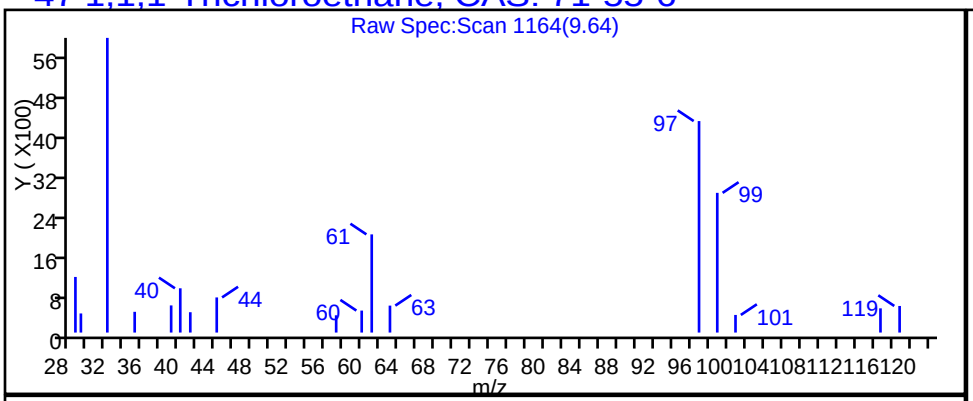


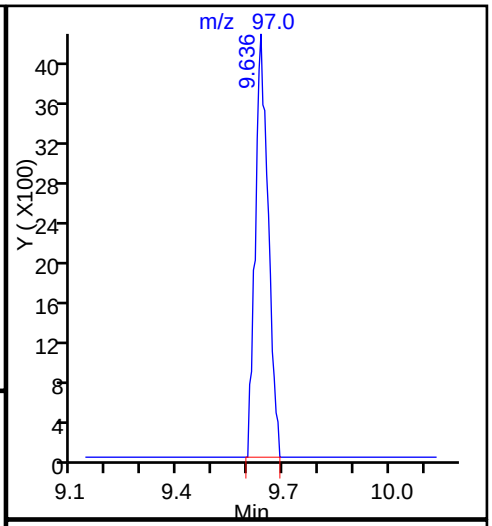


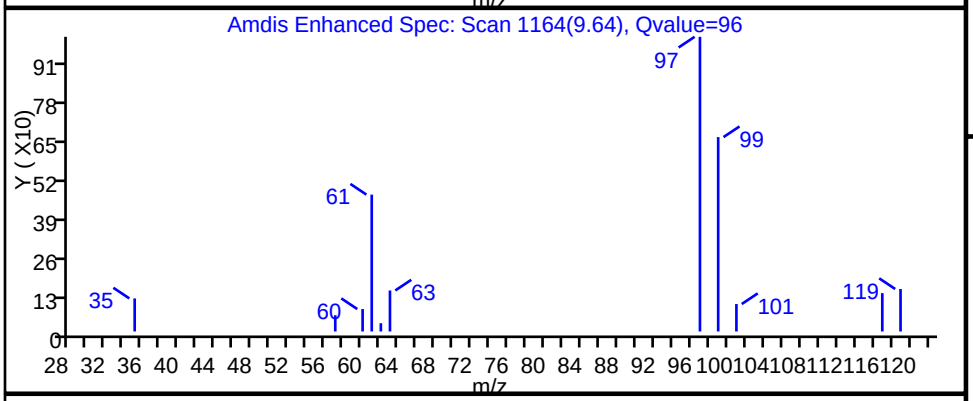
TestAmerica Knoxville

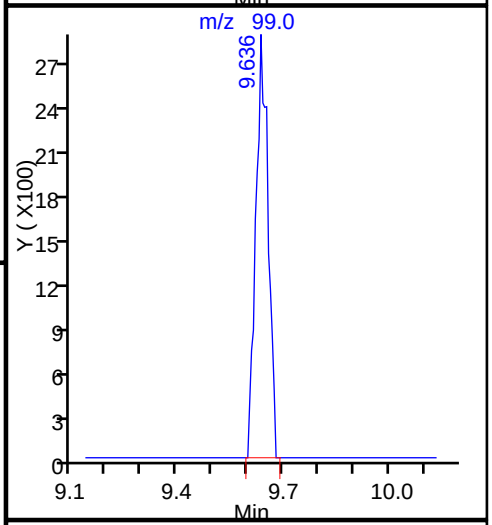
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P108.D				
Injection Date:	19-Jan-2017 21:14:30	Instrument ID:	MJ		
Lims ID:	140-6811-A-3	Lab Sample ID:	140-6811-3		
Client ID:	BLDG-L INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

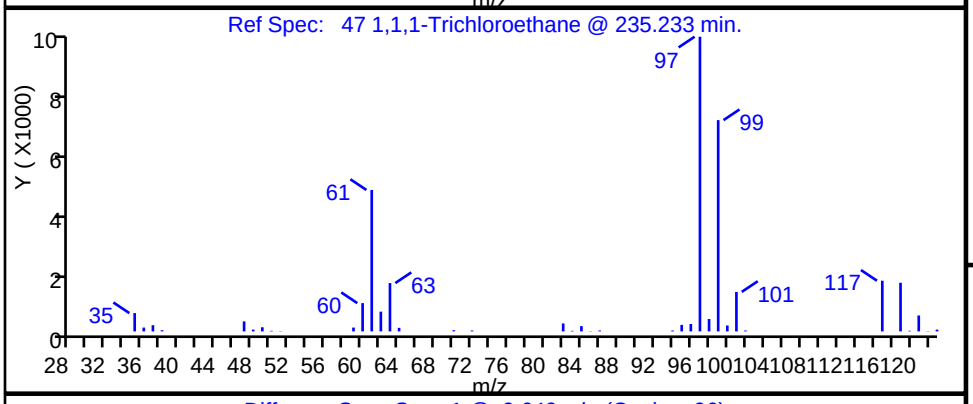
47 1,1,1-Trichloroethane, CAS: 71-55-6

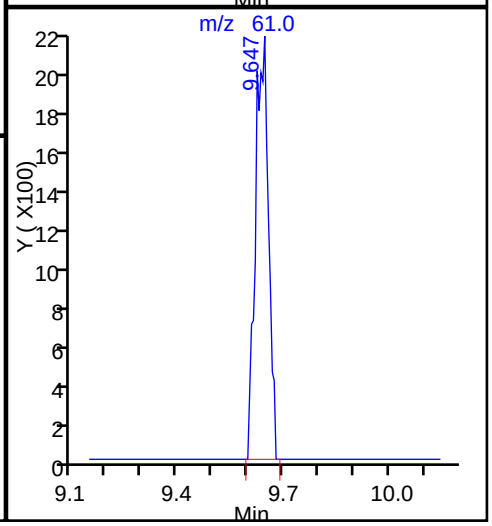


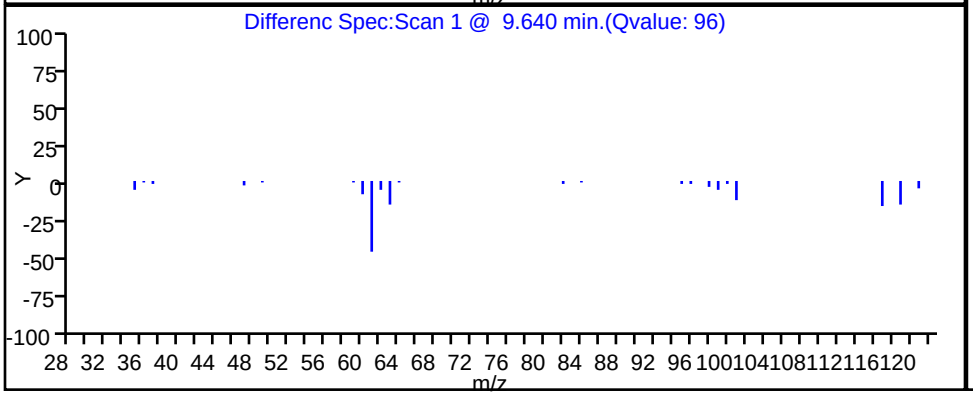










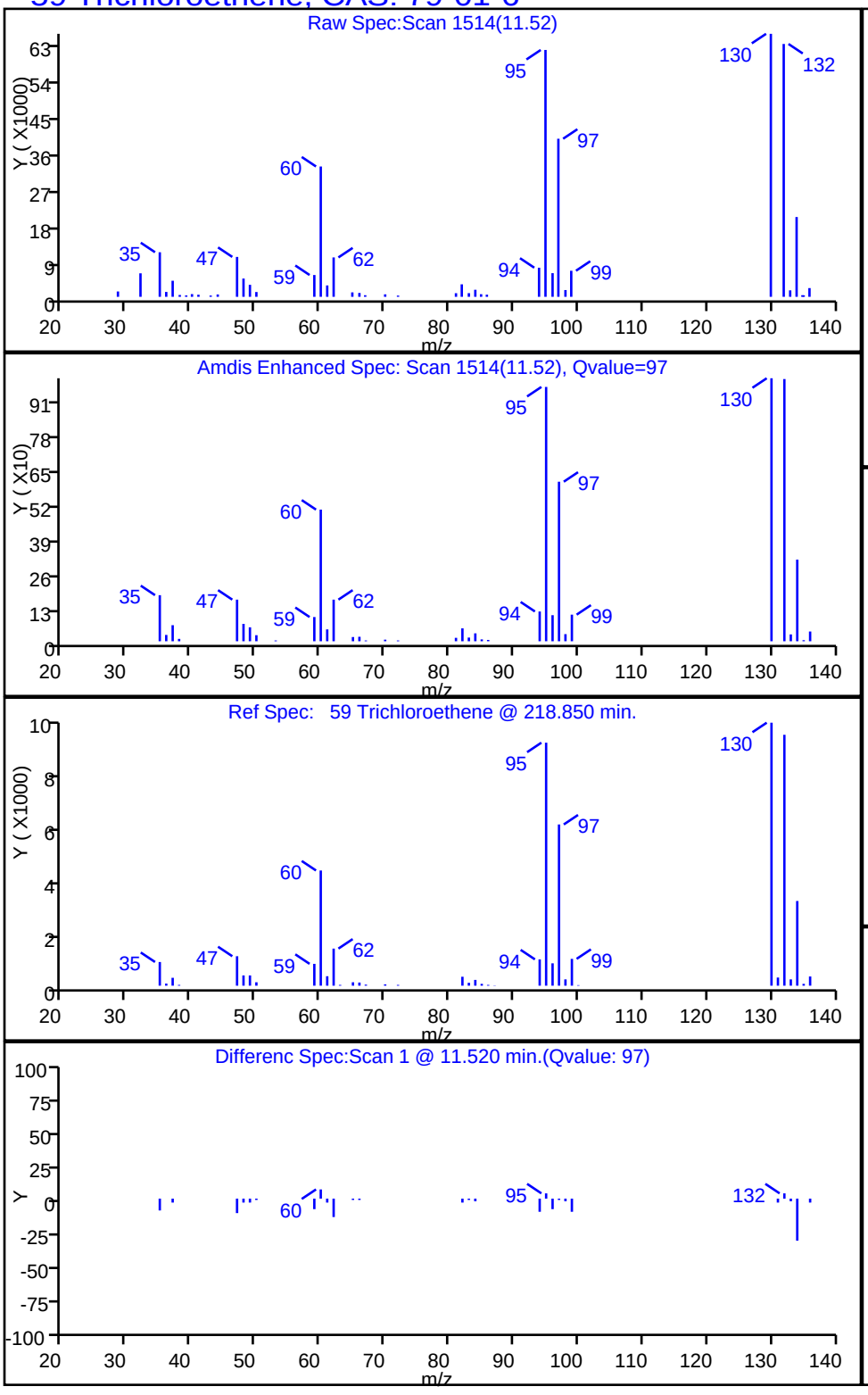


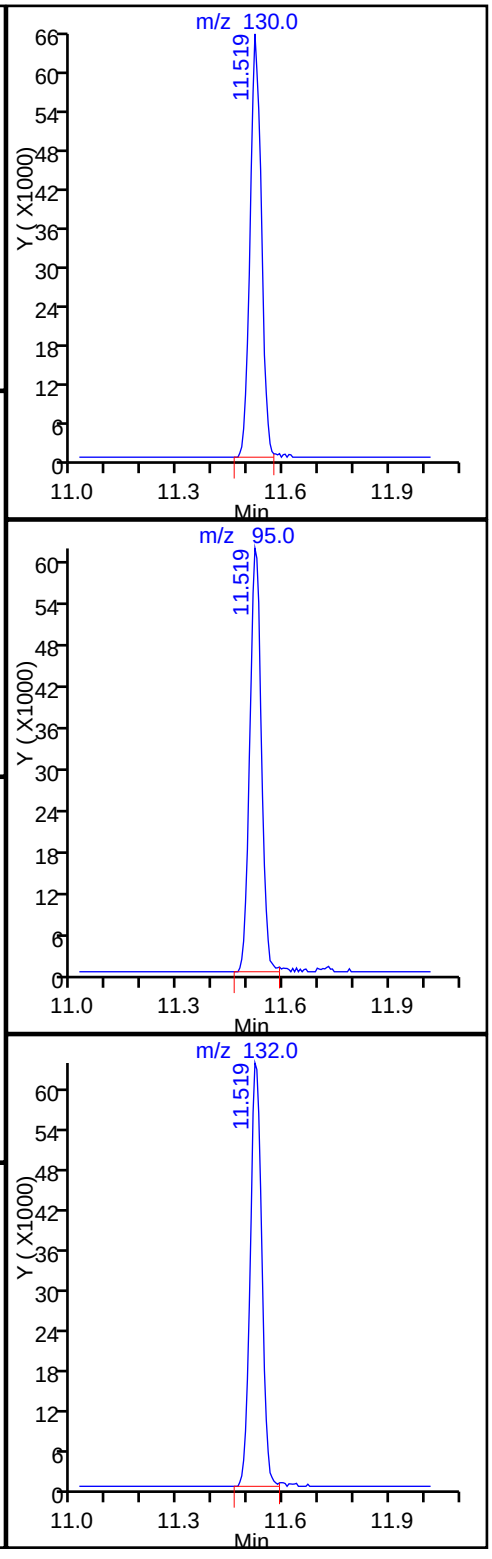
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P108.D

Injection Date:	19-Jan-2017 21:14:30	Instrument ID:	MJ		
Lims ID:	140-6811-A-3	Lab Sample ID:	140-6811-3		
Client ID:	BLDG-L INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

59 Trichloroethene, CAS: 79-01-6





Report Date: 20-Jan-2017 10:55:22 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Knoxville

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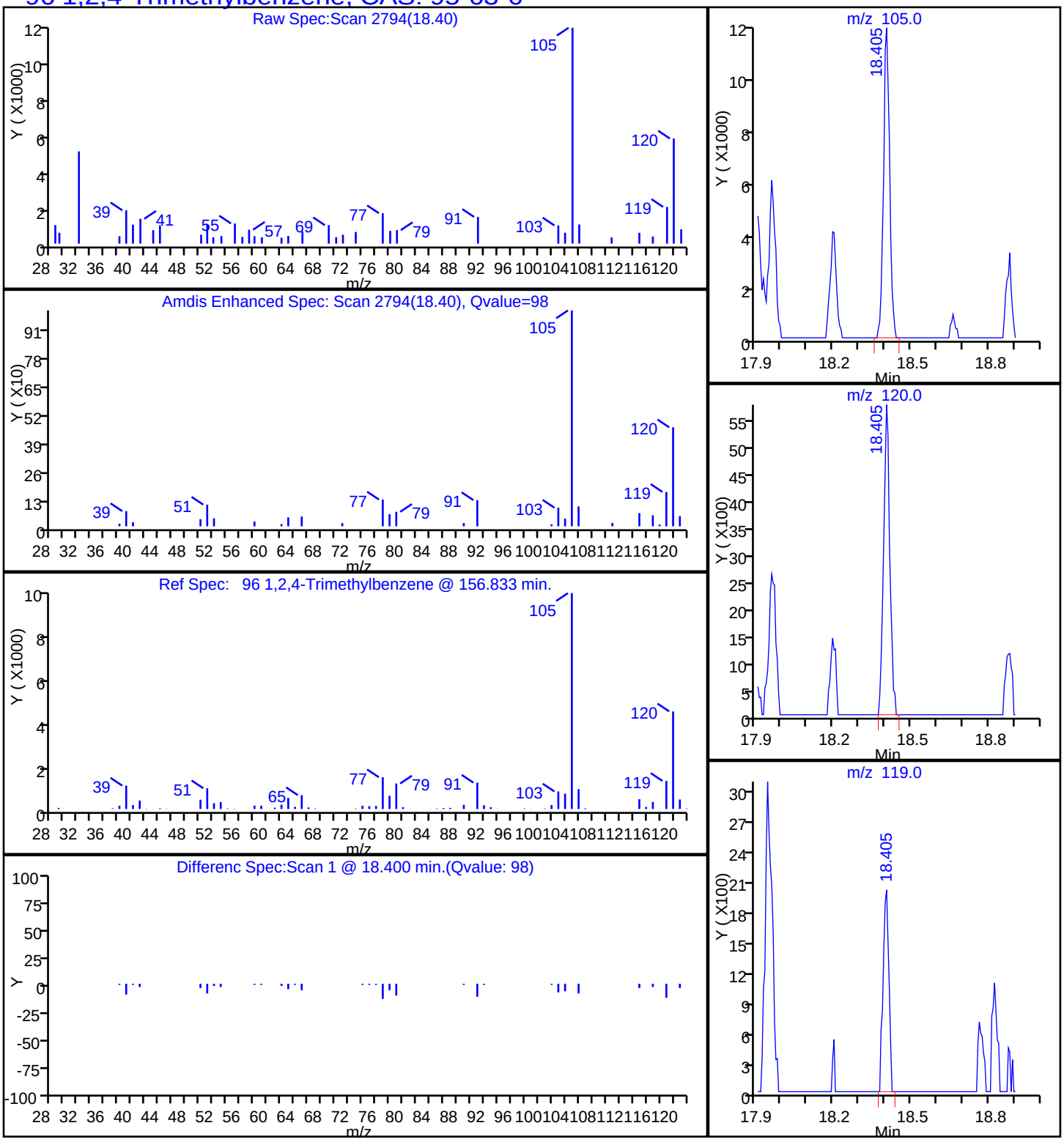
Injection Date:	19-Jan-2017 21:14:30	Instrument ID:	MJ		
Lims ID:	140-6811-A-3	Lab Sample ID:	140-6811-3		
Client ID:	BLDG-L INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

96 1,2,4-Trimethylbenzene, CAS: 95-63-6



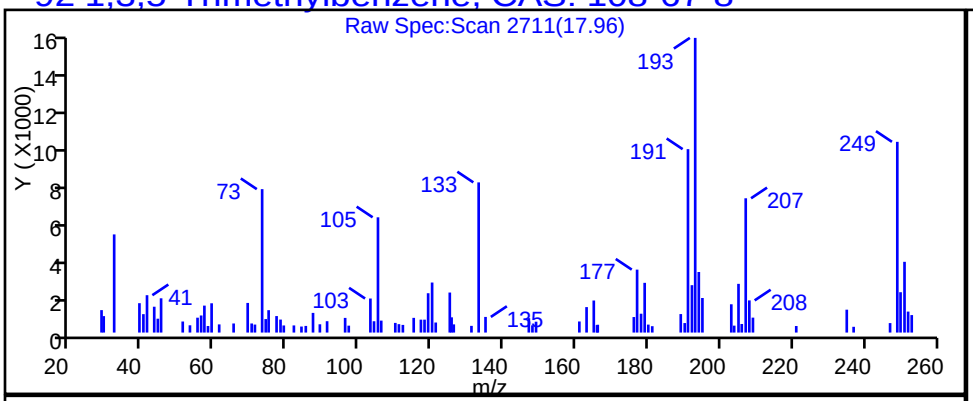
Report Date: 20-Jan-2017 10:55:22 Chrom Revision: 2.2 18-Jan-2017 10:40:14

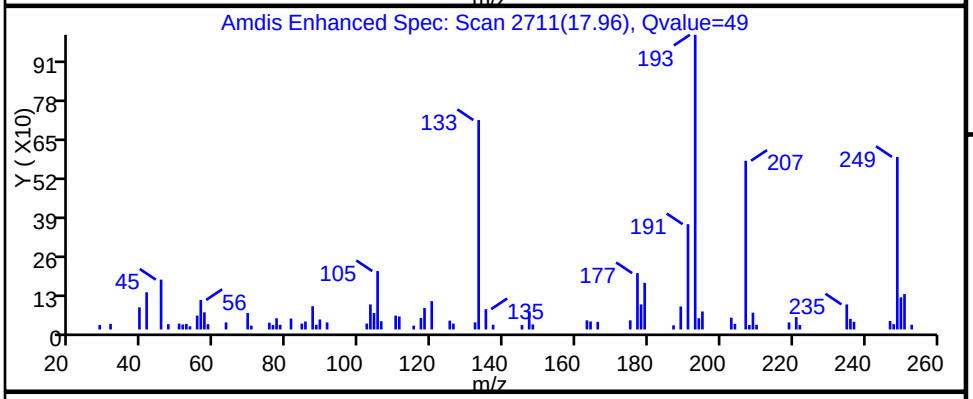
TestAmerica Knoxville

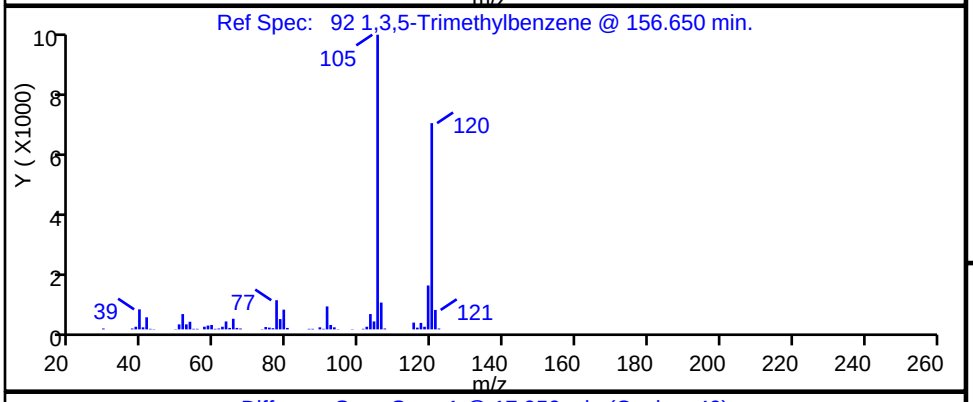
Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P108.D

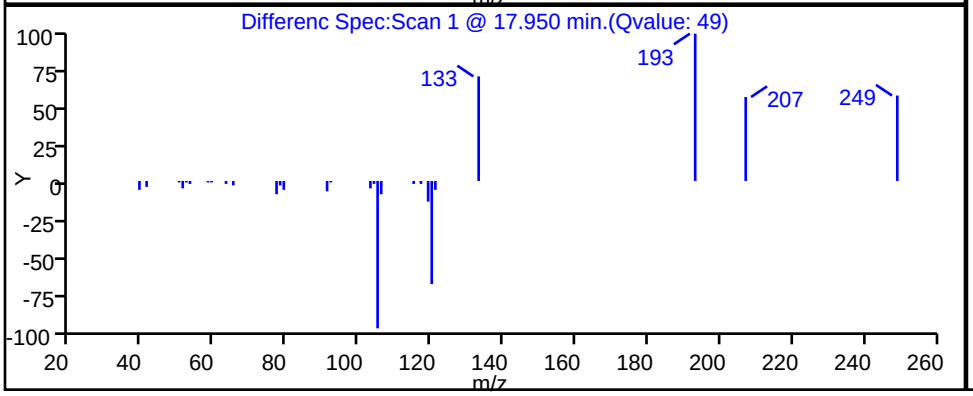
Injection Date:	19-Jan-2017 21:14:30	Instrument ID:	MJ		
Lims ID:	140-6811-A-3	Lab Sample ID:	140-6811-3		
Client ID:	BLDG-L INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

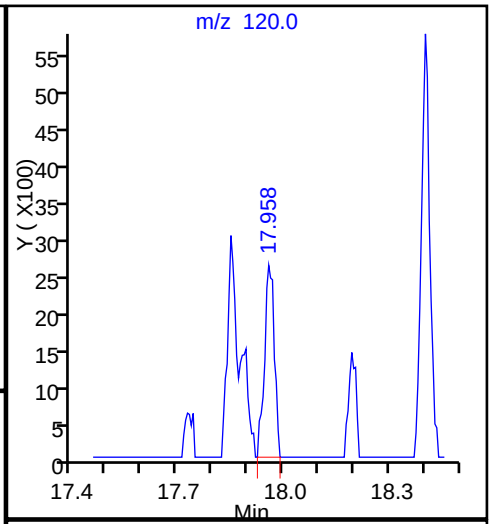
92 1,3,5-Trimethylbenzene, CAS: 108-67-8

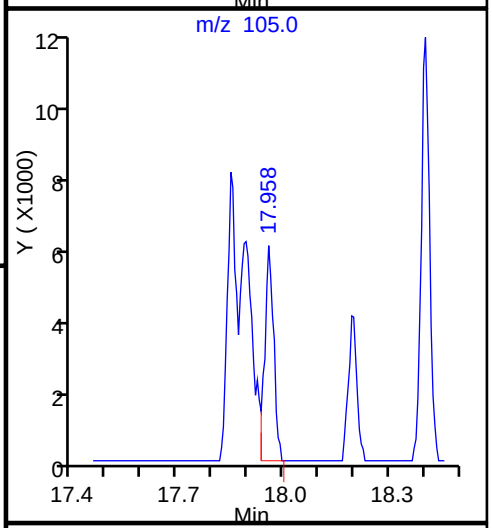


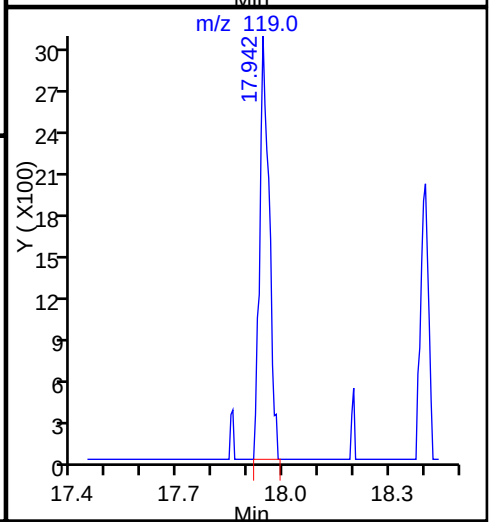








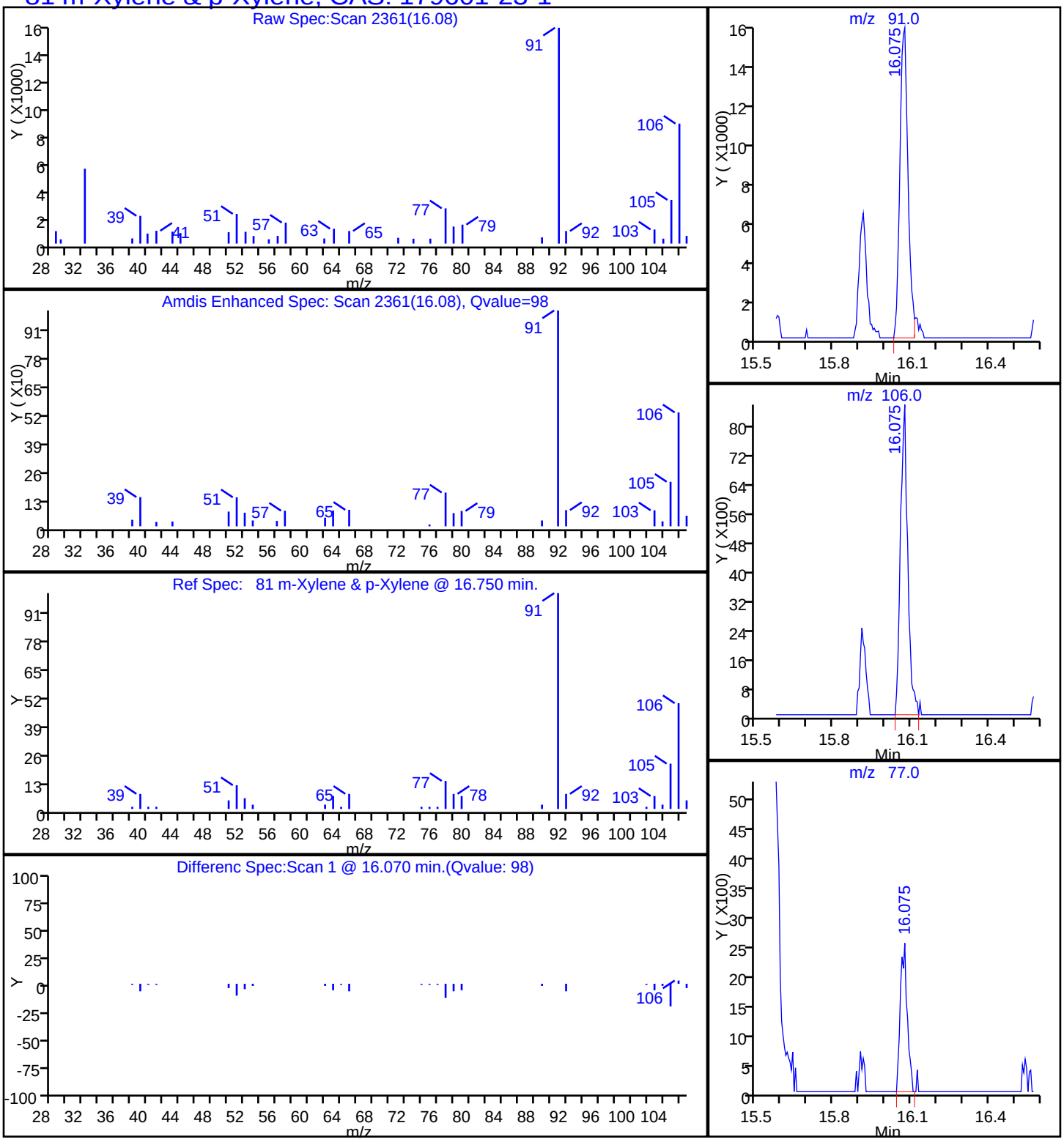




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P108.D				
Injection Date:	19-Jan-2017 21:14:30	Instrument ID:	MJ		
Lims ID:	140-6811-A-3	Lab Sample ID:	140-6811-3		
Client ID:	BLDG-L INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

81 m-Xylene & p-Xylene, CAS: 179601-23-1



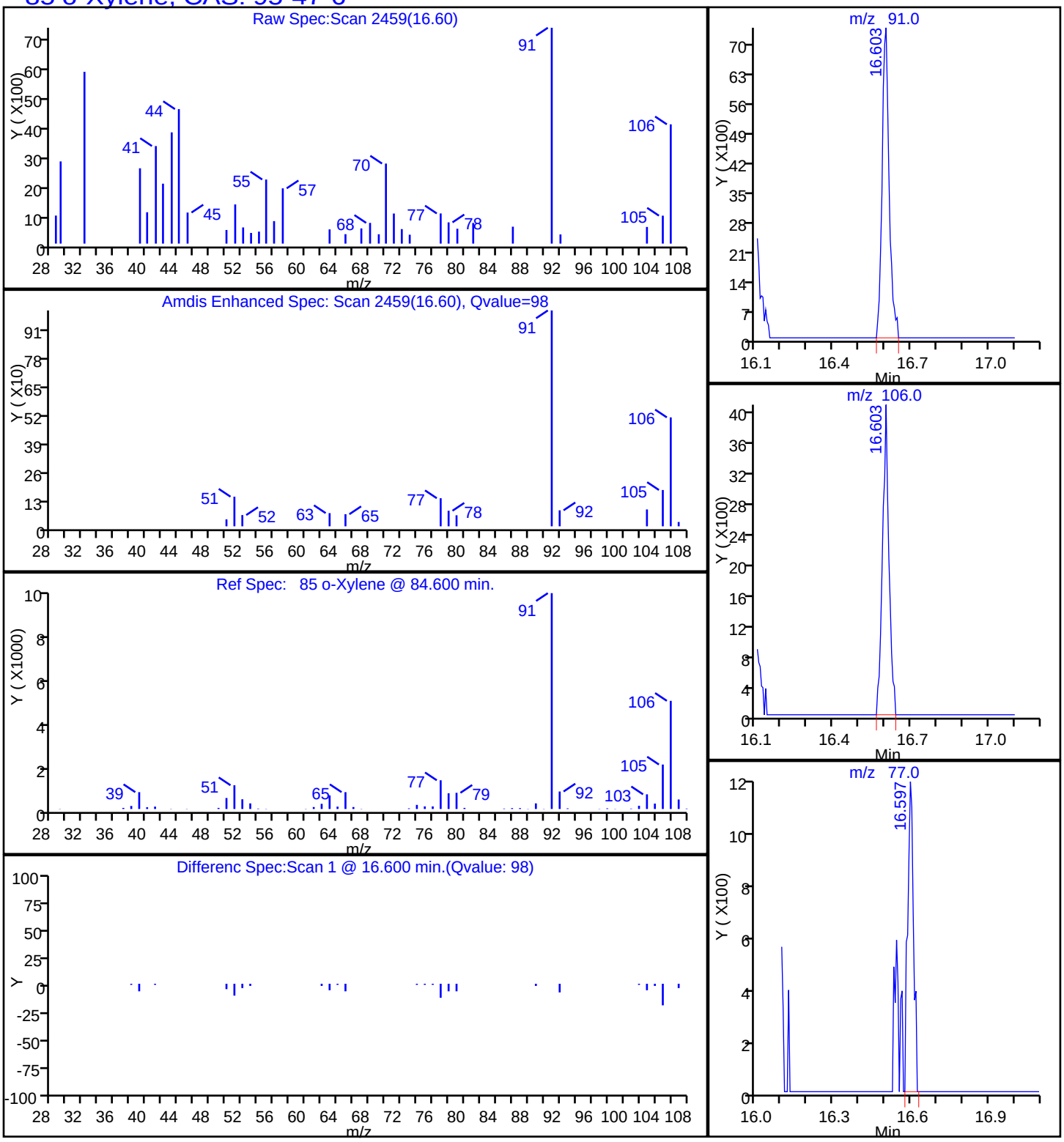
Report Date: 20-Jan-2017 10:55:22 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P108.D

Injection Date:	19-Jan-2017 21:14:30	Instrument ID:	MJ		
Lims ID:	140-6811-A-3	Lab Sample ID:	140-6811-3		
Client ID:	BLDG-L INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

85 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6811-1

SDG No.:

Client Sample ID: BLDG-A EFFFLUENT | Lab Sample ID: 140-6811-4

Matrix: Air | Lab File ID: RA18P112.D

Analysis Method: TO 15 LL | Date Collected: 01/13/2017 13:41

Sample wt/vol: 100(mL) | Date Analyzed: 01/19/2017 01:49

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7907 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	ND		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.15	J	0.40	0.080
108-88-3	Toluene	92.14	2.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.18	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.53	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Client Sample ID: BLDG-A EFFFLUENT Lab Sample ID: 140-6811-4

Matrix: Air Lab File ID: RA18P112.D

Analysis Method: TO 15 LL Date Collected: 01/13/2017 13:41

Sample wt/vol: 100(mL) Date Analyzed: 01/19/2017 01:49

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7907 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	ND		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	ND		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.2		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.0	J	2.7	0.54
108-88-3	Toluene	92.14	7.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.97	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P112.D
Lims ID: 140-6811-A-4
Client ID: BLDG-A EFFFLUENT
Sample Type: Client
Inject. Date: 19-Jan-2017 01:49:30 ALS Bottle#: 12 Worklist Smp#: 18
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003860-018
Misc. Info.: 140-6811-a-4
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Jan-2017 10:27:03 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: tajh Date: 19-Jan-2017 10:24:42

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.237	8.247	-0.010	91	291286	4.00	
* 2 1,4-Difluorobenzene	114	10.404	10.410	-0.006	93	1498796	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.295	15.295	0.000	84	1337869	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.983	16.983	0.000	96	823822	3.94	
31 Methylene Chloride	84	5.929	5.934	-0.005	97	22462	0.2976	
47 1,1,1-Trichloroethane	97	9.261	9.261	0.000	92	5376	0.0355	
68 Toluene	91	13.268	13.268	0.000	93	115141	0.3939	
76 Tetrachloroethene	129	14.492	14.454	0.038	30	3324	0.0296	
81 m-Xylene & p-Xylene	91	15.824	15.829	-0.005	99	22713	0.0770	
85 o-Xylene	91	16.358	16.358	0.000	82	8533	0.0276	
S 124 Xylenes, Total	100				0		0.1047	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

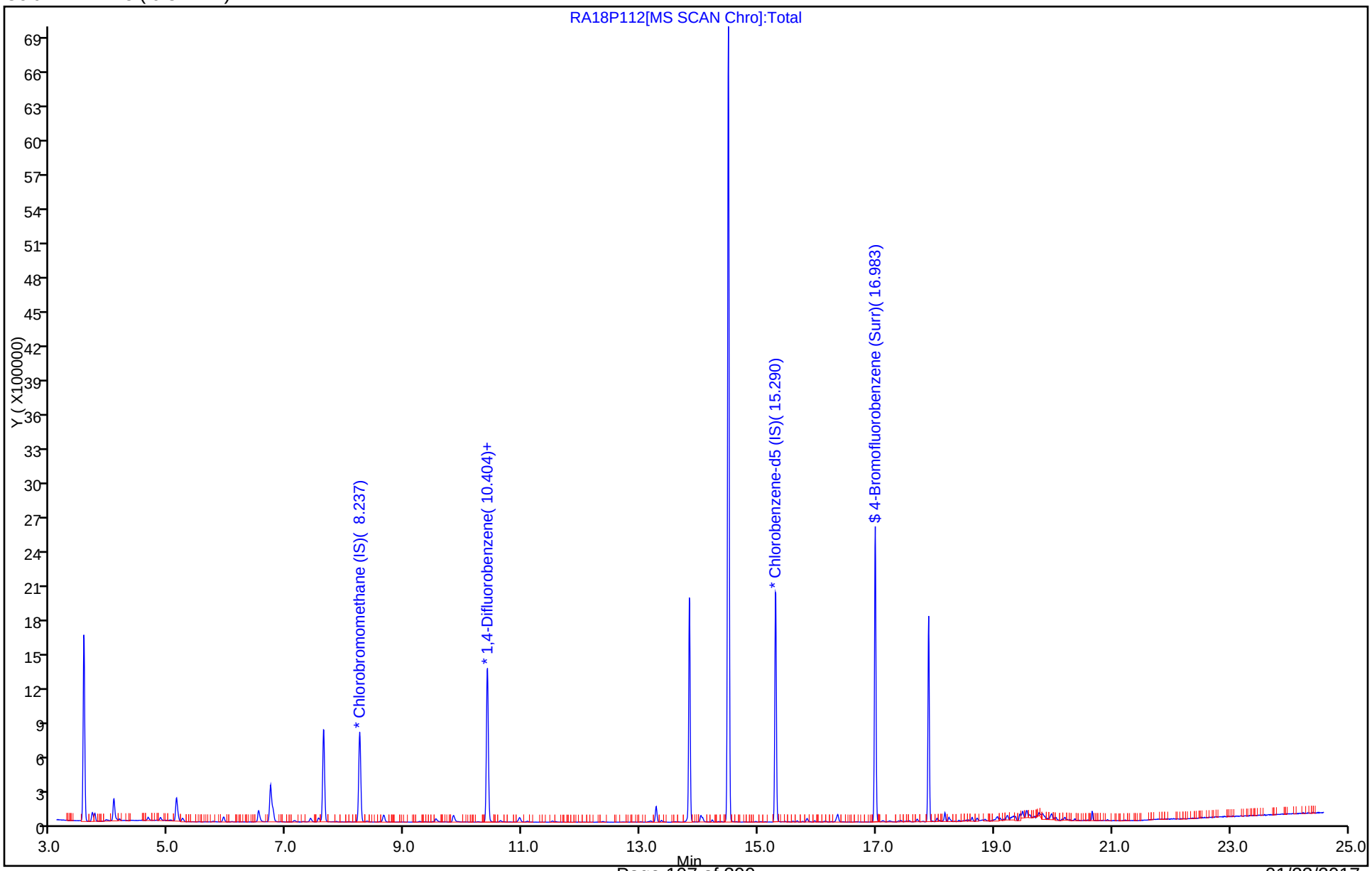
Report Date: 19-Jan-2017 10:27:29 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P112.D

Injection Date:	19-Jan-2017 01:49:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-6811-A-4	Lab Sample ID:	140-6811-4	Worklist Smp#:	18
Client ID:	BLDG-A EFFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P112.D				
Lims ID:	140-6811-A-4				
Client ID:	BLDG-A EFFFLUENT				
Sample Type:	Client				
Inject. Date:	19-Jan-2017 01:49:30	ALS Bottle#:	12	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003860-018				
Misc. Info.:	140-6811-a-4				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	19-Jan-2017 10:27:03	Calib Date:	17-Jan-2017 10:29:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK012				
First Level Reviewer: tajh		Date:	19-Jan-2017 10:24:42		

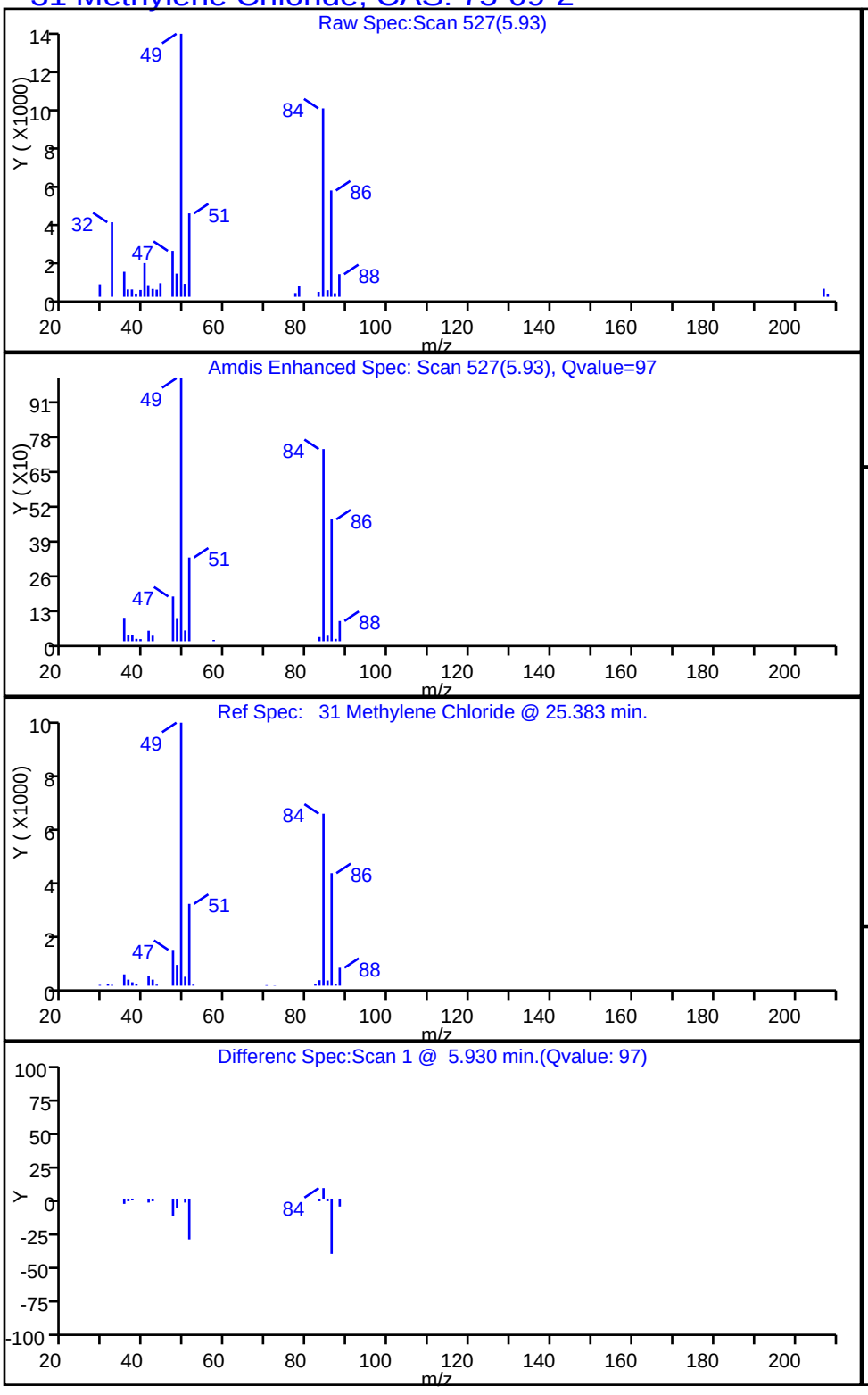
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.94	98.41

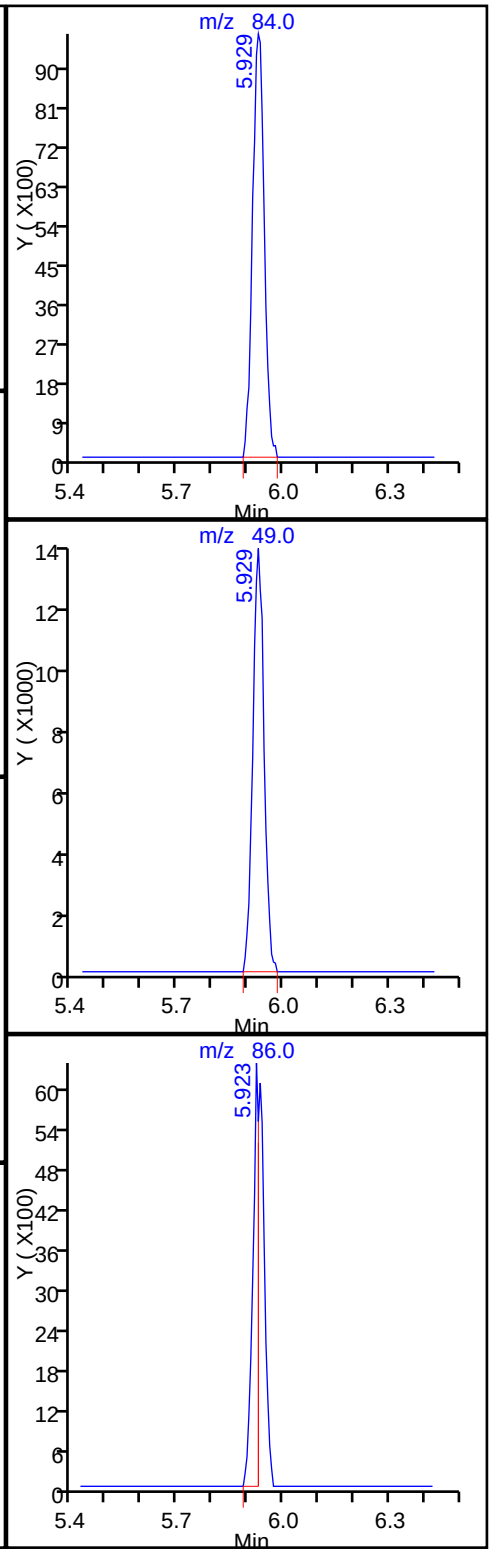
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P112.D

Injection Date:	19-Jan-2017 01:49:30	Instrument ID:	MR
Lims ID:	140-6811-A-4	Lab Sample ID:	140-6811-4
Client ID:	BLDG-A EFFFLUENT		
Operator ID:		ALS Bottle#:	12 Worklist Smp#: 18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

31 Methylene Chloride, CAS: 75-09-2

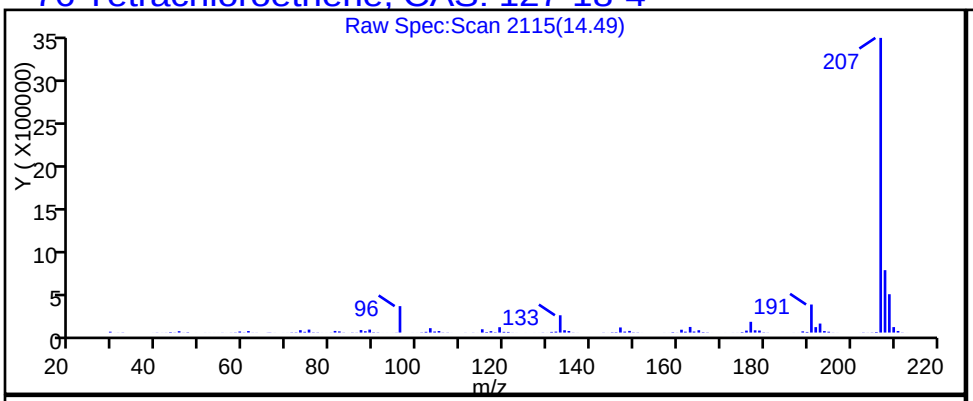


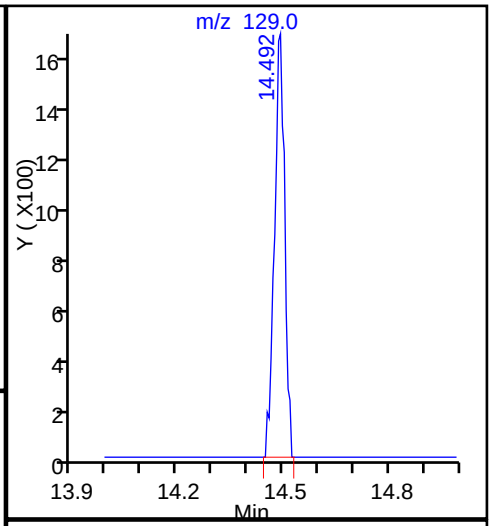


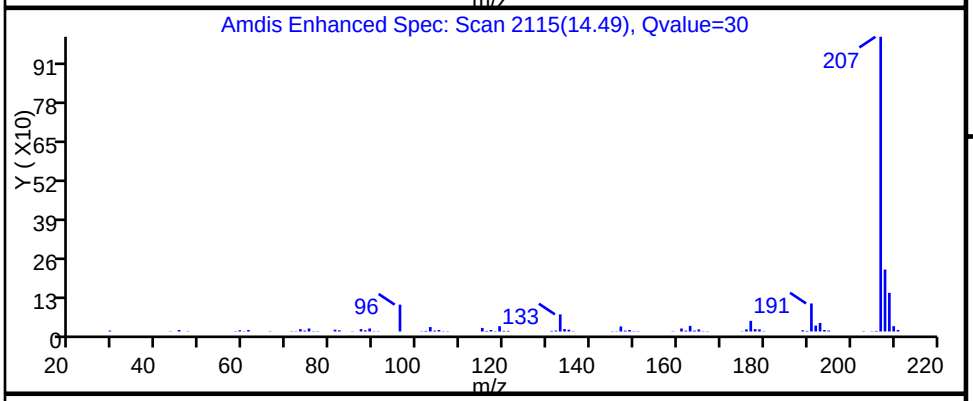
TestAmerica Knoxville

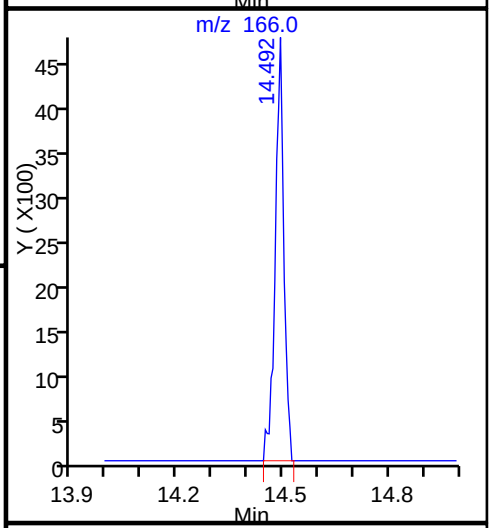
Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P112.D
Injection Date: 19-Jan-2017 01:49:30 Instrument ID: MR
Lims ID: 140-6811-A-4 Lab Sample ID: 140-6811-4
Client ID: BLDG-A EFFFLUENT
Operator ID: ALS Bottle#: 12 Worklist Smp#: 18
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

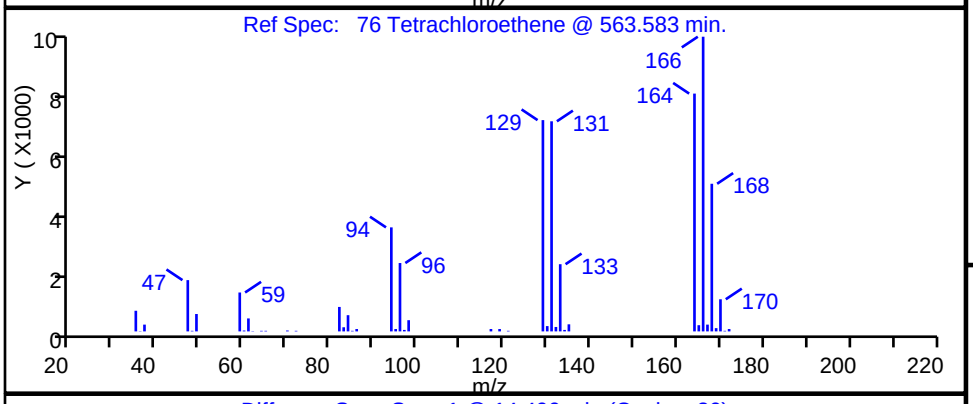
76 Tetrachloroethene, CAS: 127-18-4

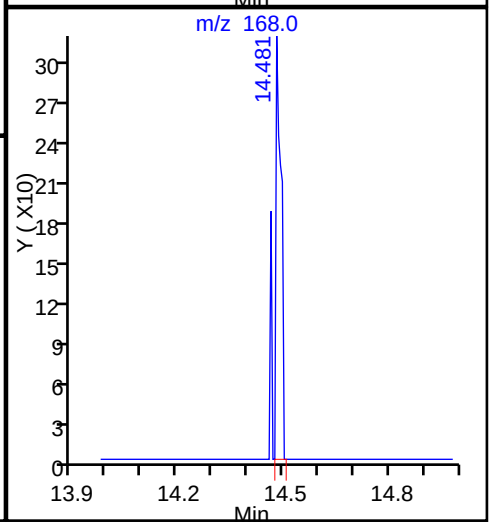


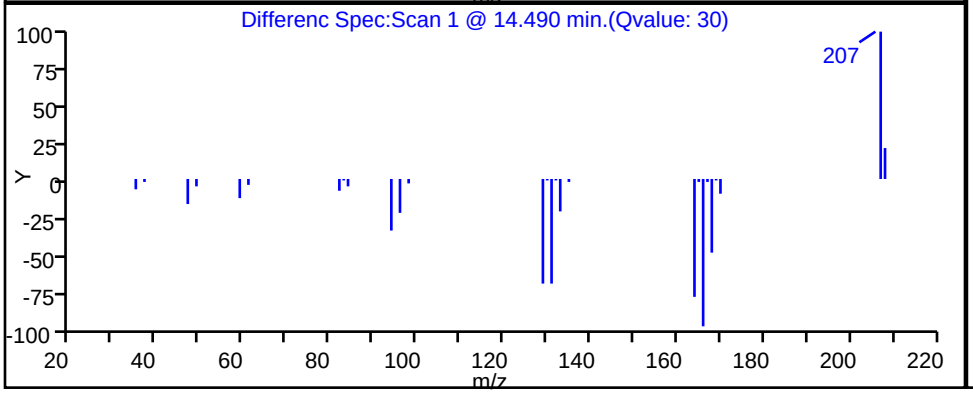












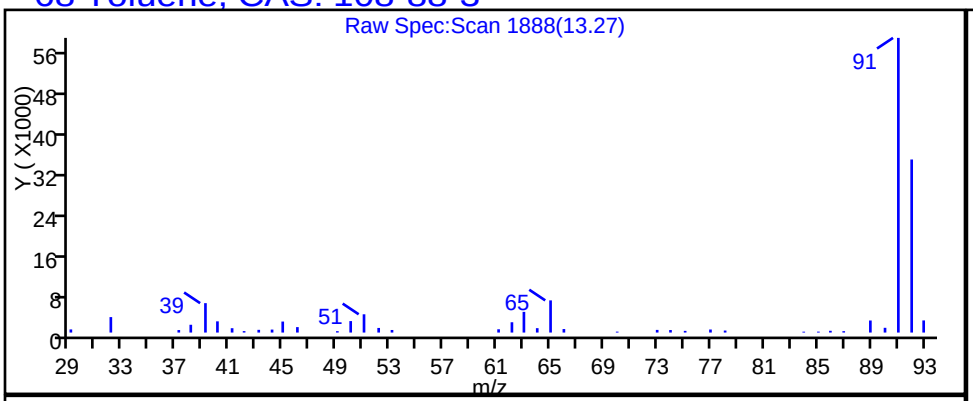
Report Date: 19-Jan-2017 10:27:29 Chrom Revision: 2.2 18-Jan-2017 10:40:14

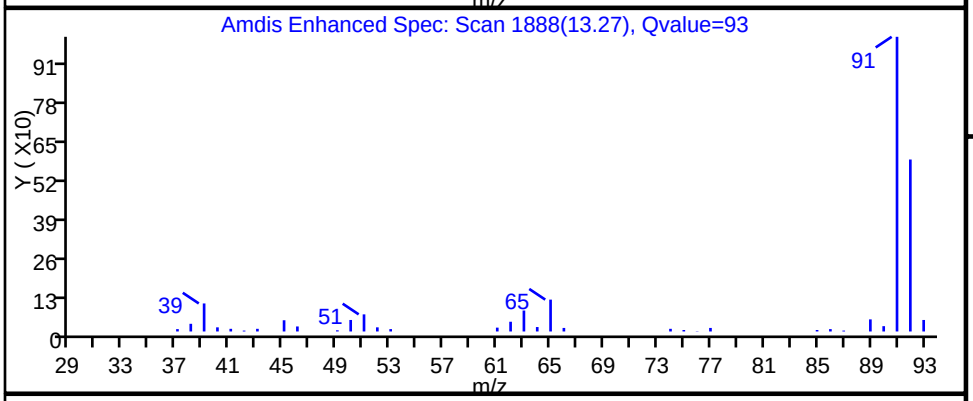
TestAmerica Knoxville

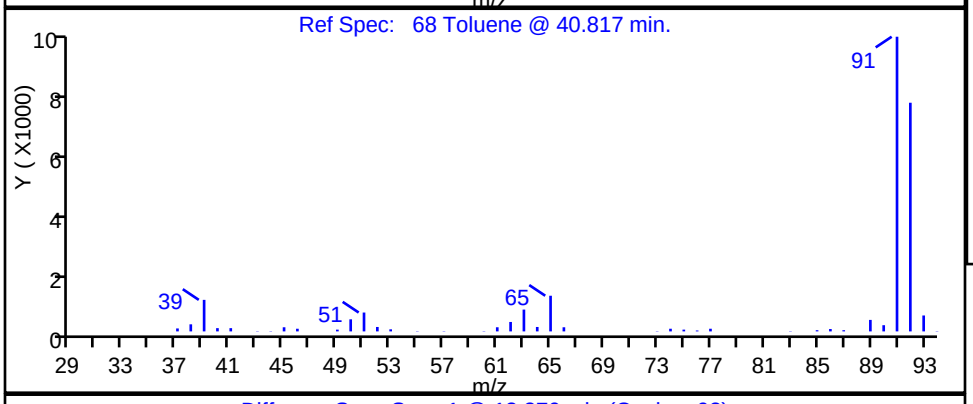
Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P112.D

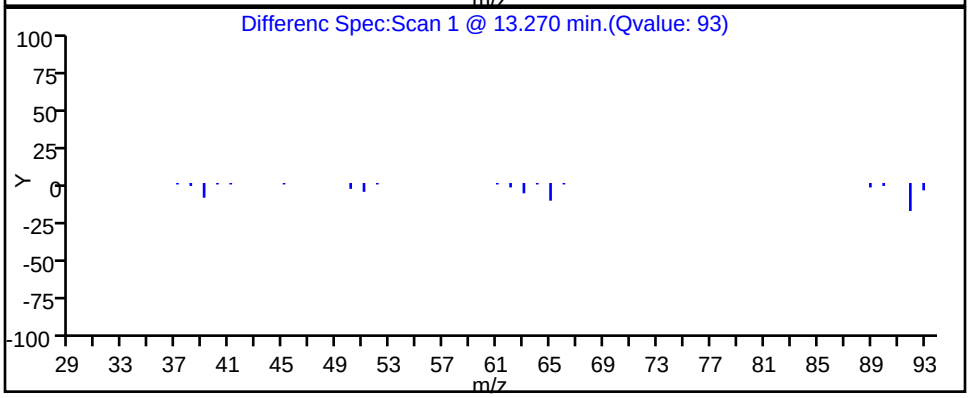
Injection Date:	19-Jan-2017 01:49:30	Instrument ID:	MR
Lims ID:	140-6811-A-4	Lab Sample ID:	140-6811-4
Client ID:	BLDG-A EFFFLUENT		
Operator ID:		ALS Bottle#:	12 Worklist Smp#: 18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

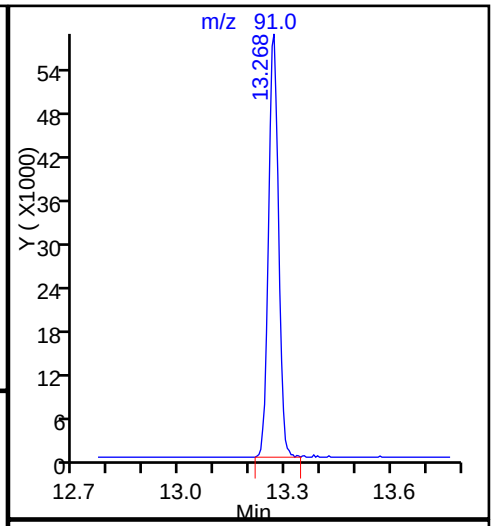
68 Toluene, CAS: 108-88-3

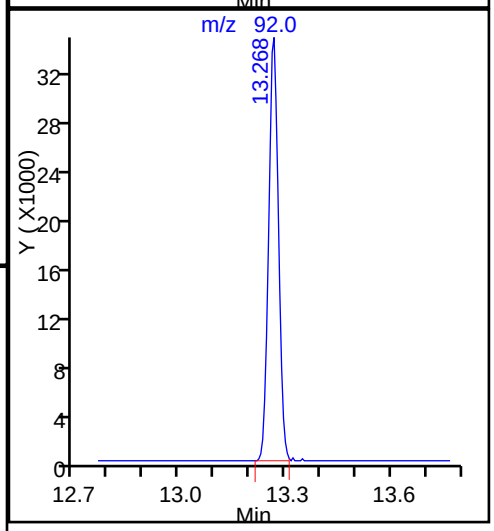








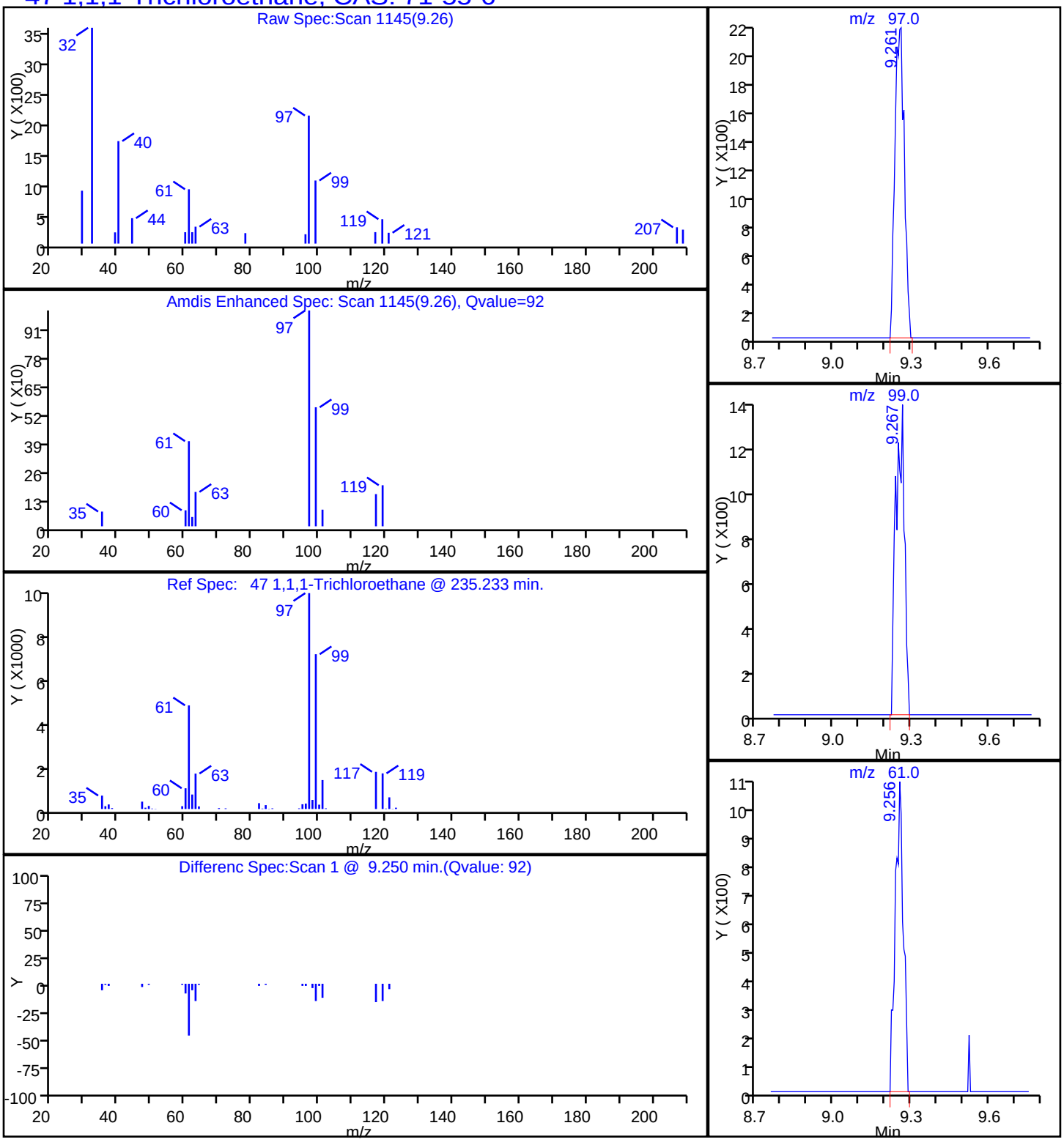




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P112.D		
Injection Date:	19-Jan-2017 01:49:30	Instrument ID:	MR
Lims ID:	140-6811-A-4	Lab Sample ID:	140-6811-4
Client ID:	BLDG-A EFFFLUENT		
Operator ID:		ALS Bottle#:	12 Worklist Smp#: 18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

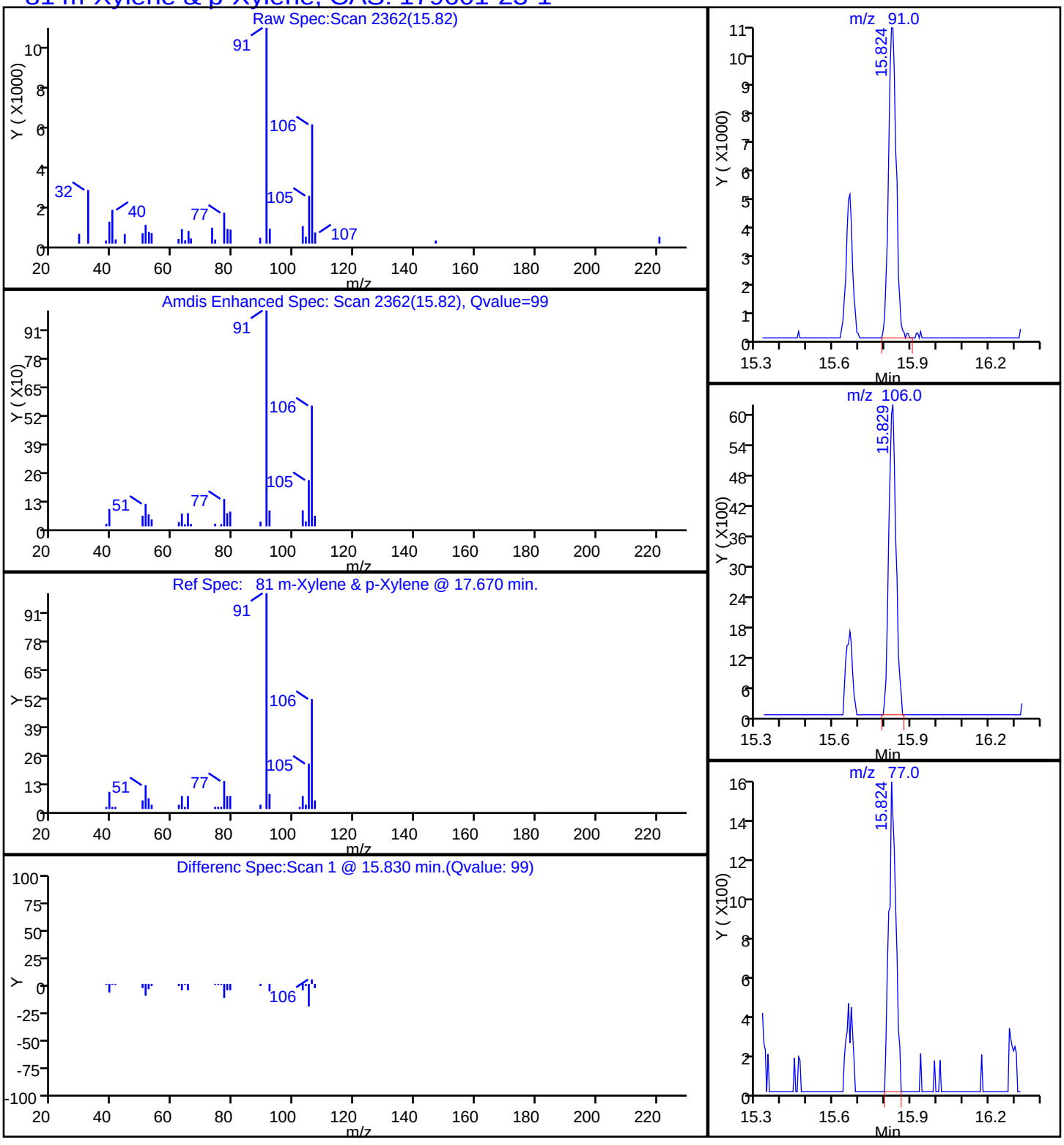
47 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P112.D		
Injection Date:	19-Jan-2017 01:49:30	Instrument ID:	MR
Lims ID:	140-6811-A-4	Lab Sample ID:	140-6811-4
Client ID:	BLDG-A EFFFLUENT		
Operator ID:		ALS Bottle#:	12 Worklist Smp#: 18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

81 m-Xylene & p-Xylene, CAS: 179601-23-1



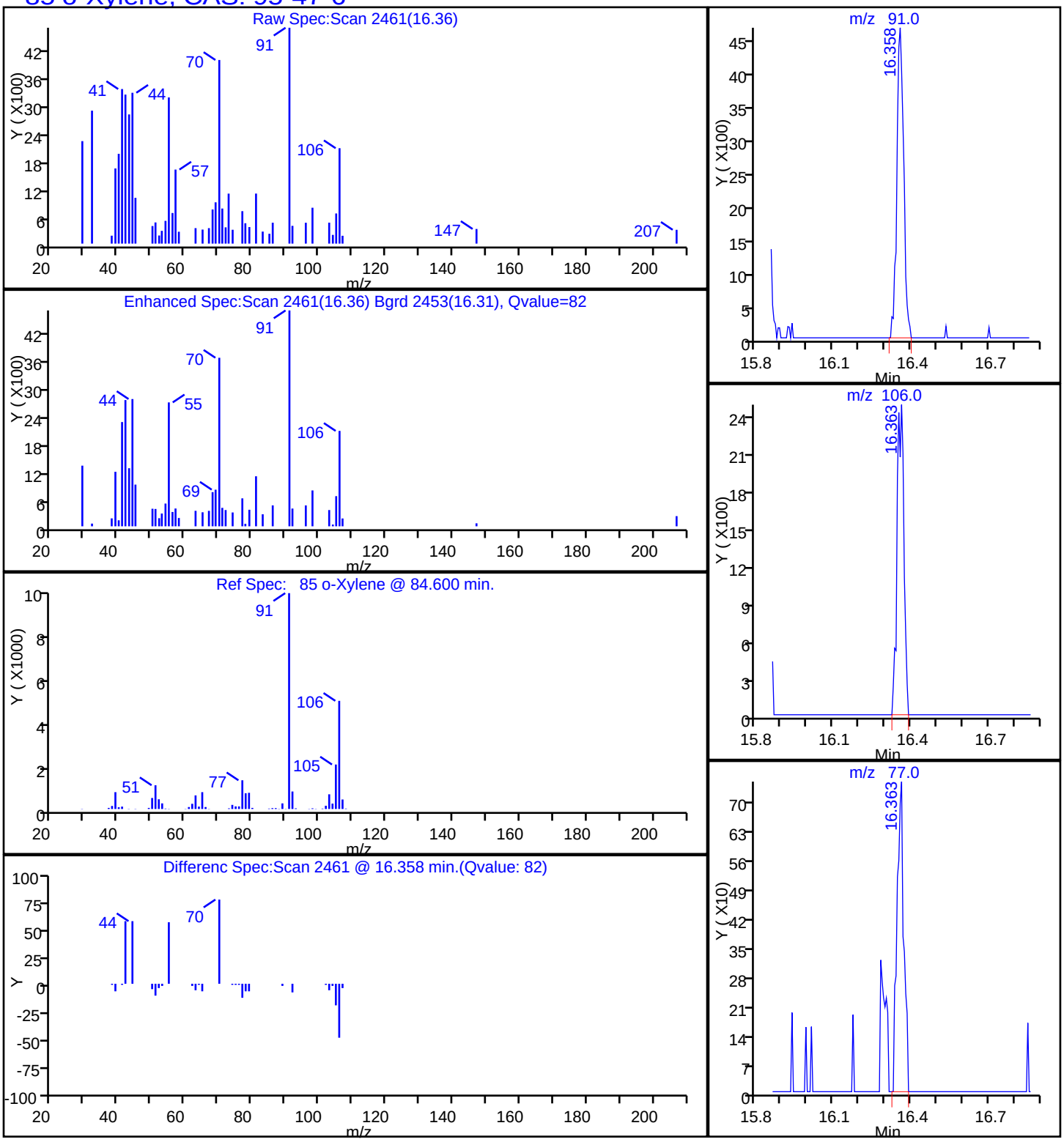
Report Date: 19-Jan-2017 10:27:29 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P112.D

Injection Date:	19-Jan-2017 01:49:30	Instrument ID:	MR
Lims ID:	140-6811-A-4	Lab Sample ID:	140-6811-4
Client ID:	BLDG-A EFFFLUENT		
Operator ID:		ALS Bottle#:	12 Worklist Smp#: 18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

85 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6811-1

SDG No.:

Client Sample ID: BLDG-A MID-GAC | Lab Sample ID: 140-6811-5

Matrix: Air | Lab File ID: RA18P114.D

Analysis Method: TO 15 LL | Date Collected: 01/13/2017 13:46

Sample wt/vol: 100(mL) | Date Analyzed: 01/19/2017 04:14

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7907 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	0.32	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	30		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	7.4		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	39		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.45		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	*1,1,1-Trichloroethane*	*133.41*	*110*	*E*	*0.40*	*0.060*
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.0		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	0.45		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.28	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Client Sample ID: BLDG-A MID-GAC Lab Sample ID: 140-6811-5

Matrix: Air Lab File ID: RA18P114.D

Analysis Method: TO 15 LL Date Collected: 01/13/2017 13:46

Sample wt/vol: 100(mL) Date Analyzed: 01/19/2017 04:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7907 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	1.5	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	120		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	30		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	160		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	8.5		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.8		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	*1,1,1-Trichloroethane*	*133.41*	*610*	*E*	*2.2*	*0.33*
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	5.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	1.2		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P114.D
Lims ID: 140-6811-A-5
Client ID: BLDG-A MID-GAC
Sample Type: Client
Inject. Date: 19-Jan-2017 04:14:30 ALS Bottle#: 14 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003860-020
Misc. Info.: 140-6811-a-5
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Jan-2017 10:27:03 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: tajh Date: 19-Jan-2017 09:58:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.242	8.247	-0.005	90	315830	4.00	
* 2 1,4-Difluorobenzene	114	10.410	10.410	0.000	93	1629780	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.290	15.295	-0.005	85	1397104	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.983	16.983	0.000	96	856355	3.92	
6 Chlorodifluoromethane	67	3.734	3.723	0.011	38	1205	0.0688	
8 Dichlorodifluoromethane	85	3.782	3.777	0.005	97	14418	0.1009	
12 Vinyl chloride	62	4.079	4.074	0.005	36	6970	0.0905	
27 1,1-Dichloroethene	96	5.643	5.643	0.000	96	682979	7.85	
31 Methylene Chloride	84	5.934	5.934	0.000	96	39915	0.4878	
34 trans-1,2-Dichloroethene	96	6.667	6.667	0.000	96	8315	0.0900	
37 1,1-Dichloroethane	63	7.034	7.040	-0.006	99	215028	1.48	
42 cis-1,2-Dichloroethene	96	7.945	7.945	0.000	89	585355	6.08	
44 Chloroform	83	8.274	8.274	0.000	94	10409	0.0633	
47 1,1,1-Trichloroethane	97	9.256	9.261	-0.005	95	3661615	22.3	E
59 Trichloroethene	130	11.138	11.143	-0.005	97	26095	0.2037	
68 Toluene	91	13.268	13.268	0.000	93	102704	0.3365	
81 m-Xylene & p-Xylene	91	15.829	15.829	0.000	96	17536	0.0569	
S 124 Xylenes, Total	100				0		0.0569	

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

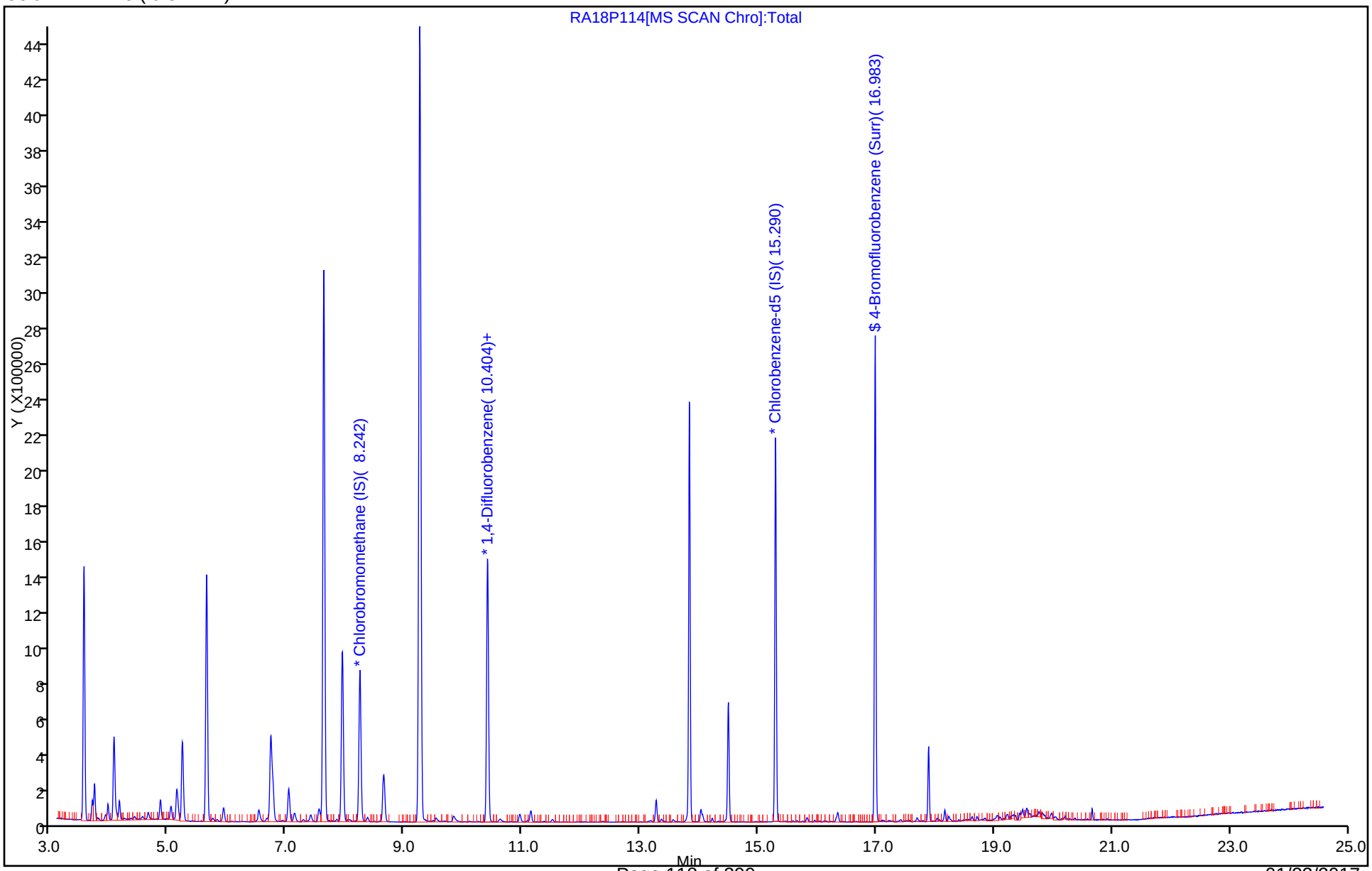
Report Date: 19-Jan-2017 10:27:33 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P114.D

Injection Date:	19-Jan-2017 04:14:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-6811-A-5	Lab Sample ID:	140-6811-5	Worklist Smp#:	20
Client ID:	BLDG-A MID-GAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



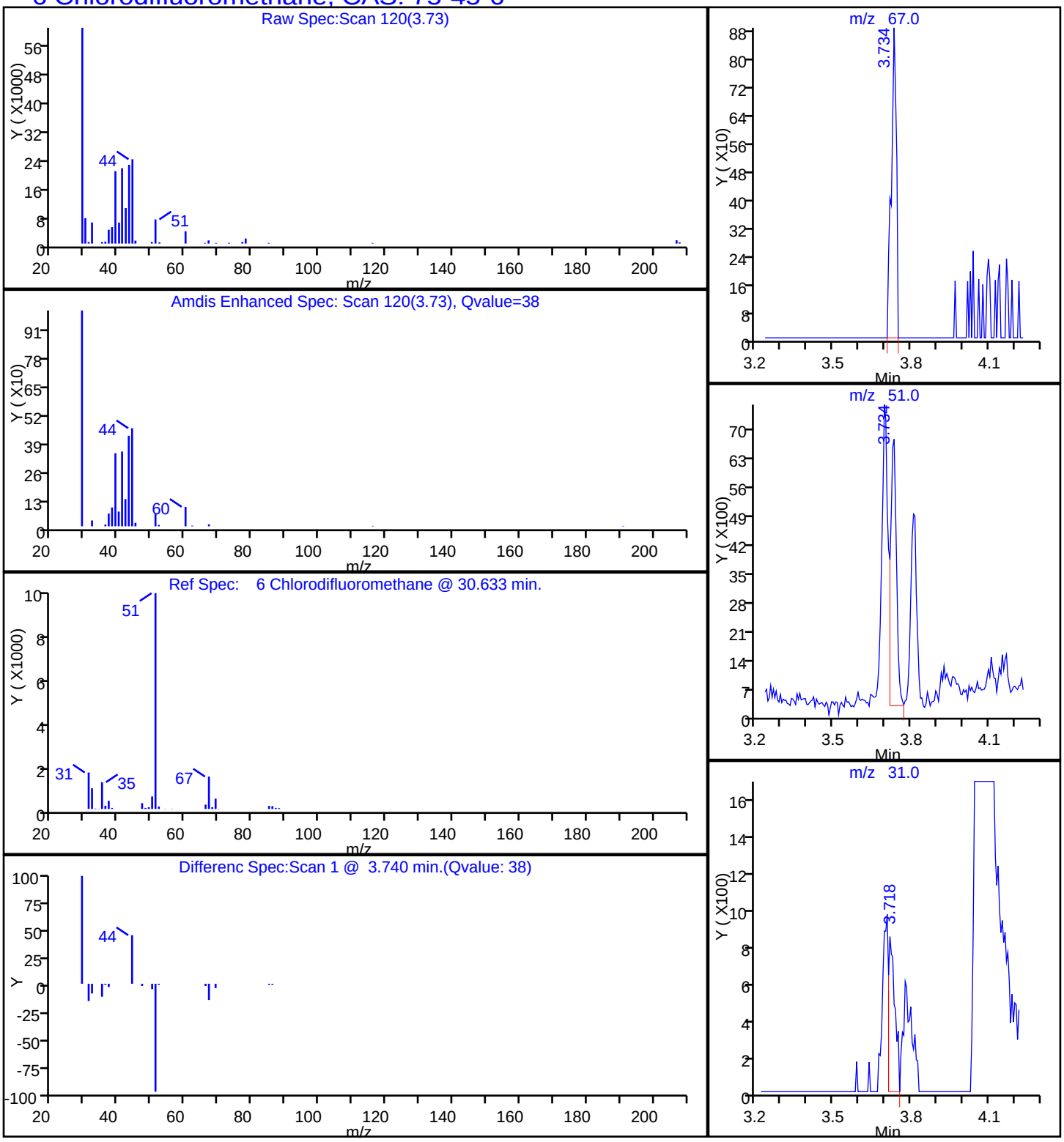
TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P114.D				
Lims ID:	140-6811-A-5				
Client ID:	BLDG-A MID-GAC				
Sample Type:	Client				
Inject. Date:	19-Jan-2017 04:14:30	ALS Bottle#:	14	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003860-020				
Misc. Info.:	140-6811-a-5				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	19-Jan-2017 10:27:03	Calib Date:	17-Jan-2017 10:29:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK012				
First Level Reviewer: tajh		Date:	19-Jan-2017 09:58:23		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.92	97.96

Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P114.D
Injection Date: 19-Jan-2017 04:14:30 Instrument ID: MR
Lims ID: 140-6811-A-5 Lab Sample ID: 140-6811-5
Client ID: BLDG-A MID-GAC
Operator ID: ALS Bottle#: 14 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

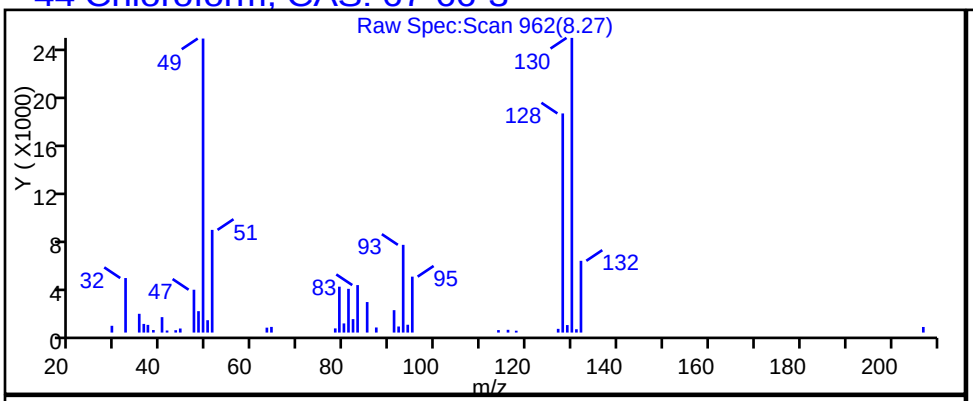


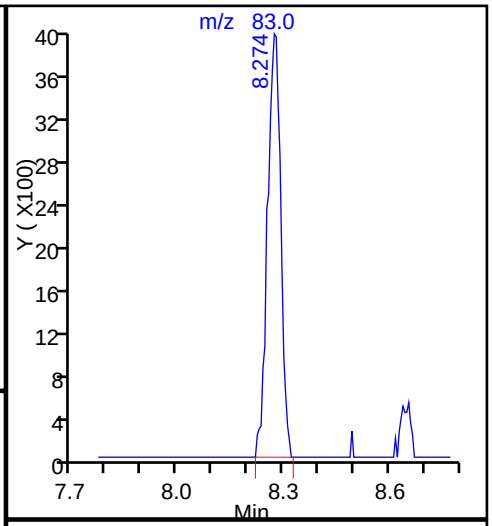
TestAmerica Knoxville

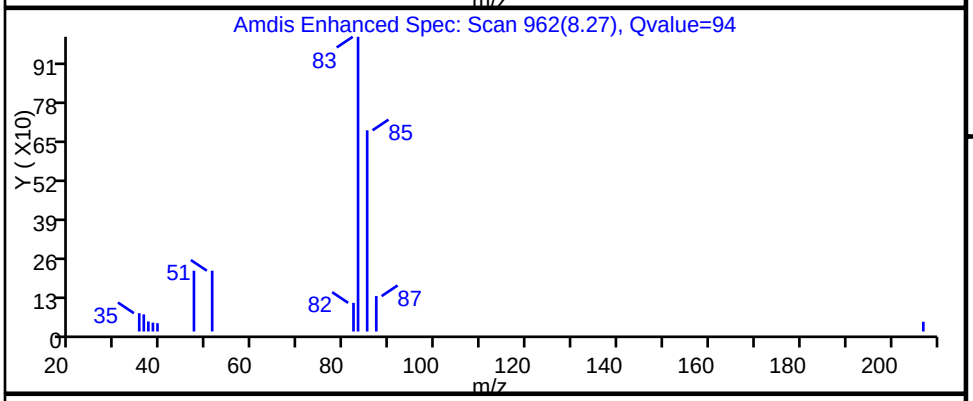
Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P114.D

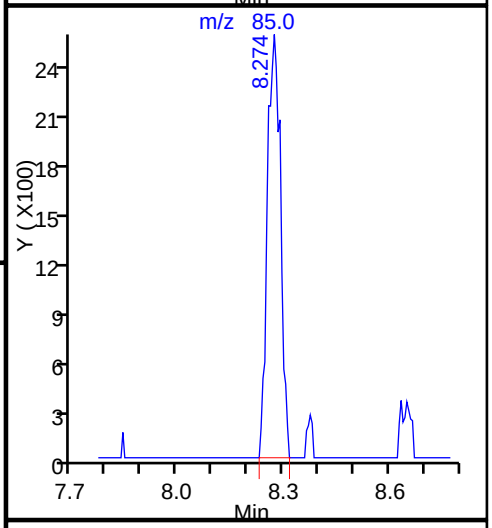
Injection Date:	19-Jan-2017 04:14:30	Instrument ID:	MR
Lims ID:	140-6811-A-5	Lab Sample ID:	140-6811-5
Client ID:	BLDG-A MID-GAC		
Operator ID:		ALS Bottle#:	14 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

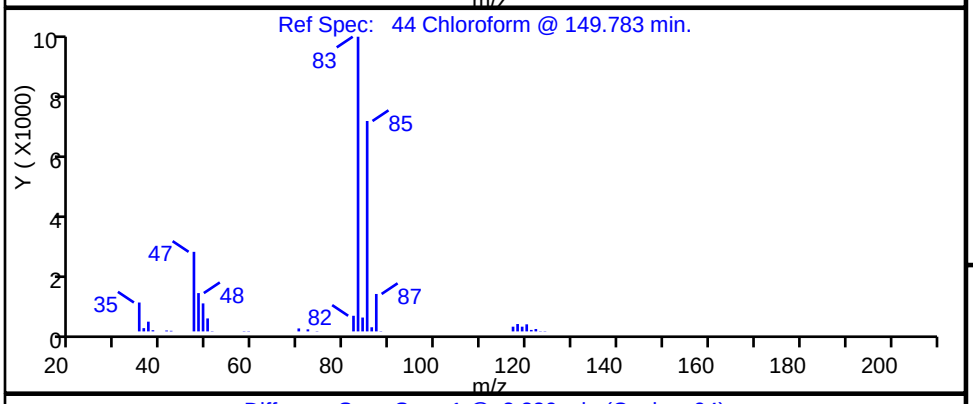
44 Chloroform, CAS: 67-66-3

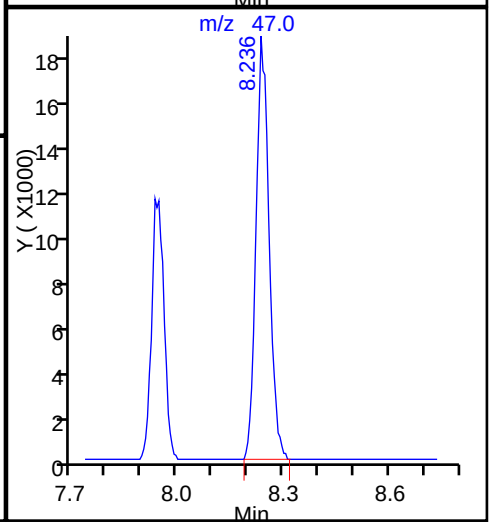


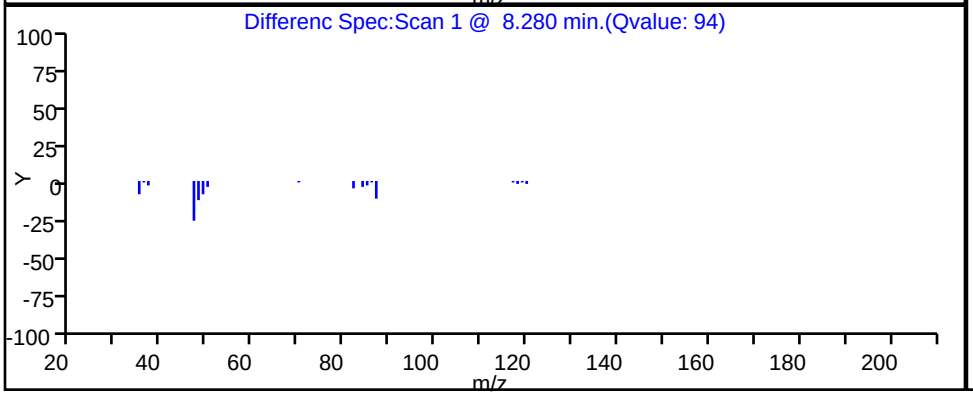












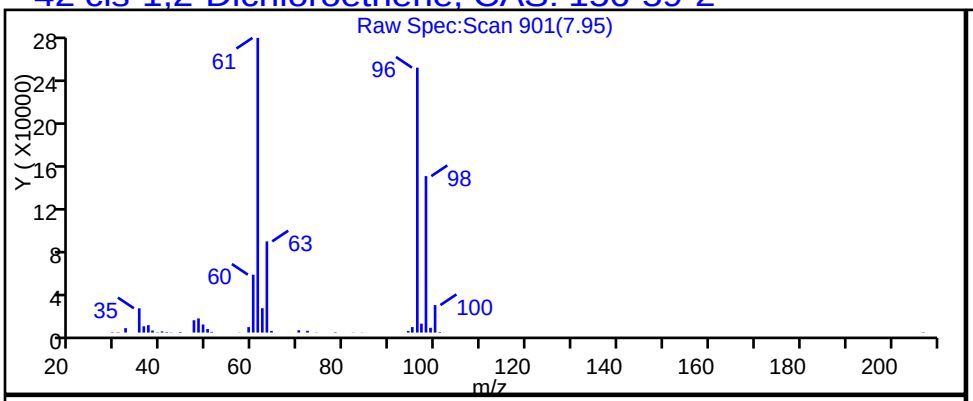
Report Date: 19-Jan-2017 10:27:34 Chrom Revision: 2.2 18-Jan-2017 10:40:14

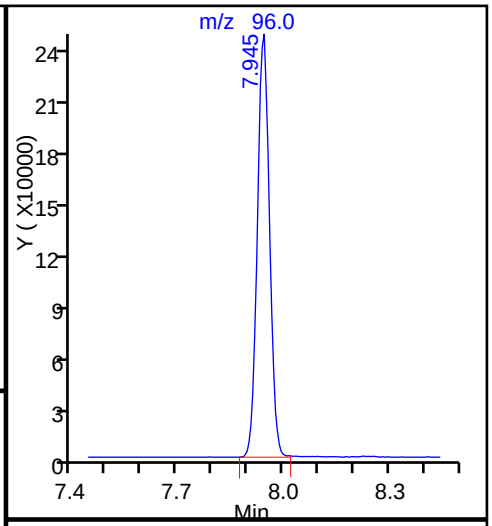
TestAmerica Knoxville

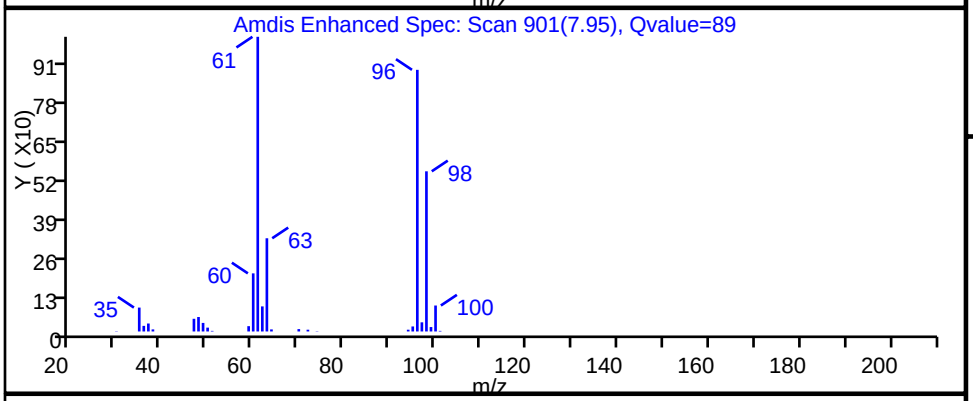
Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P114.D

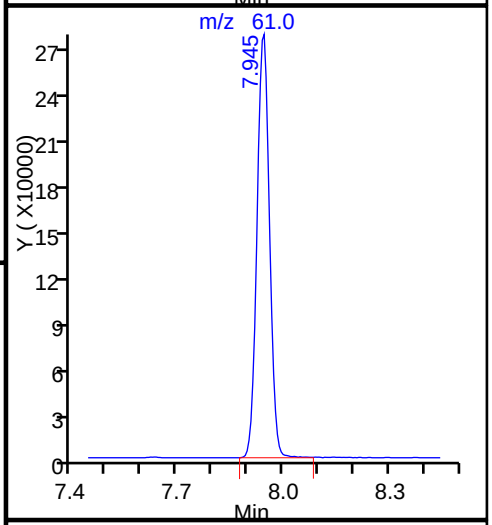
Injection Date:	19-Jan-2017 04:14:30	Instrument ID:	MR
Lims ID:	140-6811-A-5	Lab Sample ID:	140-6811-5
Client ID:	BLDG-A MID-GAC		
Operator ID:		ALS Bottle#:	14 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

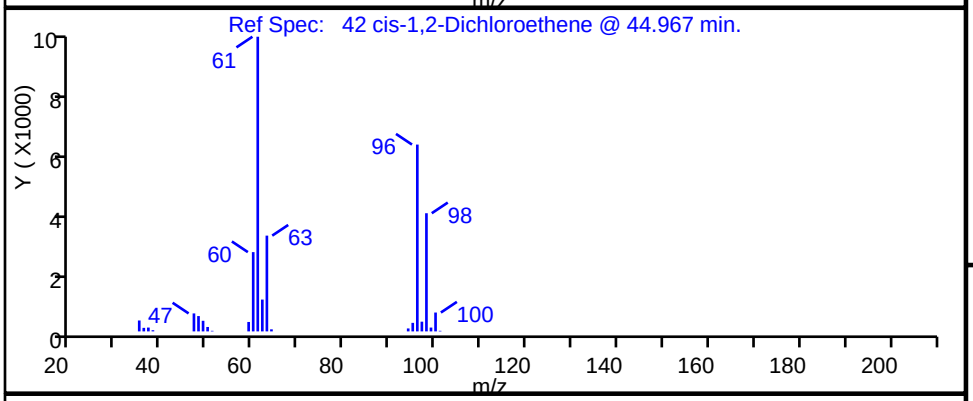
42 cis-1,2-Dichloroethene, CAS: 156-59-2

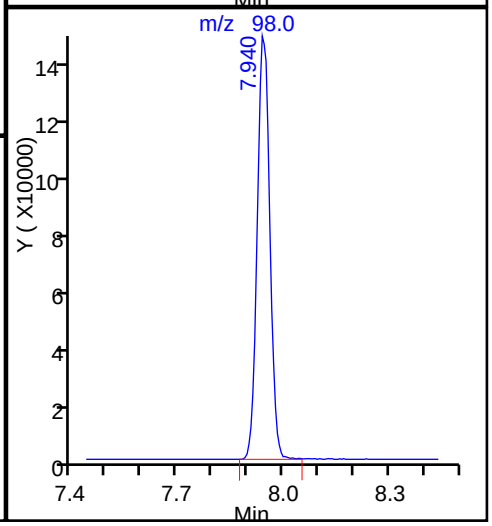


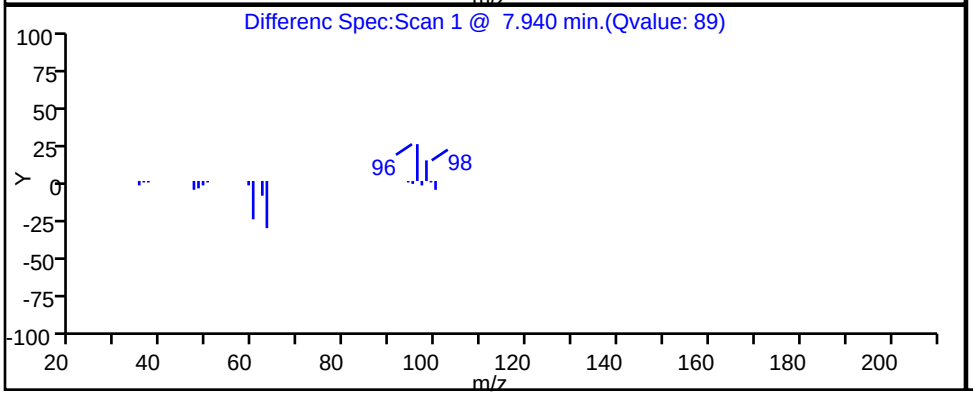










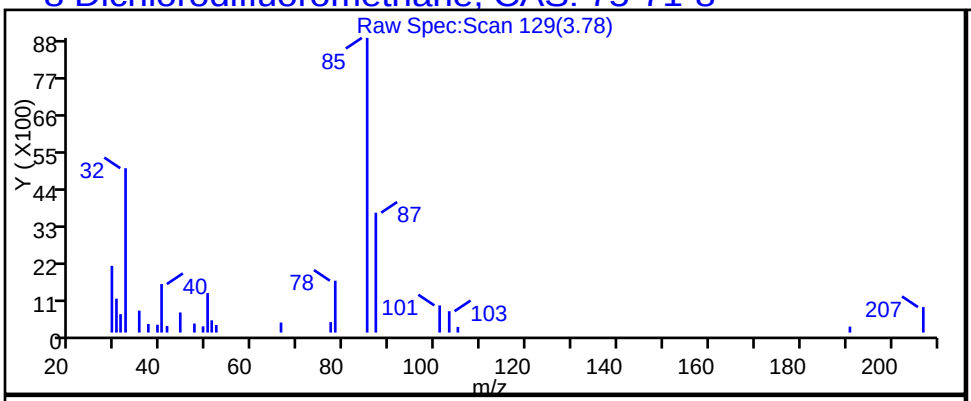


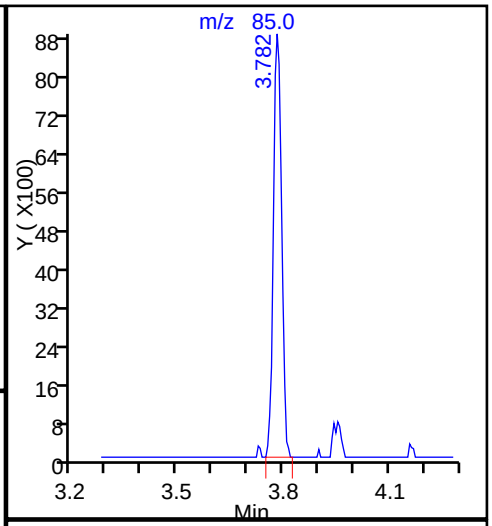
TestAmerica Knoxville

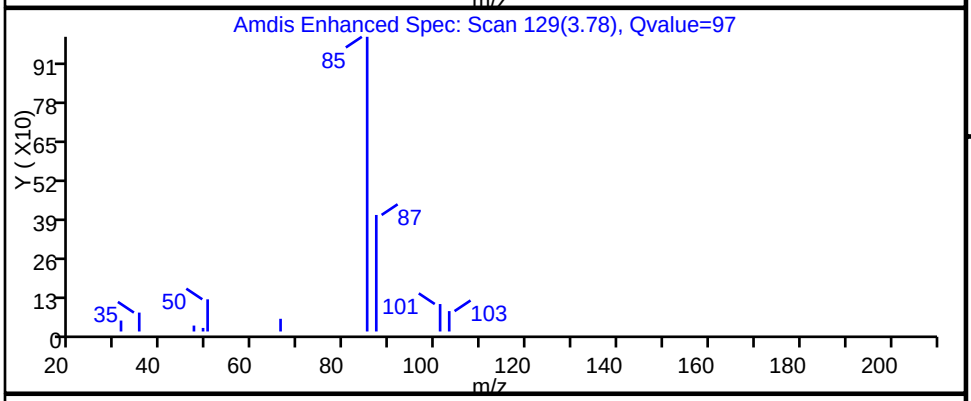
Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P114.D

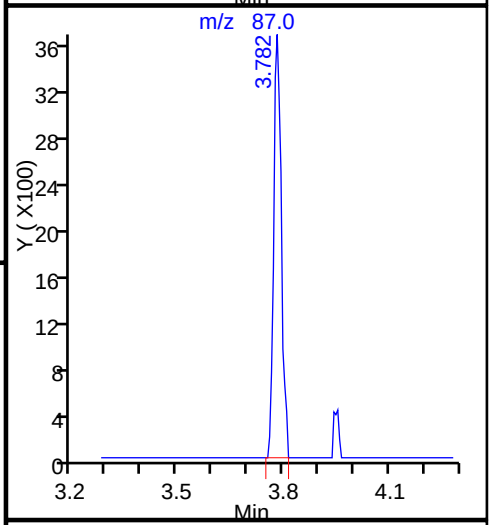
Injection Date:	19-Jan-2017 04:14:30	Instrument ID:	MR
Lims ID:	140-6811-A-5	Lab Sample ID:	140-6811-5
Client ID:	BLDG-A MID-GAC		
Operator ID:		ALS Bottle#:	14 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

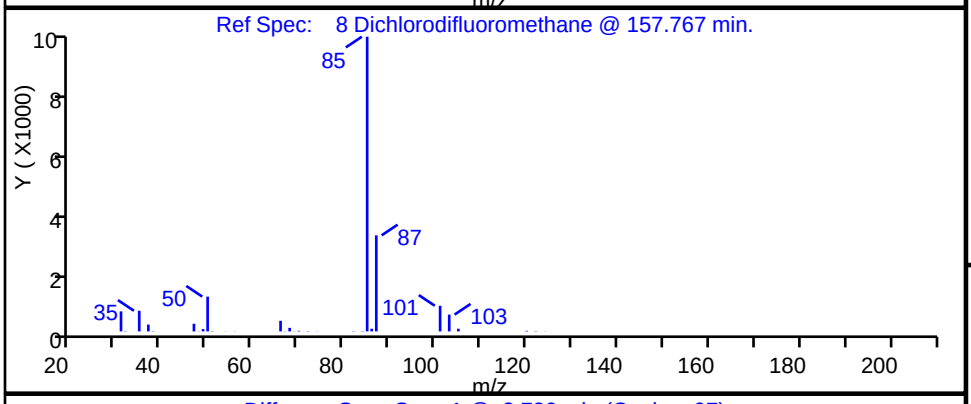
8 Dichlorodifluoromethane, CAS: 75-71-8

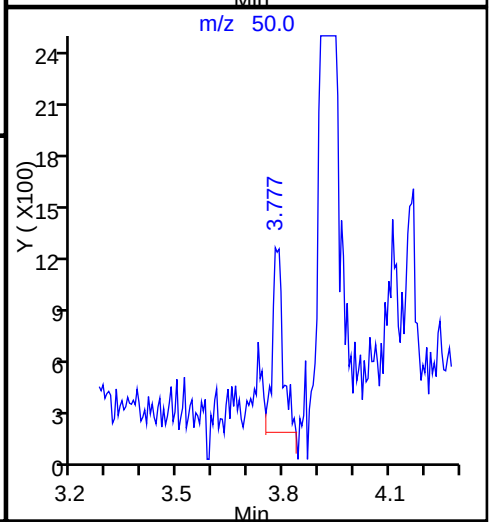


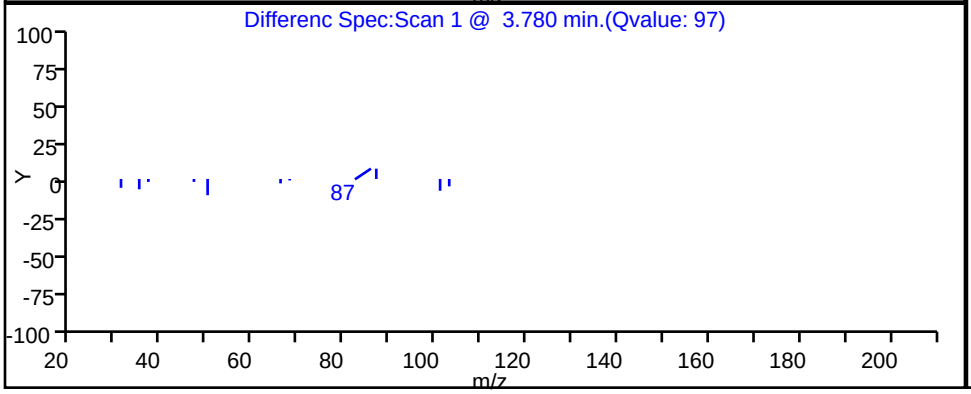












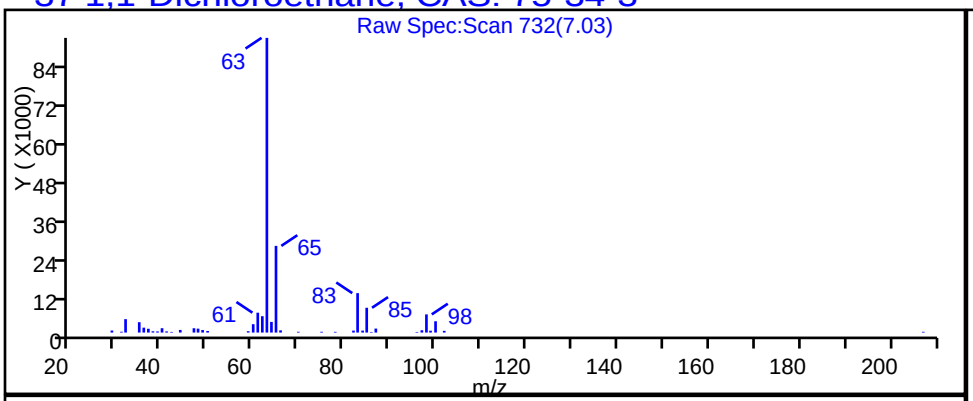
Report Date: 19-Jan-2017 10:27:34 Chrom Revision: 2.2 18-Jan-2017 10:40:14

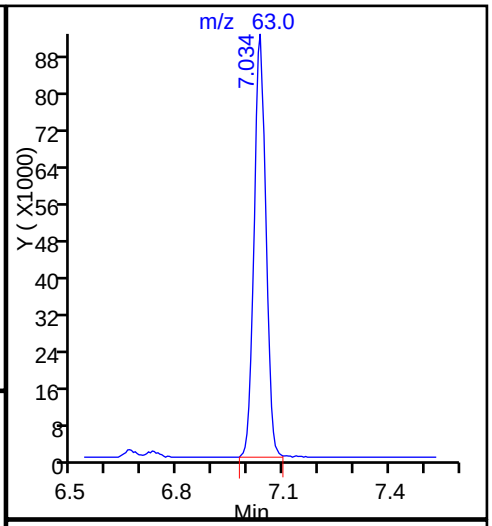
TestAmerica Knoxville

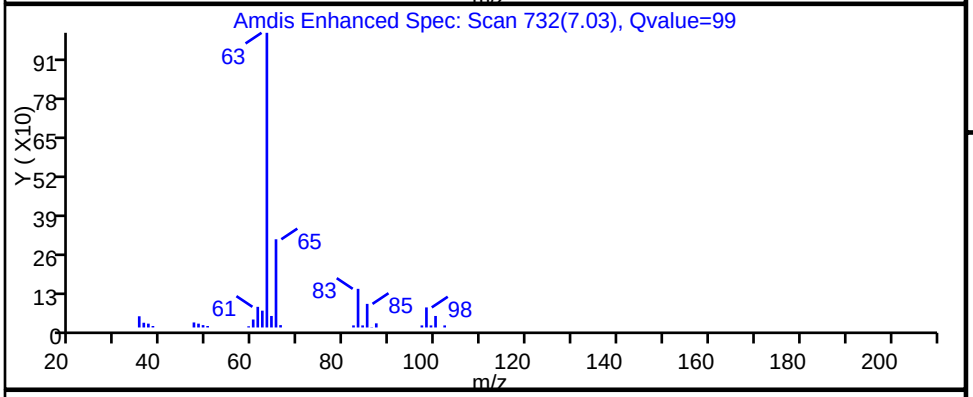
Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P114.D

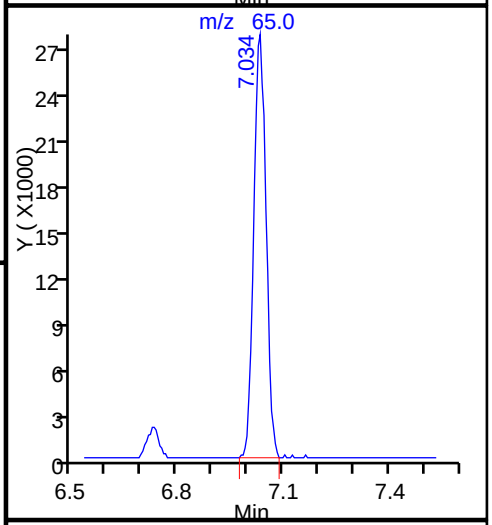
Injection Date:	19-Jan-2017 04:14:30	Instrument ID:	MR
Lims ID:	140-6811-A-5	Lab Sample ID:	140-6811-5
Client ID:	BLDG-A MID-GAC		
Operator ID:		ALS Bottle#:	14 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

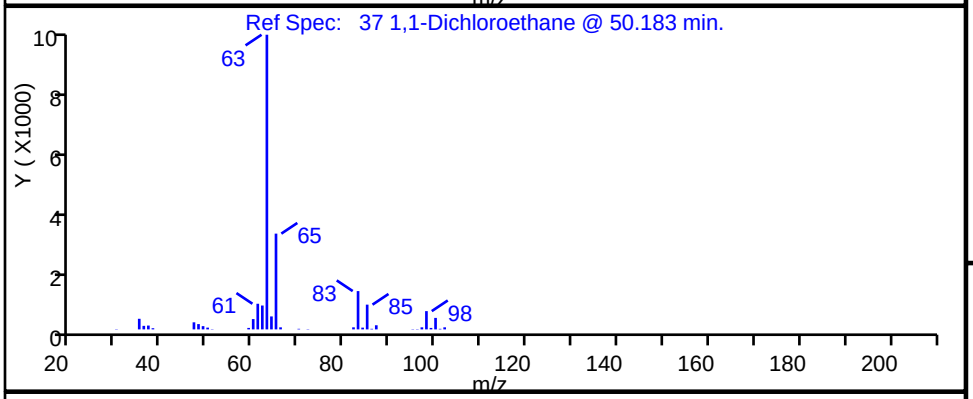
37 1,1-Dichloroethane, CAS: 75-34-3

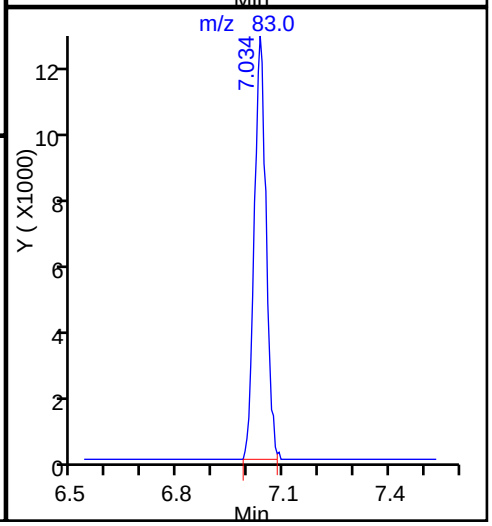


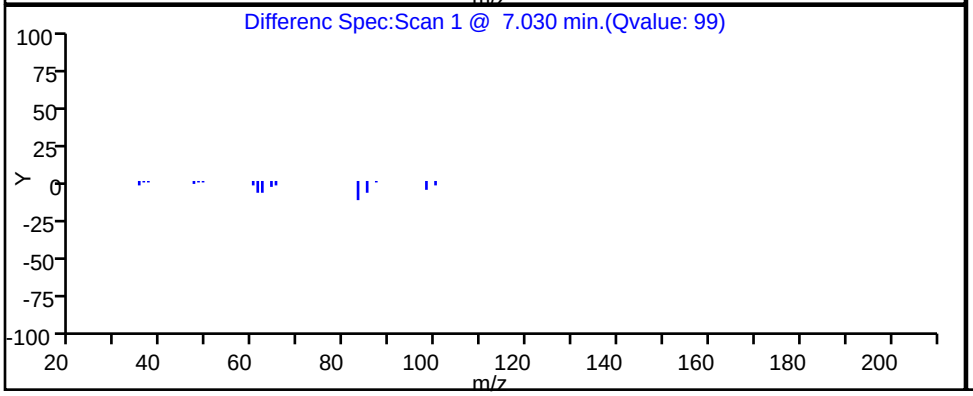










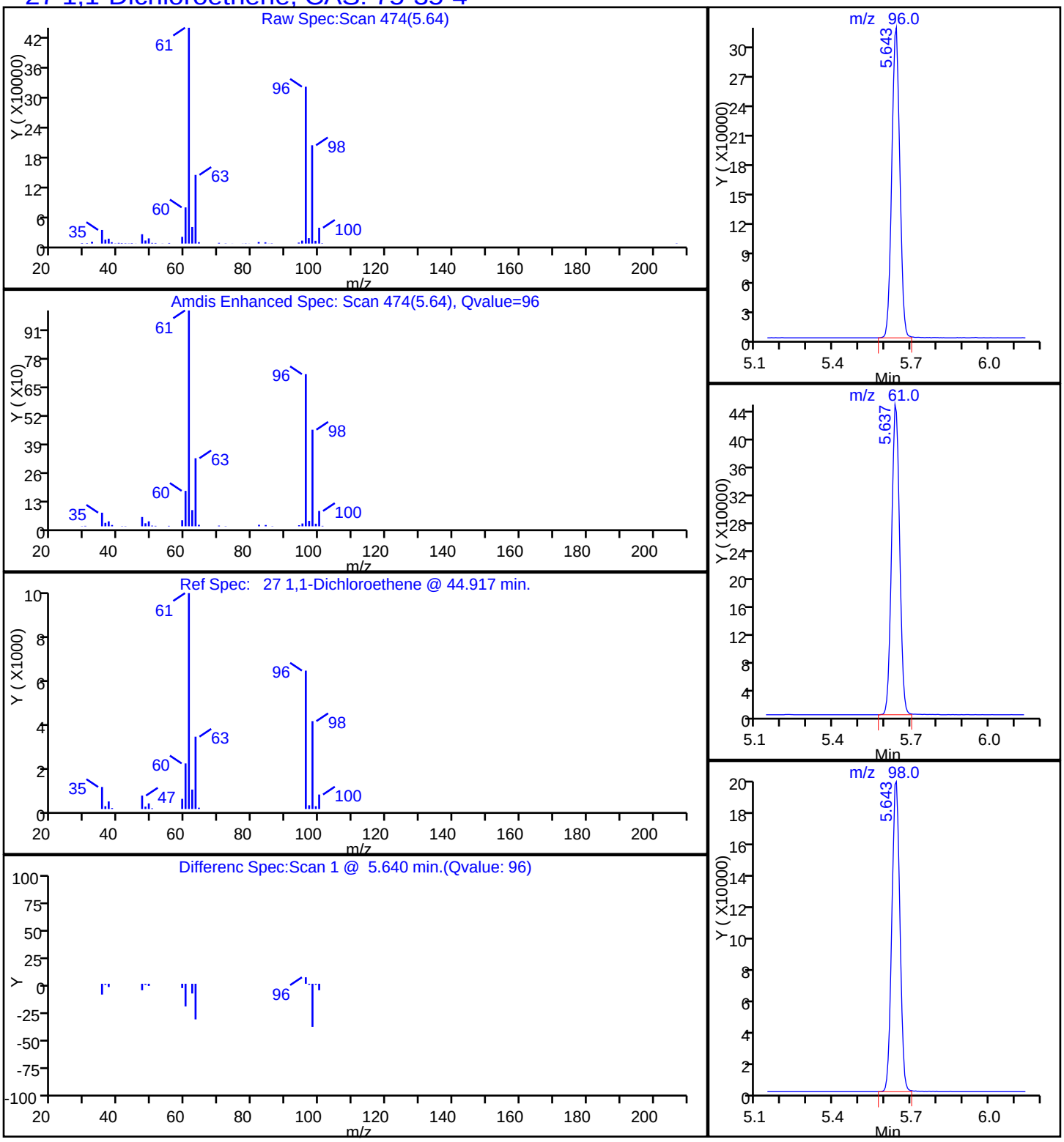


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P114.D

Injection Date:	19-Jan-2017 04:14:30	Instrument ID:	MR
Lims ID:	140-6811-A-5	Lab Sample ID:	140-6811-5
Client ID:	BLDG-A MID-GAC		
Operator ID:		ALS Bottle#:	14 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

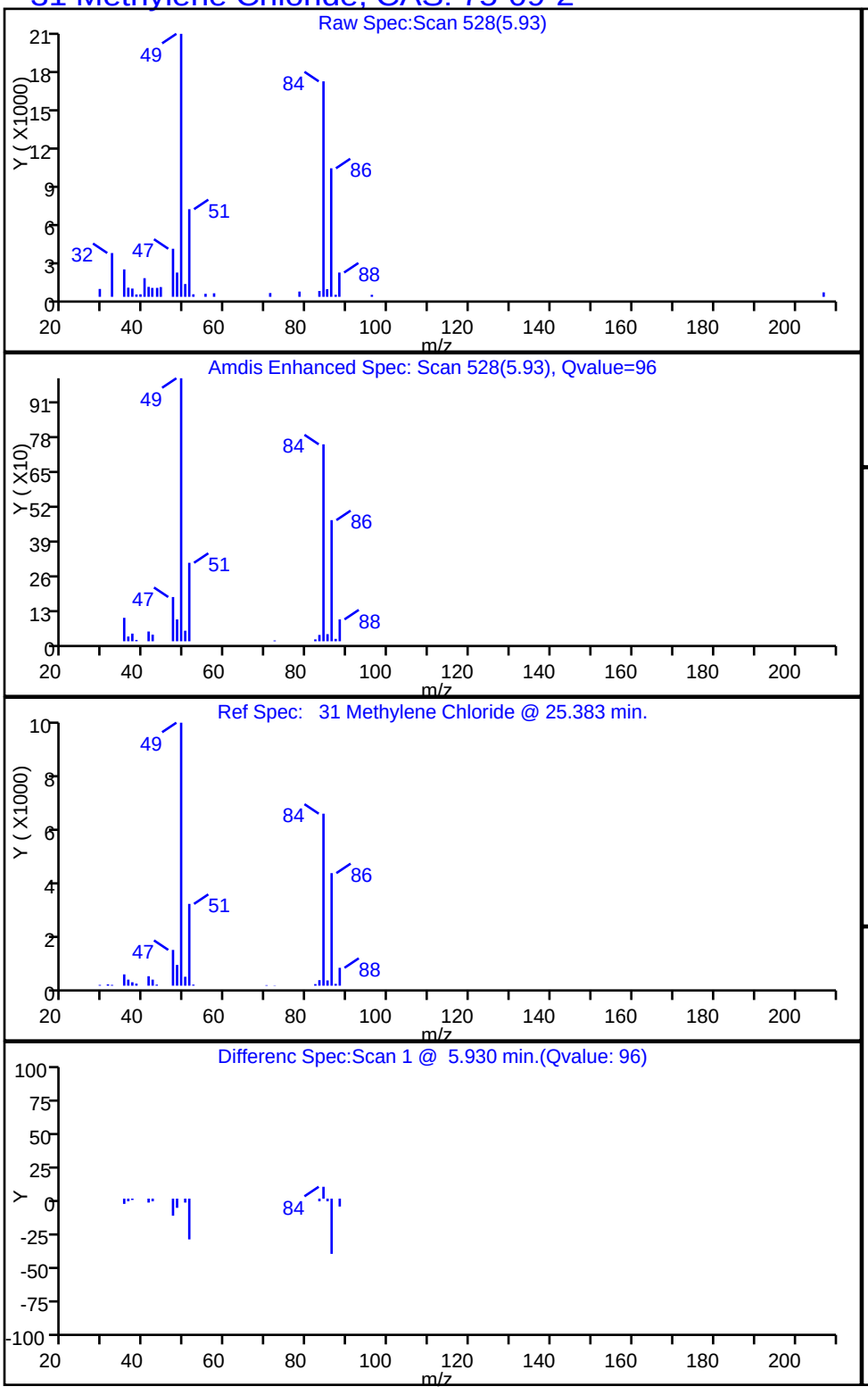
27 1,1-Dichloroethene, CAS: 75-35-4

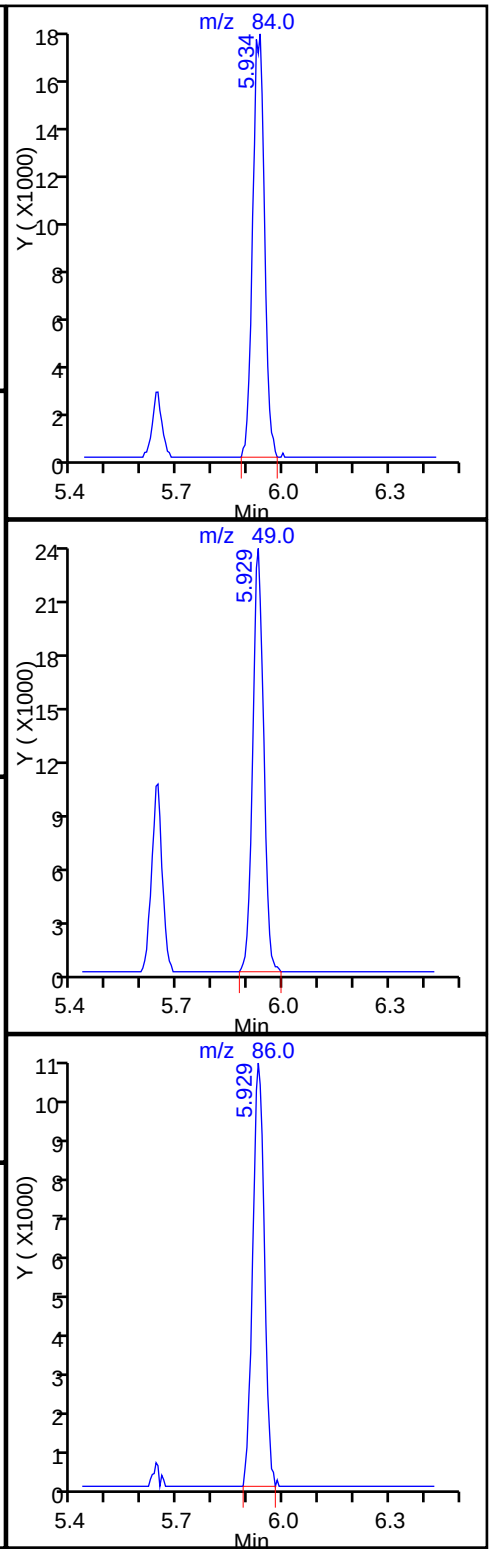


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P114.D		
Injection Date:	19-Jan-2017 04:14:30	Instrument ID:	MR
Lims ID:	140-6811-A-5	Lab Sample ID:	140-6811-5
Client ID:	BLDG-A MID-GAC		
Operator ID:		ALS Bottle#:	14 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

31 Methylene Chloride, CAS: 75-09-2





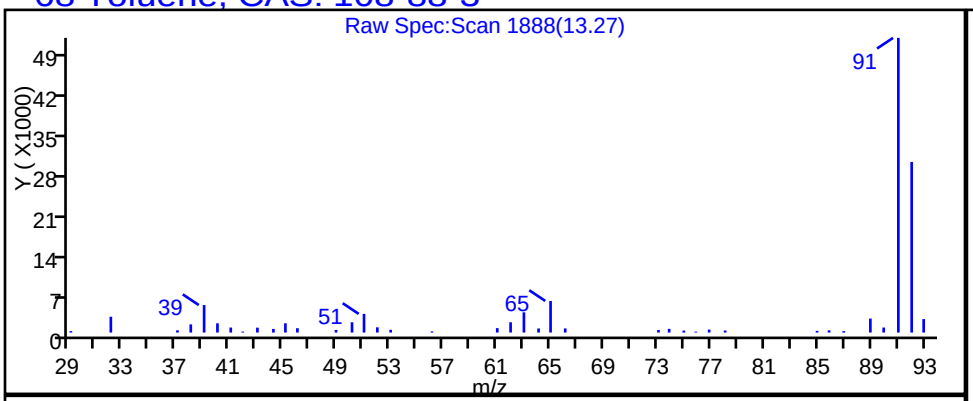
Report Date: 19-Jan-2017 10:27:34 Chrom Revision: 2.2 18-Jan-2017 10:40:14

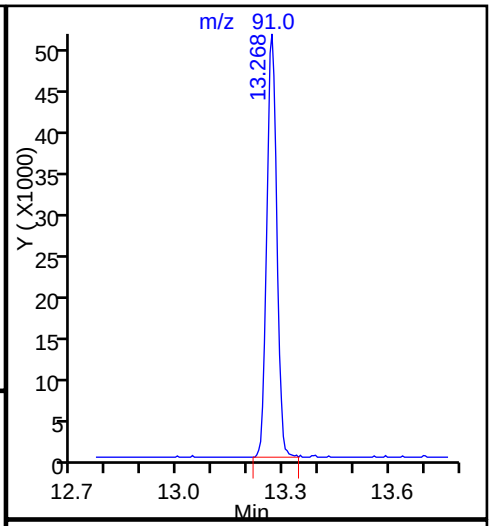
TestAmerica Knoxville

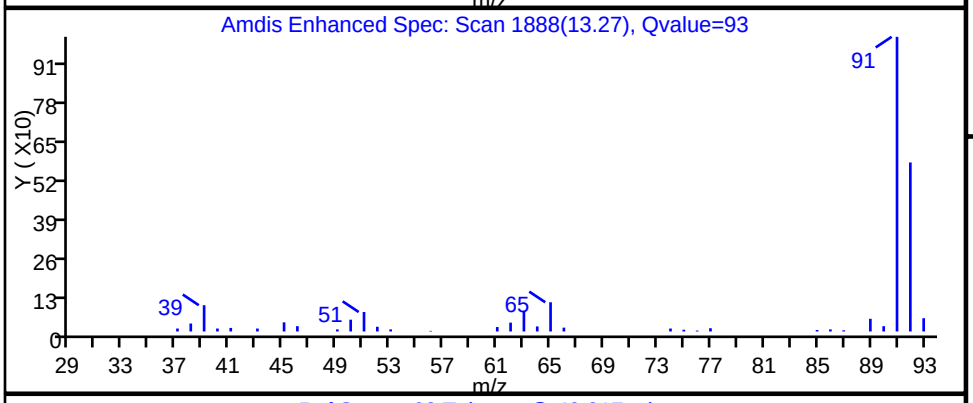
Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P114.D

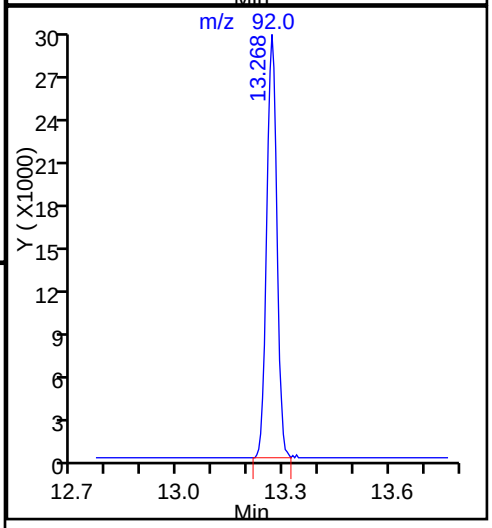
Injection Date:	19-Jan-2017 04:14:30	Instrument ID:	MR
Lims ID:	140-6811-A-5	Lab Sample ID:	140-6811-5
Client ID:	BLDG-A MID-GAC		
Operator ID:		ALS Bottle#:	14 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

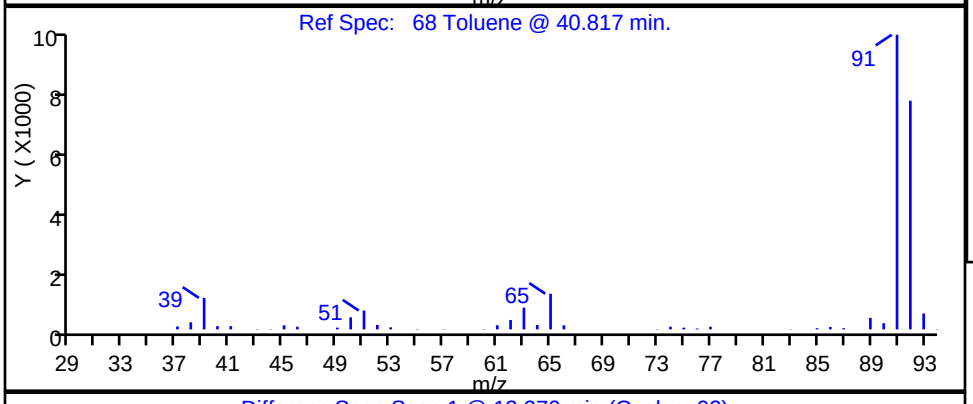
68 Toluene, CAS: 108-88-3

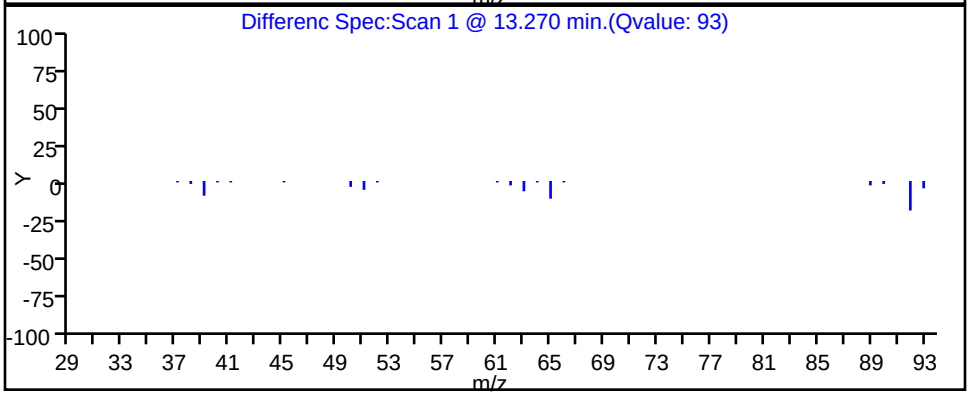












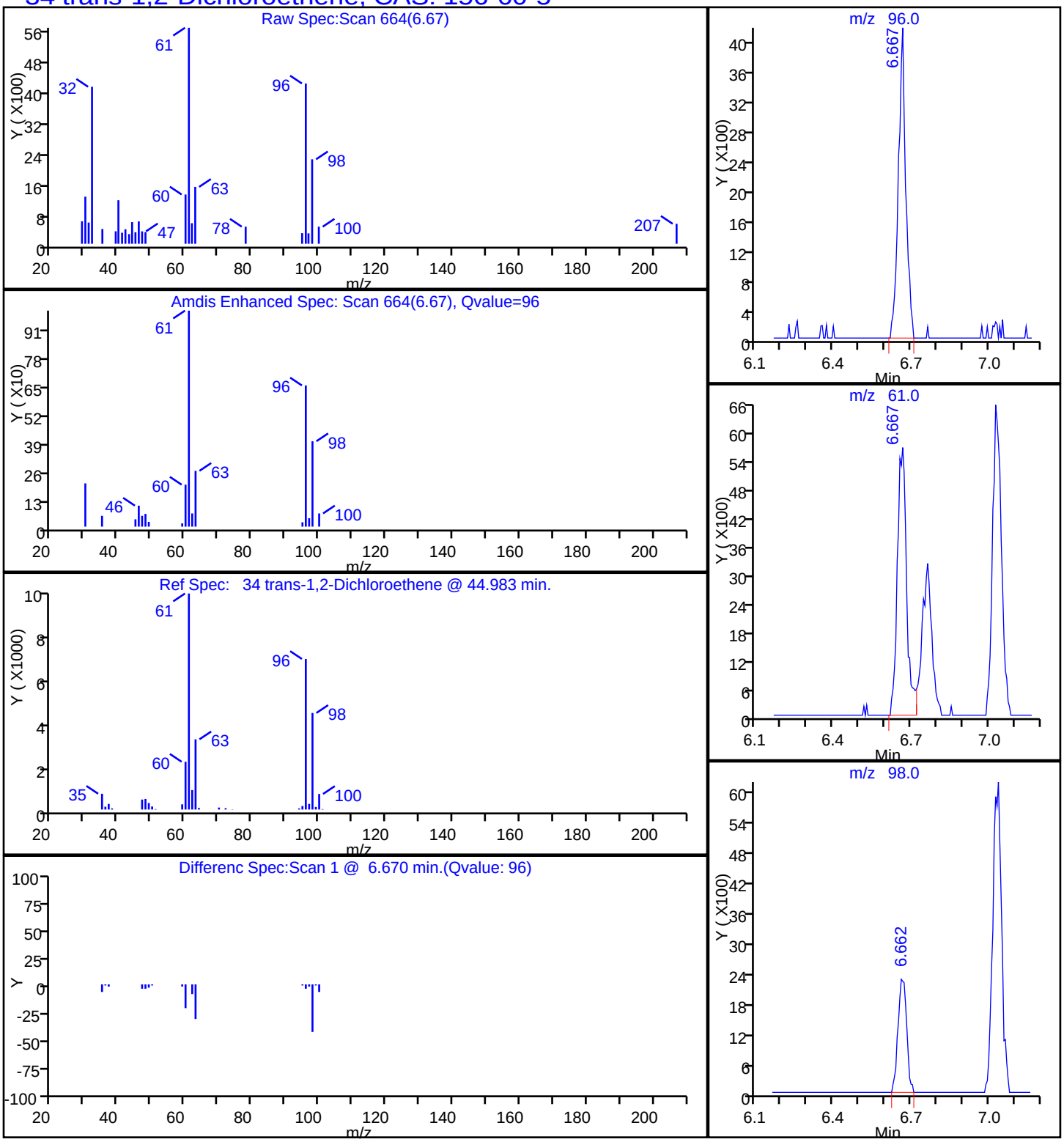
Report Date: 19-Jan-2017 10:27:34 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P114.D

Injection Date:	19-Jan-2017 04:14:30	Instrument ID:	MR		
Lims ID:	140-6811-A-5	Lab Sample ID:	140-6811-5		
Client ID:	BLDG-A MID-GAC				
Operator ID:		ALS Bottle#:	14	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

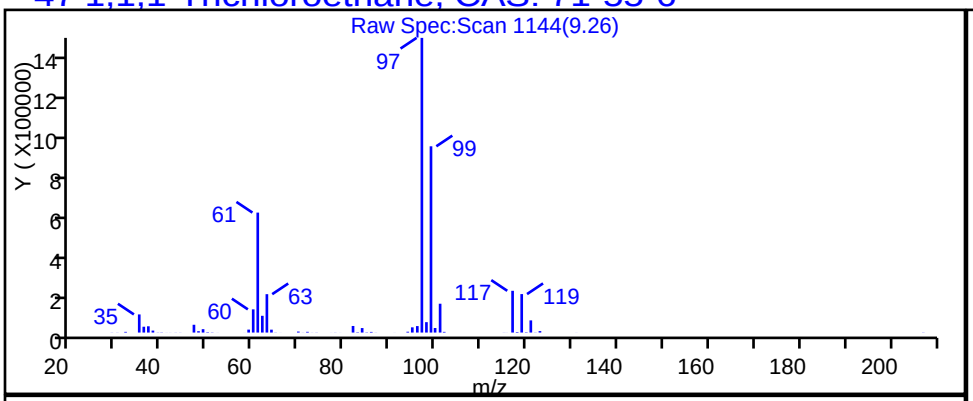
34 trans-1,2-Dichloroethene, CAS: 156-60-5

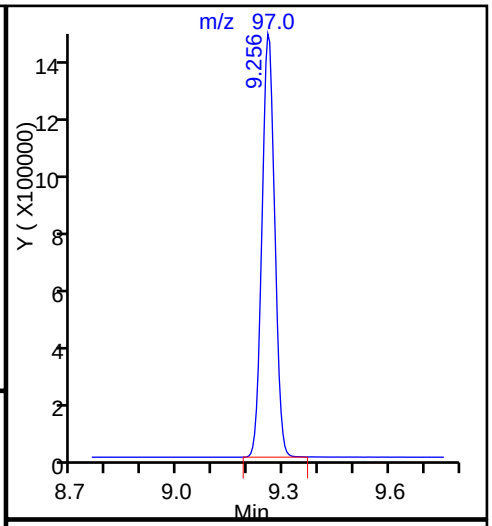


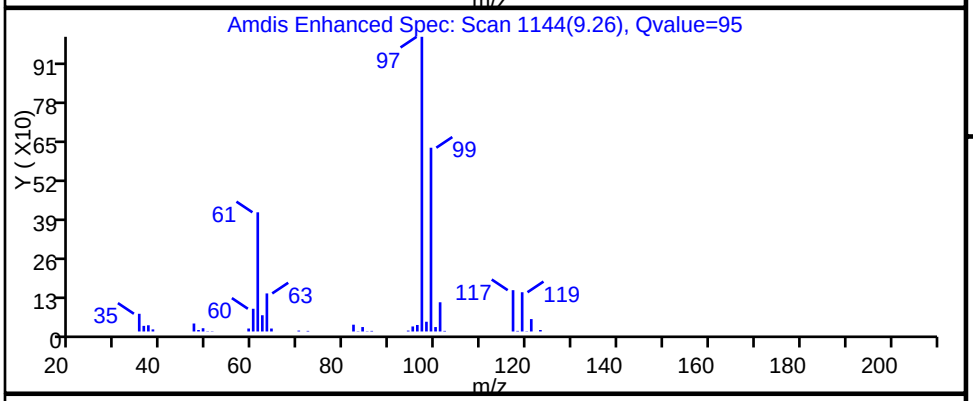
TestAmerica Knoxville

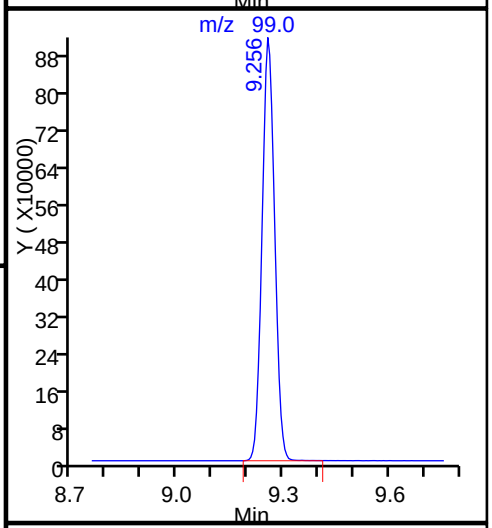
Data File:	\\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P114.D		
Injection Date:	19-Jan-2017 04:14:30	Instrument ID:	MR
Lims ID:	140-6811-A-5	Lab Sample ID:	140-6811-5
Client ID:	BLDG-A MID-GAC		
Operator ID:		ALS Bottle#:	14 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

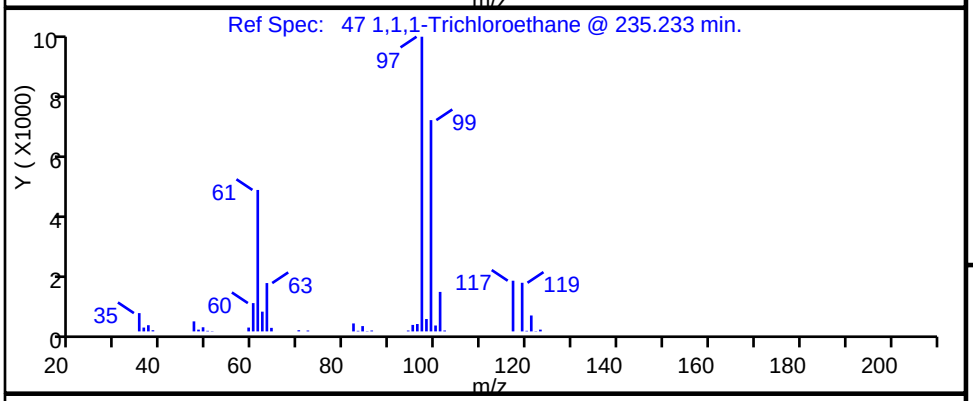
47 1,1,1-Trichloroethane, CAS: 71-55-6

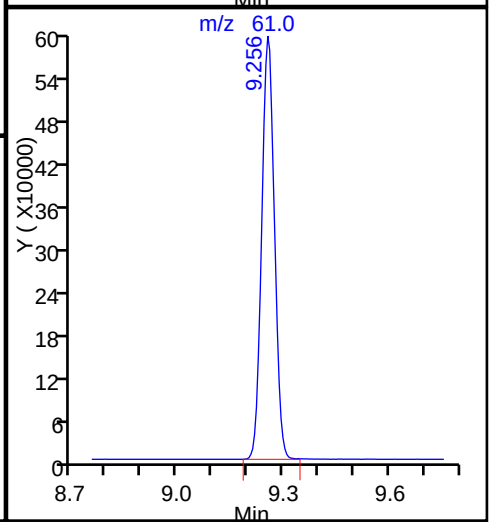


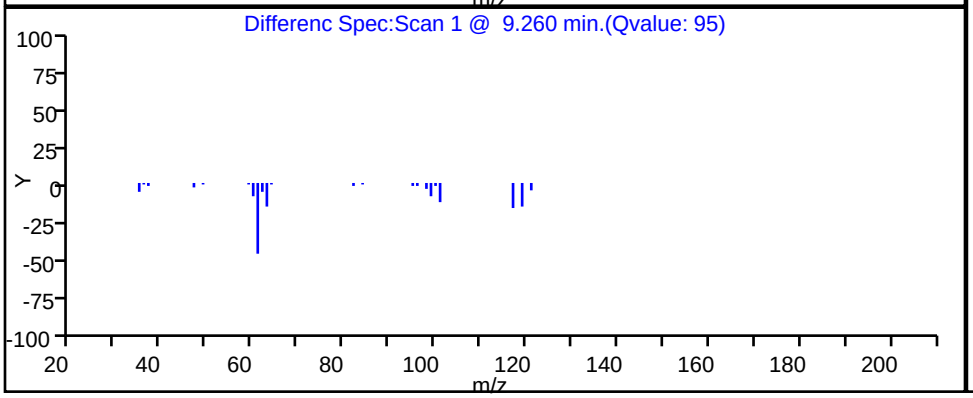










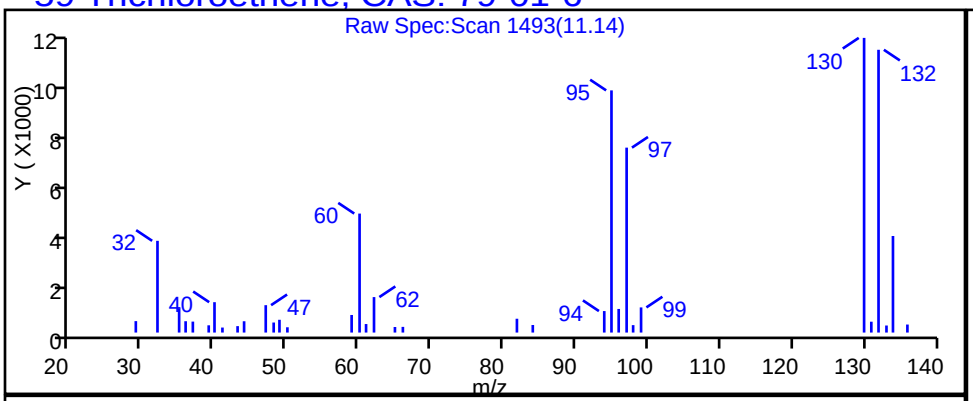


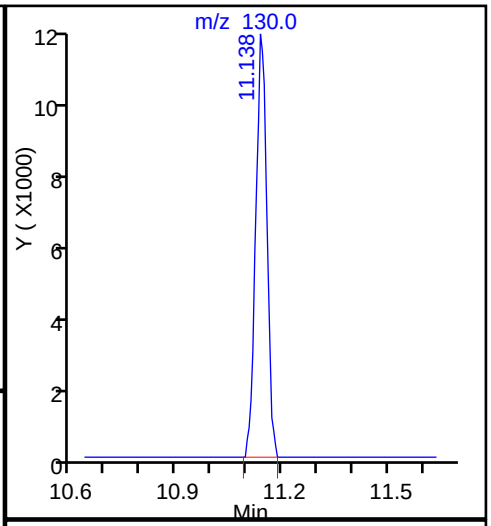
TestAmerica Knoxville

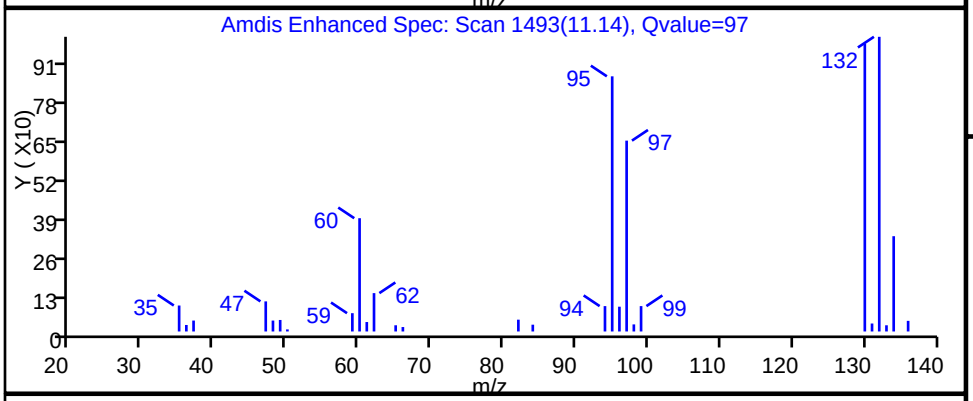
Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P114.D

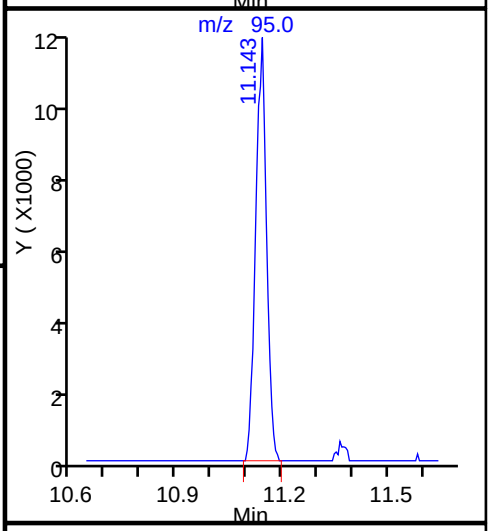
Injection Date:	19-Jan-2017 04:14:30	Instrument ID:	MR
Lims ID:	140-6811-A-5	Lab Sample ID:	140-6811-5
Client ID:	BLDG-A MID-GAC		
Operator ID:		ALS Bottle#:	14 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

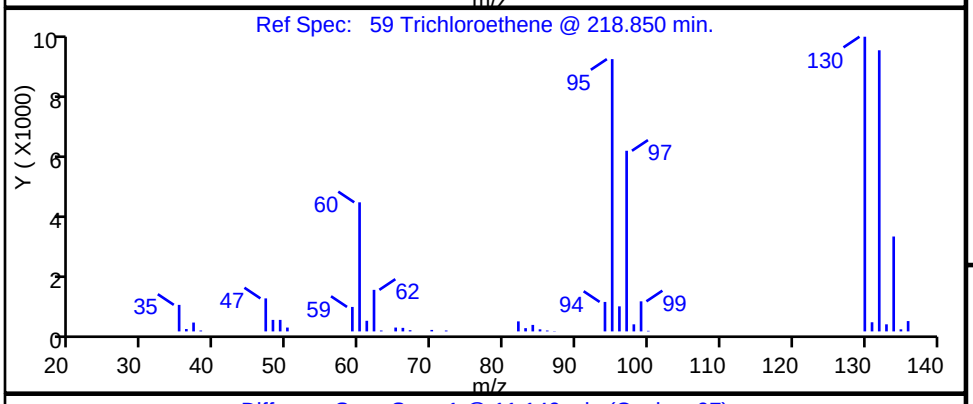
59 Trichloroethene, CAS: 79-01-6

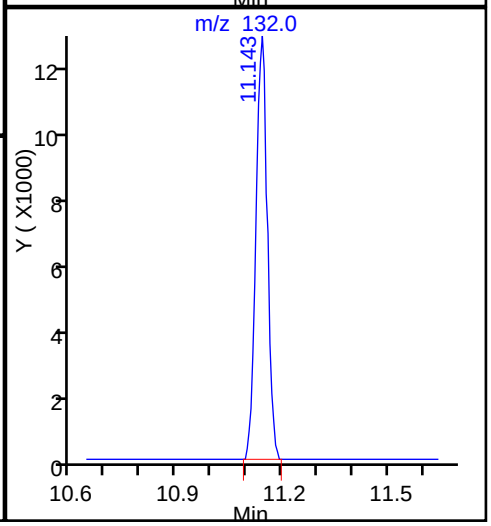


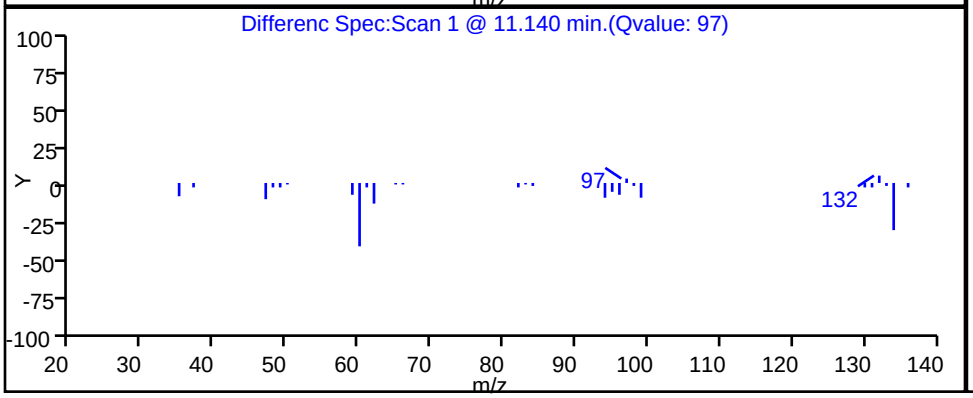








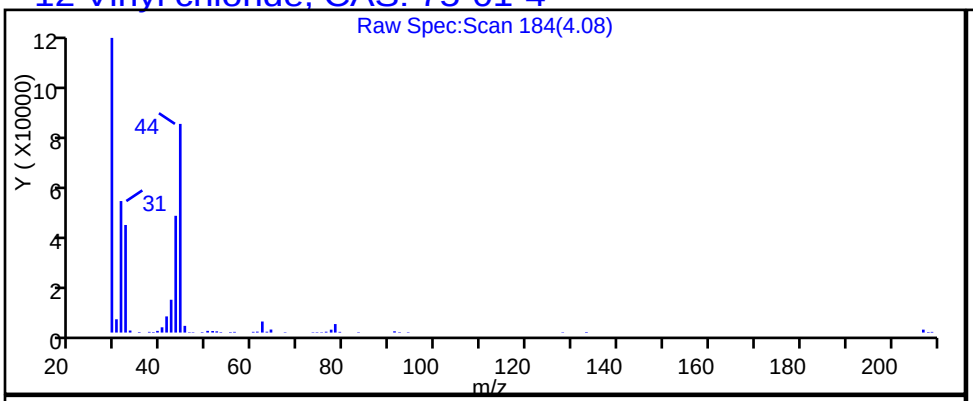


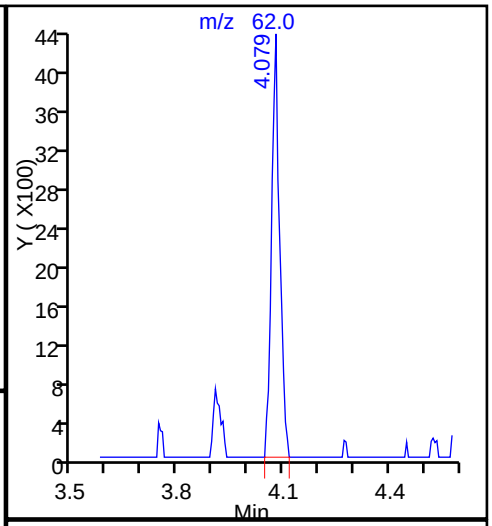


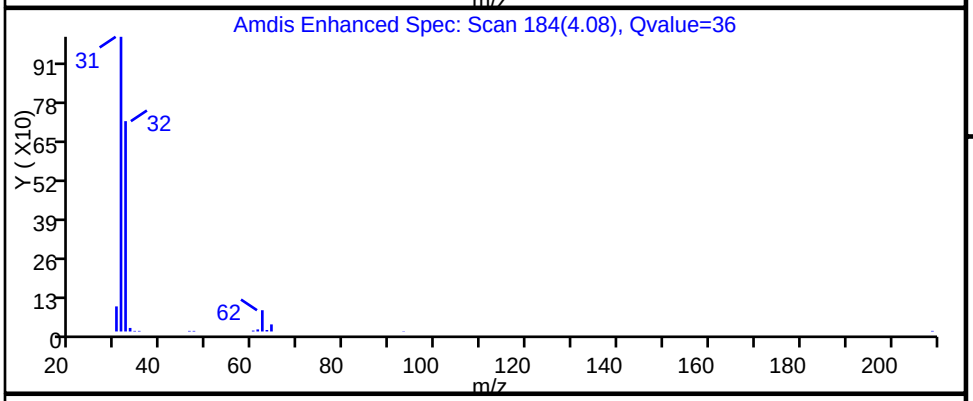
TestAmerica Knoxville

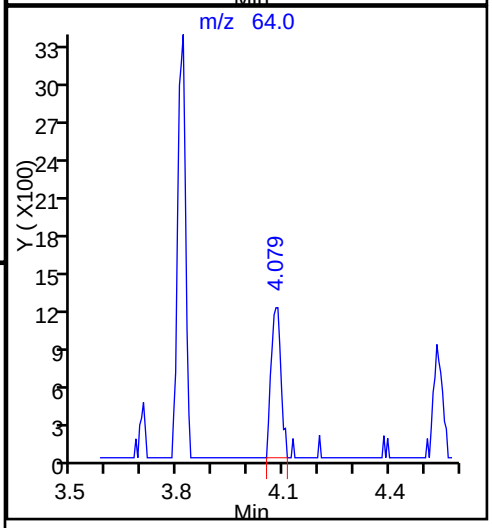
Data File:	\\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P114.D		
Injection Date:	19-Jan-2017 04:14:30	Instrument ID:	MR
Lims ID:	140-6811-A-5	Lab Sample ID:	140-6811-5
Client ID:	BLDG-A MID-GAC		
Operator ID:		ALS Bottle#:	14 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

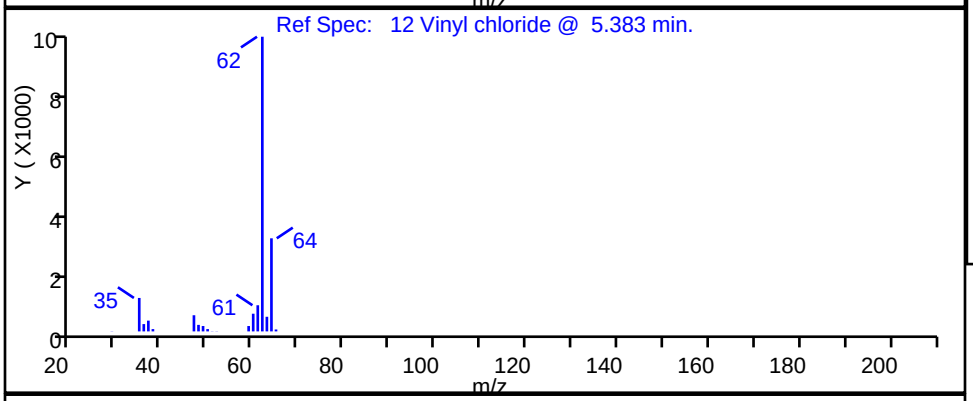
12 Vinyl chloride, CAS: 75-01-4

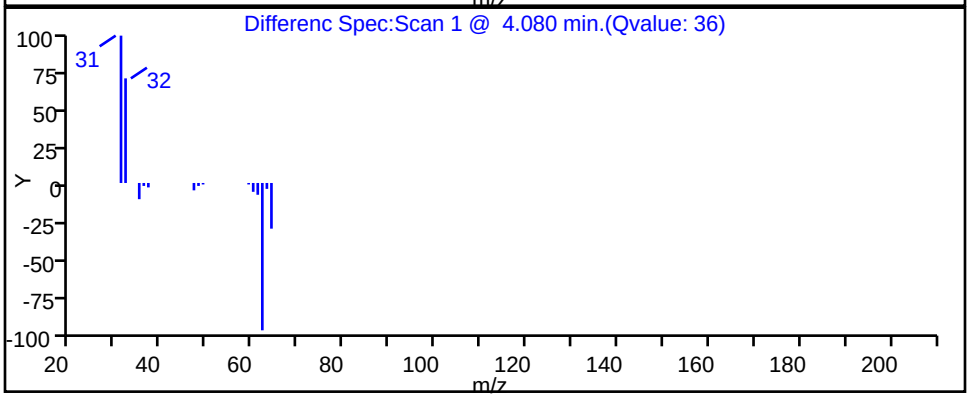








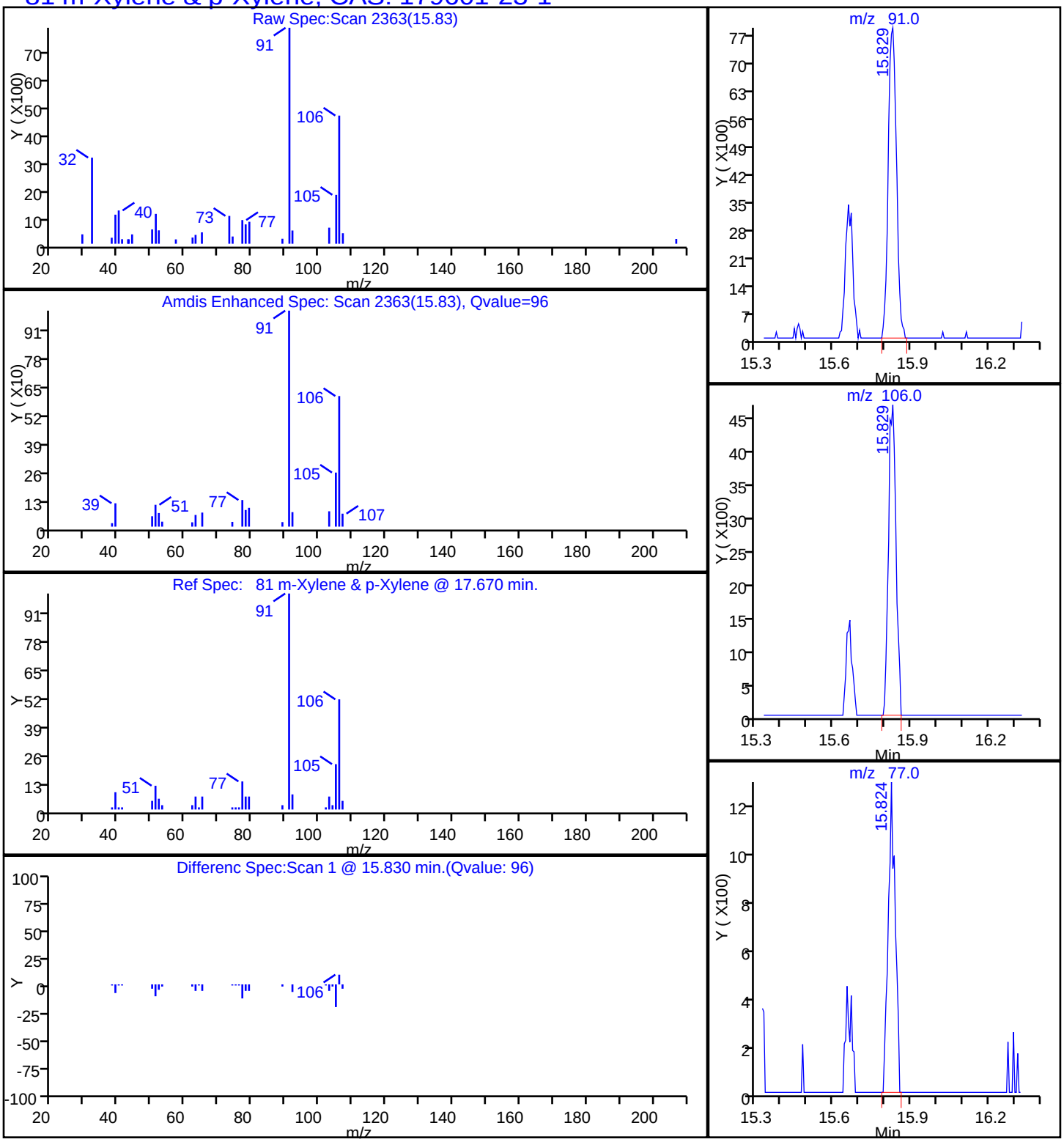




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18P114.D		
Injection Date:	19-Jan-2017 04:14:30	Instrument ID:	MR
Lims ID:	140-6811-A-5	Lab Sample ID:	140-6811-5
Client ID:	BLDG-A MID-GAC		
Operator ID:		ALS Bottle#:	14 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

81 m-Xylene & p-Xylene, CAS: 179601-23-1



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Client Sample ID: BLDG-A MID-GAC DL Lab Sample ID: 140-6811-5 DL

Matrix: Air Lab File ID: JA19P109.D

Analysis Method: TO 15 LL Date Collected: 01/13/2017 13:46

Sample wt/vol: 25(mL) Date Analyzed: 01/19/2017 22:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7893 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	133.41	74		1.6	0.24

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	88		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Client Sample ID: BLDG-A MID-GAC DL Lab Sample ID: 140-6811-5 DL

Matrix: Air Lab File ID: JA19P109.D

Analysis Method: TO 15 LL Date Collected: 01/13/2017 13:46

Sample wt/vol: 25(mL) Date Analyzed: 01/19/2017 22:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7893 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	133.41	400		8.7	1.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	88		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P109.D				
Lims ID:	140-6811-A-5				
Client ID:	BLDG-A MID-GAC				
Sample Type:	Client				
Inject. Date:	19-Jan-2017 22:00:30	ALS Bottle#:	9	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003854-014				
Misc. Info.:	140-6811-a-5				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Jan-2017 10:54:07	Calib Date:	26-Nov-2016 01:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				
First Level Reviewer: tajh		Date:	20-Jan-2017 10:51:50		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.598	8.597	0.001	99	327630	4.00	
* 2 1,4-Difluorobenzene	114	10.798	10.803	-0.005	95	1536494	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.575	15.574	0.001	87	1301340	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.215	17.220	-0.005	95	722454	3.51	
27 1,1-Dichloroethene	96	5.736	5.735	0.001	96	146181	1.48	
31 Methylene Chloride	84	6.075	6.079	-0.004	95	41928	0.4342	
37 1,1-Dichloroethane	63	7.290	7.290	0.000	99	44311	0.2352	
42 cis-1,2-Dichloroethene	96	8.269	8.269	0.000	98	90925	0.9307	
47 1,1,1-Trichloroethane	97	9.636	9.635	0.001	97	782420	3.69	
59 Trichloroethene	130	11.524	11.523	0.001	92	4519	0.0344	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

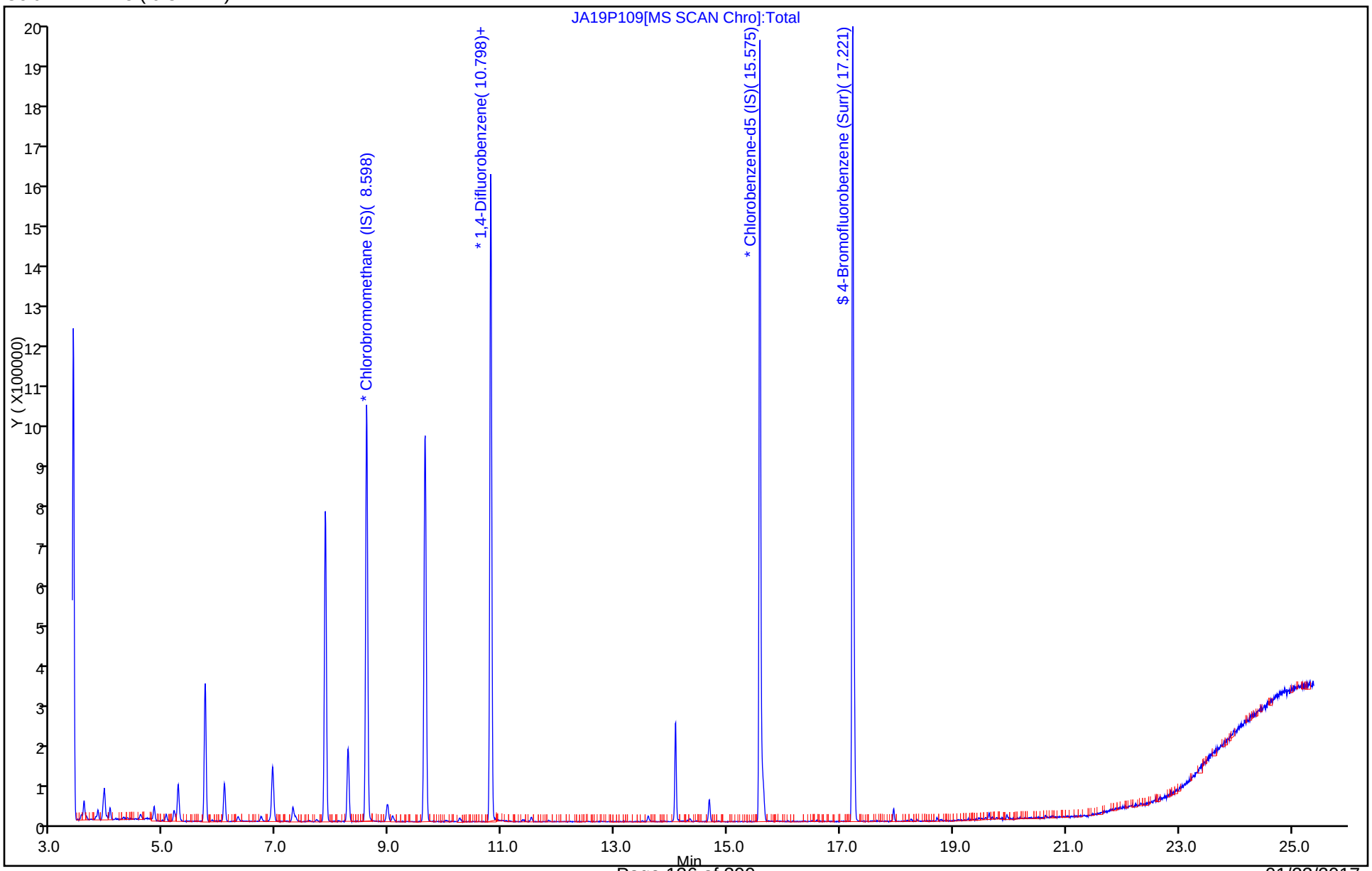
Report Date: 20-Jan-2017 10:55:23 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P109.D

Injection Date:	19-Jan-2017 22:00:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-6811-A-5	Lab Sample ID:	140-6811-5	Worklist Smp#:	14
Client ID:	BLDG-A MID-GAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

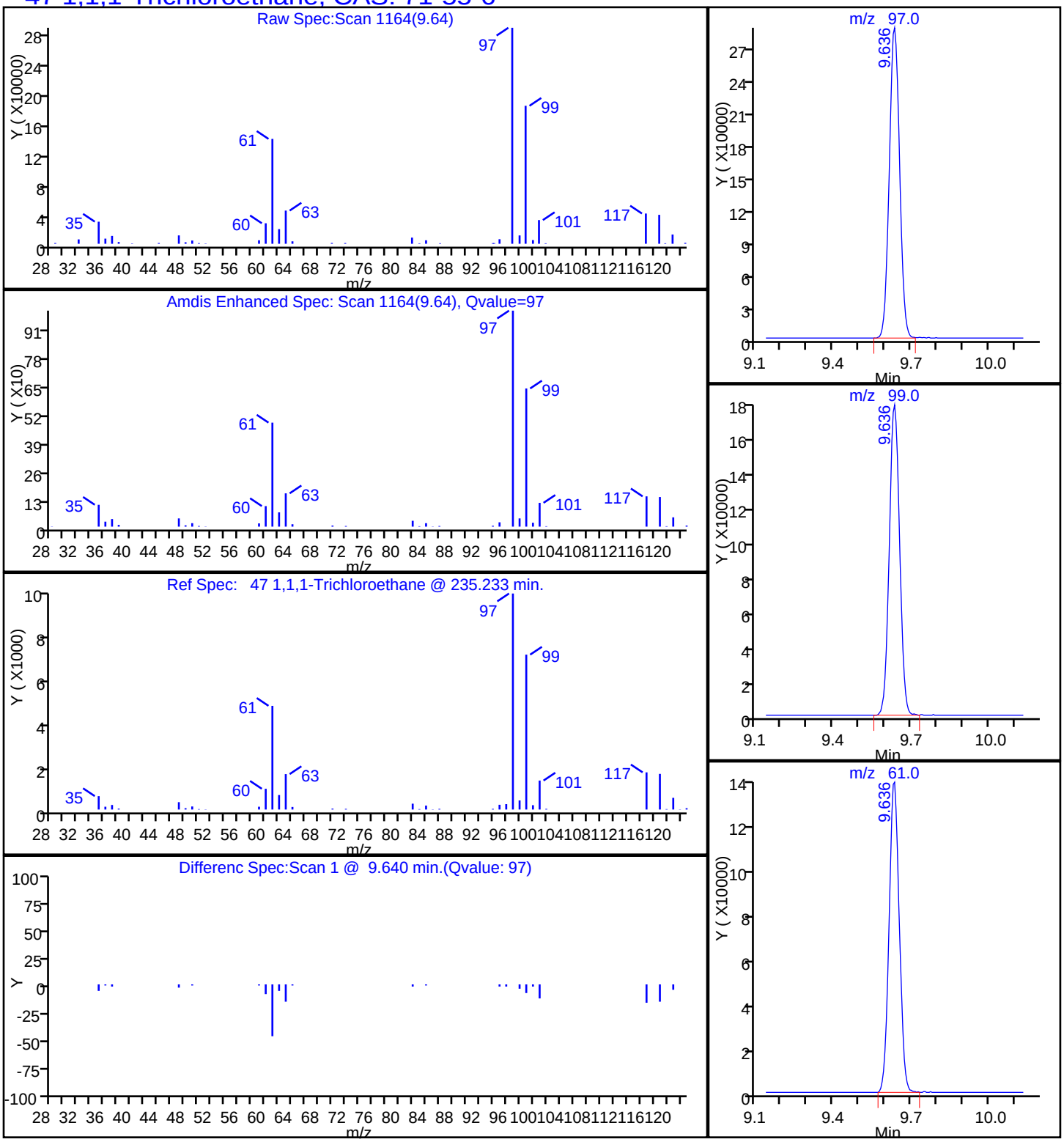
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P109.D				
Lims ID:	140-6811-A-5				
Client ID:	BLDG-A MID-GAC				
Sample Type:	Client				
Inject. Date:	19-Jan-2017 22:00:30	ALS Bottle#:	9	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003854-014				
Misc. Info.:	140-6811-a-5				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Jan-2017 10:54:07	Calib Date:	26-Nov-2016 01:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				
First Level Reviewer: tajh		Date:	20-Jan-2017 10:51:50		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.51	87.65

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P109.D		
Injection Date:	19-Jan-2017 22:00:30	Instrument ID:	MJ
Lims ID:	140-6811-A-5	Lab Sample ID:	140-6811-5
Client ID:	BLDG-A MID-GAC		
Operator ID:	7126	ALS Bottle#:	9 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

47 1,1,1-Trichloroethane, CAS: 71-55-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6811-1

SDG No.:

Client Sample ID: BLDG-A INFLUENT | Lab Sample ID: 140-6811-6

Matrix: Air | Lab File ID: JA19P110.D

Analysis Method: TO 15 LL | Date Collected: 01/13/2017 13:51

Sample wt/vol: 20(mL) | Date Analyzed: 01/19/2017 22:47

Soil Aliquot Vol: | Dilution Factor: 2.5

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7893 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	5.3		5.0	1.4
56-23-5	Carbon tetrachloride	153.81	ND		5.0	0.94
75-45-6	Chlorodifluoromethane	86.47	ND		5.0	0.94
67-66-3	Chloroform	119.38	1.7	J	5.0	0.94
156-59-2	cis-1,2-Dichloroethene	96.94	110		5.0	1.5
75-71-8	Dichlorodifluoromethane	120.91	ND		5.0	1.7
75-34-3	1,1-Dichloroethane	98.96	20		5.0	0.63
107-06-2	1,2-Dichloroethane	98.96	ND		5.0	1.2
75-35-4	1,1-Dichloroethene	96.94	94		5.0	0.88
100-41-4	Ethylbenzene	106.17	ND		5.0	1.7
75-09-2	Methylene Chloride	84.93	38		13	8.1
1634-04-4	Methyl tert-butyl ether	88.15	ND		25	4.3
91-20-3	Naphthalene	128.17	ND		2.5	2.5
127-18-4	Tetrachloroethene	165.83	ND		5.0	1.0
108-88-3	Toluene	92.14	ND		7.5	7.5
156-60-5	trans-1,2-Dichloroethene	96.94	2.3	J	5.0	1.3
120-82-1	1,2,4-Trichlorobenzene	181.45	ND	*	5.0	2.4
71-55-6	1,1,1-Trichloroethane	133.41	360		5.0	0.75
79-00-5	1,1,2-Trichloroethane	133.41	ND		5.0	1.3
79-01-6	Trichloroethene	131.39	680		2.5	0.88
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		5.0	2.1
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		5.0	1.6
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		5.0	1.6
75-01-4	Vinyl chloride	62.50	ND		2.5	1.8
1330-20-7	Xylenes, Total	106.17	ND		10	1.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6811-1

SDG No.:

Client Sample ID: BLDG-A INFLUENT | Lab Sample ID: 140-6811-6

Matrix: Air | Lab File ID: JA19P110.D

Analysis Method: TO 15 LL | Date Collected: 01/13/2017 13:51

Sample wt/vol: 20(mL) | Date Analyzed: 01/19/2017 22:47

Soil Aliquot Vol: | Dilution Factor: 2.5

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7893 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	17		16	4.6
56-23-5	Carbon tetrachloride	153.81	ND		31	5.9
75-45-6	Chlorodifluoromethane	86.47	ND		18	3.3
67-66-3	Chloroform	119.38	8.4	J	24	4.6
156-59-2	cis-1,2-Dichloroethene	96.94	440		20	5.9
75-71-8	Dichlorodifluoromethane	120.91	ND		25	8.3
75-34-3	1,1-Dichloroethane	98.96	81		20	2.5
107-06-2	1,2-Dichloroethane	98.96	ND		20	4.8
75-35-4	1,1-Dichloroethene	96.94	370		20	3.5
100-41-4	Ethylbenzene	106.17	ND		22	7.3
75-09-2	Methylene Chloride	84.93	130		43	28
1634-04-4	Methyl tert-butyl ether	88.15	ND		90	15
91-20-3	Naphthalene	128.17	ND		13	13
127-18-4	Tetrachloroethene	165.83	ND		34	6.8
108-88-3	Toluene	92.14	ND		28	28
156-60-5	trans-1,2-Dichloroethene	96.94	9.3	J	20	5.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND	*	37	18
71-55-6	1,1,1-Trichloroethane	133.41	2000		27	4.1
79-00-5	1,1,2-Trichloroethane	133.41	ND		27	7.2
79-01-6	Trichloroethene	131.39	3600		13	4.7
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		25	10
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		25	7.7
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		25	8.0
75-01-4	Vinyl chloride	62.50	ND		6.4	4.6
1330-20-7	Xylenes, Total	106.17	ND		43	6.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P110.D				
Lims ID:	140-6811-A-6				
Client ID:	BLDG-A INFLUENT				
Sample Type:	Client				
Inject. Date:	19-Jan-2017 22:47:30	ALS Bottle#:	10	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	2.5000		
Sample Info:	140-0003854-015				
Misc. Info.:	140-6811-a-6@2.50				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Jan-2017 10:54:07	Calib Date:	26-Nov-2016 01:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				
First Level Reviewer: tajh		Date:	20-Jan-2017 10:52:14		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.600	8.597	0.003	99	266542	4.00	
* 2 1,4-Difluorobenzene	114	10.800	10.803	-0.003	95	1140254	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.572	15.574	-0.002	88	884623	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.218	17.220	-0.002	95	476840	3.40	
27 1,1-Dichloroethene	96	5.738	5.735	0.003	96	120244	1.50	
31 Methylene Chloride	84	6.077	6.079	-0.002	96	47234	0.6013	
34 trans-1,2-Dichloroethene	96	6.879	6.876	0.003	94	3029	0.0376	
37 1,1-Dichloroethane	63	7.287	7.290	-0.003	100	49368	0.3220	
42 cis-1,2-Dichloroethene	96	8.272	8.269	0.003	97	140837	1.77	
44 Chloroform	83	8.611	8.613	-0.002	27	4592	0.0275	
47 1,1,1-Trichloroethane	97	9.638	9.635	0.003	97	1000239	5.80	
51 Benzene	78	10.246	10.243	0.003	97	17424	0.0841	
59 Trichloroethene	130	11.521	11.523	-0.002	97	1056806	10.8	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

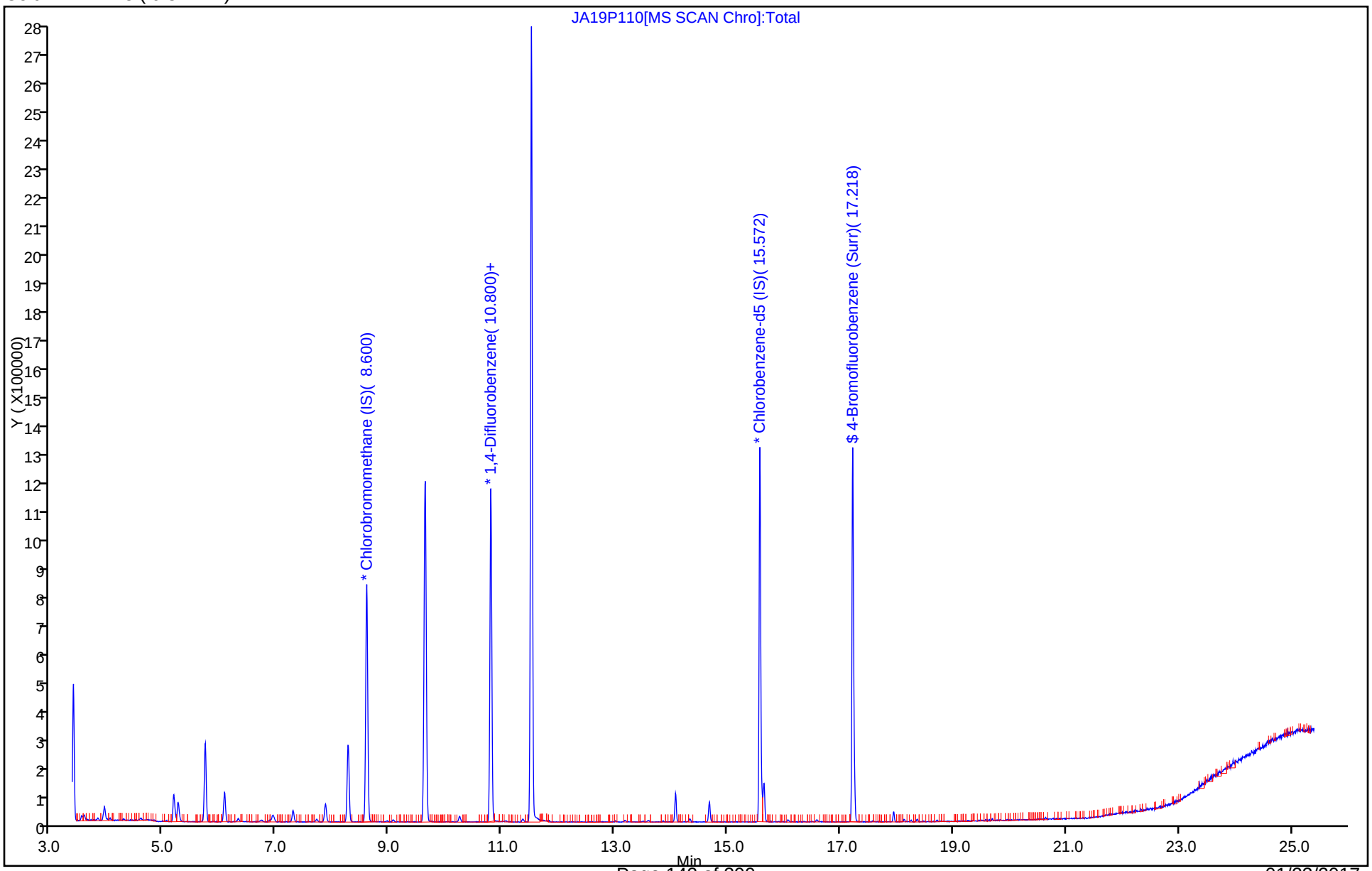
Report Date: 20-Jan-2017 10:55:24 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P110.D

Injection Date:	19-Jan-2017 22:47:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-6811-A-6	Lab Sample ID:	140-6811-6	Worklist Smp#:	15
Client ID:	BLDG-A INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	2.5000	ALS Bottle#:	10
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

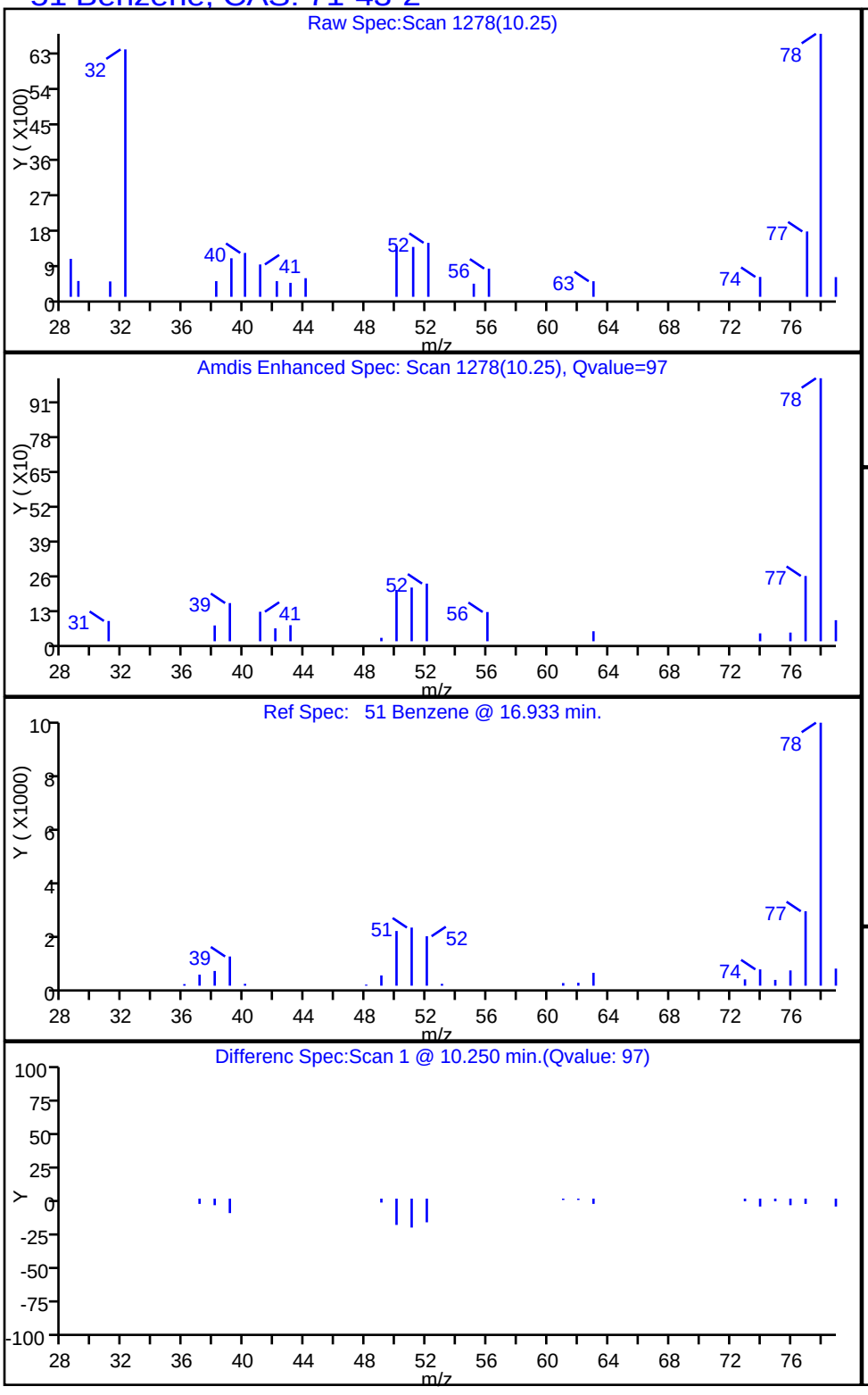
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P110.D				
Lims ID:	140-6811-A-6				
Client ID:	BLDG-A INFLUENT				
Sample Type:	Client				
Inject. Date:	19-Jan-2017 22:47:30	ALS Bottle#:	10	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	2.5000		
Sample Info:	140-0003854-015				
Misc. Info.:	140-6811-a-6@2.50				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Jan-2017 10:54:07	Calib Date:	26-Nov-2016 01:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				
First Level Reviewer: tajh		Date:	20-Jan-2017 10:52:14		

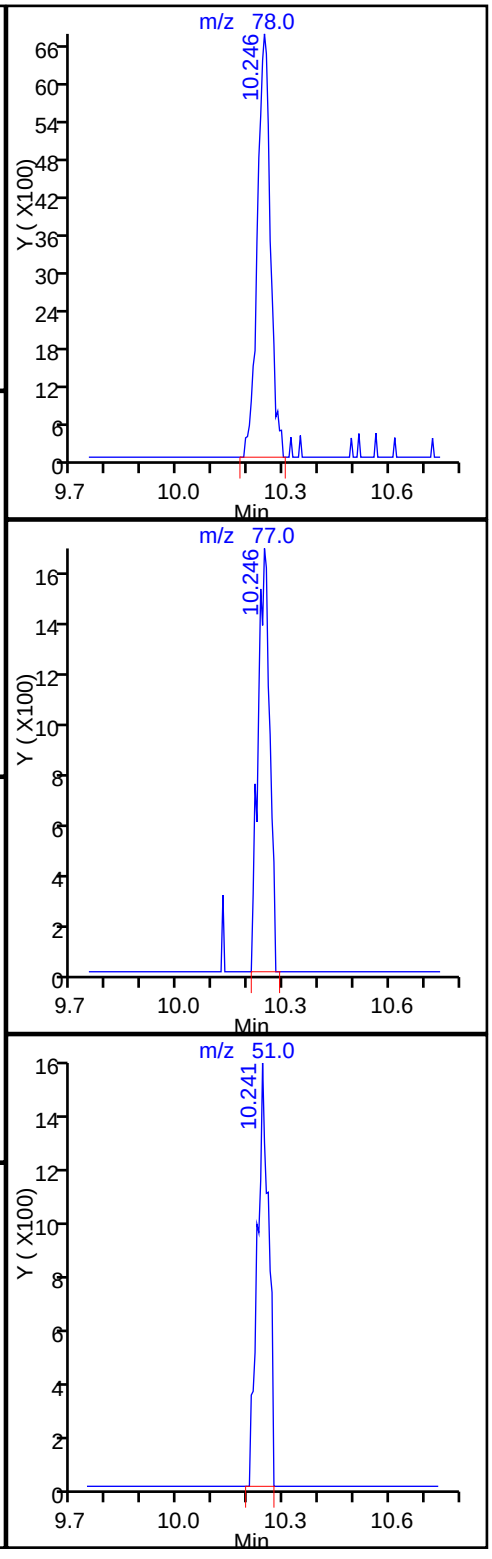
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.40	85.10

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P110.D		
Injection Date:	19-Jan-2017 22:47:30	Instrument ID:	MJ
Lims ID:	140-6811-A-6	Lab Sample ID:	140-6811-6
Client ID:	BLDG-A INFLUENT		
Operator ID:	7126	ALS Bottle#:	10 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	2.5000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

51 Benzene, CAS: 71-43-2



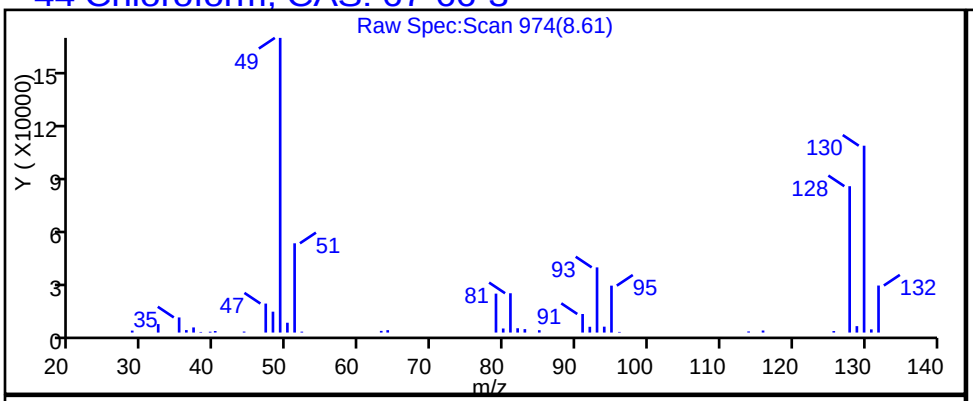


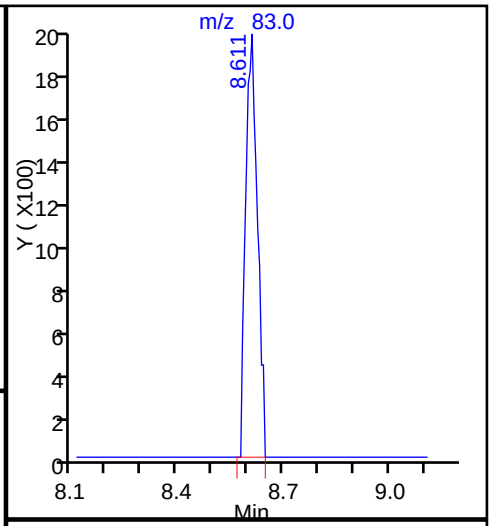
TestAmerica Knoxville

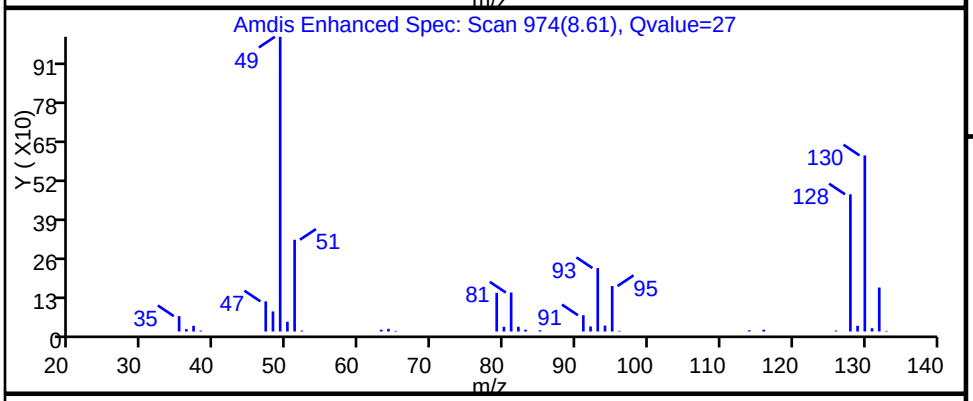
Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P110.D

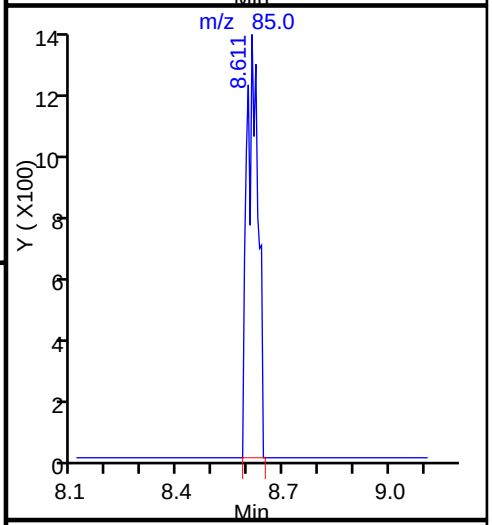
Injection Date:	19-Jan-2017 22:47:30	Instrument ID:	MJ
Lims ID:	140-6811-A-6	Lab Sample ID:	140-6811-6
Client ID:	BLDG-A INFLUENT		
Operator ID:	7126	ALS Bottle#:	10 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	2.5000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

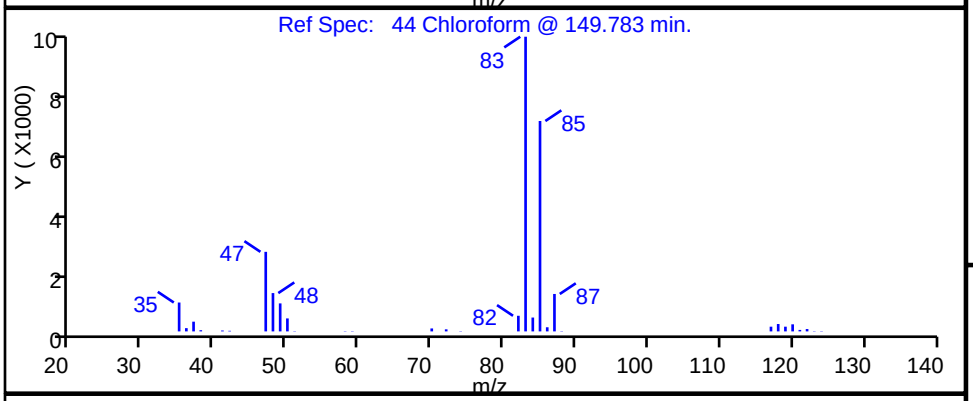
44 Chloroform, CAS: 67-66-3

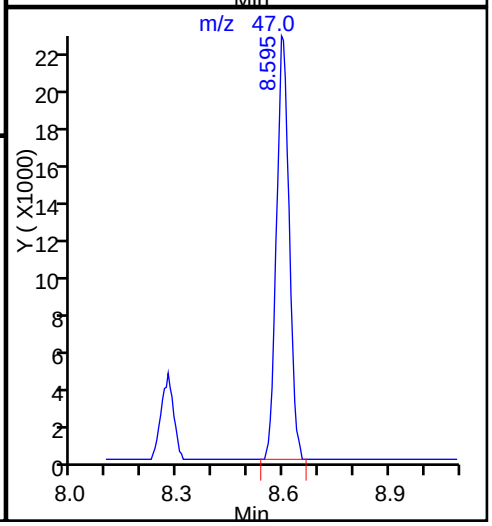


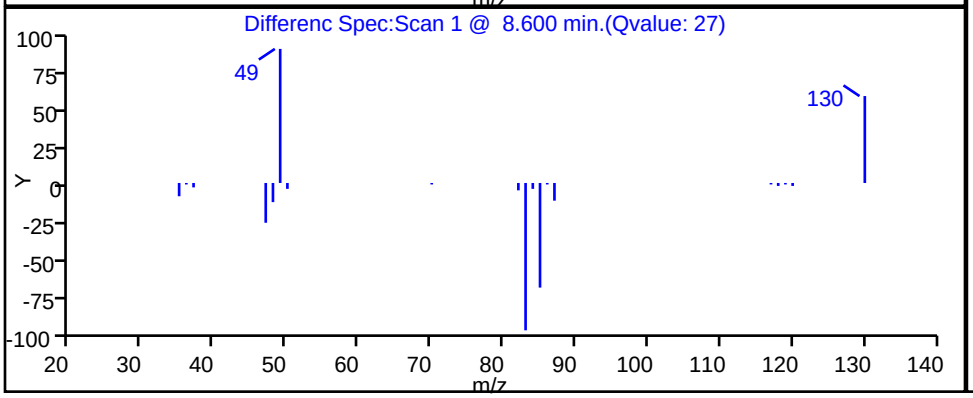








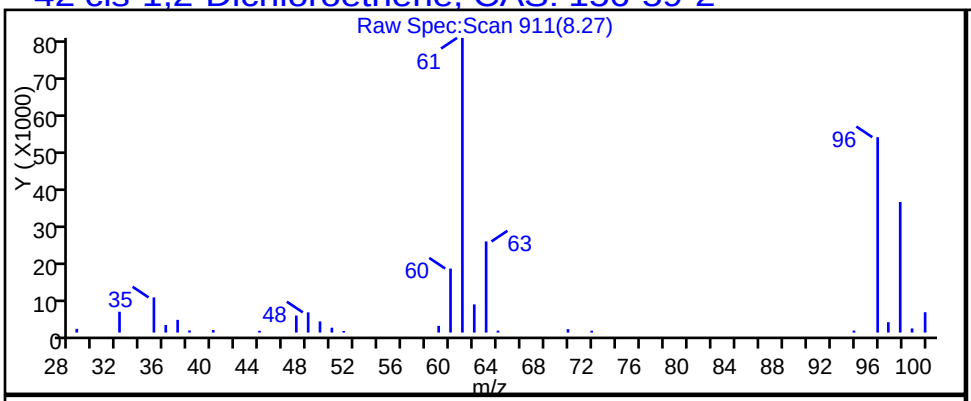


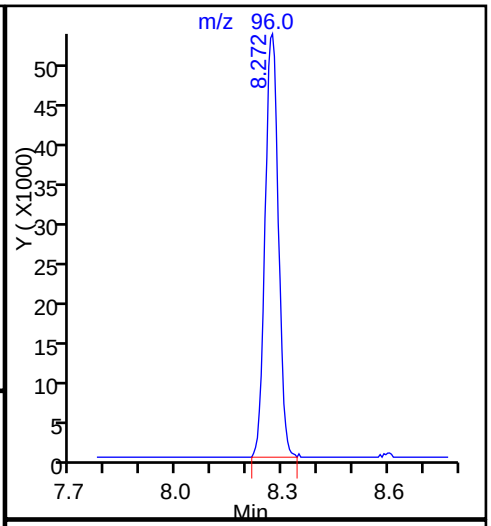


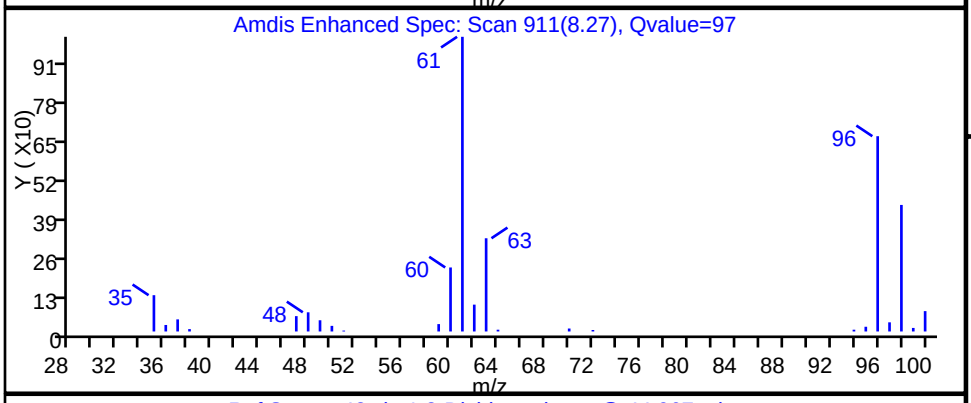
TestAmerica Knoxville

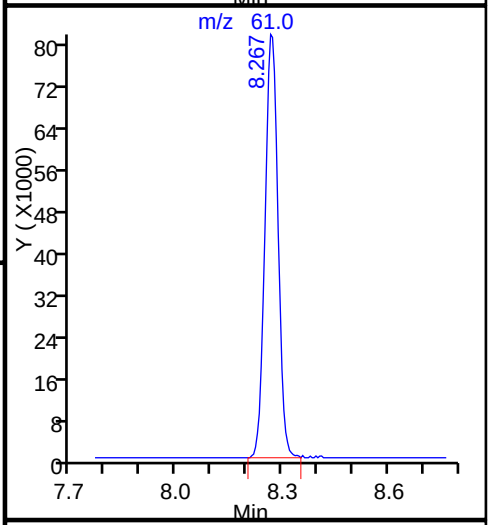
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P110.D		
Injection Date:	19-Jan-2017 22:47:30	Instrument ID:	MJ
Lims ID:	140-6811-A-6	Lab Sample ID:	140-6811-6
Client ID:	BLDG-A INFLUENT		
Operator ID:	7126	ALS Bottle#:	10 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	2.5000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

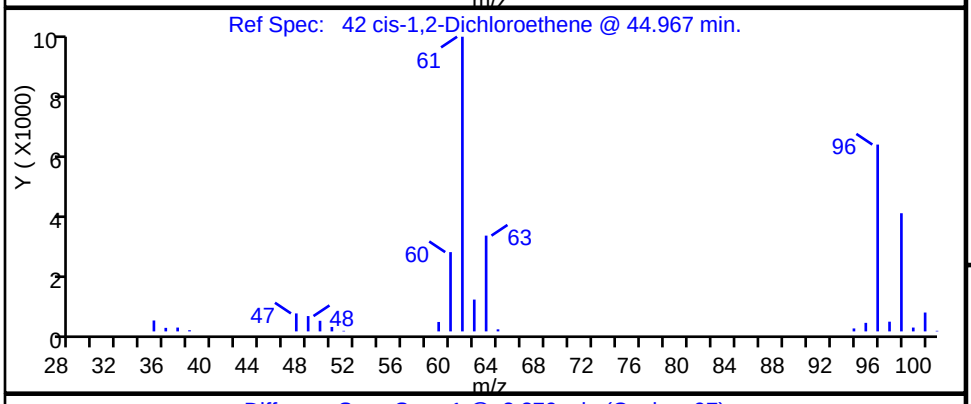
42 cis-1,2-Dichloroethene, CAS: 156-59-2

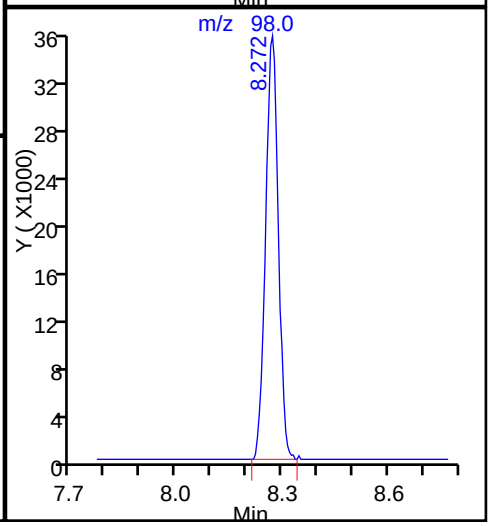


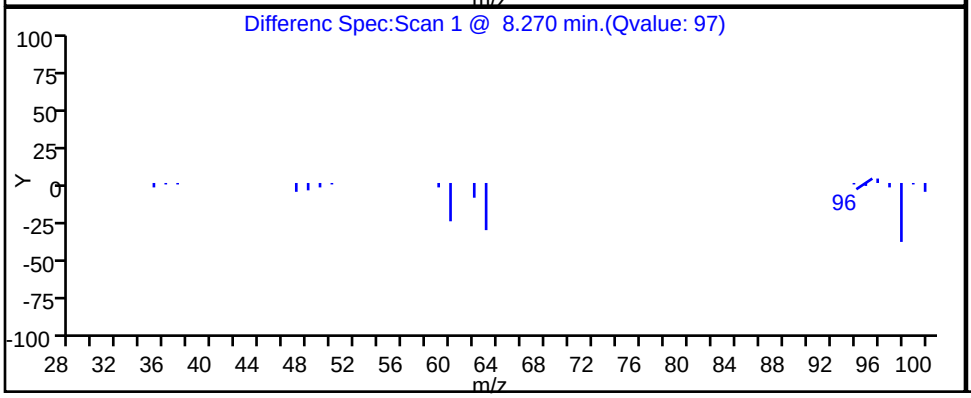








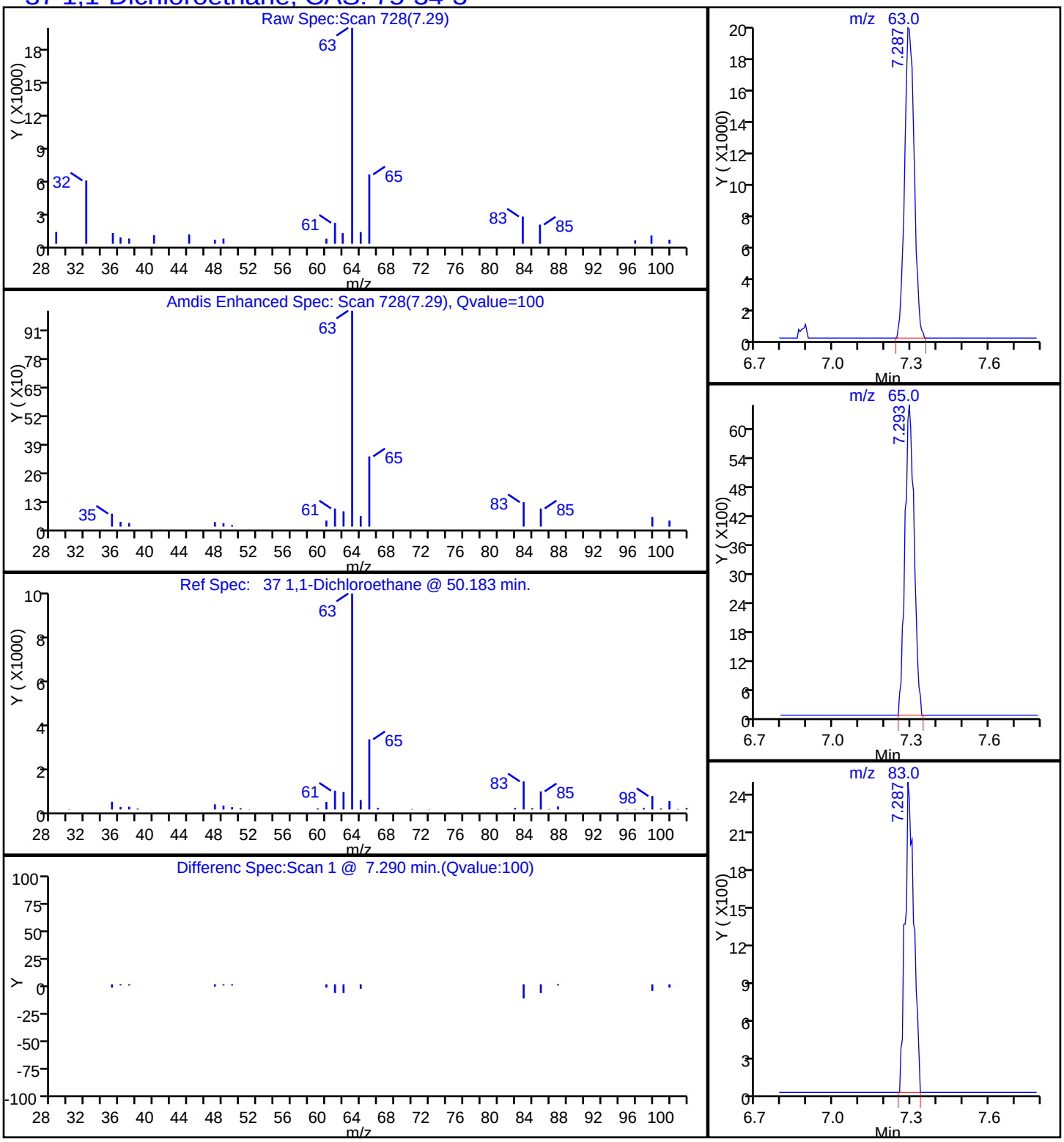




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P110.D				
Injection Date:	19-Jan-2017 22:47:30	Instrument ID:	MJ		
Lims ID:	140-6811-A-6	Lab Sample ID:	140-6811-6		
Client ID:	BLDG-A INFLUENT				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	2.5000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

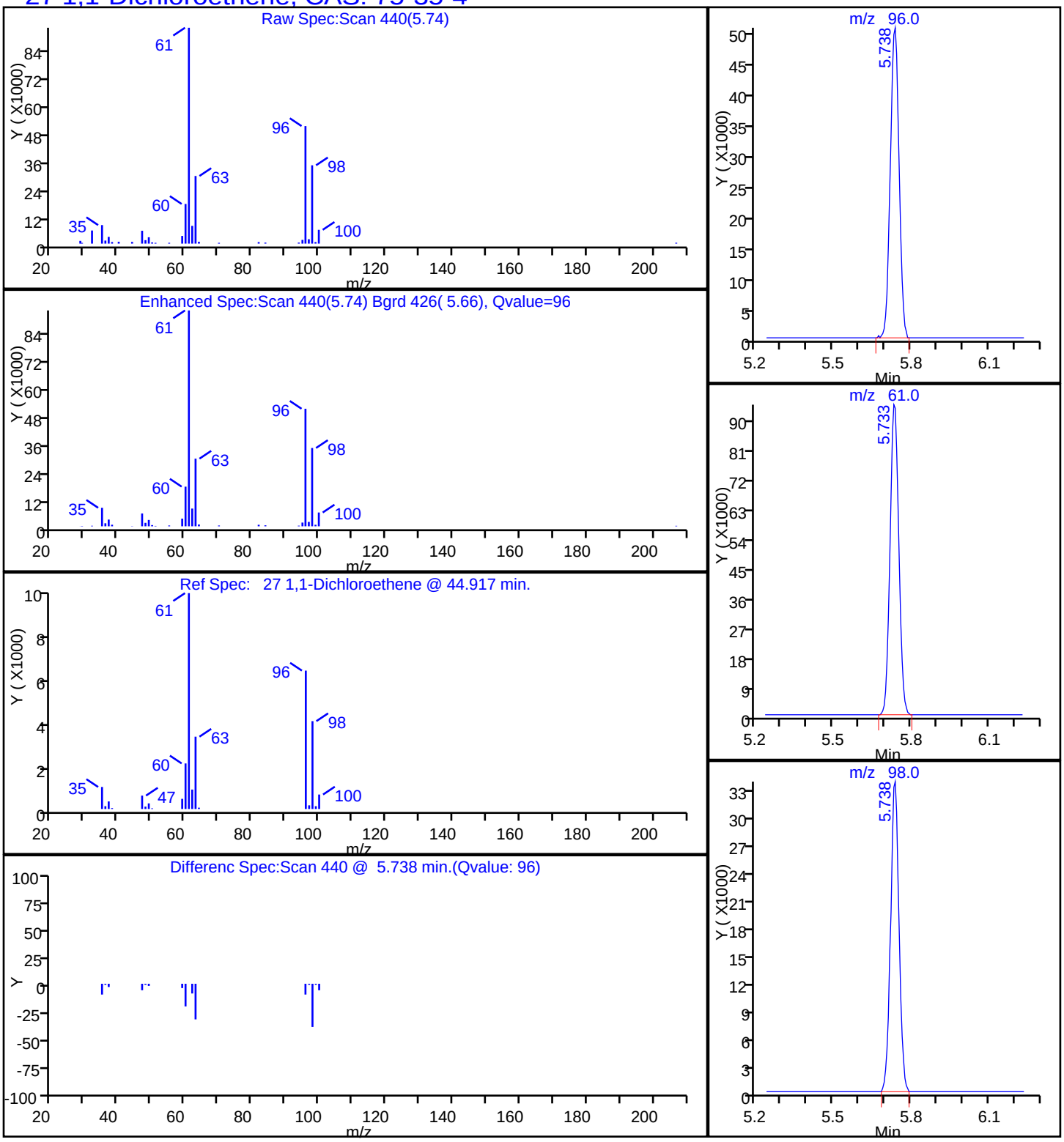
37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P110.D		
Injection Date:	19-Jan-2017 22:47:30	Instrument ID:	MJ
Lims ID:	140-6811-A-6	Lab Sample ID:	140-6811-6
Client ID:	BLDG-A INFLUENT		
Operator ID:	7126	ALS Bottle#:	10 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	2.5000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4

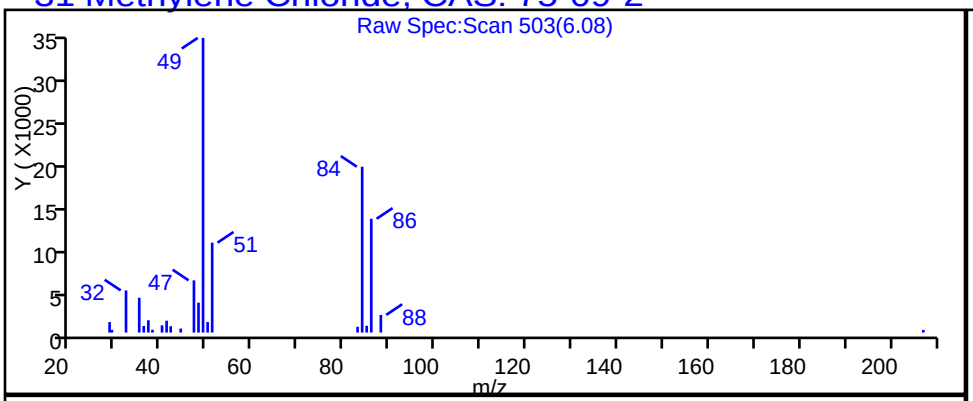


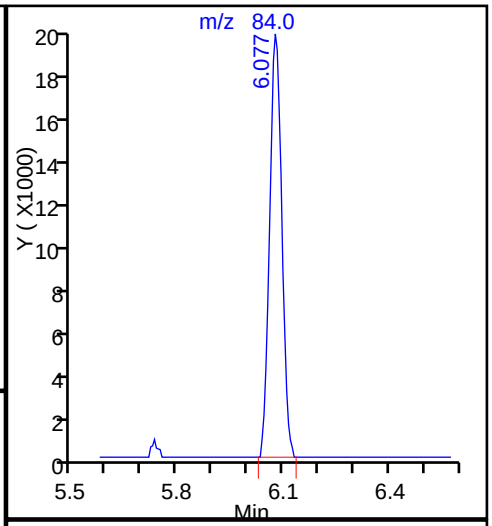
TestAmerica Knoxville

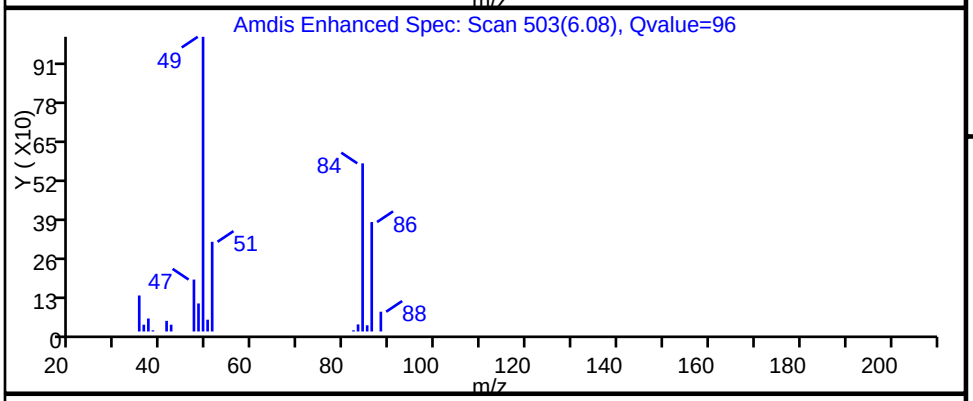
Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P110.D

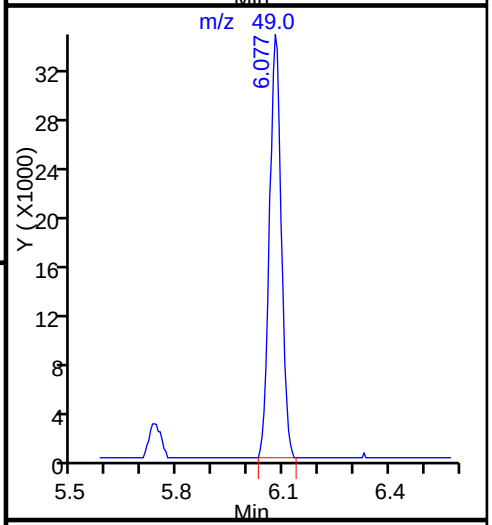
Injection Date:	19-Jan-2017 22:47:30	Instrument ID:	MJ
Lims ID:	140-6811-A-6	Lab Sample ID:	140-6811-6
Client ID:	BLDG-A INFLUENT		
Operator ID:	7126	ALS Bottle#:	10 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	2.5000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

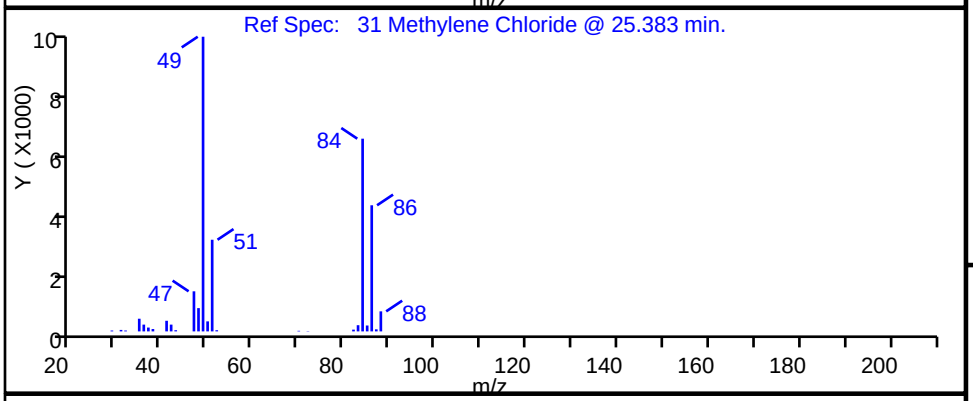
31 Methylene Chloride, CAS: 75-09-2

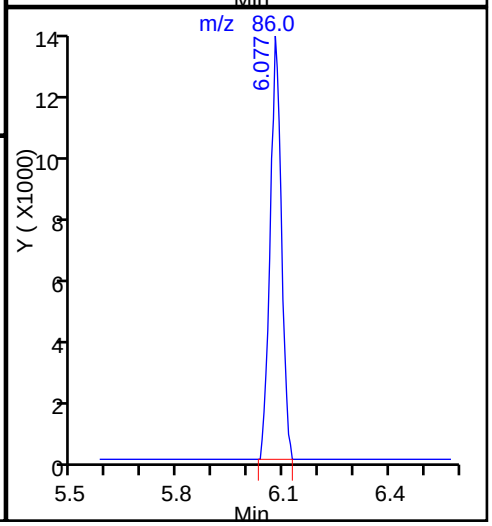


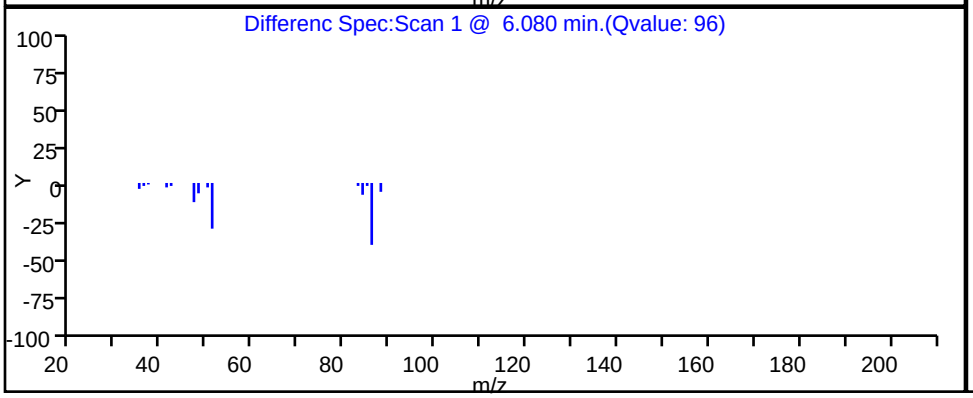






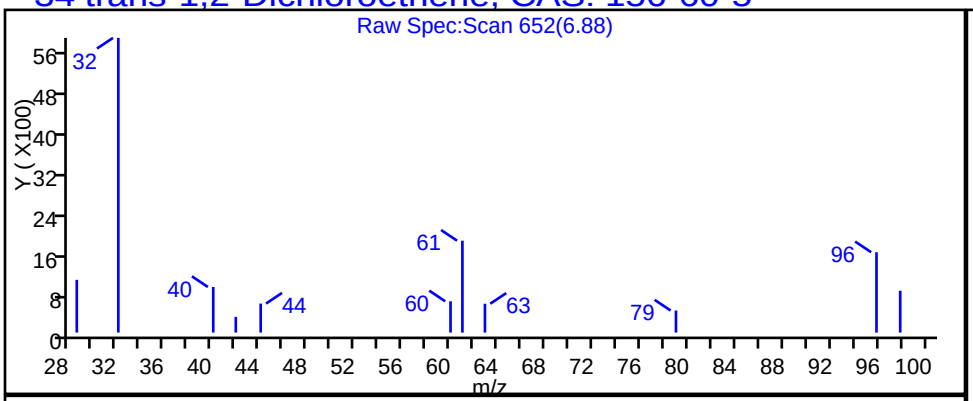


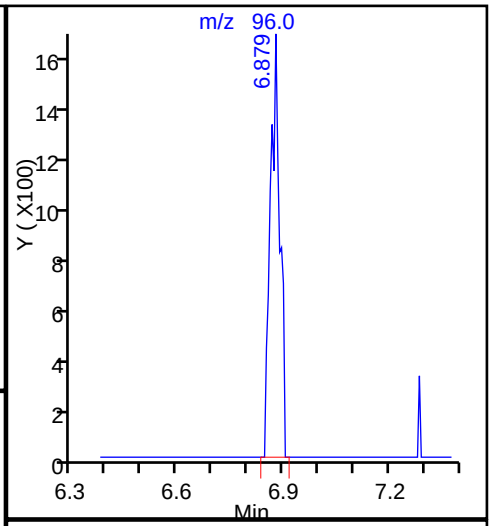


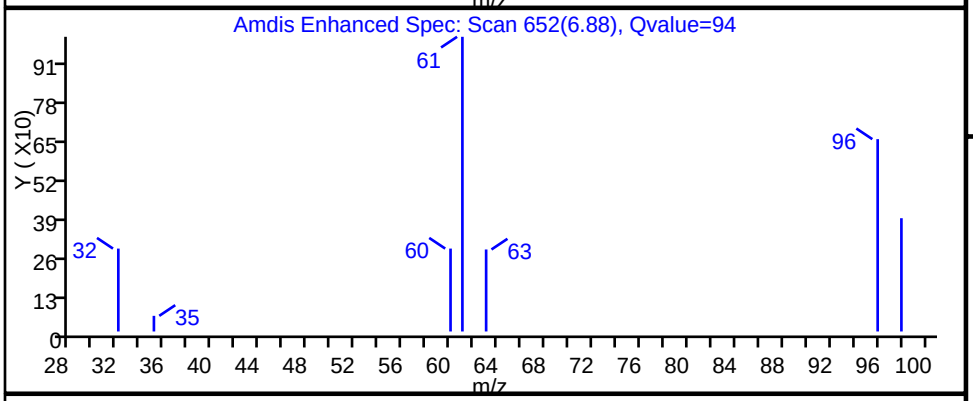


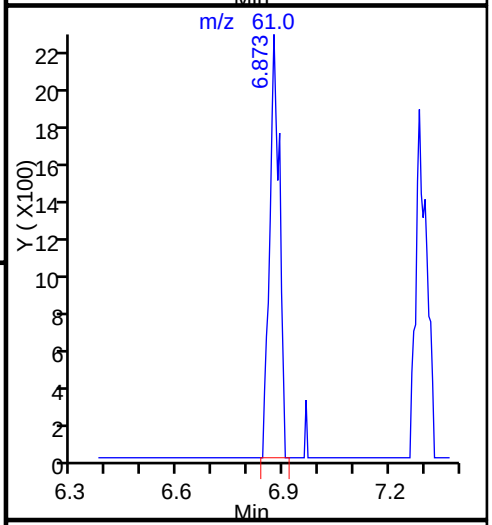
Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P110.D
Injection Date: 19-Jan-2017 22:47:30 Instrument ID: MJ
Lims ID: 140-6811-A-6 Lab Sample ID: 140-6811-6
Client ID: BLDG-A INFLUENT
Operator ID: 7126 ALS Bottle#: 10 Worklist Smp#: 15
Purge Vol: 500.000 mL Dil. Factor: 2.5000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

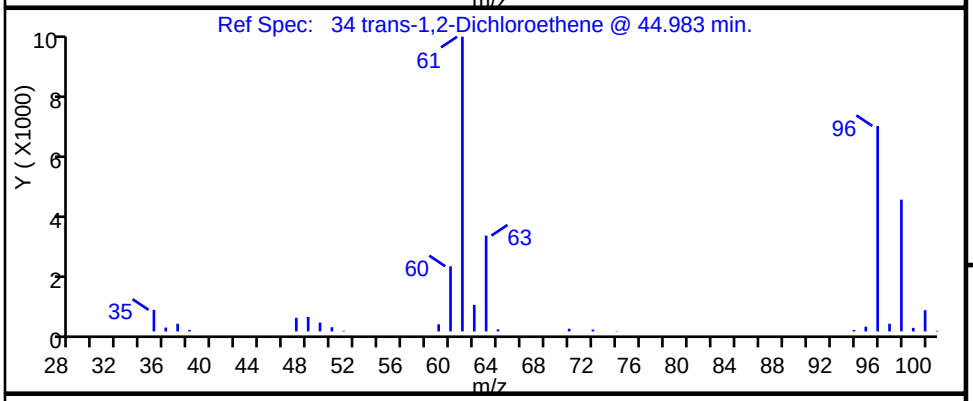
34 trans-1,2-Dichloroethene, CAS: 156-60-5

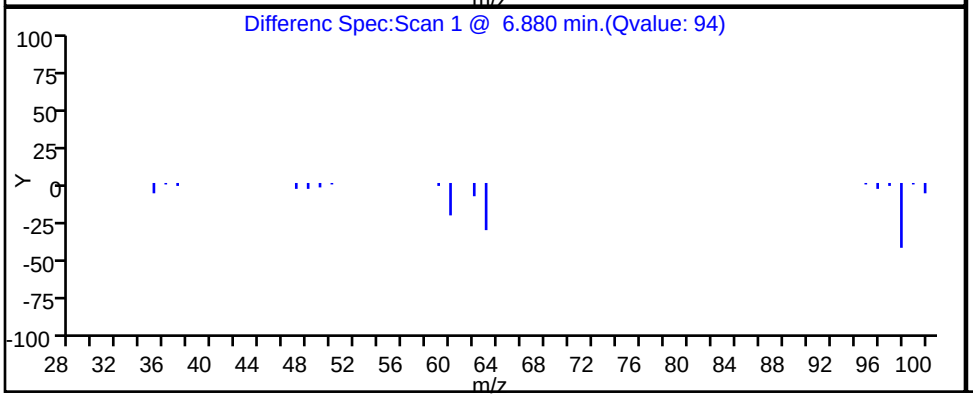


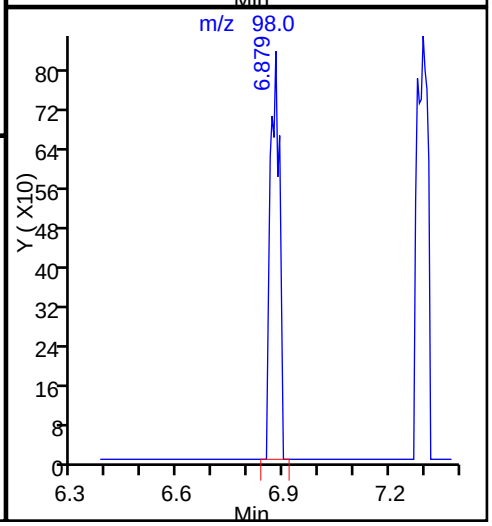








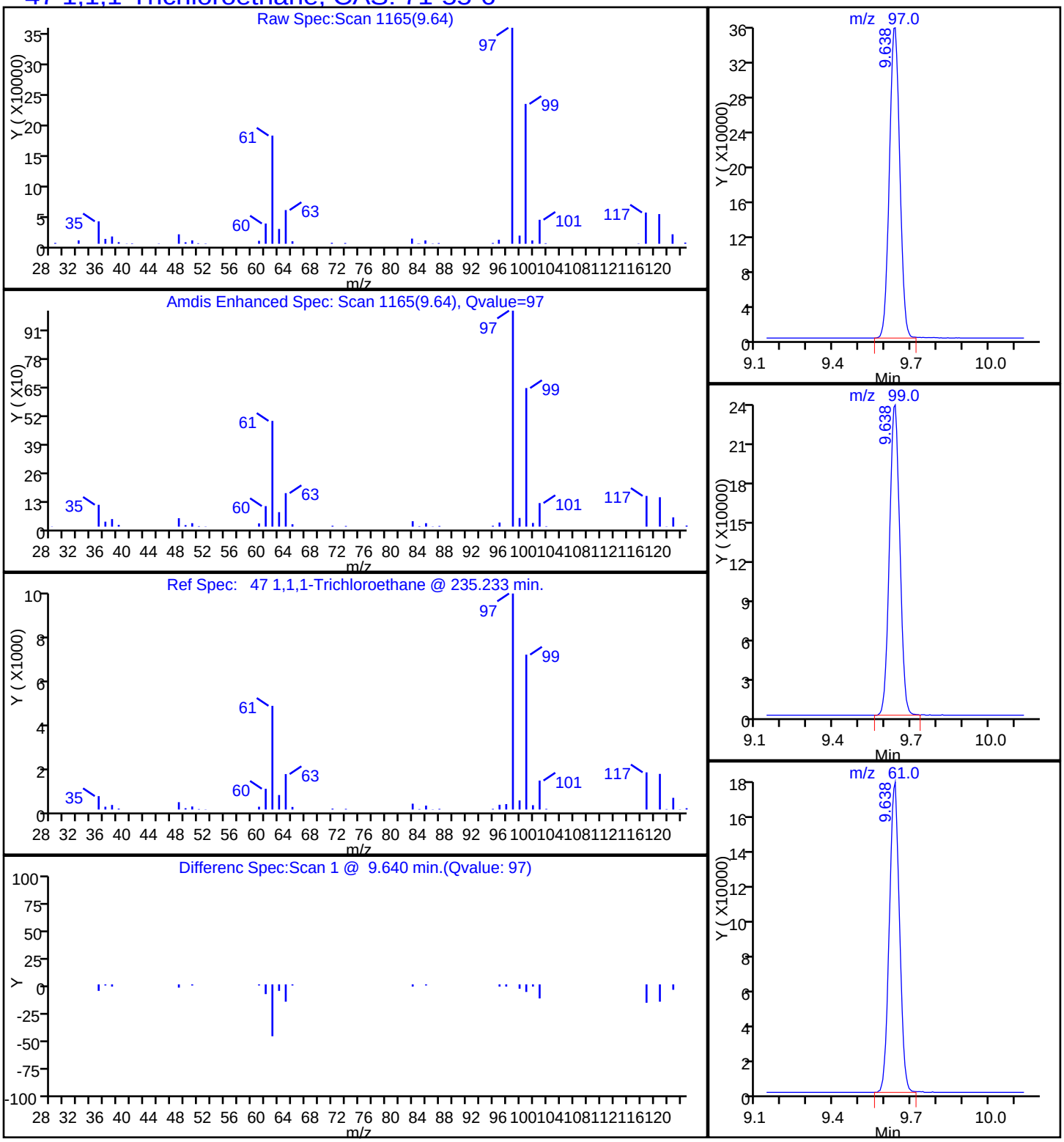




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P110.D		
Injection Date:	19-Jan-2017 22:47:30	Instrument ID:	MJ
Lims ID:	140-6811-A-6	Lab Sample ID:	140-6811-6
Client ID:	BLDG-A INFLUENT		
Operator ID:	7126	ALS Bottle#:	10 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	2.5000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

47 1,1,1-Trichloroethane, CAS: 71-55-6

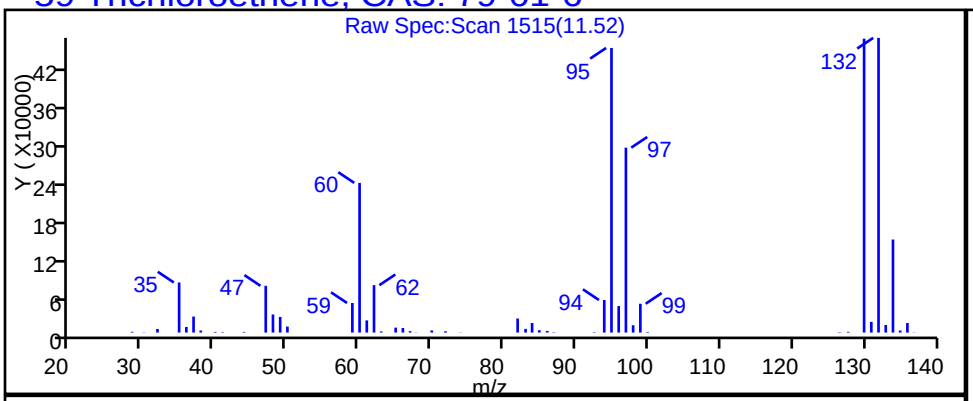


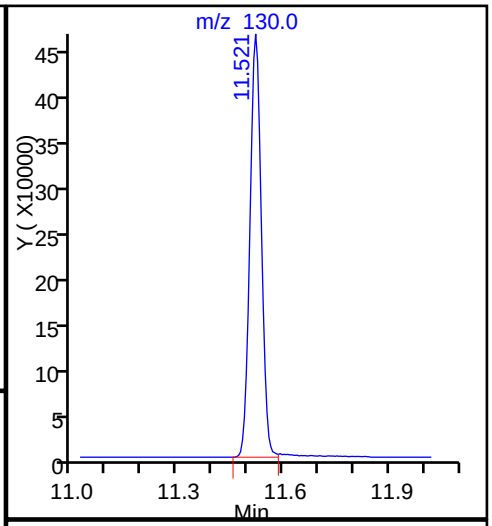
TestAmerica Knoxville

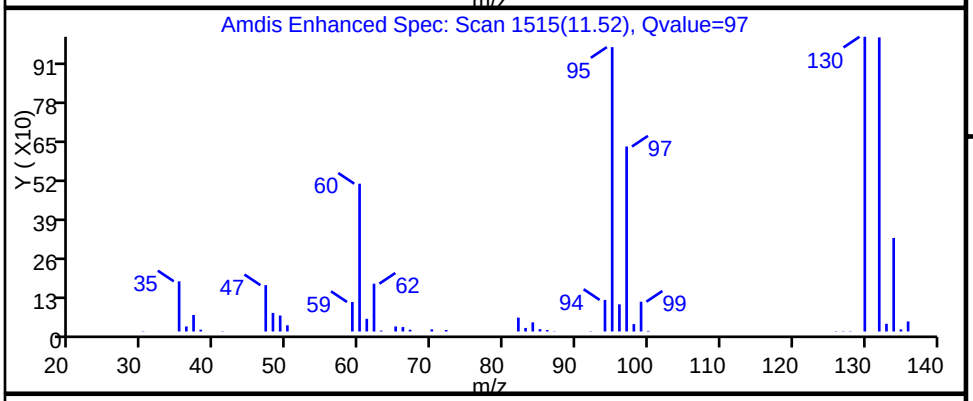
Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JA19P110.D

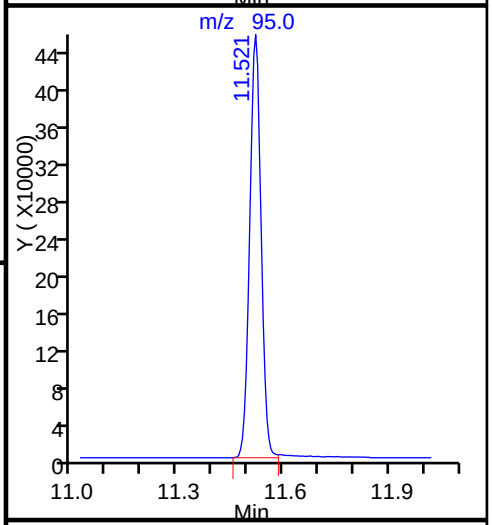
Injection Date:	19-Jan-2017 22:47:30	Instrument ID:	MJ
Lims ID:	140-6811-A-6	Lab Sample ID:	140-6811-6
Client ID:	BLDG-A INFLUENT		
Operator ID:	7126	ALS Bottle#:	10 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	2.5000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

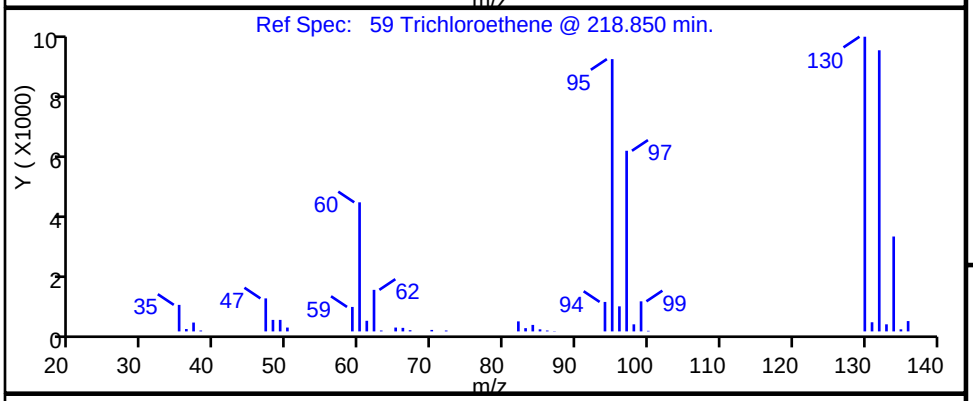
59 Trichloroethene, CAS: 79-01-6

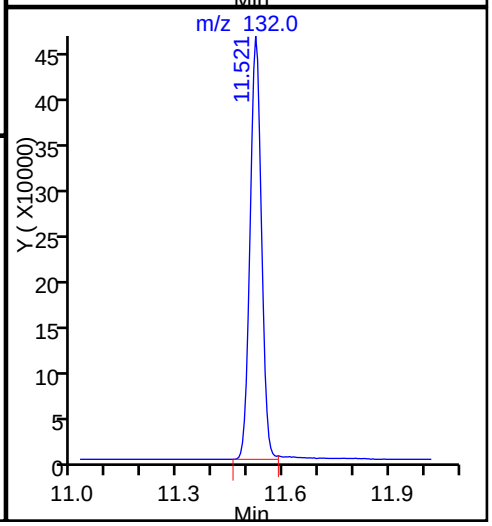


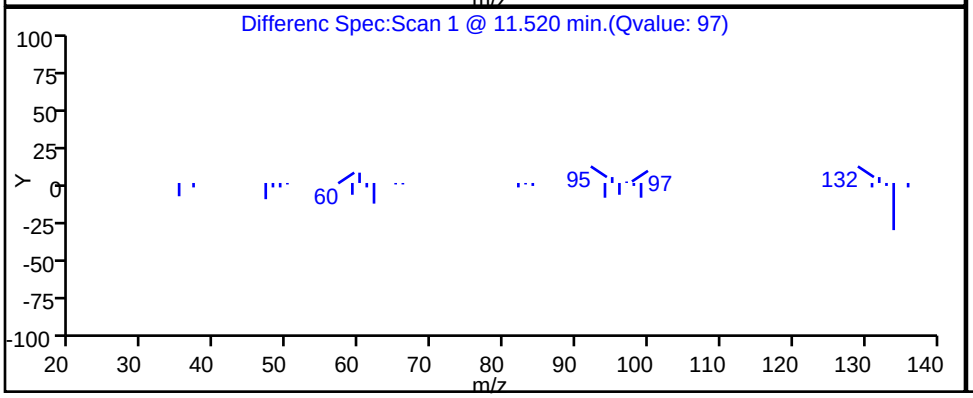












FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-7241/2	JK25IC01X.D
Level 2	IC 140-7241/3	JK25IC02X.D
Level 3	IC 140-7241/4	JK25IC03X.D
Level 4	IC 140-7241/5	JK25IC04X.D
Level 5	IC 140-7241/6	JK25IC05X.D
Level 6	ICIS 140-7241/7	JK25IC06X.D
Level 7	IC 140-7241/8	JK25IC07X.D
Level 8	IC 140-7241/9	JK25IC08X.D
Level 9	IC 140-7241/10	JK25IC09X.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.3279	0.5209 0.3424	0.3376 0.3408	0.3209 0.3492	0.3466	Ave		0.3608				18.1		30.0			
Propene	+++++ 1.1758	+++++ 1.1993	1.3594 1.2672	1.2515 1.2587	1.2062	Ave		1.2455				4.9		30.0			
Dichlorodifluoromethane	3.8475 3.0537	3.3487 3.2136	3.1580 3.1835	2.9958 3.2159	3.1307	Ave		3.2386				7.7		30.0			
Chloromethane	+++++ 0.4359	0.5252 0.4576	0.4677 0.4580	0.4181 0.4804	0.4514	Ave		0.4618				6.9		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++ 2.0718	1.8918 1.6896	1.9626 1.5936	1.6292 1.6718	1.8086	Ave		1.7899				9.6		30.0			
Acetaldehyde	+++++ 0.4566	+++++ 0.4368	0.6805 0.4719	0.4532 0.5131	0.4805	Ave		0.4989				16.8		30.0			
Vinyl chloride	1.5299 1.3297	1.4001 1.3957	1.3464 1.3972	1.2586 1.4297	1.3793	Ave		1.3852				5.4		30.0			
Butane	2.9735 2.2299	2.5054 2.3309	2.3789 2.3726	2.1780 2.4282	2.3273	Ave		2.4138				9.6		30.0			
1,3-Butadiene	+++++ 1.0536	1.1806 1.1114	1.1186 1.1221	1.0201 1.1708	1.1152	Ave		1.1116				4.8		30.0			
Bromomethane	+++++ 1.1936	1.2661 1.2491	1.2107 1.2599	1.1307 1.2876	1.2587	Ave		1.2320				4.1		30.0			
Chloroethane	+++++ 0.6554	0.7015 0.6546	0.6348 0.6662	0.6137 0.6695	0.6603	Ave		0.6570				3.9		30.0			
Ethanol	0.5705 0.5223	0.5667 0.5053	0.5919 0.4982	0.4772 0.4781	0.5432	Ave		0.5282				8.0		30.0			
Vinyl bromide	1.3456 1.1540	1.2167 1.2054	1.1654 1.2260	1.0712 1.2467	1.2246	Ave		1.2062				6.2		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	2.0288 1.6960	1.8143 1.7503	1.6822 1.7808	1.5836 1.8155	1.7549	Ave		1.7674				6.9		30.0			
Trichlorofluoromethane	3.6024 3.2281	3.3180 3.3173	3.1843 3.3742	2.9197 3.3969	3.3115	Ave		3.2947				5.6		30.0			
Acrolein	+++++ 0.3517	+++++ 0.3409	0.5264 0.3539	0.3333 0.4239	0.3839	Ave		0.3877				17.7		30.0			
Acetonitrile	+++++ 0.4656	+++++ 0.4481	0.5197 0.4687	0.4059 0.5215	0.5094	Ave		0.4770				9.0		30.0			
Acetone	+++++ 0.4196	+++++ 0.3917	+++++ 0.3945	0.4202 0.4174	0.4431	Ave		0.4144				4.6		30.0			
Isopropyl alcohol	2.1209 1.9104	1.9735 1.9294	1.9325 1.9239	1.6981 1.9040	1.9590	Ave		1.9280				5.6		30.0			
Pentane	+++++ 0.1846	+++++ 0.1866	0.1863 0.1929	0.1616 0.1996	0.1846	Ave		0.1852				6.3		30.0			
Ethyl ether	+++++ 1.3268	1.4955 1.2979	1.4011 1.3235	1.1595 1.4364	1.4228	Ave		1.3579				7.7		30.0			
1,1-Dichloroethene	1.4517 1.1478	1.2123 1.1795	1.1371 1.2067	1.0798 1.2269	1.1937	Ave		1.2040				8.6		30.0			
Acrylonitrile	0.9001 0.7158	0.7984 0.7022	0.8029 0.7410	0.6242 0.8371	0.7564	Ave		0.7642				10.6		30.0			
tert-Butyl alcohol	1.8439 1.9956	1.9418 2.0218	1.9150 2.0374	1.7291 1.9964	2.0129	Ave		1.9438				5.2		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	2.8738 2.6185	2.7163 2.6279	2.5695 2.7290	2.4107 2.8100	2.6551	Ave		2.6679				5.1		30.0			
Methylene Chloride	+++++ 1.0931	+++++ 1.0697	1.5404 1.0991	1.1635 1.1074	1.1789	Ave		1.1789				13.9		30.0			
3-Chloropropene	+++++ 1.3409	1.4536 1.3288	1.5147 1.3596	1.2743 1.4217	1.4115	Ave		1.3881				5.5		30.0			
Carbon disulfide	3.9115 3.3893	3.7671 3.4592	3.4541 3.5389	3.2558 3.5681	3.5744	Ave		3.5465				5.5		30.0			
trans-1,2-Dichloroethene	1.3787 1.1690	1.2657 1.1718	1.1799 1.2095	1.0788 1.2275	1.2113	Ave		1.2102				6.7		30.0			
2-Methylpentane	3.5552 3.0451	3.2099 3.0193	3.0439 3.1532	2.7866 3.2386	3.1086	Ave		3.1289				6.6		30.0			
Methyl tert-butyl ether	2.8993 2.3272	2.8445 2.2839	2.5815 2.3429	2.0927 2.4349	2.4571	Ave		2.4738				10.6		30.0			
1,1-Dichloroethane	2.6041 2.2322	2.4643 2.1350	2.2671 2.2124	2.1642 2.3110	2.3145	Ave		2.3005				6.5		30.0			
Vinyl acetate	2.9851 2.7422	3.0101 2.6575	2.9743 2.7570	2.3823 3.0708	2.9180	Ave		2.8330				7.8		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.3708	0.3334 0.3586	0.3892 0.3677	0.3327 0.3798	0.3687	Ave		0.3626				5.6		30.0			
Hexane	+++++ 1.0259	1.2313 0.9943	1.0969 1.0492	0.9671 1.1068	1.0490	Ave		1.0651				7.7		30.0			
Isopropyl ether	4.0607 3.6638	3.7881 3.6242	3.9354 3.7695	3.2767 3.8864	3.9218	Ave		3.7696				6.1		30.0			
cis-1,2-Dichloroethene	1.4783 1.1314	1.2330 1.0794	1.1960 1.1235	1.1085 1.1935	1.1910	Ave		1.1928				9.9		30.0			
Ethyl acetate	2.4761 2.0850	2.2471 2.0350	2.1376 2.0630	1.7887 2.1294	2.0820	Ave		2.1160				8.6		30.0			
Chloroform	3.0247 2.3882	2.7668 2.2280	2.6010 2.3049	2.3218 2.4506	2.4911	Ave		2.5086				10.1		30.0			
Tert-butyl ethyl ether	2.7965 2.8749	3.0587 2.8302	3.0183 2.9494	2.4991 3.0294	3.0020	Ave		2.8954				6.1		30.0			
Tetrahydrofuran	+++++ 1.1460	1.3809 1.0826	1.2631 1.1127	1.0323 1.2144	1.1865	Ave		1.1773				9.4		30.0			
1,1,1-Trichloroethane	3.1145 2.5058	2.7531 2.3548	2.6301 2.4015	2.4118 2.5385	2.5942	Ave		2.5894				9.0		30.0			
1,2-Dichloroethane	0.4336 0.3666	0.3727 0.3311	0.3707 0.3547	0.3467 0.4034	0.3755	Ave		0.3728				8.2		30.0			
1-Butanol	+++++ 0.1215	0.1246 0.1211	0.1092 0.1266	0.0991 0.1337	0.1196	Ave		0.1194				9.0		30.0			
Cyclohexane	+++++ 0.1293	+++++ 0.1205	0.1569 0.1244	0.1230 0.1388	0.1342	Ave		0.1325				9.5		30.0			
Benzene	0.9199 0.6870	0.7288 0.6372	0.7252 0.6816	0.6544 0.7950	0.7103	Ave		0.7266				11.8		30.0			
Carbon tetrachloride	0.7660 0.6506	0.6614 0.6021	0.6423 0.5137	0.5728 0.6916	0.6637	Ave		0.6405				11.3		30.0			
2,3-Dimethylpentane	+++++ 0.1639	0.1817 0.1498	0.1699 0.1601	0.1592 0.1819	0.1674	Ave		0.1667				6.6		30.0			
Thiophene	0.5058 0.3990	0.4152 0.3696	0.4238 0.3916	0.3745 0.4451	0.4135	Ave		0.4153				10.0		30.0			
Tert-amyl methyl ether	+++++ 0.6604	0.5982 0.6006	0.5926 0.6188	0.5386 0.6438	0.7224	Ave		0.6219				8.8		30.0			
2,2,4-Trimethylpentane	+++++ 1.3383	1.5785 1.2186	1.4409 1.2948	1.2908 1.4822	1.3763	Ave		1.3776				8.5		30.0			
Heptane	0.3156 0.2383	0.2763 0.2197	0.2614 0.2336	0.2274 0.2722	0.2470	Ave		0.2546				11.8		30.0			
1,2-Dichloropropane	0.3317 0.2850	0.2964 0.2668	0.2887 0.2829	0.2636 0.3323	0.3019	Ave		0.2944				8.4		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.4047 0.3224	0.3508 0.3009	0.3621 0.3176	0.3154 0.3719	0.3318	Ave		0.3420				9.7		30.0			
Dibromomethane	0.4152 0.3099	0.3258 0.2848	0.3210 0.3000	0.3016 0.3484	0.3163	Ave		0.3248				11.8		30.0			
Bromodichloromethane	0.7155 0.5386	0.5955 0.4942	0.5617 0.5262	0.4941 0.6104	0.5528	Ave		0.5654				12.2		30.0			
1,4-Dioxane	0.0760 0.0803	0.0765 0.0791	0.0708 0.0817	0.0636 0.0846	0.0805	Ave		0.0770				8.3		30.0			
Methyl methacrylate	+++++ 0.2758	0.2781 0.2750	0.2691 0.2947	0.2314 0.3249	0.2784	Ave		0.2784				9.4		30.0			
Methylcyclohexane	+++++ 0.5470	0.6129 0.4948	0.5612 0.5246	0.5222 0.5970	0.5628	Ave		0.5528				7.1		30.0			
4-Methyl-2-pentanone (MIBK)	0.6044 0.5456	0.5569 0.5396	0.5362 0.5676	0.4620 0.6066	0.5373	Ave		0.5507				7.8		30.0			
cis-1,3-Dichloropropene	0.4472 0.3699	0.3541 0.3619	0.3536 0.3931	0.3411 0.4436	0.3748	Ave		0.3821				10.1		30.0			
trans-1,3-Dichloropropene	0.4678 0.3274	0.3618 0.3204	0.2858 0.3429	0.2743 0.3961	0.3224	Ave		0.3443				17.2		30.0			
Toluene Range	2.9852 2.1585	2.2448 2.0285	2.1821 2.1704	1.8063 2.4356	2.2621	Ave		2.2526				14.4		30.0			
Toluene	+++++ 0.8479	0.8984 0.7936	0.8894 0.8539	0.7495 0.9595	0.8883	Ave		0.8601				7.6		30.0			
1,1,2-Trichloroethane	0.3435 0.2646	0.2696 0.2425	0.2602 0.2572	0.2323 0.2883	0.2753	Ave		0.2704				11.9		30.0			
2-Methylthiophene	+++++ 0.7403	0.7593 0.6716	0.6686 0.7239	0.6483 0.8025	0.7594	Ave		0.7217				7.5		30.0			
3-Methylthiophene	+++++ 0.6788	0.7328 0.6493	0.6904 0.6885	0.6001 0.7729	0.6991	Ave		0.6890				7.5		30.0			
2-Hexanone	+++++ 0.2614	0.2290 0.2734	0.2173 0.2785	0.1991 0.2986	0.2517	Ave		0.2511				13.4		30.0			
C8 Range	+++++ 3.1096	+++++ 2.8109	3.2020 2.9646	2.7739 3.3358	3.2719	Ave		3.0670				7.2		30.0			
Octane	0.3590 0.2789	0.3147 0.2536	0.2752 0.2683	0.2446 0.3054	0.2923	Ave		0.2880				12.1		30.0			
Dibromochloromethane	0.7263 0.6428	0.6250 0.5873	0.5865 0.6267	0.5131 0.7138	0.6522	Ave		0.6304				10.4		30.0			
1,2-Dibromoethane (EDB)	0.5581 0.4501	0.4574 0.4226	0.4244 0.4524	0.3554 0.5175	0.4565	Ave		0.4549				12.6		30.0			
Tetrachloroethene	0.4997 0.3580	0.4044 0.3239	0.3567 0.3458	0.3374 0.3924	0.3731	Ave		0.3768				14.0		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorobenzene	0.8119 0.6651	0.6711 0.6266	0.6199 0.6745	0.5616 0.7759	0.6719	Ave		0.6754				11.4		30.0			
2,3-Dimethylheptane	1.1660 1.0785	1.1670 0.9808	1.0695 1.0153	0.9629 1.1134	1.1327	Ave		1.0762				7.1		30.0			
Ethylbenzene	1.3653 0.9774	1.0019 0.9174	0.9920 0.9981	0.7905 1.1242	1.0145	Ave		1.0201				15.4		30.0			
2-Ethylthiophene	0.9035 0.7469	0.7527 0.7105	0.7245 0.7758	0.6125 0.8812	0.7573	Ave		0.7628				11.5		30.0			
m-Xylene & p-Xylene	0.9161 0.7347	0.7271 0.6977	0.7185 0.7666	0.5864 0.8663	0.7608	Ave		0.7527				12.7		30.0			
Nonane	0.7785 0.6367	0.6093 0.6067	0.6044 0.6540	0.5024 0.7504	0.6488	Ave		0.6435				12.7		30.0			
Bromoform	0.6867 0.5981	0.5302 0.5880	0.5387 0.6519	0.4509 0.8044	0.5555	Ave		0.6005				17.2		30.0			
Styrene	0.6616 0.5192	0.4669 0.5187	0.4666 0.5854	0.3764 0.6988	0.5235	Ave		0.5352				18.7		30.0			
o-Xylene	1.0374 0.7741	0.8121 0.7268	0.8252 0.7878	0.6459 0.8841	0.8122	Ave		0.8117				13.3		30.0			
1,1,2,2-Tetrachloroethane	0.7578 0.5860	0.5524 0.5636	0.5036 0.6170	0.4597 0.6778	0.5995	Ave		0.5908				15.1		30.0			
1,2,3-Trichloropropane	+++++ 0.1362	0.1351 0.1310	0.1263 0.1469	0.1017 0.1656	0.1423	Ave		0.1356				13.5		30.0			
Isopropylbenzene	1.4300 1.0460	1.1107 0.9870	1.0783 1.0790	0.8534 1.2030	1.0952	Ave		1.0980				14.3		30.0			
Propylbenzene	0.3117 0.2615	0.2150 0.2492	0.2338 0.2793	0.1871 0.3270	0.2606	Ave		0.2584				17.1		30.0			
2-Chlorotoluene	0.3232 0.2648	0.2511 0.2595	0.2653 0.2876	0.2101 0.3338	0.2744	Ave		0.2744				13.6		30.0			
4-Ethyltoluene	1.1777 0.9153	0.7877 0.8908	0.8034 0.9987	0.6479 1.1417	0.9015	Ave		0.9183				18.4		30.0			
1,3,5-Trimethylbenzene	0.5614 0.4580	0.4000 0.4385	0.4540 0.4896	0.3436 0.5642	0.4574	Ave		0.4630				15.2		30.0			
Alpha Methyl Styrene	0.4217 0.3608	0.2786 0.3630	0.2794 0.4253	0.2366 0.5040	0.3478	Ave		0.3575				23.7		30.0			
Decane	+++++ 0.6528	0.6013 0.6570	0.5953 0.7392	0.4586 0.8575	0.6448	Ave		0.6508				17.7		30.0			
tert-Butylbenzene	1.1493 0.9074	0.8557 0.8661	0.9100 0.9720	0.7027 1.1125	0.9329	Ave		0.9343				14.4		30.0			
1,2,4-Trimethylbenzene	0.9974 0.7933	0.6954 0.7726	0.7121 0.8661	0.5683 0.9996	0.7846	Ave		0.7988				17.5		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	1.5378 1.1932	1.0946 1.1562	1.1832 1.2867	0.8961 1.4520	1.2291	Ave		1.2254				15.4		30.0			
1,3-Dichlorobenzene	0.5550 0.4199	0.3703 0.4402	0.3233 0.5410	0.2865 0.6876	0.4043	Ave		0.4476				28.3		30.0			
Benzyl chloride	+++++ 0.4344	0.3207 0.4606	0.2811 0.5817	0.2549 +++++	0.3836	Ave		0.3881				29.5		30.0			
1,4-Dichlorobenzene	0.4368 0.3614	0.2948 0.3825	0.2705 0.4825	0.2323 +++++	0.3308	Ave		0.3490				24.2		30.0			
4-Isopropyltoluene	1.2247 0.9539	0.8120 0.9215	0.8627 1.0355	0.6793 1.1549	0.9553	Ave		0.9555				17.6		30.0			
1,2,3-Trimethylbenzene	0.7389 0.5904	0.5559 0.5663	0.5748 0.6310	0.4445 0.7050	0.5967	Ave		0.6004				14.3		30.0			
Butylcyclohexane	0.9939 0.7487	0.6964 0.7290	0.7343 0.8014	0.5920 0.8884	0.7723	Ave		0.7729				14.9		30.0			
Indane	0.8395 0.6893	0.5975 0.6764	0.6142 0.7856	0.4850 0.9222	0.6825	Ave		0.6991				19.0		30.0			
1,2-Dichlorobenzene	0.5313 0.4395	0.3695 0.4481	0.3510 0.5483	0.2920 0.6744	0.4257	Ave		0.4533				25.7		30.0			
Indene	0.5216 0.4348	0.3300 0.4414	0.3234 0.5337	0.2717 0.6454	0.4085	Ave		0.4345				27.3		30.0			
Butylbenzene	1.0320 0.8033	0.6580 0.8001	0.6470 0.9309	0.5248 1.0536	0.7655	Ave		0.8017				22.3		30.0			
Undecane	+++++ 0.5973	0.5390 0.5900	0.4922 0.6843	0.4020 0.8030	0.5661	Ave		0.5842				20.7		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 0.6180	0.5048 0.6086	0.5006 0.6944	0.4163 0.7766	0.5937	Ave		0.5891				19.5		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.1739	0.1315 0.1811	0.1242 0.2201	0.1052 +++++	0.1558	Ave		0.1560				25.2		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 0.7255	0.5992 0.7149	0.6031 0.8093	0.4817 0.8971	0.6875	Ave		0.6898				18.8		30.0			
1,2,3,5-Tetramethylbenzene	+++++ 0.4432	0.3662 0.4420	0.3835 0.4915	0.2965 0.5445	0.4246	Ave		0.4240				18.1		30.0			
1,2,3,4-Tetramethylbenzene	+++++ 0.5580	0.5018 0.5469	0.4684 0.6231	0.3685 0.6869	0.5361	Ave		0.5362				17.9		30.0			
Dodecane	+++++ 0.5103	0.4533 0.4838	0.4122 0.5557	0.3131 0.6262	0.5110	Ave		0.4832				19.5		30.0			
1,2,4-Trichlorobenzene	0.1681 0.1556	0.1028 0.1706	0.0957 +++++	0.0776 +++++	0.1423	Ave		0.1304				29.0		30.0			
Naphthalene	0.4947 0.3598	0.2746 0.3910	0.2282 0.5046	0.2037 +++++	0.3360	Ave		0.3491				32.3	*	30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	+++++ 0.1503	0.1107 0.1611	0.0905 0.2166	0.0836 +++++	0.1388	Ave		0.1359				34.0	*	30.0			
Hexachlorobutadiene	0.6292 0.4815	0.4595 0.4700	0.4647 0.5481	0.3282 0.6640	0.4975	Ave		0.5047				19.7		30.0			
1,2,3-Trichlorobenzene	0.1979 0.1824	0.1457 0.1937	0.1256 0.2459	0.0937 +++++	0.1794	Ave		0.1705				27.8		30.0			
2-Methylnaphthalene	+++++ 0.0376	0.0294 0.0397	0.0240 0.0458	0.0144 0.0500	0.0333	Ave		0.0343				33.9		50.0			
1-Methylnaphthalene	+++++ 0.0439	0.0354 0.0453	0.0295 0.0483	0.0162 0.0466	0.0401	Ave		0.0381				28.5		50.0			
4-Bromofluorobenzene (Surr)	0.5598 0.6420	0.6032 0.6644	0.6008 0.6801	0.6245 0.7022	0.6235	Ave		0.6334				7.0		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-7241/2	JK25IC01X.D
Level 2	IC 140-7241/3	JK25IC02X.D
Level 3	IC 140-7241/4	JK25IC03X.D
Level 4	IC 140-7241/5	JK25IC04X.D
Level 5	IC 140-7241/6	JK25IC05X.D
Level 6	ICIS 140-7241/7	JK25IC06X.D
Level 7	IC 140-7241/8	JK25IC07X.D
Level 8	IC 140-7241/9	JK25IC08X.D
Level 9	IC 140-7241/10	JK25IC09X.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 58411	3817 118844	5092 235313	11982 484336	30842	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propene	CBM	Ave	+++++ 209464	+++++ 416325	20501 875090	46736 1745617	107343	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	13281 544024	24537 1115556	47625 2198367	111873 4459893	278609	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	+++++ 77658	3848 158851	7053 316299	15615 666251	40173	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	+++++ 369090	13862 586542	29597 1100458	60841 2318437	160950	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 406708	+++++ 758197	51314 1629284	84629 3557537	213784	+++++ 9.99	+++++ 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl chloride	CBM	Ave	5281 236881	10259 484487	20305 964833	47000 1982759	122746	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butane	CBM	Ave	10264 397262	18358 809131	35876 1638360	81334 3367418	207118	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	+++++ 187703	8651 385793	16869 774881	38093 1623732	99249	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	+++++ 212632	9277 433625	18258 870033	42225 1785611	112019	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	+++++ 116765	5140 227227	9573 460075	22919 928476	58761	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	9847 465217	20763 876962	44631 1720033	89104 3315415	241723	0.196 9.99	0.392 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl bromide	CBM	Ave	4645 205590	8915 418434	17575 846638	40004 1728904	108983	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	7003 302142	13294 607591	25369 1229715	59137 2517794	156174	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Trichlorofluoromethane	CBM	Ave	12435 575081	24312 1151548	48022 2330072	109033 4710858	294702	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrolein	CBM	Ave	+++++ 62656	+++++ 118346	7938 244387	12447 587930	34165	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 82955	+++++ 155542	7837 323650	15157 723270	45336	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 224276	+++++ 407996	+++++ 817306	47081 1736723	118305	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.01
Isopropyl alcohol	CBM	Ave	21965 1021108	43385 2009448	87437 3985916	190258 7921894	523062	0.118 5.99	0.235 12.0	0.476 24.0	1.20 48.0	3.01
Pentane	CBM	Ave	+++++ 32889	+++++ 64760	2810 133194	6036 276851	16429	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl ether	CBM	Ave	+++++ 236371	10958 450555	21130 913954	43301 1992033	126616	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	5011 204488	8883 409463	17148 833287	40325 1701547	106234	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	3107 127525	5850 243769	12108 511675	23310 1160939	67317	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butyl alcohol	CBM	Ave	6365 355509	14228 701844	28880 1406893	64571 2768624	179135	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroetha ne	CBM	Ave	9920 466491	19903 912233	38750 1884507	90023 3896999	236287	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 194734	+++++ 371333	23231 758999	43448 1535696	104918	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	+++++ 238874	10651 461294	22843 938863	47589 1971589	125613	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	13502 603813	27603 1200814	52091 2443791	121583 4948271	318098	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	4759 208258	9274 406768	17794 835250	40286 1702361	107797	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylpentane	CBM	Ave	12272 542486	23520 1048110	45905 2177430	104062 4491353	276646	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	10008 414593	20843 792821	38931 1617852	78151 3376773	218669	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	8989 397664	18057 741147	34190 1527772	80819 3204866	205971	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	10304 488532	22056 922514	44854 1903842	88963 4258617	259685	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Butanone (MEK)	CBM	Ave	+++++ 66052	2443 124487	5869 253927	12424 526678	32810	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Hexane	CBM	Ave	+++++ 182768	9022 345145	16542 724504	36117 1534885	93351	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isopropyl ether	CBM	Ave	14017 652700	27757 1258094	59349 2603004	122364 5389640	349017	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	5103 201554	9035 374711	18037 775858	41397 1655099	105995	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	8547 371439	16465 706434	32237 1424609	66797 2953037	185284	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroform	CBM	Ave	10441 425460	20273 773414	39225 1591650	86703 3398489	221690	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	9653 512166	22412 982477	45518 2036709	93325 4201218	267158	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	+++++ 204152	10118 375805	19048 768341	38550 1684106	105594	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	10751 446406	20173 817437	39664 1658324	90067 3520443	230864	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFBZ	Ave	6047 287059	12345 518857	25128 1078779	58242 2324578	148871	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1-Butanol	DFBZ	Ave	+++++ 95163	4128 189813	7404 385011	16643 770202	47398	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Cyclohexane	DFBZ	Ave	+++++ 101218	+++++ 188882	10636 378419	20665 799986	53224	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Benzene	DFBZ	Ave	12828 537887	24141 998620	49152 2072736	109926 4580943	281600	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFBZ	Ave	10682 509407	21907 943611	43534 1562157	96221 3985428	263147	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylpentane	DFBZ	Ave	+++++ 128303	6018 234828	11513 486787	26735 1047976	66382	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Thiophene	DFBZ	Ave	7053 312374	13753 579159	28726 1190849	62914 2564706	163933	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-amyl methyl ether	CBZd5	Ave	+++++ 439550	16558 826406	34262 1687255	78058 3478703	238993	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 1047845	52286 1909813	97663 3937619	216817 8541251	545679	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Heptane	DFBZ	Ave	4401 186596	9153 344303	17720 710384	38197 1568743	97916	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFBZ	Ave	4626 223106	9817 418060	19570 860195	44282 1914762	119711	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Trichloroethene	DFBZ	Ave	5644 252436	11621 471497	24542 965984	52984 2143254	131547	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromomethane	DFBZ	Ave	5790 242664	10791 446341	21756 912301	50658 2007775	125422	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromodichloromethane	DFBZ	Ave	9978 421714	19726 774474	38075 1600155	83001 3517359	219152	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DFBZ	Ave	1060 62903	2535 123907	4802 248451	10682 487655	31913	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl methacrylate	DFBZ	Ave	+++++ 215926	9213 430899	18239 896296	38866 1872520	110367	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylcyclohexane	DFBZ	Ave	+++++ 428267	20303 775502	38039 1595324	87709 3440508	223142	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	8429 427163	18448 845642	36347 1726160	77604 3495706	213021	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFBZ	Ave	6237 289600	11728 567162	23969 1195443	57296 2556154	148579	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZd 5	Ave	4949 217897	10015 440824	16526 934863	39757 2140300	106665	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene Range	CBZd 5	Ave	31580 1436613	62136 2791156	126167 5917756	261800 13161341	748324	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene	CBZd 5	Ave	+++++ 564299	24869 1091996	51423 2328051	108634 5184820	293852	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZd 5	Ave	3634 176087	7462 333675	15047 701197	33667 1557835	91074	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylthiophene	CBZd 5	Ave	+++++ 492684	21017 924136	38657 1973707	93967 4336537	251216	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
3-Methylthiophene	CBZd 5	Ave	+++++ 451800	20285 893344	39921 1877320	86973 4176696	231259	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Hexanone	CBZd 5	Ave	+++++ 173958	6340 376223	12562 759406	28857 1613389	83279	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
C8 Range	CBZd 5	Ave	+++++ 2069587	+++++ 3867680	185140 8082975	402043 18025464	1082393	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Octane	CBZd 5	Ave	3798 185643	8712 348881	15913 731653	35453 1650234	96708	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZd 5	Ave	7683 427846	17301 808128	33912 1708750	74369 3856951	215761	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	5904 299565	12660 581436	24538 1233456	51514 2796441	151021	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZd 5	Ave	5286 238290	11194 445648	20627 942886	48901 2120157	123410	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chlorobenzene	CBZd 5	Ave	8589 442675	18576 862198	35843 1839152	81389 4192705	222281	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylheptane	CBZd 5	Ave	12335 717787	32304 1349555	61836 2768264	139554 6016570	374711	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethylbenzene	CBZd 5	Ave	14443 650505	27733 1262362	57358 2721372	114570 6074677	335611	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Ethylthiophene	CBZd 5	Ave	9558 497116	20835 977657	41893 2115122	88766 4761553	250527	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m-Xylene & p-Xylene	CBZd 5	Ave	19383 978007	40253 1919976	83085 4180493	169976 9362617	503389	0.0784 3.99	0.157 8.00	0.317 16.0	0.800 32.0	2.00
Nonane	CBZd 5	Ave	8236 423733	16865 834807	34945 1783024	72811 4054710	214636	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromoform	CBZd 5	Ave	7264 398085	14675 809091	31148 1777546	65347 4346492	183780	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Styrene	CBZd 5	Ave	6999 345579	12925 713753	26979 1596019	54555 3775896	173185	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
o-Xylene	CBZd 5	Ave	10974 515214	22480 1000055	47711 2147893	93610 4777380	268703	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	8017 389997	15290 775460	29118 1682135	66629 3662446	198338	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZd 5	Ave	+++++ 90650	3741 180195	7300 400421	14733 894821	47060	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Isopropylbenzene	CBZd 5	Ave	15128 696162	30745 1358053	62346 2941806	123682 6500407	362291	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propylbenzene	CBZd 5	Ave	3297 174024	5951 342915	13516 761562	27120 1767252	86216	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZd 5	Ave	3419 176214	6950 357053	15341 784198	30458 1803940	90776	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZd 5	Ave	12458 609217	21804 1225761	46453 2722956	93901 6169617	298239	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZd 5	Ave	5939 304811	11072 603355	26253 1334976	49807 3048962	151317	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZd 5	Ave	4461 240130	7712 499500	16153 1159461	34288 2723428	115072	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Decane	CBZd 5	Ave	+++++ 434454	16645 903971	34420 2015482	66474 4633466	213303	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butylbenzene	CBZd 5	Ave	12158 603936	23687 1191702	52616 2650102	101841 6011355	308625	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZd 5	Ave	10551 527968	19250 1063039	41173 2361494	82370 5401392	259545	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZd 5	Ave	16268 794110	30298 1590827	68410 3508321	129882 7846256	406602	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Dichlorobenzene	CBZd 5	Ave	5871 279497	10249 605637	18695 1475008	41517 3715351	133752	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzyl chloride	CBZd 5	Ave	+++++ 289147	8876 633760	16254 1586115	36944 +++++	126892	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
1,4-Dichlorobenzene	CBZd 5	Ave	4621 240547	8160 526340	15642 1315653	33672 +++++	109444	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
4-Isopropyltoluene	CBZd 5	Ave	12956 634861	22476 1267933	49882 2823302	98451 6240921	316041	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZd5	Ave	7817 392961	15387 779253	33236 1720307	64421 3809531	197400	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylcyclohexane	CBZd5	Ave	10514 498300	19278 1003008	42456 2185035	85795 4800601	255485	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indane	CBZd5	Ave	8881 458736	16540 930740	35512 2141880	70292 4983494	225790	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorobenzene	CBZd5	Ave	5620 292486	10229 616546	20295 1494867	42321 3643973	140823	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indene	CBZd5	Ave	5518 289355	9134 607320	18700 1455216	39379 3487774	135133	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylbenzene	CBZd5	Ave	10917 534655	18213 1100830	37412 2538094	76064 5693195	253234	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Undecane	CBZd5	Ave	+++++ 397504	14919 811824	28458 1865694	58268 4338903	187279	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZd5	Ave	+++++ 411342	13973 837435	28944 1893275	60335 4196638	196408	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZd5	Ave	+++++ 115728	3641 249204	7180 600110	15249 +++++	51540	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
1,2,4,5-Tetramethylbenzene	CBZd5	Ave	+++++ 482854	16586 983706	34869 2206639	69812 4847664	227428	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,5-Tetramethylbenzene	CBZd5	Ave	+++++ 294960	10137 608119	22173 1340133	42970 2942221	140477	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZd5	Ave	+++++ 371381	13891 752440	27081 1698919	53410 3711528	177361	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dodecane	CBZd5	Ave	+++++ 339664	12548 665748	23834 1515010	45381 3383807	169033	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZd5	Ave	1778 103584	2846 234735	5532 +++++	11248 +++++	47080	0.0392 2.00	0.0784 4.00	0.159 +++++	0.400 +++++	1.00
Naphthalene	CBZd5	Ave	5233 239465	7601 538060	13194 1375773	29521 +++++	111140	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
Benzo(b)thiophene	CBZd5	Ave	+++++ 100021	3065 221729	5231 590694	12110 +++++	45901	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
Hexachlorobutadiene	CBZd5	Ave	6656 320484	12720 646694	26869 1494370	47565 3588165	164579	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZd5	Ave	2094 121404	4032 266581	7260 670480	13575 +++++	59332	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
2-Methylnaphthalene	CBZd5	Ave	+++++ 78199	2539 170697	4331 389989	6537 844376	34373	+++++ 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
1-Methylnaphthalene	CBZd5	Ave	+++++ 91252	3063 194863	5326 411293	7334 786213	41424	+++++ 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
4-Bromofluorobenzene (Surr)	CBZd5	Ave	604280 855705	851872 914153	875722 927094	905137 948626	823670	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

Curve Type Legend:
Ave = Average ISTD

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC01X.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 25-Nov-2016 18:47:30 ALS Bottle#: 1 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003656-003
Misc. Info.: 067941
Operator ID: 007126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Nov-2016 13:55:16 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: barlozhetskayaa Date: 26-Nov-2016 10:51:34

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.641	8.640	0.001	98	352231	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.841	10.843	-0.002	96	1422985	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.607	15.609	-0.002	89	1079457	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.253	17.254	-0.001	95	604280	4.00	3.54	
6 Chlorodifluoromethane	67	3.568	3.568	0.000	95	2178	0.0392	0.0686	
7 Propene	41	3.579	3.578	0.001	90	5725	0.0392	0.0522	
8 Dichlorodifluoromethane	85	3.627	3.627	0.000	98	13281	0.0392	0.0466	
9 Chloromethane	52	3.810	3.806	0.004	59	2667	0.0392	0.0656	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.810	3.810	0.000	90	10207	0.0392	0.0648	
11 Acetaldehyde	44	3.955	3.953	0.002	94	13489	0.1960	0.3070	
12 Vinyl chloride	62	3.966	3.969	-0.003	96	5281	0.0392	0.0433	
13 Butane	43	4.057	4.055	0.002	86	10264	0.0392	0.0483	
14 Butadiene	54	4.057	4.057	0.000	63	5184	0.0392	0.0530	
15 Bromomethane	94	4.369	4.367	0.002	96	5229	0.0392	0.0482	
16 Chloroethane	64	4.509	4.504	0.005	34	2567	0.0392	0.0444	
17 Ethanol	31	4.611	4.602	0.009	98	9847	0.1960	0.2117	
18 Vinyl bromide	106	4.794	4.797	-0.003	93	4645	0.0392	0.0437	
19 2-Methylbutane	43	4.848	4.845	0.003	94	7003	0.0392	0.0450	
20 Trichlorofluoromethane	101	5.069	5.060	0.009	98	12435	0.0392	0.0429	
21 Acrolein	56	5.074	5.074	0.000	26	2130	0.0392	0.0624	
22 Acetonitrile	40	5.149	5.138	0.011	71	3006	0.0392	0.0716	
23 Acetone	58	5.203	5.192	0.011	97	5322	0.1176	0.1458	
24 Isopropyl alcohol	45	5.289	5.273	0.016	87	21965	0.1176	0.1294	
26 Ethyl ether	31	5.456	5.451	0.005	90	2691	0.0392	0.0225	
27 1,1-Dichloroethene	96	5.763	5.758	0.005	93	5011	0.0392	0.0473	
29 Acrylonitrile	53	5.870	5.865	0.005	93	3107	0.0392	0.0462	
28 2-Methyl-2-propanol	59	5.892	5.868	0.024	88	6365	0.0392	0.0372	
30 1,1,2-Trichloro-1,2,2-trif	101	5.935	5.931	0.004	95	9920	0.0392	0.0422	
31 Methylene Chloride	84	6.107	6.105	0.002	94	10989	0.0392	0.1059	
32 3-Chloro-1-propene	39	6.123	6.121	0.002	72	5261	0.0392	0.0430	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.263	6.264	-0.001	96	13502	0.0392	0.0432	
34 trans-1,2-Dichloroethene	96	6.908	6.908	0.000	67	4759	0.0392	0.0447	
35 2-Methylpentane	43	6.919	6.923	-0.004	95	12272	0.0392	0.0445	
36 Methyl tert-butyl ether	73	7.070	7.049	0.021	95	10008	0.0392	0.0459	
37 1,1-Dichloroethane	63	7.328	7.326	0.002	97	8989	0.0392	0.0444	
38 Vinyl acetate	43	7.430	7.435	-0.005	98	10304	0.0392	0.0413	
39 2-Butanone (MEK)	72	7.904	7.895	0.009	84	1230	0.0392	0.0385	
40 Hexane	56	7.898	7.901	-0.003	80	5273	0.0392	0.0562	
41 Isopropyl ether	45	8.087	8.072	0.015	97	14017	0.0392	0.0422	
42 cis-1,2-Dichloroethene	96	8.307	8.307	0.000	93	5103	0.0392	0.0486	
43 Ethyl acetate	43	8.511	8.508	0.003	96	8547	0.0392	0.0459	
44 Chloroform	83	8.646	8.651	-0.005	28	10441	0.0392	0.0473	
45 Tert-butyl ethyl ether	59	8.764	8.750	0.014	96	9653	0.0392	0.0379	
46 Tetrahydrofuran	42	9.109	9.083	0.026	90	5546	0.0392	0.0535	
47 1,1,1-Trichloroethane	97	9.679	9.679	0.000	96	10751	0.0392	0.0472	
48 1,2-Dichloroethane	62	9.792	9.792	0.000	95	6047	0.0392	0.0456	
49 n-Butanol	31	10.297	10.272	0.025	64	2090	0.0392	0.0492	
50 Cyclohexane	69	10.287	10.285	0.002	81	4196	0.0392	0.0890	
51 Benzene	78	10.281	10.285	-0.004	94	12828	0.0392	0.0496	
52 Carbon tetrachloride	117	10.314	10.308	0.006	92	10682	0.0392	0.0469	
53 2,3-Dimethylpentane	71	10.400	10.407	-0.007	90	3251	0.0392	0.0548	
54 Thiophene	84	10.566	10.565	0.001	94	7053	0.0392	0.0477	
55 Tert-amyl methyl ether	73	10.841	10.821	0.020	39	14163	0.0392	0.0844	
56 Isooctane	57	11.056	11.058	-0.002	97	26791	0.0392	0.0547	
57 n-Heptane	71	11.438	11.441	-0.003	94	4401	0.0392	0.0486	
58 1,2-Dichloropropane	63	11.519	11.526	-0.007	88	4626	0.0392	0.0442	
59 Trichloroethene	130	11.562	11.561	0.001	94	5644	0.0392	0.0464	
60 Dibromomethane	93	11.642	11.648	-0.006	94	5790	0.0392	0.0501	
62 Dichlorobromomethane	83	11.793	11.795	-0.002	95	9978	0.0392	0.0496	
61 1,4-Dioxane	88	11.847	11.835	0.012	30	1060	0.0392	0.0387	
63 Methyl methacrylate	41	11.901	11.902	-0.001	35	2571	0.0392	0.0260	
64 Methylcyclohexane	83	12.336	12.336	0.000	91	10487	0.0392	0.0533	
65 4-Methyl-2-pentanone (MIBK	43	12.767	12.764	0.003	96	8429	0.0392	0.0430	
66 cis-1,3-Dichloropropene	75	12.810	12.808	0.002	93	6237	0.0392	0.0459	
67 trans-1,3-Dichloropropene	75	13.509	13.509	0.000	91	4949	0.0392	0.0533	
68 Toluene	91	13.627	13.630	-0.003	89	12311	0.0392	0.0530	
69 1,1,2-Trichloroethane	83	13.713	13.709	0.004	92	3634	0.0392	0.0498	
70 2-Methylthiophene	97	13.789	13.784	0.005	95	10651	0.0392	0.0547	
71 3-Methylthiophene	97	13.982	13.985	-0.003	97	9795	0.0392	0.0527	
72 2-Hexanone	58	14.117	14.106	0.011	88	3389	0.0392	0.0500	
73 n-Octane	85	14.321	14.322	-0.001	97	3798	0.0392	0.0489	
74 Chlorodibromomethane	129	14.413	14.412	0.001	92	7683	0.0392	0.0452	
75 Ethylene Dibromide	107	14.709	14.706	0.003	99	5904	0.0392	0.0481	
76 Tetrachloroethene	129	14.779	14.777	0.002	90	5286	0.0392	0.0520	
78 Chlorobenzene	112	15.661	15.658	0.003	96	8589	0.0392	0.0471	
77 2,3-Dimethylheptane	43	15.677	15.677	0.000	94	12335	0.0392	0.0425	
79 Ethylbenzene	91	15.951	15.947	0.004	97	14443	0.0392	0.0525	
80 2-Ethylthiophene	97	16.054	16.050	0.004	96	9558	0.0392	0.0464	
81 m-Xylene & p-Xylene	91	16.113	16.110	0.003	99	19383	0.0784	0.0954	
82 n-Nonane	57	16.527	16.528	-0.001	94	8236	0.0392	0.0474	
83 Bromoform	173	16.554	16.559	-0.005	84	7264	0.0392	0.0448	
84 Styrene	104	16.570	16.575	-0.005	95	6999	0.0392	0.0485	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	16.634	16.634	0.000	96	10974	0.0392	0.0501	
86 1,1,2,2-Tetrachloroethane	83	16.963	16.962	0.001	95	8017	0.0392	0.0503	
87 1,2,3-Trichloropropane	110	17.124	17.122	0.002	95	1498	0.0392	0.0409	
88 Isopropylbenzene	105	17.221	17.221	0.000	87	15128	0.0392	0.0511	
89 N-Propylbenzene	120	17.770	17.767	0.003	99	3297	0.0392	0.0473	
90 2-Chlorotoluene	126	17.818	17.813	0.005	89	3419	0.0392	0.0462	
91 4-Ethyltoluene	105	17.926	17.921	0.005	97	12458	0.0392	0.0503	
92 1,3,5-Trimethylbenzene	120	17.995	17.995	0.000	92	5939	0.0392	0.0475	
93 Alpha Methyl Styrene	118	18.232	18.229	0.003	89	4461	0.0392	0.0462	
94 n-Decane	57	18.286	18.287	-0.001	86	9240	0.0392	0.0526	
95 tert-Butylbenzene	119	18.420	18.422	-0.002	90	12158	0.0392	0.0482	
96 1,2,4-Trimethylbenzene	105	18.437	18.436	0.001	95	10551	0.0392	0.0489	
97 sec-Butylbenzene	105	18.695	18.694	0.001	97	16268	0.0392	0.0492	
98 1,3-Dichlorobenzene	146	18.711	18.710	0.001	93	5871	0.0392	0.0486	
99 Benzyl chloride	91	18.786	18.786	0.000	70	6308	0.0392	0.0602	
100 1,4-Dichlorobenzene	146	18.797	18.799	-0.002	94	4621	0.0392	0.0491	
101 4-Isopropyltoluene	119	18.856	18.857	-0.001	97	12956	0.0392	0.0502	
102 1,2,3-Trimethylbenzene	105	18.915	18.912	0.003	97	7817	0.0392	0.0482	
103 Butylcyclohexane	83	18.964	18.964	0.000	86	10514	0.0392	0.0504	
104 2,3-Dihydroindene	117	19.157	19.159	-0.002	93	8881	0.0392	0.0471	
105 1,2-Dichlorobenzene	146	19.157	19.159	-0.002	78	5620	0.0392	0.0459	
107 Indene	116	19.292	19.290	0.002	69	5518	0.0392	0.0471	
106 n-Butylbenzene	91	19.297	19.294	0.003	97	10917	0.0392	0.0505	
108 Undecane	57	19.604	19.605	-0.001	91	8186	0.0392	0.0519	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.663	19.667	-0.004	97	9618	0.0392	0.0605	
110 1,2-Dibromo-3-Chloropropan	157	19.760	19.765	-0.005	89	2631	0.0392	0.0625	
111 1,2,4,5-Tetramethylbenzene	119	20.050	20.052	-0.002	98	11087	0.0392	0.0596	
112 1,2,3,5-Tetramethylbenzene	119	20.110	20.108	0.002	95	6542	0.0392	0.0572	
113 1,2,3,4-Tetramethylbenzene	119	20.502	20.505	-0.003	96	8071	0.0392	0.0558	
114 Dodecane	57	20.669	20.665	0.004	91	7473	0.0392	0.0573	
115 1,2,4-Trichlorobenzene	180	20.868	20.865	0.003	79	1778	0.0392	0.0505	
116 Naphthalene	128	21.008	21.007	0.001	94	5233	0.0392	0.0556	
117 Benzo(b)thiophene	134	21.110	21.112	-0.002	95	2516	0.0392	0.0686	
118 Hexachlorobutadiene	225	21.229	21.225	0.004	92	6656	0.0392	0.0489	
119 1,2,3-Trichlorobenzene	180	21.298	21.297	0.001	93	2094	0.0392	0.0455	
120 2-Methylnaphthalene	142	21.971	21.967	0.004	93	2038	0.1225	0.2204	
121 1-Methylnaphthalene	142	22.095	22.095	0.000	95	1742	0.1225	0.1692	
A 124 Toluene Range	1	13.627	(13.597-13.657)		0	31580	0.0392	0.0519	
S 126 Xylenes, Total	100				0		0.1176	0.1455	
S 127 1,2-Dichloroethene, Total	1				0		0.0784	0.0932	

Reagents:

40L12DNP_00008	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

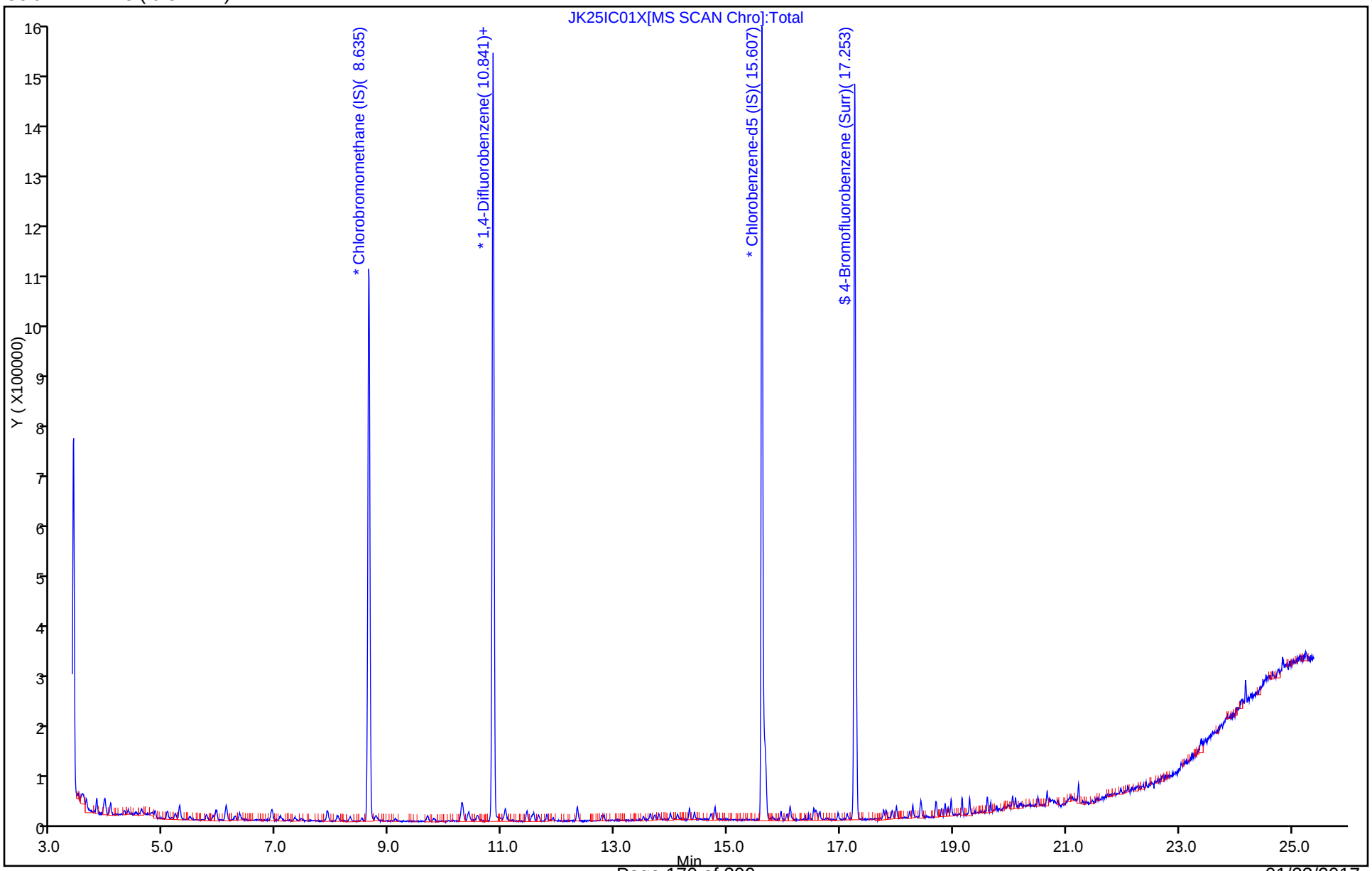
Report Date: 28-Nov-2016 13:55:17 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC01X.D

Injection Date:	25-Nov-2016 18:47:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	IC L1			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

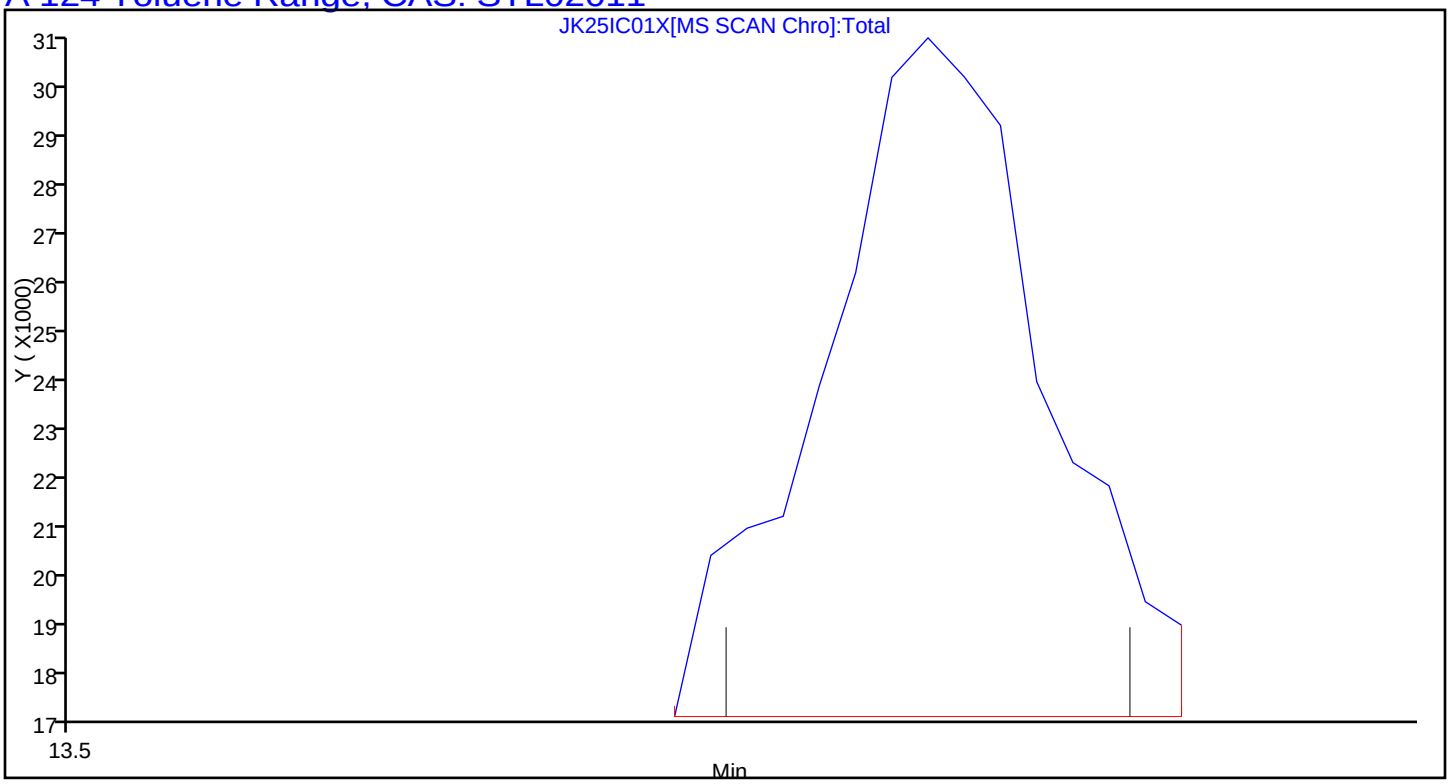


Report Date: 28-Nov-2016 13:55:17 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC01X.D				
Injection Date:	25-Nov-2016 18:47:30	Instrument ID:	MJ		
Lims ID:	IC L1				
Client ID:					
Operator ID:	007126	ALS Bottle#:	1	Worklist Smp#:	2
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC02X.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 25-Nov-2016 19:41:30 ALS Bottle#: 1 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003656-004
Misc. Info.: 067941
Operator ID: 007126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Nov-2016 13:55:20 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: barlozhetskayaa Date: 26-Nov-2016 10:59:20

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.638	8.640	-0.002	98	373845	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.843	10.843	0.000	96	1690007	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.610	15.609	0.001	89	1412269	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.256	17.254	0.002	97	851872	4.00	3.81	
6 Chlorodifluoromethane	67	3.576	3.568	0.008	97	3817	0.0784	0.1132	
7 Propene	41	3.586	3.578	0.008	98	14059	0.0784	0.1208	
8 Dichlorodifluoromethane	85	3.635	3.627	0.008	99	24537	0.0784	0.0811	
9 Chloromethane	52	3.807	3.806	0.001	77	3848	0.0784	0.0892	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.818	3.810	0.008	89	13862	0.0784	0.0829	
11 Acetaldehyde	44	3.963	3.953	0.010	86	27933	0.3920	0.5990	
12 Vinyl chloride	62	3.979	3.969	0.010	97	10259	0.0784	0.0792	
13 Butane	43	4.065	4.055	0.010	86	18358	0.0784	0.0814	
14 Butadiene	54	4.065	4.057	0.008	65	8651	0.0784	0.0833	
15 Bromomethane	94	4.377	4.367	0.010	95	9277	0.0784	0.0806	
16 Chloroethane	64	4.512	4.504	0.008	89	5140	0.0784	0.0837	
17 Ethanol	31	4.619	4.602	0.017	97	20763	0.3920	0.4206	
18 Vinyl bromide	106	4.802	4.797	0.005	97	8915	0.0784	0.0791	
19 2-Methylbutane	43	4.856	4.845	0.011	94	13294	0.0784	0.0805	
20 Trichlorofluoromethane	101	5.066	5.060	0.006	99	24312	0.0784	0.0790	
21 Acrolein	56	5.087	5.074	0.013	89	4293	0.0784	0.1185	
22 Acetonitrile	40	5.146	5.138	0.008	88	6608	0.0784	0.1482	
23 Acetone	58	5.216	5.192	0.024	98	10873	0.2352	0.2807	
24 Isopropyl alcohol	45	5.292	5.273	0.019	84	43385	0.2352	0.2408	
25 Pentane	72	5.292	5.279	0.013	71	942	0.0784	0.0544	
26 Ethyl ether	31	5.469	5.451	0.018	89	10958	0.0784	0.0863	
27 1,1-Dichloroethene	96	5.765	5.758	0.007	95	8883	0.0784	0.0789	
29 Acrylonitrile	53	5.867	5.865	0.002	77	5850	0.0784	0.0819	
28 2-Methyl-2-propanol	59	5.894	5.868	0.026	92	14228	0.0784	0.0783	
30 1,1,2-Trichloro-1,2,2-trif	101	5.937	5.931	0.006	96	19903	0.0784	0.0798	
31 Methylene Chloride	84	6.109	6.105	0.004	95	15555	0.0784	0.1412	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.126	6.121	0.005	97	10651	0.0784	0.0821	
33 Carbon disulfide	76	6.271	6.264	0.007	99	27603	0.0784	0.0833	
34 trans-1,2-Dichloroethene	96	6.911	6.908	0.003	96	9274	0.0784	0.0820	
35 2-Methylpentane	43	6.932	6.923	0.009	97	23520	0.0784	0.0804	
36 Methyl tert-butyl ether	73	7.072	7.049	0.023	96	20843	0.0784	0.0902	
37 1,1-Dichloroethane	63	7.325	7.326	-0.001	98	18057	0.0784	0.0840	
38 Vinyl acetate	43	7.443	7.435	0.008	100	22056	0.0784	0.0833	
39 2-Butanone (MEK)	72	7.917	7.895	0.022	82	2443	0.0784	0.0721	
40 Hexane	56	7.911	7.901	0.010	80	9022	0.0784	0.0906	
41 Isopropyl ether	45	8.089	8.072	0.017	96	27757	0.0784	0.0788	
42 cis-1,2-Dichloroethene	96	8.304	8.307	-0.003	97	9035	0.0784	0.0810	
43 Ethyl acetate	43	8.519	8.508	0.011	96	16465	0.0784	0.0833	
44 Chloroform	83	8.648	8.651	-0.003	28	20273	0.0784	0.0865	
45 Tert-butyl ethyl ether	59	8.772	8.750	0.022	96	22412	0.0784	0.0828	
46 Tetrahydrofuran	42	9.116	9.083	0.033	92	10118	0.0784	0.0920	
47 1,1,1-Trichloroethane	97	9.681	9.679	0.002	97	20173	0.0784	0.0834	
48 1,2-Dichloroethane	62	9.794	9.792	0.002	95	12345	0.0784	0.0784	
49 n-Butanol	31	10.305	10.272	0.033	61	4128	0.0784	0.0818	
50 Cyclohexane	69	10.284	10.285	-0.001	82	5864	0.0784	0.1048	
51 Benzene	78	10.289	10.285	0.004	95	24141	0.0784	0.0786	
52 Carbon tetrachloride	117	10.305	10.308	-0.003	95	21907	0.0784	0.0810	
53 2,3-Dimethylpentane	71	10.402	10.407	-0.005	91	6018	0.0784	0.0854	
54 Thiophene	84	10.564	10.565	-0.001	96	13753	0.0784	0.0784	
55 Tert-amyl methyl ether	73	10.800	10.811	-0.011	50	16558	0.0784	0.0754	
56 Isooctane	57	11.064	11.058	0.006	97	52286	0.0784	0.0898	
57 n-Heptane	71	11.440	11.441	-0.001	93	9153	0.0784	0.0851	
58 1,2-Dichloropropane	63	11.532	11.526	0.006	88	9817	0.0784	0.0789	
59 Trichloroethene	130	11.564	11.561	0.003	96	11621	0.0784	0.0804	
60 Dibromomethane	93	11.645	11.648	-0.003	94	10791	0.0784	0.0786	
62 Dichlorobromomethane	83	11.801	11.795	0.006	96	19726	0.0784	0.0826	
61 1,4-Dioxane	88	11.860	11.835	0.025	84	2535	0.0784	0.0779	
63 Methyl methacrylate	41	11.908	11.902	0.006	92	9213	0.0784	0.0783	
64 Methylcyclohexane	83	12.339	12.336	0.003	90	20303	0.0784	0.0869	
65 4-Methyl-2-pentanone (MIBK	43	12.775	12.764	0.011	97	18448	0.0784	0.0793	
66 cis-1,3-Dichloropropene	75	12.807	12.808	-0.001	97	11728	0.0784	0.0726	
67 trans-1,3-Dichloropropene	75	13.506	13.509	-0.003	95	10015	0.0784	0.0824	
68 Toluene	91	13.630	13.630	0.000	92	24869	0.0784	0.0819	
69 1,1,2-Trichloroethane	83	13.711	13.709	0.002	97	7462	0.0784	0.0782	
70 2-Methylthiophene	97	13.786	13.784	0.002	97	21017	0.0784	0.0825	
71 3-Methylthiophene	97	13.985	13.985	0.000	98	20285	0.0784	0.0834	
72 2-Hexanone	58	14.109	14.106	0.003	89	6340	0.0784	0.0715	
73 n-Octane	85	14.324	14.322	0.002	96	8712	0.0784	0.0857	
74 Chlorodibromomethane	129	14.410	14.412	-0.002	96	17301	0.0784	0.0777	
75 Ethylene Dibromide	107	14.706	14.706	0.000	96	12660	0.0784	0.0788	
76 Tetrachloroethene	129	14.776	14.777	-0.001	94	11194	0.0784	0.0841	
78 Chlorobenzene	112	15.658	15.658	0.000	96	18576	0.0784	0.0779	
77 2,3-Dimethylheptane	43	15.674	15.677	-0.003	94	32304	0.0784	0.0850	
79 Ethylbenzene	91	15.948	15.947	0.001	99	27733	0.0784	0.0770	
80 2-Ethylthiophene	97	16.051	16.050	0.001	98	20835	0.0784	0.0774	
81 m-Xylene & p-Xylene	91	16.110	16.110	0.000	97	40253	0.1568	0.1515	
82 n-Nonane	57	16.529	16.528	0.001	95	16865	0.0784	0.0742	
83 Bromoform	173	16.556	16.559	-0.003	96	14675	0.0784	0.0692	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.572	16.575	-0.003	97	12925	0.0784	0.0684	
85 o-Xylene	91	16.632	16.634	-0.002	99	22480	0.0784	0.0784	
86 1,1,2,2-Tetrachloroethane	83	16.960	16.962	-0.002	98	15290	0.0784	0.0733	
87 1,2,3-Trichloropropane	110	17.121	17.122	-0.001	94	3741	0.0784	0.0781	
88 Isopropylbenzene	105	17.223	17.221	0.002	95	30745	0.0784	0.0793	
89 N-Propylbenzene	120	17.772	17.767	0.005	98	5951	0.0784	0.0652	
90 2-Chlorotoluene	126	17.810	17.813	-0.003	95	6950	0.0784	0.0717	
91 4-Ethyltoluene	105	17.923	17.921	0.002	98	21804	0.0784	0.0672	
92 1,3,5-Trimethylbenzene	120	17.993	17.995	-0.002	92	11072	0.0784	0.0677	
93 Alpha Methyl Styrene	118	18.229	18.229	0.000	87	7712	0.0784	0.0611	
94 n-Decane	57	18.288	18.287	0.001	89	16645	0.0784	0.0724	
95 tert-Butylbenzene	119	18.423	18.422	0.001	91	23687	0.0784	0.0718	
96 1,2,4-Trimethylbenzene	105	18.434	18.436	-0.002	95	19250	0.0784	0.0683	
97 sec-Butylbenzene	105	18.692	18.694	-0.002	98	30298	0.0784	0.0700	
98 1,3-Dichlorobenzene	146	18.713	18.710	0.003	96	10249	0.0784	0.0649	
99 Benzyl chloride	91	18.789	18.786	0.003	96	8876	0.0784	0.0648	
100 1,4-Dichlorobenzene	146	18.805	18.799	0.006	94	8160	0.0784	0.0662	
101 4-Isopropyltoluene	119	18.859	18.857	0.002	96	22476	0.0784	0.0666	
102 1,2,3-Trimethylbenzene	105	18.913	18.912	0.000	99	15387	0.0784	0.0726	
103 Butylcyclohexane	83	18.966	18.964	0.002	87	19278	0.0784	0.0706	
104 2,3-Dihydroindene	117	19.160	19.159	0.001	94	16540	0.0784	0.0670	
105 1,2-Dichlorobenzene	146	19.160	19.159	0.001	76	10229	0.0784	0.0639	
107 Indene	116	19.289	19.290	-0.001	69	9134	0.0784	0.0595	
106 n-Butylbenzene	91	19.294	19.294	0.000	95	18213	0.0784	0.0643	
108 Undecane	57	19.606	19.605	0.001	93	14919	0.0784	0.0723	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.671	19.667	0.004	97	13973	0.0784	0.0672	
110 1,2-Dibromo-3-Chloropropan	157	19.768	19.765	0.003	91	3641	0.0784	0.0661	
111 1,2,4,5-Tetramethylbenzene	119	20.053	20.052	0.001	97	16586	0.0784	0.0681	
112 1,2,3,5-Tetramethylbenzene	119	20.107	20.108	-0.001	95	10137	0.0784	0.0677	
113 1,2,3,4-Tetramethylbenzene	119	20.505	20.505	0.000	97	13891	0.0784	0.0734	
114 Dodecane	57	20.666	20.665	0.001	90	12548	0.0784	0.0736	
115 1,2,4-Trichlorobenzene	180	20.871	20.865	0.006	91	2846	0.0784	0.0618	
116 Naphthalene	128	21.005	21.007	-0.002	99	7601	0.0784	0.0617	
117 Benzo(b)thiophene	134	21.113	21.112	0.001	95	3065	0.0784	0.0639	
118 Hexachlorobutadiene	225	21.226	21.225	0.001	93	12720	0.0784	0.0714	
119 1,2,3-Trichlorobenzene	180	21.296	21.297	-0.001	91	4032	0.0784	0.0670	
120 2-Methylnaphthalene	142	21.968	21.967	0.001	93	2539	0.2450	0.2099	
121 1-Methylnaphthalene	142	22.097	22.095	0.002	94	3063	0.2450	0.2274	
A 124 Toluene Range	1	13.630	(13.600-13.660)		0	62136	0.0784	0.0781	
S 126 Xylenes, Total	100				0		0.2352	0.2299	
S 127 1,2-Dichloroethene, Total	1				0		0.1568	0.1630	

Reagents:

40L12DNP_00008	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

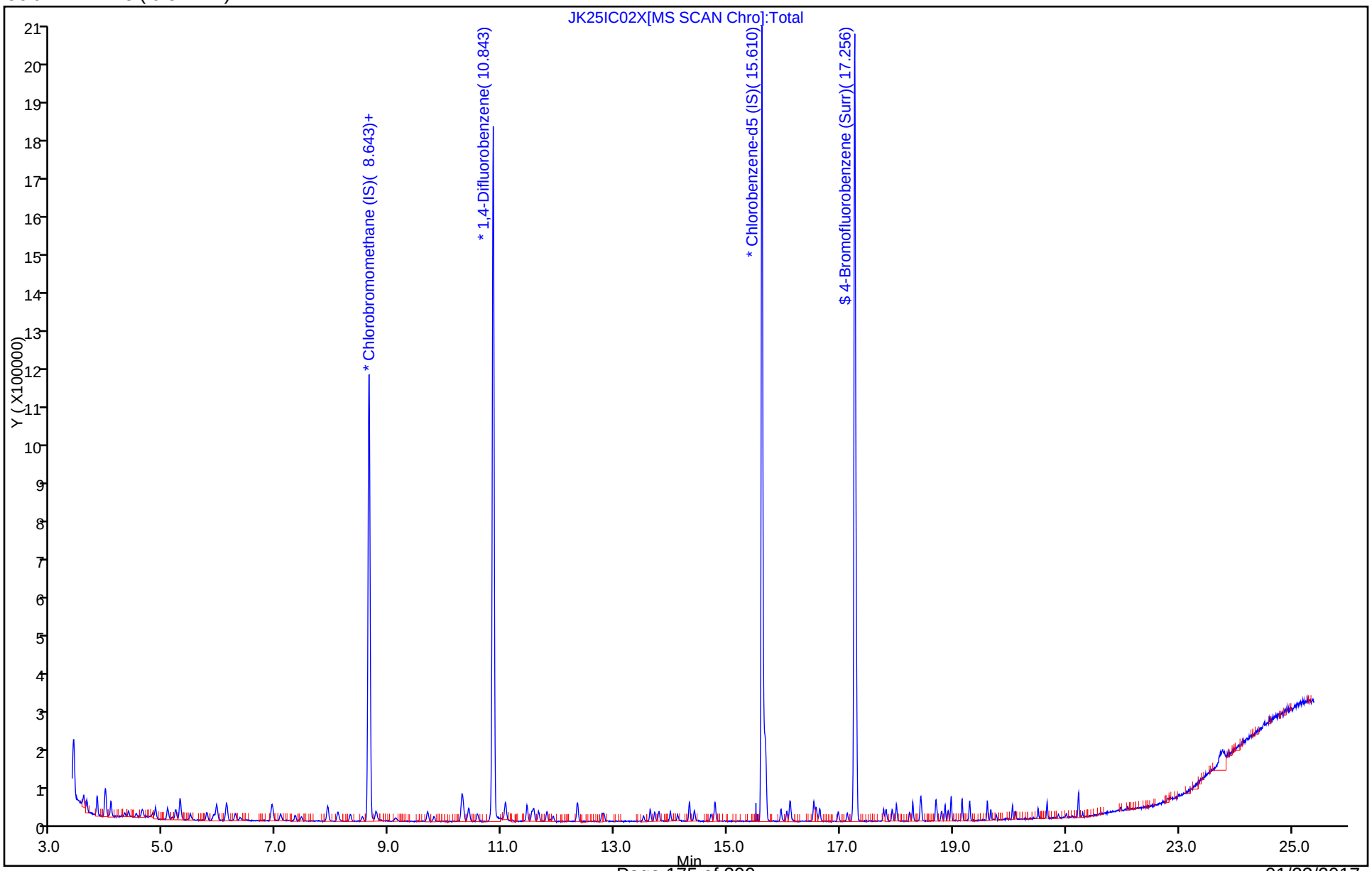
Report Date: 28-Nov-2016 13:55:21 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC02X.D

Injection Date:	25-Nov-2016 19:41:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	IC L2			Worklist Smp#:	3
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

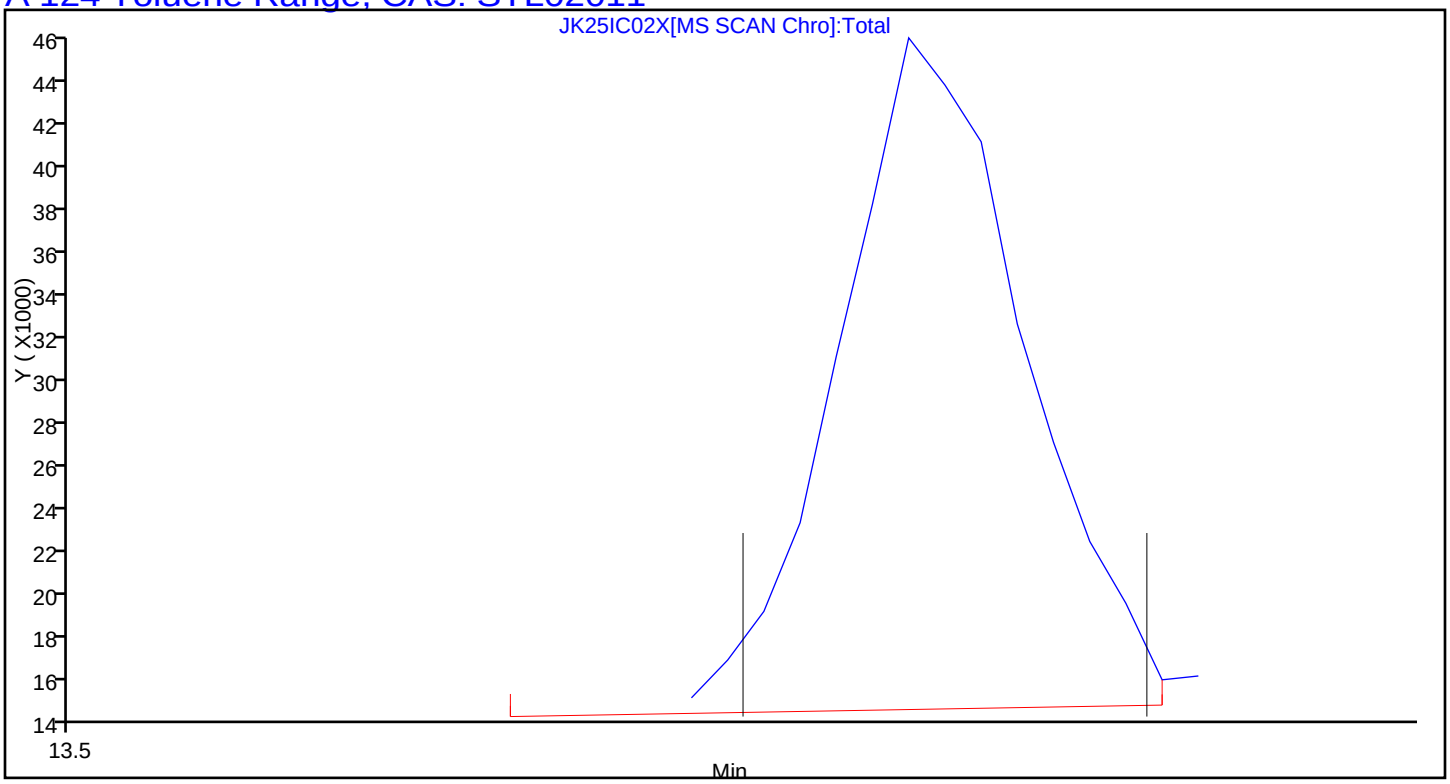


Report Date: 28-Nov-2016 13:55:21 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC02X.D				
Injection Date:	25-Nov-2016 19:41:30	Instrument ID:	MJ		
Lims ID:	IC L2				
Client ID:					
Operator ID:	007126	ALS Bottle#:	1	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC03X.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 25-Nov-2016 20:34:30 ALS Bottle#: 2 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003656-005
Misc. Info.: 067940
Operator ID: 007126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Nov-2016 13:55:24 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh Date: 28-Nov-2016 11:48:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.636	8.640	-0.004	98	380187	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.836	10.843	-0.007	96	1708776	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.608	15.609	-0.001	89	1457644	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.254	17.254	0.000	96	875722	4.00	3.79	
6 Chlorodifluoromethane	67	3.569	3.568	0.001	98	5092	0.1587	0.1485	
7 Propene	41	3.574	3.578	-0.004	97	20501	0.1587	0.1732	
8 Dichlorodifluoromethane	85	3.628	3.627	0.001	99	47625	0.1587	0.1547	
9 Chloromethane	52	3.805	3.806	-0.001	64	7053	0.1587	0.1607	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.811	3.810	0.001	91	29597	0.1587	0.1740	
11 Acetaldehyde	44	3.951	3.953	-0.003	94	51314	0.7933	1.08	
12 Vinyl chloride	62	3.967	3.969	-0.002	99	20305	0.1587	0.1542	
13 Butane	43	4.053	4.055	-0.002	86	35876	0.1587	0.1564	
14 Butadiene	54	4.058	4.057	0.001	67	16869	0.1587	0.1597	
15 Bromomethane	94	4.365	4.367	-0.002	98	18258	0.1587	0.1559	
16 Chloroethane	64	4.499	4.504	-0.005	87	9573	0.1587	0.1533	
17 Ethanol	31	4.596	4.602	-0.006	97	44631	0.7933	0.8891	
18 Vinyl bromide	106	4.795	4.797	-0.002	97	17575	0.1587	0.1533	
19 2-Methylbutane	43	4.838	4.845	-0.007	94	25369	0.1587	0.1510	
20 Trichlorofluoromethane	101	5.053	5.060	-0.007	99	48022	0.1587	0.1534	
21 Acrolein	56	5.075	5.074	0.001	71	7938	0.1587	0.2154	
22 Acetonitrile	40	5.123	5.138	-0.015	99	7837	0.1587	0.1729	
23 Acetone	58	5.193	5.192	0.001	99	27346	0.4760	0.6942	
24 Isopropyl alcohol	45	5.268	5.273	-0.005	88	87437	0.4760	0.4772	
25 Pentane	72	5.279	5.279	0.000	76	2810	0.1587	0.1597	
26 Ethyl ether	31	5.457	5.451	0.006	88	21130	0.1587	0.1637	
27 1,1-Dichloroethene	96	5.753	5.758	-0.005	94	17148	0.1587	0.1499	
29 Acrylonitrile	53	5.860	5.865	-0.005	94	12108	0.1587	0.1667	
28 2-Methyl-2-propanol	59	5.871	5.868	0.003	95	28880	0.1587	0.1563	
30 1,1,2-Trichloro-1,2,2-trif	101	5.925	5.931	-0.006	97	38750	0.1587	0.1528	
31 Methylene Chloride	84	6.102	6.105	-0.003	96	23231	0.1587	0.2073	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.118	6.121	-0.003	95	22843	0.1587	0.1731	
33 Carbon disulfide	76	6.258	6.264	-0.006	100	52091	0.1587	0.1545	
34 trans-1,2-Dichloroethene	96	6.904	6.908	-0.004	94	17794	0.1587	0.1547	
35 2-Methylpentane	43	6.920	6.923	-0.003	96	45905	0.1587	0.1544	
36 Methyl tert-butyl ether	73	7.049	7.049	0.000	96	38931	0.1587	0.1656	
37 1,1-Dichloroethane	63	7.323	7.326	-0.003	99	34190	0.1587	0.1564	
38 Vinyl acetate	43	7.436	7.435	0.001	100	44854	0.1587	0.1666	
39 2-Butanone (MEK)	72	7.899	7.895	0.004	82	5869	0.1587	0.1703	
40 Hexane	56	7.899	7.901	-0.002	74	16542	0.1587	0.1634	
41 Isopropyl ether	45	8.071	8.072	-0.001	96	59349	0.1587	0.1656	
42 cis-1,2-Dichloroethene	96	8.302	8.307	-0.005	98	18037	0.1587	0.1591	
43 Ethyl acetate	43	8.507	8.508	-0.001	97	32237	0.1587	0.1603	
44 Chloroform	83	8.647	8.651	-0.004	91	39225	0.1587	0.1645	
45 Tert-butyl ethyl ether	59	8.754	8.750	0.004	97	45518	0.1587	0.1654	
46 Tetrahydrofuran	42	9.088	9.083	0.005	93	19048	0.1587	0.1702	
47 1,1,1-Trichloroethane	97	9.674	9.679	-0.005	97	39664	0.1587	0.1612	
48 1,2-Dichloroethane	62	9.793	9.792	0.001	96	25128	0.1587	0.1578	
49 n-Butanol	31	10.288	10.272	0.016	59	7404	0.1587	0.1451	
50 Cyclohexane	69	10.282	10.285	-0.003	80	10636	0.1587	0.1880	
51 Benzene	78	10.282	10.285	-0.003	96	49152	0.1587	0.1584	
52 Carbon tetrachloride	117	10.304	10.308	-0.004	95	43534	0.1587	0.1591	
53 2,3-Dimethylpentane	71	10.406	10.407	-0.001	92	11513	0.1587	0.1616	
54 Thiophene	84	10.562	10.565	-0.003	96	28726	0.1587	0.1619	
55 Tert-amyl methyl ether	73	10.793	10.811	-0.018	95	34262	0.1587	0.1512	
56 Isooctane	57	11.057	11.058	-0.001	98	97663	0.1587	0.1660	
57 n-Heptane	71	11.444	11.441	0.003	96	17720	0.1587	0.1629	
58 1,2-Dichloropropane	63	11.519	11.526	-0.007	88	19570	0.1587	0.1556	
59 Trichloroethene	130	11.557	11.561	-0.004	94	24542	0.1587	0.1680	
60 Dibromomethane	93	11.649	11.648	0.001	94	21756	0.1587	0.1568	
62 Dichlorobromomethane	83	11.794	11.795	-0.001	97	38075	0.1587	0.1576	
61 1,4-Dioxane	88	11.842	11.835	0.007	91	4802	0.1587	0.1459	
63 Methyl methacrylate	41	11.907	11.902	0.005	92	18239	0.1587	0.1533	
64 Methylcyclohexane	83	12.326	12.336	-0.010	91	38039	0.1587	0.1611	
65 4-Methyl-2-pentanone (MIBK	43	12.762	12.764	-0.002	97	36347	0.1587	0.1545	
66 cis-1,3-Dichloropropene	75	12.805	12.808	-0.003	98	23969	0.1587	0.1468	
67 trans-1,3-Dichloropropene	75	13.510	13.509	0.001	95	16526	0.1587	0.1317	
68 Toluene	91	13.628	13.630	-0.002	92	51423	0.1587	0.1641	
69 1,1,2-Trichloroethane	83	13.709	13.709	0.000	97	15047	0.1587	0.1527	
70 2-Methylthiophene	97	13.779	13.784	-0.005	98	38657	0.1587	0.1470	
71 3-Methylthiophene	97	13.983	13.985	-0.002	98	39921	0.1587	0.1590	
72 2-Hexanone	58	14.107	14.106	0.001	89	12562	0.1587	0.1373	
73 n-Octane	85	14.322	14.322	0.000	98	15913	0.1587	0.1516	
74 Chlorodibromomethane	129	14.408	14.412	-0.004	96	33912	0.1587	0.1476	
75 Ethylene Dibromide	107	14.704	14.706	-0.002	96	24538	0.1587	0.1480	
76 Tetrachloroethene	129	14.774	14.777	-0.003	95	20627	0.1587	0.1502	
78 Chlorobenzene	112	15.656	15.658	-0.002	97	35843	0.1587	0.1456	
77 2,3-Dimethylheptane	43	15.678	15.677	0.001	93	61836	0.1587	0.1577	
79 Ethylbenzene	91	15.947	15.947	0.000	98	57358	0.1587	0.1543	
80 2-Ethylthiophene	97	16.049	16.050	-0.001	98	41893	0.1587	0.1507	
81 m-Xylene & p-Xylene	91	16.108	16.110	-0.002	99	83085	0.3173	0.3029	
82 n-Nonane	57	16.528	16.528	0.000	94	34945	0.1587	0.1490	
83 Bromoform	173	16.560	16.559	0.001	93	31148	0.1587	0.1423	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.576	16.575	0.001	97	26979	0.1587	0.1383	
85 o-Xylene	91	16.635	16.634	0.001	98	47711	0.1587	0.1613	
86 1,1,2,2-Tetrachloroethane	83	16.963	16.962	0.001	99	29118	0.1587	0.1352	
87 1,2,3-Trichloropropane	110	17.119	17.122	-0.003	94	7300	0.1587	0.1477	
88 Isopropylbenzene	105	17.222	17.221	0.001	97	62346	0.1587	0.1558	
89 N-Propylbenzene	120	17.765	17.767	-0.002	99	13516	0.1587	0.1436	
90 2-Chlorotoluene	126	17.813	17.813	0.000	97	15341	0.1587	0.1534	
91 4-Ethyltoluene	105	17.921	17.921	0.000	98	46453	0.1587	0.1388	
92 1,3,5-Trimethylbenzene	120	17.996	17.995	0.001	92	26253	0.1587	0.1556	
93 Alpha Methyl Styrene	118	18.228	18.229	-0.001	84	16153	0.1587	0.1240	
94 n-Decane	57	18.287	18.287	0.000	87	34420	0.1587	0.1451	
95 tert-Butylbenzene	119	18.421	18.422	-0.001	91	52616	0.1587	0.1545	
96 1,2,4-Trimethylbenzene	105	18.432	18.436	-0.004	96	41173	0.1587	0.1414	
97 sec-Butylbenzene	105	18.690	18.694	-0.004	98	68410	0.1587	0.1532	
98 1,3-Dichlorobenzene	146	18.706	18.710	-0.004	97	18695	0.1587	0.1146	
99 Benzyl chloride	91	18.782	18.786	-0.004	98	16254	0.1587	0.1149	
100 1,4-Dichlorobenzene	146	18.798	18.799	-0.001	91	15642	0.1587	0.1230	
101 4-Isopropyltoluene	119	18.857	18.857	0.000	97	49882	0.1587	0.1433	
102 1,2,3-Trimethylbenzene	105	18.911	18.912	-0.001	98	33236	0.1587	0.1519	
103 Butylcyclohexane	83	18.965	18.964	0.001	89	42456	0.1587	0.1507	
104 2,3-Dihydroindene	117	19.158	19.159	-0.001	93	35512	0.1587	0.1394	
105 1,2-Dichlorobenzene	146	19.158	19.159	-0.001	74	20295	0.1587	0.1229	
107 Indene	116	19.287	19.290	-0.003	84	18700	0.1587	0.1181	
106 n-Butylbenzene	91	19.293	19.294	-0.001	96	37412	0.1587	0.1281	
108 Undecane	57	19.605	19.605	0.000	92	28458	0.1587	0.1337	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.664	19.667	-0.003	97	28944	0.1587	0.1348	
110 1,2-Dibromo-3-Chloropropan	157	19.766	19.765	0.001	92	7180	0.1587	0.1263	
111 1,2,4,5-Tetramethylbenzene	119	20.051	20.052	-0.001	96	34869	0.1587	0.1387	
112 1,2,3,5-Tetramethylbenzene	119	20.105	20.108	-0.003	94	22173	0.1587	0.1435	
113 1,2,3,4-Tetramethylbenzene	119	20.503	20.505	-0.002	97	27081	0.1587	0.1386	
114 Dodecane	57	20.665	20.665	-0.001	91	23834	0.1587	0.1354	
115 1,2,4-Trichlorobenzene	180	20.864	20.865	-0.001	91	5532	0.1587	0.1164	
116 Naphthalene	128	21.009	21.007	0.002	98	13194	0.1587	0.1037	
117 Benzo(b)thiophene	134	21.111	21.112	-0.001	98	5231	0.1587	0.1056	
118 Hexachlorobutadiene	225	21.224	21.225	-0.001	94	26869	0.1587	0.1461	
119 1,2,3-Trichlorobenzene	180	21.299	21.297	0.002	94	7260	0.1587	0.1168	
120 2-Methylnaphthalene	142	21.966	21.967	-0.001	93	4331	0.4958	0.3469	
121 1-Methylnaphthalene	142	22.095	22.095	0.000	94	5326	0.4958	0.3831	
A 124 Toluene Range	1	13.628	(13.598-13.658)		0	126167	0.1587	0.1537	
A 125 C8 Range	1	14.307	(14.284-14.331)		0	185140	0.1587	0.1657	
S 126 Xylenes, Total	100				0		0.4760	0.4642	
S 127 1,2-Dichloroethene, Total	1				0		0.3173	0.3138	

Reagents:

40L3DNP_00009	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

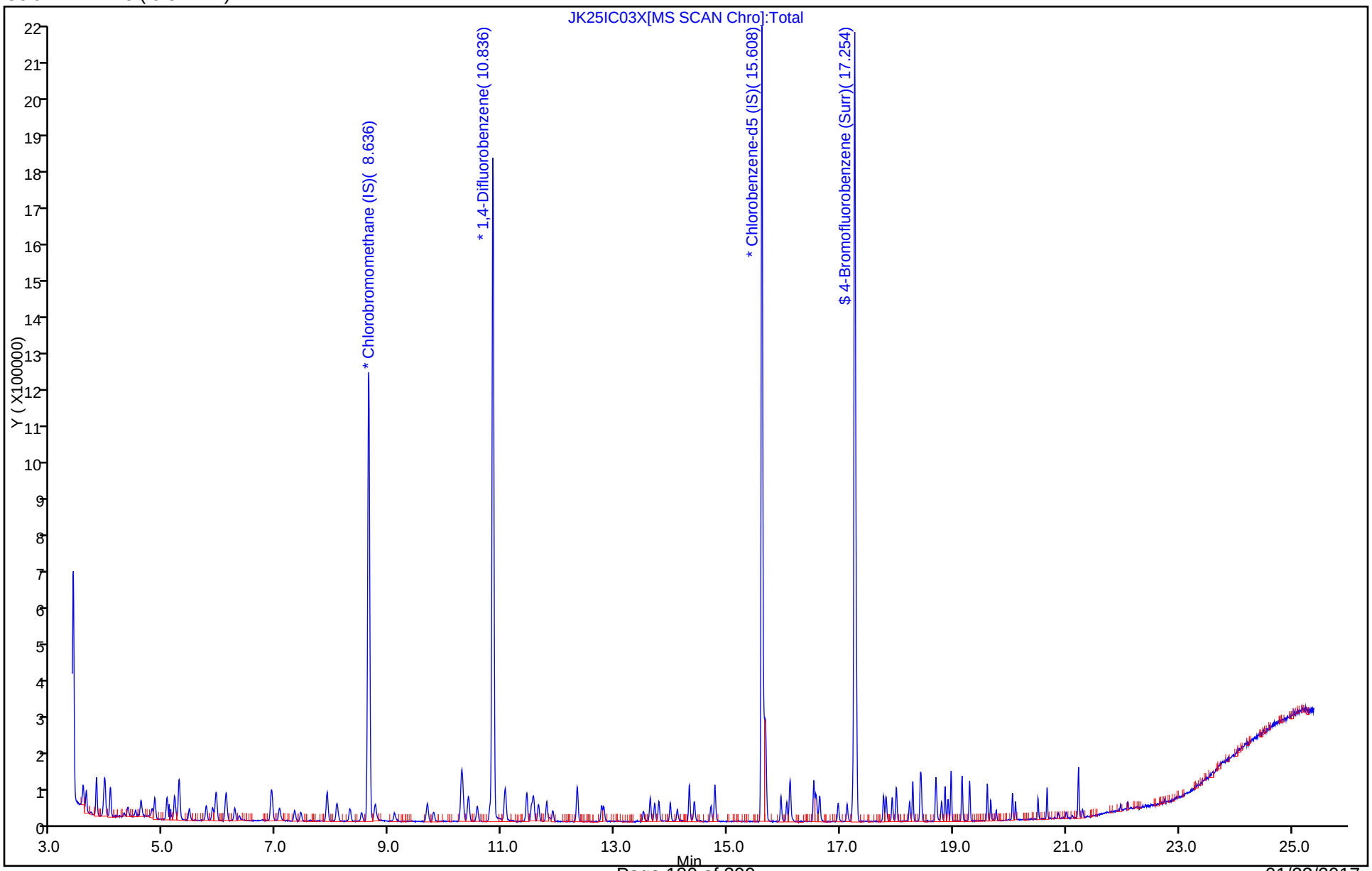
Report Date: 28-Nov-2016 13:55:25 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC03X.D

Injection Date:	25-Nov-2016 20:34:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	IC L3			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

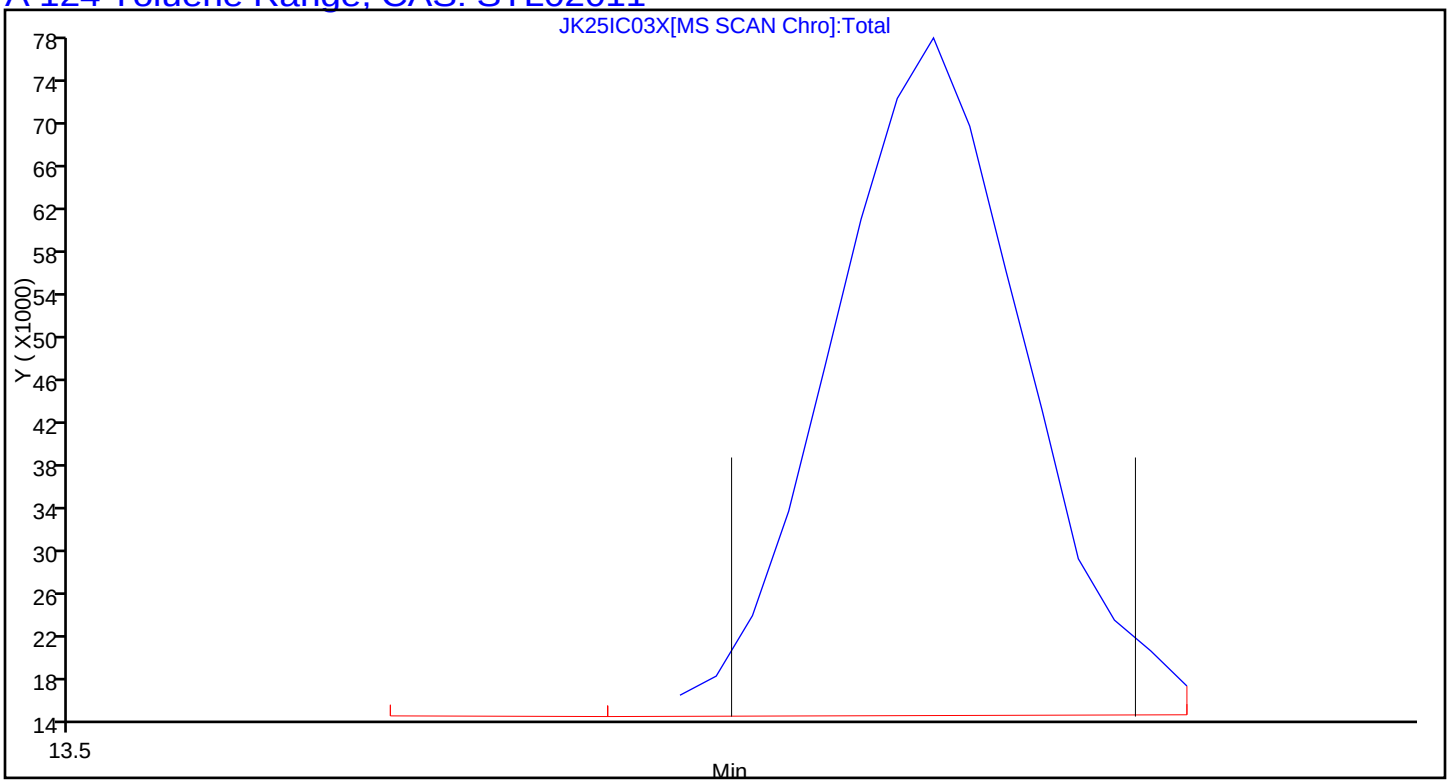


Report Date: 28-Nov-2016 13:55:25 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC03X.D				
Injection Date:	25-Nov-2016 20:34:30	Instrument ID:	MJ		
Lims ID:	IC L3				
Client ID:					
Operator ID:	007126	ALS Bottle#:	2	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

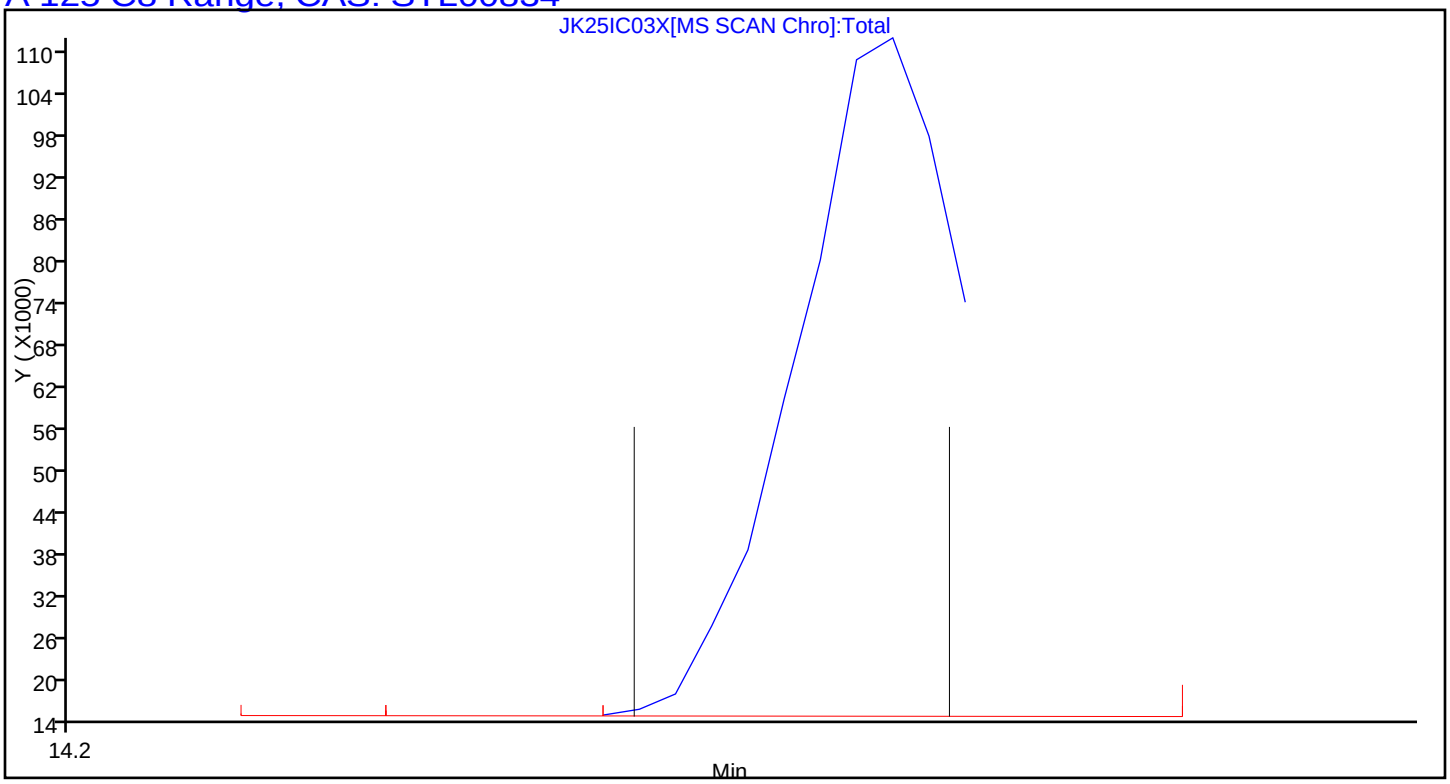


Report Date: 28-Nov-2016 13:55:25 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC03X.D				
Injection Date:	25-Nov-2016 20:34:30	Instrument ID:	MJ		
Lims ID:	IC L3				
Client ID:					
Operator ID:	007126	ALS Bottle#:	2	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC04X.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 25-Nov-2016 21:29:30 ALS Bottle#: 3 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003656-006
Misc. Info.: 067939
Operator ID: 007126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Nov-2016 13:55:28 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh Date: 28-Nov-2016 11:52:02

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.635	8.640	-0.005	98	373438	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.841	10.843	-0.002	96	1679746	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.607	15.609	-0.002	89	1449355	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.253	17.254	-0.001	96	905137	4.00	3.94	
6 Chlorodifluoromethane	67	3.568	3.568	0.000	97	11982	0.4000	0.3557	
7 Propene	41	3.578	3.578	0.000	98	46736	0.4000	0.4019	
8 Dichlorodifluoromethane	85	3.627	3.627	0.000	99	111873	0.4000	0.3700	
9 Chloromethane	52	3.810	3.806	0.004	65	15615	0.4000	0.3622	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.810	3.810	0.000	92	60841	0.4000	0.3641	
11 Acetaldehyde	44	3.950	3.953	-0.003	94	84629	2.00	1.82	
12 Vinyl chloride	62	3.966	3.969	-0.003	99	47000	0.4000	0.3634	
13 Butane	43	4.052	4.055	-0.003	86	81334	0.4000	0.3609	
14 Butadiene	54	4.057	4.057	0.000	65	38093	0.4000	0.3671	
15 Bromomethane	94	4.364	4.367	-0.003	98	42225	0.4000	0.3671	
16 Chloroethane	64	4.498	4.504	-0.006	86	22919	0.4000	0.3737	
17 Ethanol	31	4.595	4.602	-0.007	98	89104	2.00	1.81	
18 Vinyl bromide	106	4.794	4.797	-0.003	98	40004	0.4000	0.3552	
19 2-Methylbutane	43	4.843	4.845	-0.002	94	59137	0.4000	0.3584	
20 Trichlorofluoromethane	101	5.058	5.060	-0.002	100	109033	0.4000	0.3545	
21 Acrolein	56	5.074	5.074	0.000	95	12447	0.4000	0.3439	
22 Acetonitrile	40	5.133	5.138	-0.005	98	15157	0.4000	0.3404	
23 Acetone	58	5.187	5.192	-0.005	99	47081	1.20	1.22	
24 Isopropyl alcohol	45	5.262	5.273	-0.011	93	190258	1.20	1.06	
25 Pentane	72	5.278	5.279	-0.001	96	6036	0.4000	0.3491	
26 Ethyl ether	31	5.450	5.451	-0.001	90	43301	0.4000	0.3416	
27 1,1-Dichloroethene	96	5.757	5.758	-0.001	95	40325	0.4000	0.3588	
29 Acrylonitrile	53	5.865	5.865	0.000	57	23310	0.4000	0.3267	
28 2-Methyl-2-propanol	59	5.859	5.868	-0.009	96	64571	0.4000	0.3558	
30 1,1,2-Trichloro-1,2,2-trif	101	5.929	5.931	-0.002	96	90023	0.4000	0.3614	
31 Methylene Chloride	84	6.101	6.105	-0.004	95	43448	0.4000	0.3948	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.118	6.121	-0.003	95	47589	0.4000	0.3672	
33 Carbon disulfide	76	6.263	6.264	-0.001	100	121583	0.4000	0.3672	
34 trans-1,2-Dichloroethene	96	6.903	6.908	-0.005	96	40286	0.4000	0.3566	
35 2-Methylpentane	43	6.924	6.923	0.001	97	104062	0.4000	0.3562	
36 Methyl tert-butyl ether	73	7.048	7.049	-0.001	96	78151	0.4000	0.3384	
37 1,1-Dichloroethane	63	7.323	7.326	-0.003	99	80819	0.4000	0.3763	
38 Vinyl acetate	43	7.430	7.435	-0.005	100	88963	0.4000	0.3364	
39 2-Butanone (MEK)	72	7.898	7.895	0.003	81	12424	0.4000	0.3670	
40 Hexane	56	7.898	7.901	-0.003	78	36117	0.4000	0.3632	
41 Isopropyl ether	45	8.070	8.072	-0.002	96	122364	0.4000	0.3477	
42 cis-1,2-Dichloroethene	96	8.302	8.307	-0.005	98	41397	0.4000	0.3718	
43 Ethyl acetate	43	8.506	8.508	-0.002	98	66797	0.4000	0.3381	
44 Chloroform	83	8.646	8.651	-0.005	97	86703	0.4000	0.3702	
45 Tert-butyl ethyl ether	59	8.743	8.750	-0.007	98	93325	0.4000	0.3453	
46 Tetrahydrofuran	42	9.087	9.083	0.004	92	38550	0.4000	0.3507	
47 1,1,1-Trichloroethane	97	9.679	9.679	0.000	97	90067	0.4000	0.3726	
48 1,2-Dichloroethane	62	9.786	9.792	-0.006	97	58242	0.4000	0.3720	
49 n-Butanol	31	10.265	10.272	-0.007	67	16643	0.4000	0.3319	
50 Cyclohexane	69	10.281	10.285	-0.004	80	20665	0.4000	0.3715	
51 Benzene	78	10.281	10.285	-0.004	96	109926	0.4000	0.3603	
52 Carbon tetrachloride	117	10.303	10.308	-0.005	95	96221	0.4000	0.3578	
53 2,3-Dimethylpentane	71	10.410	10.407	0.003	92	26735	0.4000	0.3819	
54 Thiophene	84	10.566	10.565	0.001	97	62914	0.4000	0.3607	
55 Tert-amyl methyl ether	73	10.782	10.811	-0.029	94	78058	0.4000	0.3464	
56 Isooctane	57	11.056	11.058	-0.002	97	216817	0.4000	0.3748	
57 n-Heptane	71	11.432	11.441	-0.009	96	38197	0.4000	0.3572	
58 1,2-Dichloropropane	63	11.524	11.526	-0.002	88	44282	0.4000	0.3582	
59 Trichloroethene	130	11.556	11.561	-0.005	95	52984	0.4000	0.3690	
60 Dibromomethane	93	11.642	11.648	-0.006	95	50658	0.4000	0.3714	
62 Dichlorobromomethane	83	11.788	11.795	-0.007	97	83001	0.4000	0.3495	
61 1,4-Dioxane	88	11.836	11.835	0.001	86	10682	0.4000	0.3303	
63 Methyl methacrylate	41	11.895	11.902	-0.007	93	38866	0.4000	0.3324	
64 Methylcyclohexane	83	12.336	12.336	0.000	90	87709	0.4000	0.3778	
65 4-Methyl-2-pentanone (MIBK	43	12.761	12.764	-0.003	97	77604	0.4000	0.3356	
66 cis-1,3-Dichloropropene	75	12.804	12.808	-0.004	98	57296	0.4000	0.3570	
67 trans-1,3-Dichloropropene	75	13.509	13.509	0.000	95	39757	0.4000	0.3187	
68 Toluene	91	13.627	13.630	-0.003	92	108634	0.4000	0.3486	
69 1,1,2-Trichloroethane	83	13.703	13.709	-0.006	97	33667	0.4000	0.3436	
70 2-Methylthiophene	97	13.783	13.784	-0.001	98	93967	0.4000	0.3593	
71 3-Methylthiophene	97	13.982	13.985	-0.003	99	86973	0.4000	0.3484	
72 2-Hexanone	58	14.106	14.106	0.000	91	28857	0.4000	0.3171	
73 n-Octane	85	14.321	14.322	-0.001	98	35453	0.4000	0.3397	
74 Chlorodibromomethane	129	14.407	14.412	-0.005	97	74369	0.4000	0.3256	
75 Ethylene Dibromide	107	14.703	14.706	-0.003	99	51514	0.4000	0.3125	
76 Tetrachloroethene	129	14.778	14.777	0.001	95	48901	0.4000	0.3582	
78 Chlorobenzene	112	15.655	15.658	-0.003	95	81389	0.4000	0.3326	
77 2,3-Dimethylheptane	43	15.677	15.677	0.000	94	139554	0.4000	0.3579	
79 Ethylbenzene	91	15.946	15.947	-0.001	99	114570	0.4000	0.3100	
80 2-Ethylthiophene	97	16.048	16.050	-0.002	99	88766	0.4000	0.3212	
81 m-Xylene & p-Xylene	91	16.107	16.110	-0.003	99	169976	0.8000	0.6232	
82 n-Nonane	57	16.527	16.528	-0.001	95	72811	0.4000	0.3123	
83 Bromoform	173	16.559	16.559	0.000	96	65347	0.4000	0.3003	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.575	16.575	0.000	99	54555	0.4000	0.2813	
85 o-Xylene	91	16.634	16.634	0.000	98	93610	0.4000	0.3183	
86 1,1,2,2-Tetrachloroethane	83	16.963	16.962	0.001	99	66629	0.4000	0.3112	
87 1,2,3-Trichloropropane	110	17.119	17.122	-0.003	96	14733	0.4000	0.2998	
88 Isopropylbenzene	105	17.221	17.221	0.000	94	123682	0.4000	0.3109	
89 N-Propylbenzene	120	17.764	17.767	-0.003	99	27120	0.4000	0.2897	
90 2-Chlorotoluene	126	17.813	17.813	-0.001	97	30458	0.4000	0.3063	
91 4-Ethyltoluene	105	17.920	17.921	-0.001	98	93901	0.4000	0.2822	
92 1,3,5-Trimethylbenzene	120	17.995	17.995	0.000	92	49807	0.4000	0.2969	
93 Alpha Methyl Styrene	118	18.227	18.229	-0.002	87	34288	0.4000	0.2647	
94 n-Decane	57	18.286	18.287	-0.001	88	66474	0.4000	0.2819	
95 tert-Butylbenzene	119	18.420	18.422	-0.002	92	101841	0.4000	0.3008	
96 1,2,4-Trimethylbenzene	105	18.437	18.436	0.001	96	82370	0.4000	0.2846	
97 sec-Butylbenzene	105	18.695	18.694	0.001	98	129882	0.4000	0.2925	
98 1,3-Dichlorobenzene	146	18.711	18.710	0.001	97	41517	0.4000	0.2560	
99 Benzyl chloride	91	18.786	18.786	0.000	98	36944	0.4000	0.2627	
100 1,4-Dichlorobenzene	146	18.797	18.799	-0.002	92	33672	0.4000	0.2663	
101 4-Isopropyltoluene	119	18.856	18.857	-0.001	97	98451	0.4000	0.2844	
102 1,2,3-Trimethylbenzene	105	18.910	18.912	-0.002	99	64421	0.4000	0.2961	
103 Butylcyclohexane	83	18.964	18.964	0.000	90	85795	0.4000	0.3063	
104 2,3-Dihydroindene	117	19.157	19.159	-0.002	93	70292	0.4000	0.2775	
105 1,2-Dichlorobenzene	146	19.157	19.159	-0.002	75	42321	0.4000	0.2577	
107 Indene	116	19.292	19.290	0.002	88	39379	0.4000	0.2501	
106 n-Butylbenzene	91	19.292	19.294	-0.002	97	76064	0.4000	0.2619	
108 Undecane	57	19.604	19.605	-0.001	92	58268	0.4000	0.2753	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.668	19.667	0.001	98	60335	0.4000	0.2826	
110 1,2-Dibromo-3-Chloropropan	157	19.765	19.765	0.000	93	15249	0.4000	0.2698	
111 1,2,4,5-Tetramethylbenzene	119	20.050	20.052	-0.002	97	69812	0.4000	0.2793	
112 1,2,3,5-Tetramethylbenzene	119	20.110	20.108	0.002	95	42970	0.4000	0.2797	
113 1,2,3,4-Tetramethylbenzene	119	20.508	20.505	0.003	98	53410	0.4000	0.2749	
114 Dodecane	57	20.664	20.665	-0.001	90	45381	0.4000	0.2592	
115 1,2,4-Trichlorobenzene	180	20.863	20.865	-0.002	93	11248	0.4000	0.2381	
116 Naphthalene	128	21.008	21.007	0.001	99	29521	0.4000	0.2334	
117 Benzo(b)thiophene	134	21.110	21.112	-0.002	99	12110	0.4000	0.2459	
118 Hexachlorobutadiene	225	21.223	21.225	-0.002	95	47565	0.4000	0.2601	
119 1,2,3-Trichlorobenzene	180	21.293	21.297	-0.004	93	13575	0.4000	0.2197	
120 2-Methylnaphthalene	142	21.965	21.967	-0.002	96	6537	1.25	0.5266	
121 1-Methylnaphthalene	142	22.095	22.095	0.000	96	7334	1.25	0.5306	
A 124 Toluene Range	1	13.627	(13.597-13.657)		0	261800	0.4000	0.3207	
A 125 C8 Range	1	14.306	(14.283-14.330)		0	402043	0.4000	0.3618	
S 126 Xylenes, Total	100				0		1.20	0.9415	
S 127 1,2-Dichloroethene, Total	1				0		0.8000	0.7283	

Reagents:

40L4DNP_00008	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

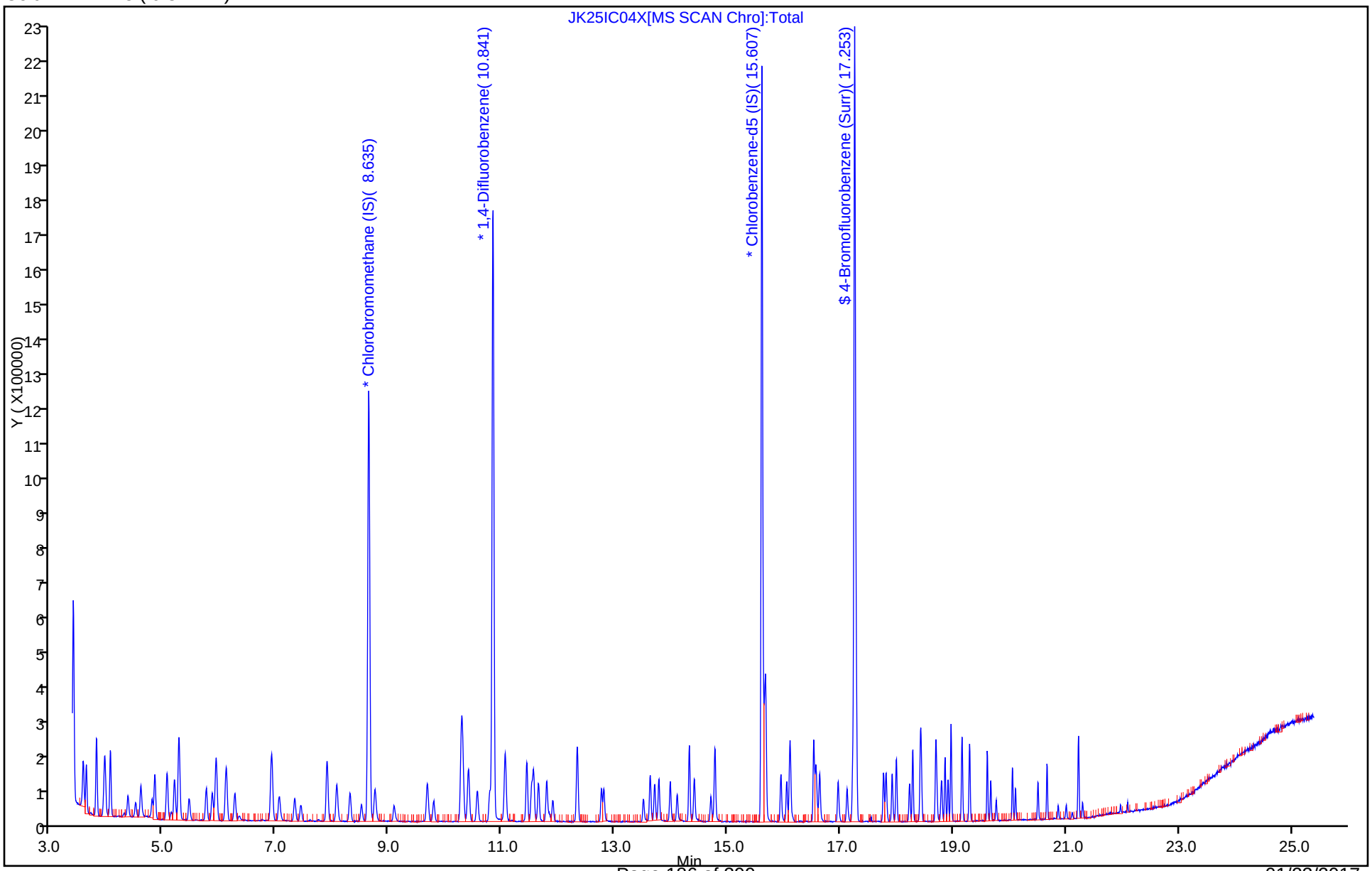
Report Date: 28-Nov-2016 13:55:29 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC04X.D

Injection Date:	25-Nov-2016 21:29:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	IC L4			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

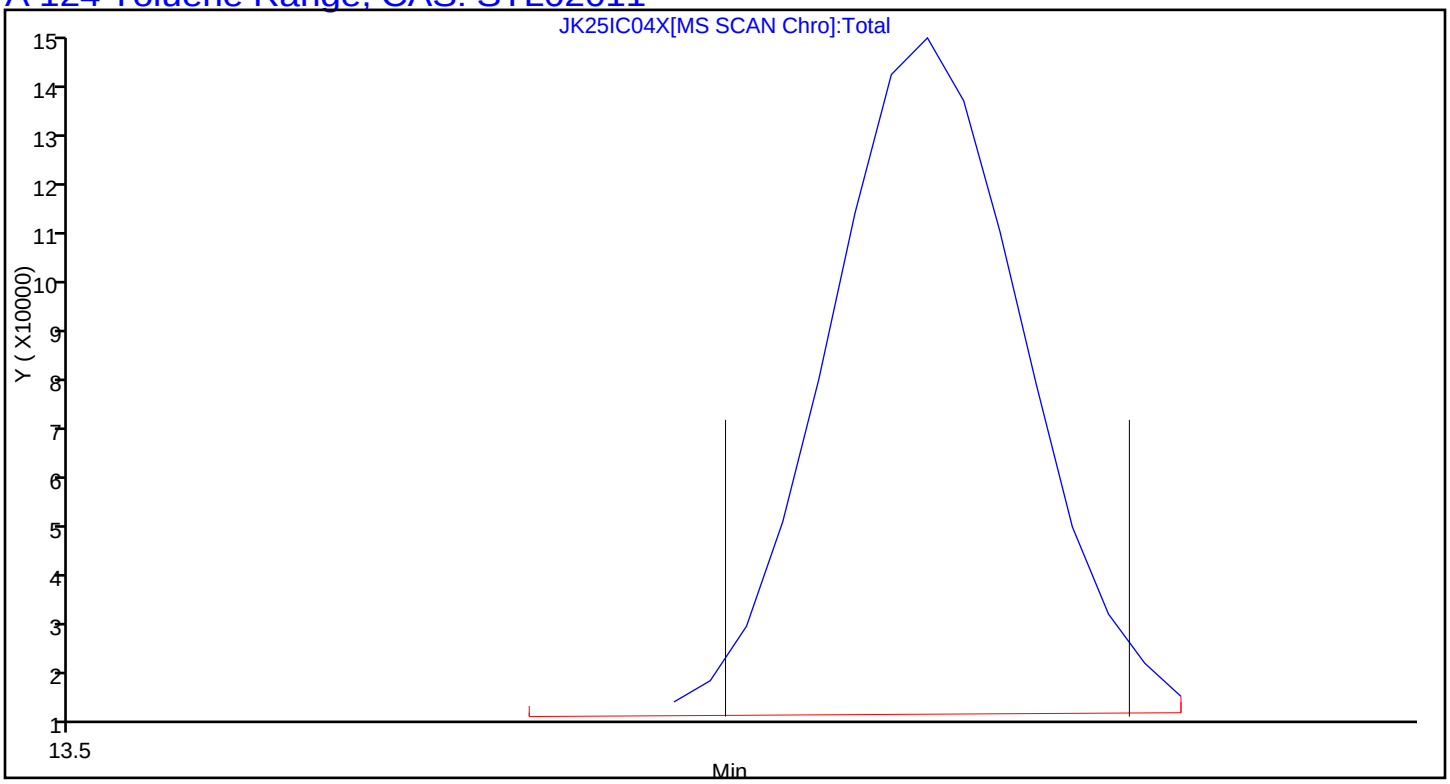


Report Date: 28-Nov-2016 13:55:29 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC04X.D				
Injection Date:	25-Nov-2016 21:29:30	Instrument ID:	MJ		
Lims ID:	IC L4				
Client ID:					
Operator ID:	007126	ALS Bottle#:	3	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

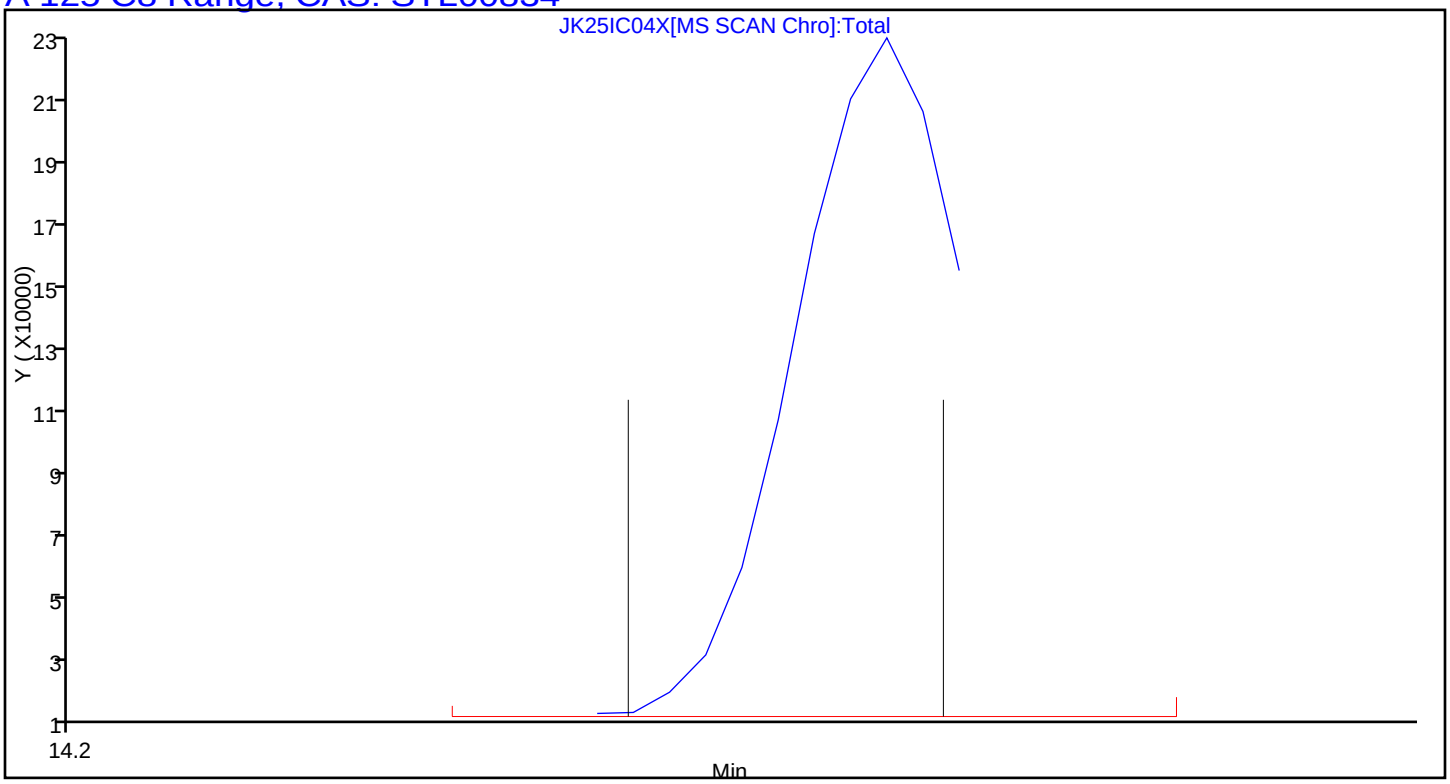


Report Date: 28-Nov-2016 13:55:29 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC04X.D				
Injection Date:	25-Nov-2016 21:29:30	Instrument ID:	MJ		
Lims ID:	IC L4				
Client ID:					
Operator ID:	007126	ALS Bottle#:	3	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC05X.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 25-Nov-2016 22:23:30 ALS Bottle#: 4 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003656-006
Misc. Info.: 067938
Operator ID: 007126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Nov-2016 13:55:32 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh Date: 28-Nov-2016 11:52:51

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	8.634	8.640	-0.006	97	355404	4.00	4.00	
*	2 1,4-Difluorobenzene	114	10.839	10.843	-0.004	96	1583347	4.00	4.00	
*	3 Chlorobenzene-d5 (IS)	117	15.605	15.609	-0.004	89	1321140	4.00	4.00	
$	4 4-Bromofluorobenzene (Surr	95	17.252	17.254	-0.002	96	823670	4.00	3.94	
	6 Chlorodifluoromethane	67	3.566	3.568	-0.002	98	30842	1.00	0.9621	
	7 Propene	41	3.577	3.578	-0.001	98	107343	1.00	0.9700	
	8 Dichlorodifluoromethane	85	3.625	3.627	-0.002	99	278609	1.00	0.9682	
	9 Chloromethane	52	3.803	3.806	-0.003	98	40173	1.00	0.9791	
	10 1,2-Dichloro-1,1,2,2-tetra	135	3.808	3.810	-0.002	92	160950	1.00	1.01	
	11 Acetaldehyde	44	3.948	3.953	-0.005	94	213784	5.01	4.82	
	12 Vinyl chloride	62	3.970	3.969	0.001	99	122746	1.00	1.00	
	13 Butane	43	4.050	4.055	-0.005	86	207118	1.00	0.9657	
	14 Butadiene	54	4.050	4.057	-0.007	66	99249	1.00	1.00	
	15 Bromomethane	94	4.362	4.367	-0.005	98	112019	1.00	1.02	
	16 Chloroethane	64	4.502	4.504	-0.002	89	58761	1.00	1.01	
	17 Ethanol	31	4.594	4.602	-0.008	98	241723	5.01	5.15	
	18 Vinyl bromide	106	4.793	4.797	-0.004	98	108983	1.00	1.02	
	19 2-Methylbutane	43	4.841	4.845	-0.004	94	156174	1.00	0.99	
	20 Trichlorofluoromethane	101	5.056	5.060	-0.004	100	294702	1.00	1.01	
	21 Acrolein	56	5.067	5.074	-0.007	97	34165	1.00	0.99	
	22 Acetonitrile	40	5.132	5.138	-0.006	99	45336	1.00	1.07	
	23 Acetone	58	5.185	5.192	-0.007	99	118305	3.01	3.21	
	24 Isopropyl alcohol	45	5.261	5.273	-0.012	93	523062	3.01	3.05	
	25 Pentane	72	5.271	5.279	-0.008	96	16429	1.00	1.00	
	26 Ethyl ether	31	5.444	5.451	-0.007	89	126616	1.00	1.05	
	27 1,1-Dichloroethene	96	5.756	5.758	-0.002	95	106234	1.00	0.99	
	29 Acrylonitrile	53	5.858	5.865	-0.007	58	67317	1.00	0.99	
	28 2-Methyl-2-propanol	59	5.852	5.868	-0.016	95	179135	1.00	1.04	
	30 1,1,2-Trichloro-1,2,2-trif	101	5.928	5.931	-0.003	96	236287	1.00	1.00	
	31 Methylene Chloride	84	6.100	6.105	-0.005	96	104918	1.00	1.00	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.116	6.121	-0.005	94	125613	1.00	1.02	
33 Carbon disulfide	76	6.261	6.264	-0.003	100	318098	1.00	1.01	
34 trans-1,2-Dichloroethene	96	6.907	6.908	-0.001	94	107797	1.00	1.00	
35 2-Methylpentane	43	6.918	6.923	-0.005	96	276646	1.00	1.00	
36 Methyl tert-butyl ether	73	7.041	7.049	-0.008	97	218669	1.00	0.99	
37 1,1-Dichloroethane	63	7.321	7.326	-0.005	99	205971	1.00	1.01	
38 Vinyl acetate	43	7.429	7.435	-0.006	100	259685	1.00	1.03	
39 2-Butanone (MEK)	72	7.881	7.895	-0.015	94	32810	1.00	1.02	
40 Hexane	56	7.897	7.901	-0.004	78	93351	1.00	0.9865	
41 Isopropyl ether	45	8.063	8.072	-0.009	97	349017	1.00	1.04	
42 cis-1,2-Dichloroethene	96	8.300	8.307	-0.007	98	105995	1.00	1.00	
43 Ethyl acetate	43	8.499	8.508	-0.009	97	185284	1.00	0.9855	
44 Chloroform	83	8.650	8.651	-0.001	97	221690	1.00	0.99	
45 Tert-butyl ethyl ether	59	8.741	8.750	-0.009	98	267158	1.00	1.04	
46 Tetrahydrofuran	42	9.075	9.083	-0.008	93	105594	1.00	1.01	
47 1,1,1-Trichloroethane	97	9.677	9.679	-0.002	97	230864	1.00	1.00	
48 1,2-Dichloroethane	62	9.790	9.792	-0.002	96	148871	1.00	1.01	
49 n-Butanol	31	10.258	10.272	-0.014	84	47398	1.00	1.00	
50 Cyclohexane	69	10.285	10.285	0.000	81	53224	1.00	1.02	
51 Benzene	78	10.285	10.285	0.000	98	281600	1.00	0.9791	
52 Carbon tetrachloride	117	10.307	10.308	-0.001	95	263147	1.00	1.04	
53 2,3-Dimethylpentane	71	10.409	10.407	0.002	91	66382	1.00	1.01	
54 Thiophene	84	10.559	10.565	-0.006	97	163933	1.00	1.00	
55 Tert-amyl methyl ether	73	10.780	10.804	-0.024	95	238993	1.00	1.16	
56 Isooctane	57	11.054	11.058	-0.004	97	545679	1.00	1.00	
57 n-Heptane	71	11.436	11.441	-0.005	96	97916	1.00	0.9715	
58 1,2-Dichloropropane	63	11.522	11.526	-0.004	89	119711	1.00	1.03	
59 Trichloroethene	130	11.555	11.561	-0.006	95	131547	1.00	0.9718	
60 Dibromomethane	93	11.646	11.648	-0.002	96	125422	1.00	0.9756	
62 Dichlorobromomethane	83	11.791	11.795	-0.004	97	219152	1.00	0.9791	
61 1,4-Dioxane	88	11.834	11.835	-0.001	96	31913	1.00	1.05	
63 Methyl methacrylate	41	11.899	11.902	-0.003	93	110367	1.00	1.00	
64 Methylcyclohexane	83	12.335	12.336	-0.001	91	223142	1.00	1.02	
65 4-Methyl-2-pentanone (MIBK	43	12.760	12.764	-0.004	97	213021	1.00	0.9772	
66 cis-1,3-Dichloropropene	75	12.808	12.808	0.000	98	148579	1.00	0.9822	
67 trans-1,3-Dichloropropene	75	13.507	13.509	-0.002	97	106665	1.00	0.9379	
68 Toluene	91	13.626	13.630	-0.004	93	293852	1.00	1.03	
69 1,1,2-Trichloroethane	83	13.706	13.709	-0.003	97	91074	1.00	1.02	
70 2-Methylthiophene	97	13.782	13.784	-0.002	99	251216	1.00	1.05	
71 3-Methylthiophene	97	13.986	13.985	0.001	99	231259	1.00	1.02	
72 2-Hexanone	58	14.099	14.106	-0.007	90	83279	1.00	1.00	
73 n-Octane	85	14.320	14.322	-0.002	98	96708	1.00	1.02	
74 Chlorodibromomethane	129	14.411	14.412	-0.001	98	215761	1.00	1.04	
75 Ethylene Dibromide	107	14.702	14.706	-0.004	97	151021	1.00	1.01	
76 Tetrachloroethene	129	14.777	14.777	0.000	96	123410	1.00	0.99	
78 Chlorobenzene	112	15.654	15.658	-0.004	94	222281	1.00	1.00	
77 2,3-Dimethylheptane	43	15.675	15.677	-0.002	94	374711	1.00	1.05	
79 Ethylbenzene	91	15.944	15.947	-0.003	99	335611	1.00	1.00	
80 2-Ethylthiophene	97	16.047	16.050	-0.003	98	250527	1.00	0.99	
81 m-Xylene & p-Xylene	91	16.106	16.110	-0.004	99	503389	2.00	2.02	
82 n-Nonane	57	16.525	16.528	-0.003	94	214636	1.00	1.01	
83 Bromoform	173	16.558	16.559	-0.001	97	183780	1.00	0.9266	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.574	16.575	-0.001	98	173185	1.00	0.9797	
85 o-Xylene	91	16.633	16.634	-0.001	98	268703	1.00	1.00	
86 1,1,2,2-Tetrachloroethane	83	16.961	16.962	-0.001	99	198338	1.00	1.02	
87 1,2,3-Trichloropropane	110	17.122	17.122	0.000	96	47060	1.00	1.05	
88 Isopropylbenzene	105	17.219	17.221	-0.002	97	362291	1.00	1.00	
89 N-Propylbenzene	120	17.763	17.767	-0.004	99	86216	1.00	1.01	
90 2-Chlorotoluene	126	17.811	17.813	-0.002	97	90776	1.00	1.00	
91 4-Ethyltoluene	105	17.919	17.921	-0.002	98	298239	1.00	0.9833	
92 1,3,5-Trimethylbenzene	120	17.994	17.995	-0.001	92	151317	1.00	0.9895	
93 Alpha Methyl Styrene	118	18.225	18.229	-0.004	87	115072	1.00	0.9747	
94 n-Decane	57	18.284	18.287	-0.003	88	213303	1.00	0.99	
95 tert-Butylbenzene	119	18.419	18.422	-0.003	91	308625	1.00	1.00	
96 1,2,4-Trimethylbenzene	105	18.435	18.436	-0.001	96	259545	1.00	0.9837	
97 sec-Butylbenzene	105	18.693	18.694	-0.001	98	406602	1.00	1.00	
98 1,3-Dichlorobenzene	146	18.709	18.710	-0.001	97	133752	1.00	0.9048	
99 Benzyl chloride	91	18.785	18.786	-0.001	97	126892	1.00	0.9898	
100 1,4-Dichlorobenzene	146	18.801	18.799	0.002	95	109444	1.00	0.9495	
101 4-Isopropyltoluene	119	18.855	18.857	-0.002	97	316041	1.00	1.00	
102 1,2,3-Trimethylbenzene	105	18.908	18.912	-0.004	99	197400	1.00	1.00	
103 Butylcyclohexane	83	18.962	18.964	-0.002	89	255485	1.00	1.00	
104 2,3-Dihydroindene	117	19.156	19.159	-0.003	93	225790	1.00	0.9778	
105 1,2-Dichlorobenzene	146	19.161	19.159	0.002	78	140823	1.00	0.9406	
107 Indene	116	19.290	19.290	0.000	89	135133	1.00	0.9416	
106 n-Butylbenzene	91	19.290	19.294	-0.004	98	253234	1.00	0.9564	
108 Undecane	57	19.602	19.605	-0.003	92	187279	1.00	0.9706	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.667	19.667	0.000	98	196408	1.00	1.01	
110 1,2-Dibromo-3-Chloropropan	157	19.764	19.765	-0.001	94	51540	1.00	1.00	
111 1,2,4,5-Tetramethylbenzene	119	20.054	20.052	0.002	97	227428	1.00	1.00	
112 1,2,3,5-Tetramethylbenzene	119	20.108	20.108	0.000	95	140477	1.00	1.00	
113 1,2,3,4-Tetramethylbenzene	119	20.506	20.505	0.001	97	177361	1.00	1.00	
114 Dodecane	57	20.662	20.665	-0.003	91	169033	1.00	1.06	
115 1,2,4-Trichlorobenzene	180	20.861	20.865	-0.004	93	47080	1.00	1.09	
116 Naphthalene	128	21.006	21.007	-0.001	99	111140	1.00	0.9640	
117 Benzo(b)thiophene	134	21.114	21.112	0.002	99	45901	1.00	1.02	
118 Hexachlorobutadiene	225	21.222	21.225	-0.003	95	164579	1.00	0.9872	
119 1,2,3-Trichlorobenzene	180	21.297	21.297	0.000	95	59332	1.00	1.05	
120 2-Methylnaphthalene	142	21.969	21.967	0.002	97	34373	3.13	3.04	
121 1-Methylnaphthalene	142	22.093	22.095	-0.002	97	41424	3.13	3.29	
A 124 Toluene Range	1	13.626	(13.596-13.656)		0	748324	1.00	1.01	
A 125 C8 Range	1	14.305	(14.281-14.328)		0	1082393	1.00	1.07	
S 126 Xylenes, Total	100				0		3.00	3.03	
S 127 1,2-Dichloroethene, Total	1				0		2.00	2.00	

Reagents:

40L5DNP_00008	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

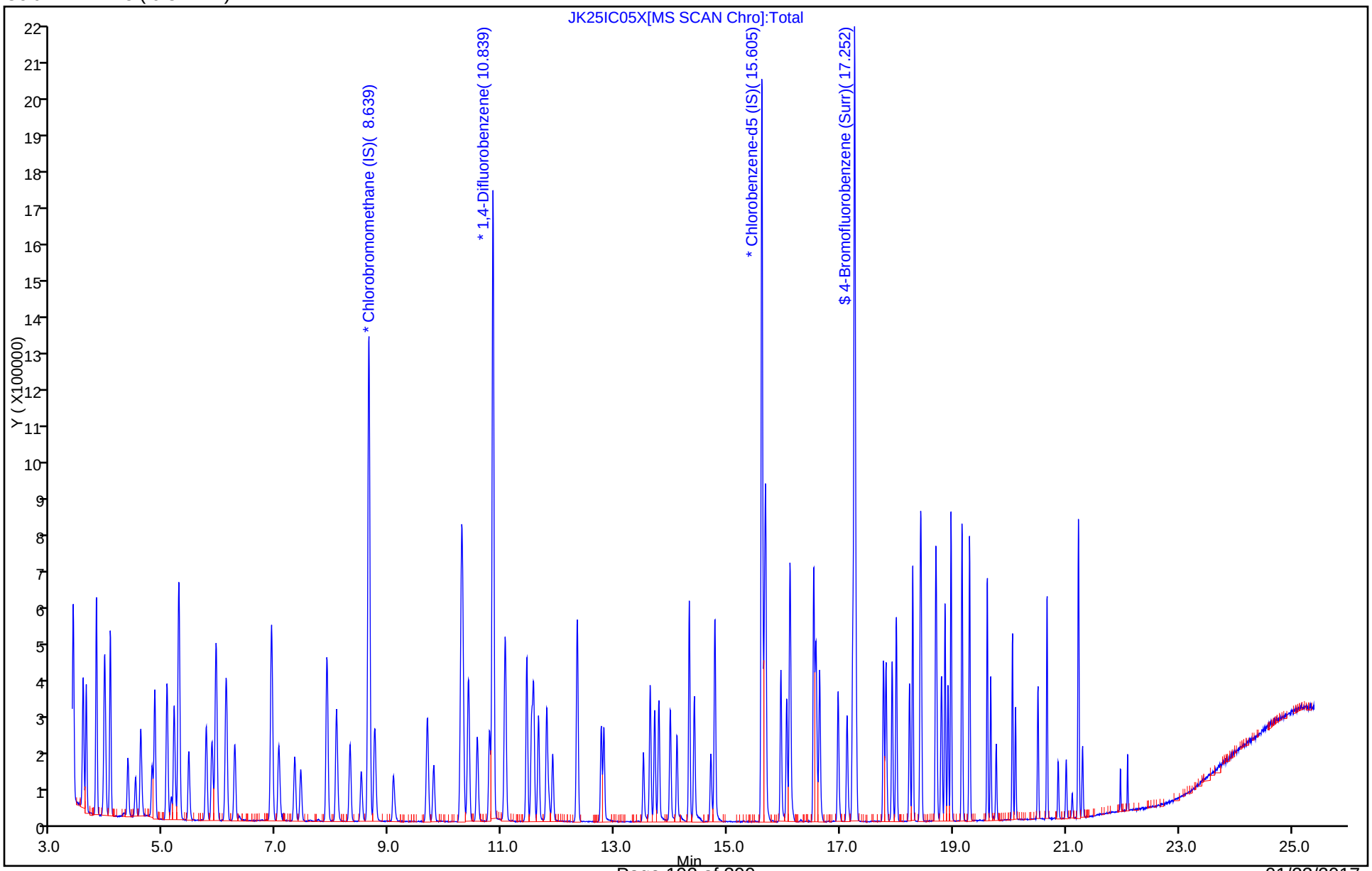
Report Date: 28-Nov-2016 13:55:33 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC05X.D

Injection Date:	25-Nov-2016 22:23:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	IC L5			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

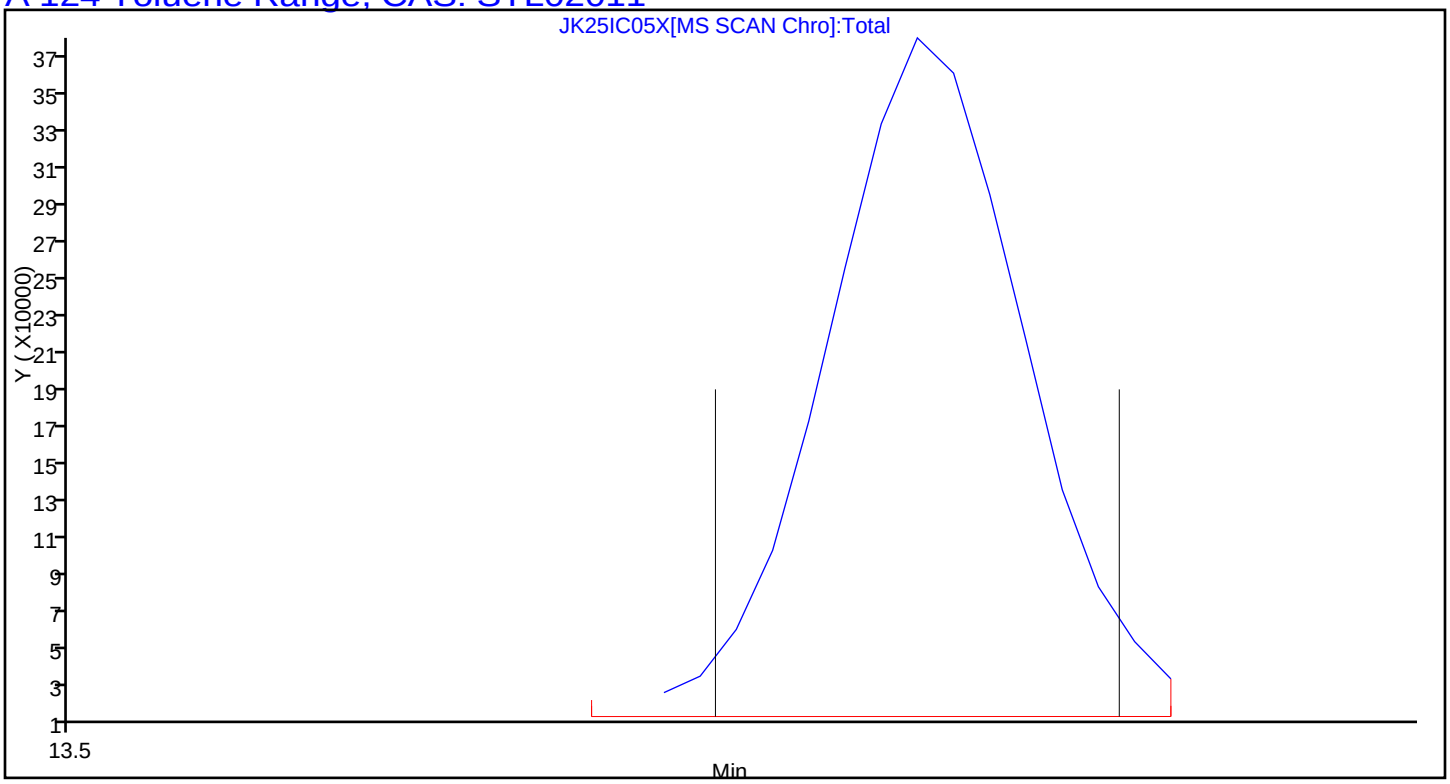


Report Date: 28-Nov-2016 13:55:33 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC05X.D				
Injection Date:	25-Nov-2016 22:23:30	Instrument ID:	MJ		
Lims ID:	IC L5				
Client ID:					
Operator ID:	007126	ALS Bottle#:	4	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

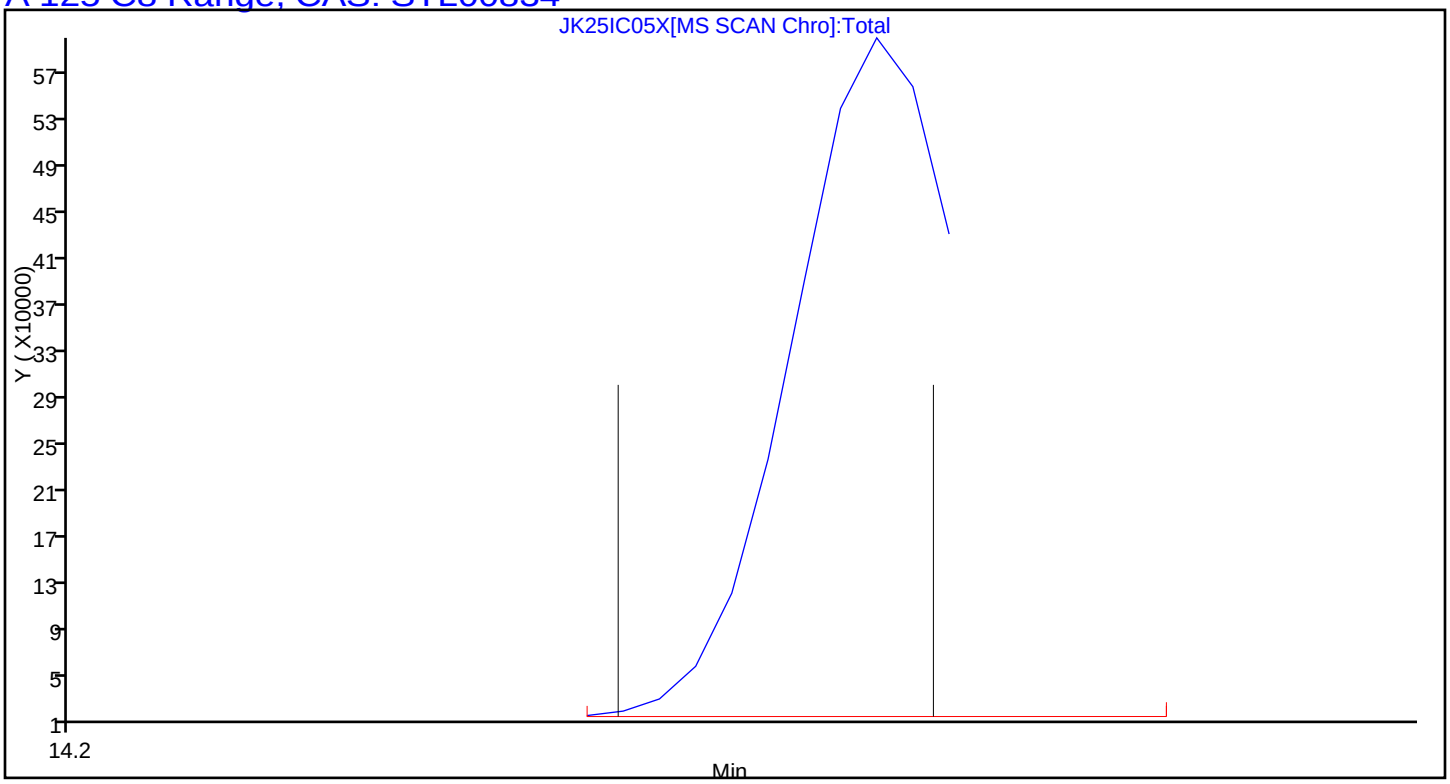


Report Date: 28-Nov-2016 13:55:33 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC05X.D				
Injection Date:	25-Nov-2016 22:23:30	Instrument ID:	MJ		
Lims ID:	IC L5				
Client ID:					
Operator ID:	007126	ALS Bottle#:	4	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC06X.D
Lims ID: ICIS L6
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 25-Nov-2016 23:17:30 ALS Bottle#: 5 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003656-007
Misc. Info.: 067938
Operator ID: 007126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Nov-2016 13:55:35 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: barlozhetskayaa Date: 26-Nov-2016 10:31:05

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.640	8.640	0.000	97	356777	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.841	10.843	-0.002	96	1567971	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.607	15.609	-0.002	89	1332891	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.253	17.254	-0.001	96	855705	4.00	4.05	
6 Chlorodifluoromethane	67	3.568	3.568	0.000	97	58411	2.00	1.82	
7 Propene	41	3.578	3.578	0.000	99	209464	2.00	1.89	
8 Dichlorodifluoromethane	85	3.627	3.627	0.000	99	544024	2.00	1.88	
9 Chloromethane	52	3.804	3.806	-0.002	65	77658	2.00	1.89	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.810	3.810	0.000	91	369090	2.00	2.31	
11 Acetaldehyde	44	3.955	3.953	0.002	95	406708	9.99	9.14	
12 Vinyl chloride	62	3.971	3.969	0.002	99	236881	2.00	1.92	
13 Butane	43	4.057	4.055	0.002	86	397262	2.00	1.85	
14 Butadiene	54	4.057	4.057	0.000	67	187703	2.00	1.89	
15 Bromomethane	94	4.369	4.367	0.002	98	212632	2.00	1.93	
16 Chloroethane	64	4.504	4.504	0.000	89	116765	2.00	1.99	
17 Ethanol	31	4.595	4.602	-0.007	97	465217	9.99	9.88	
18 Vinyl bromide	106	4.800	4.797	0.003	98	205590	2.00	1.91	
19 2-Methylbutane	43	4.843	4.845	-0.002	93	302142	2.00	1.92	
20 Trichlorofluoromethane	101	5.058	5.060	-0.002	100	575081	2.00	1.96	
21 Acrolein	56	5.069	5.074	-0.005	95	62656	2.00	1.81	
22 Acetonitrile	40	5.138	5.138	0.000	99	82955	2.00	1.95	
23 Acetone	58	5.187	5.192	-0.005	99	224276	5.99	6.07	
24 Isopropyl alcohol	45	5.262	5.273	-0.011	95	1021108	5.99	5.94	
25 Pentane	72	5.278	5.279	-0.001	98	32889	2.00	1.99	
26 Ethyl ether	31	5.445	5.451	-0.006	89	236371	2.00	1.95	
27 1,1-Dichloroethene	96	5.757	5.758	-0.001	95	204488	2.00	1.90	
29 Acrylonitrile	53	5.865	5.865	0.000	95	127525	2.00	1.87	
28 2-Methyl-2-propanol	59	5.854	5.868	-0.014	95	355509	2.00	2.05	
30 1,1,2-Trichloro-1,2,2-trif	101	5.929	5.931	-0.002	96	466491	2.00	1.96	
31 Methylene Chloride	84	6.101	6.105	-0.004	95	194734	2.00	1.85	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.118	6.121	-0.003	95	238874	2.00	1.93	
33 Carbon disulfide	76	6.263	6.264	-0.001	100	603813	2.00	1.91	
34 trans-1,2-Dichloroethene	96	6.908	6.908	0.000	94	208258	2.00	1.93	
35 2-Methylpentane	43	6.919	6.923	-0.004	96	542486	2.00	1.94	
36 Methyl tert-butyl ether	73	7.043	7.049	-0.006	98	414593	2.00	1.88	
37 1,1-Dichloroethane	63	7.328	7.326	0.002	100	397664	2.00	1.94	
38 Vinyl acetate	43	7.435	7.435	0.000	100	488532	2.00	1.93	
39 2-Butanone (MEK)	72	7.887	7.895	-0.008	95	66052	2.00	2.04	
40 Hexane	56	7.898	7.901	-0.003	80	182768	2.00	1.92	
41 Isopropyl ether	45	8.065	8.072	-0.007	97	652700	2.00	1.94	
42 cis-1,2-Dichloroethene	96	8.307	8.307	0.000	98	201554	2.00	1.89	
43 Ethyl acetate	43	8.506	8.508	-0.002	97	371439	2.00	1.97	
44 Chloroform	83	8.651	8.651	0.000	96	425460	2.00	1.90	
45 Tert-butyl ethyl ether	59	8.743	8.750	-0.007	98	512166	2.00	1.98	
46 Tetrahydrofuran	42	9.071	9.083	-0.012	92	204152	2.00	1.94	
47 1,1,1-Trichloroethane	97	9.679	9.679	0.000	97	446406	2.00	1.93	
48 1,2-Dichloroethane	62	9.792	9.792	0.000	97	287059	2.00	1.96	
49 n-Butanol	31	10.260	10.272	-0.012	92	95163	2.00	2.03	
50 Cyclohexane	69	10.287	10.285	0.002	85	101218	2.00	1.95	
51 Benzene	78	10.287	10.285	0.002	96	537887	2.00	1.89	
52 Carbon tetrachloride	117	10.308	10.308	0.000	96	509407	2.00	2.03	
53 2,3-Dimethylpentane	71	10.410	10.407	0.003	91	128303	2.00	1.96	
54 Thiophene	84	10.561	10.565	-0.004	97	312374	2.00	1.92	
55 Tert-amyl methyl ether	73	10.782	10.799	-0.017	95	439550	2.00	2.12	
56 Isooctane	57	11.056	11.058	-0.002	97	1047845	2.00	1.94	
57 n-Heptane	71	11.443	11.441	0.002	96	186596	2.00	1.87	
58 1,2-Dichloropropane	63	11.529	11.526	0.003	88	223106	2.00	1.93	
59 Trichloroethene	130	11.562	11.561	0.001	95	252436	2.00	1.88	
60 Dibromomethane	93	11.648	11.648	0.000	95	242664	2.00	1.91	
62 Dichlorobromomethane	83	11.793	11.795	-0.002	97	421714	2.00	1.90	
61 1,4-Dioxane	88	11.825	11.835	-0.010	97	62903	2.00	2.08	
63 Methyl methacrylate	41	11.900	11.902	-0.002	93	215926	2.00	1.98	
64 Methylcyclohexane	83	12.336	12.336	0.000	92	428267	2.00	1.98	
65 4-Methyl-2-pentanone (MIBK	43	12.761	12.764	-0.003	97	427163	2.00	1.98	
66 cis-1,3-Dichloropropene	75	12.810	12.808	0.002	98	289600	2.00	1.93	
67 trans-1,3-Dichloropropene	75	13.509	13.509	0.000	96	217897	2.00	1.90	
68 Toluene	91	13.627	13.630	-0.003	93	564299	2.00	1.97	
69 1,1,2-Trichloroethane	83	13.708	13.709	-0.001	98	176087	2.00	1.95	
70 2-Methylthiophene	97	13.783	13.784	-0.001	98	492684	2.00	2.05	
71 3-Methylthiophene	97	13.982	13.985	-0.003	100	451800	2.00	1.97	
72 2-Hexanone	58	14.101	14.106	-0.005	91	173958	2.00	2.08	
73 n-Octane	85	14.321	14.322	-0.001	97	185643	2.00	1.93	
74 Chlorodibromomethane	129	14.413	14.412	0.001	98	427846	2.00	2.04	
75 Ethylene Dibromide	107	14.703	14.706	-0.003	98	299565	2.00	1.98	
76 Tetrachloroethene	129	14.778	14.777	0.001	95	238290	2.00	1.90	
78 Chlorobenzene	112	15.655	15.658	-0.003	95	442675	2.00	1.97	
77 2,3-Dimethylheptane	43	15.677	15.677	0.000	94	717787	2.00	2.00	
79 Ethylbenzene	91	15.946	15.947	-0.001	99	650505	2.00	1.91	
80 2-Ethylthiophene	97	16.048	16.050	-0.002	98	497116	2.00	1.96	
81 m-Xylene & p-Xylene	91	16.107	16.110	-0.003	100	978007	3.99	3.90	
82 n-Nonane	57	16.527	16.528	-0.001	94	423733	2.00	1.98	
83 Bromoform	173	16.559	16.559	0.000	96	398085	2.00	1.99	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.575	16.575	0.000	98	345579	2.00	1.94	
85 o-Xylene	91	16.634	16.634	0.000	98	515214	2.00	1.90	
86 1,1,2,2-Tetrachloroethane	83	16.957	16.962	-0.005	99	389997	2.00	1.98	
87 1,2,3-Trichloropropane	110	17.119	17.122	-0.003	96	90650	2.00	2.01	
88 Isopropylbenzene	105	17.221	17.221	0.000	97	696162	2.00	1.90	
89 N-Propylbenzene	120	17.764	17.767	-0.003	99	174024	2.00	2.02	
90 2-Chlorotoluene	126	17.812	17.813	-0.001	96	176214	2.00	1.93	
91 4-Ethyltoluene	105	17.920	17.921	-0.001	98	609217	2.00	1.99	
92 1,3,5-Trimethylbenzene	120	17.995	17.995	0.000	92	304811	2.00	1.98	
93 Alpha Methyl Styrene	118	18.227	18.229	-0.002	86	240130	2.00	2.02	
94 n-Decane	57	18.286	18.287	-0.001	88	434454	2.00	2.00	
95 tert-Butylbenzene	119	18.420	18.422	-0.002	90	603936	2.00	1.94	
96 1,2,4-Trimethylbenzene	105	18.436	18.436	0.000	96	527968	2.00	1.98	
97 sec-Butylbenzene	105	18.695	18.694	0.001	98	794110	2.00	1.94	
98 1,3-Dichlorobenzene	146	18.711	18.710	0.001	97	279497	2.00	1.87	
99 Benzyl chloride	91	18.786	18.786	0.000	97	289147	2.00	2.24	
100 1,4-Dichlorobenzene	146	18.797	18.799	-0.002	94	240547	2.00	2.07	
101 4-Isopropyltoluene	119	18.856	18.857	-0.001	97	634861	2.00	1.99	
102 1,2,3-Trimethylbenzene	105	18.910	18.912	-0.002	99	392961	2.00	1.96	
103 Butylcyclohexane	83	18.964	18.964	0.000	89	498300	2.00	1.93	
104 2,3-Dihydroindene	117	19.157	19.159	-0.002	93	458736	2.00	1.97	
105 1,2-Dichlorobenzene	146	19.157	19.159	-0.002	78	292486	2.00	1.94	
107 Indene	116	19.286	19.290	-0.004	89	289355	2.00	2.00	
106 n-Butylbenzene	91	19.292	19.294	-0.002	98	534655	2.00	2.00	
108 Undecane	57	19.604	19.605	-0.001	93	397504	2.00	2.04	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.668	19.667	0.001	98	411342	2.00	2.10	
110 1,2-Dibromo-3-Chloropropan	157	19.765	19.765	0.000	96	115728	2.00	2.23	
111 1,2,4,5-Tetramethylbenzene	119	20.050	20.052	-0.002	97	482854	2.00	2.10	
112 1,2,3,5-Tetramethylbenzene	119	20.104	20.108	-0.004	95	294960	2.00	2.09	
113 1,2,3,4-Tetramethylbenzene	119	20.502	20.505	-0.003	98	371381	2.00	2.08	
114 Dodecane	57	20.664	20.665	-0.001	91	339664	2.00	2.11	
115 1,2,4-Trichlorobenzene	180	20.863	20.865	-0.002	94	103584	2.00	2.38	
116 Naphthalene	128	21.008	21.007	0.001	99	239465	2.00	2.06	
117 Benzo(b)thiophene	134	21.110	21.112	-0.002	99	100021	2.00	2.21	
118 Hexachlorobutadiene	225	21.223	21.225	-0.002	95	320484	2.00	1.91	
119 1,2,3-Trichlorobenzene	180	21.298	21.297	0.001	94	121404	2.00	2.14	
120 2-Methylnaphthalene	142	21.965	21.967	-0.002	98	78199	6.24	6.85	
121 1-Methylnaphthalene	142	22.095	22.095	0.000	99	91252	6.24	7.18	
A 124 Toluene Range	1	13.627	(13.597-13.657)		0	1436613	2.00	1.91	
A 125 C8 Range	1	14.306	(14.283-14.330)		0	2069587	2.00	2.03	
S 126 Xylenes, Total	100				0		5.99	5.80	
S 127 1,2-Dichloroethene, Total	1				0		3.99	3.82	

Reagents:

40L6DNP_00009	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

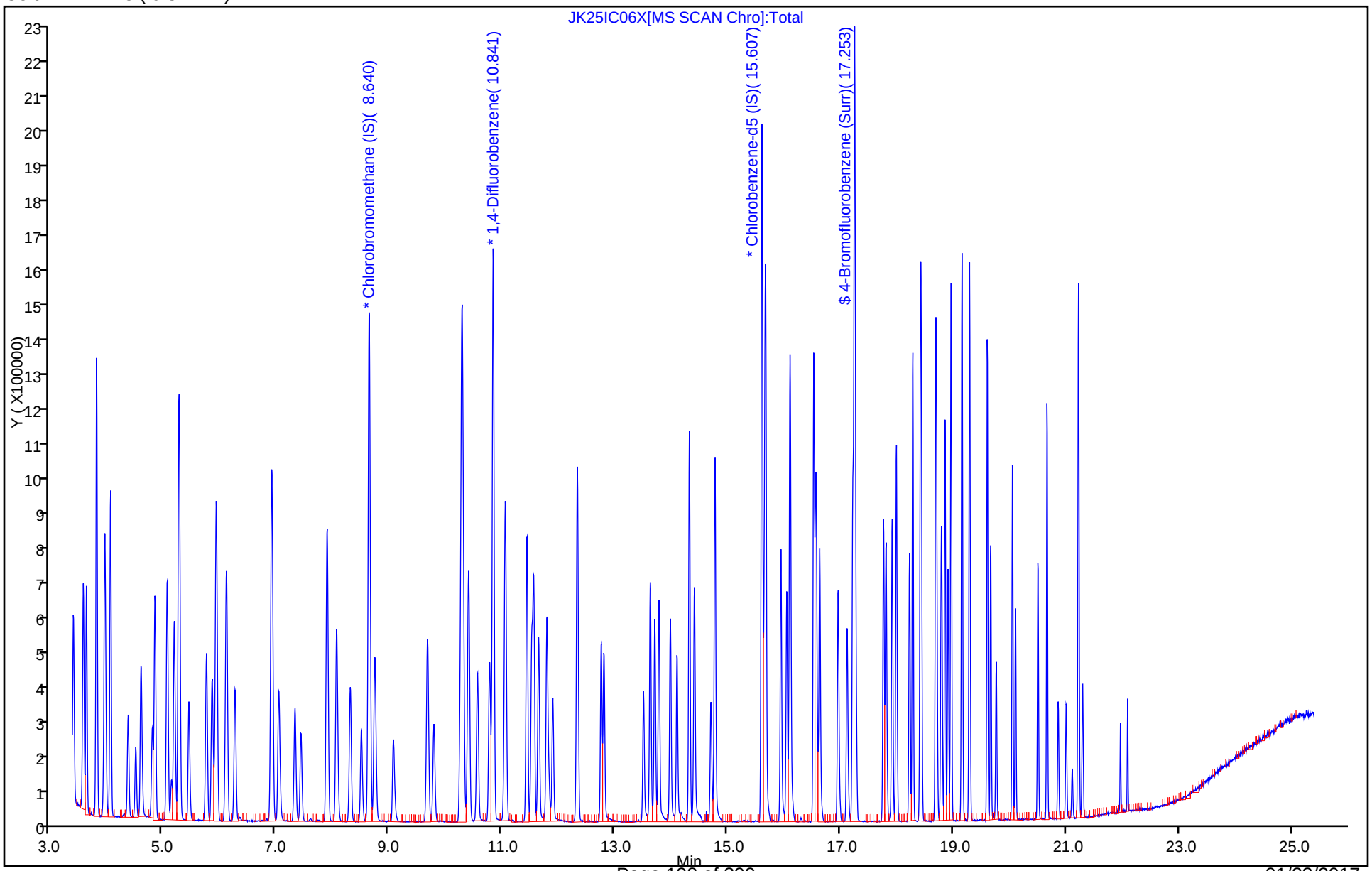
Report Date: 28-Nov-2016 13:55:36 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC06X.D

Injection Date:	25-Nov-2016 23:17:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	ICIS L6			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

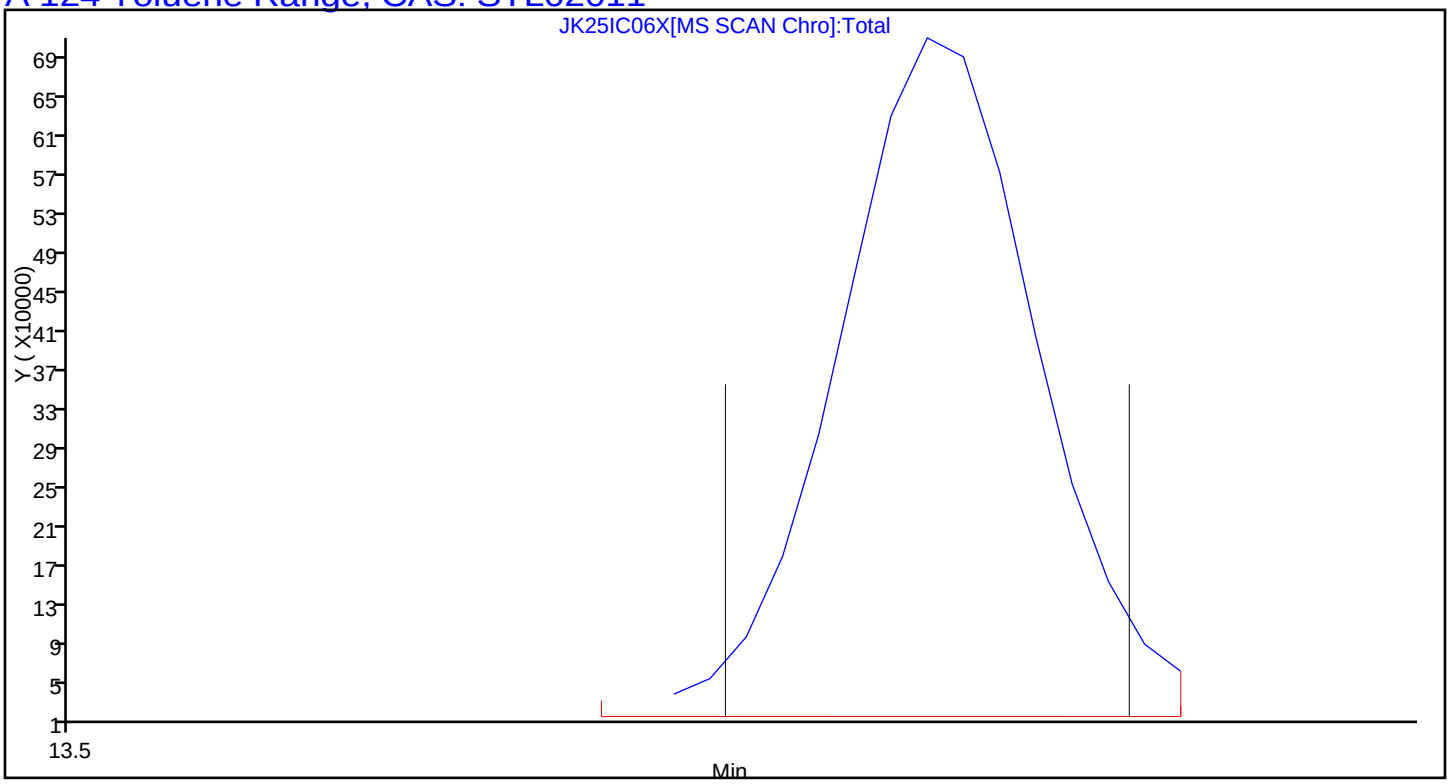


Report Date: 28-Nov-2016 13:55:36 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC06X.D				
Injection Date:	25-Nov-2016 23:17:30	Instrument ID:	MJ		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	007126	ALS Bottle#:	5	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

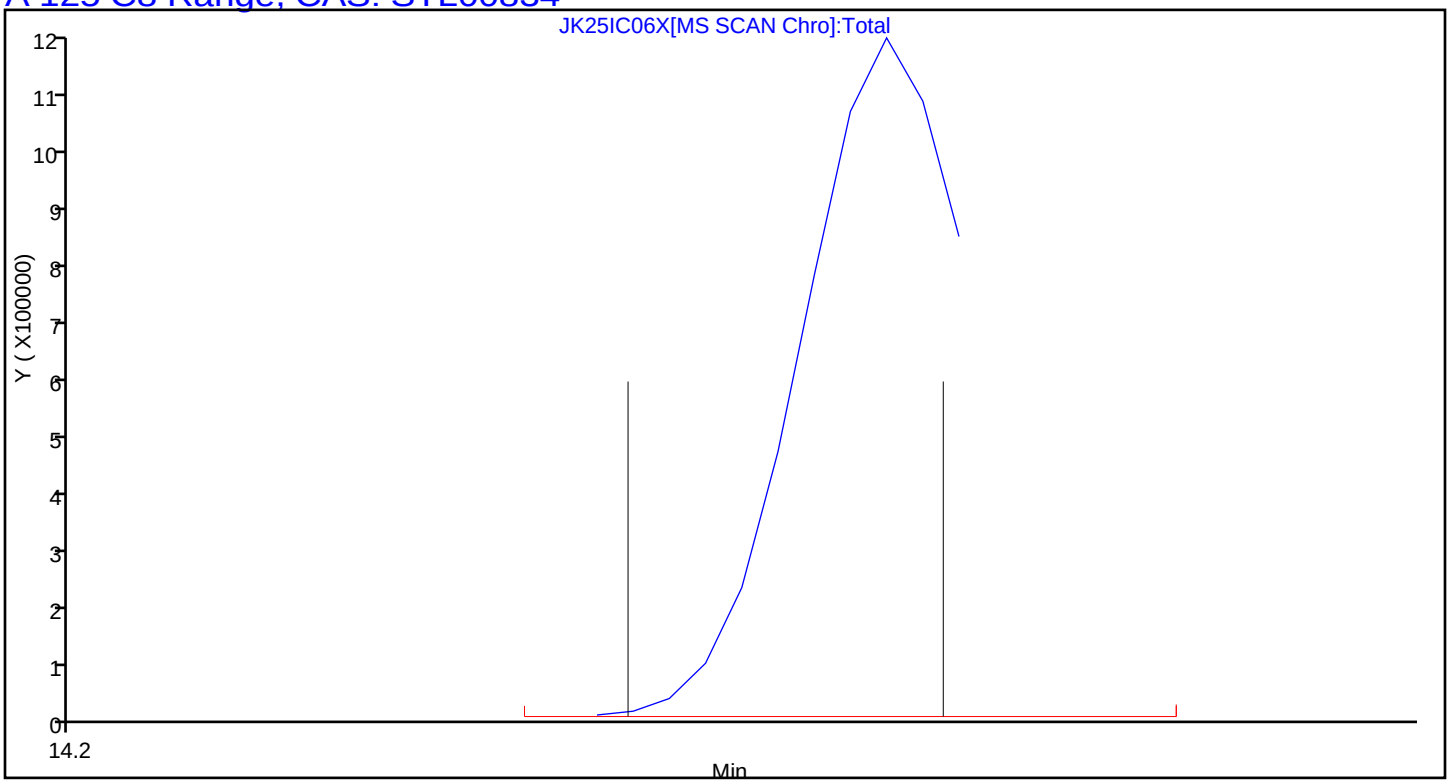


Report Date: 28-Nov-2016 13:55:37 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC06X.D				
Injection Date:	25-Nov-2016 23:17:30	Instrument ID:	MJ		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	007126	ALS Bottle#:	5	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC07X.D
Lims ID: IC L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 26-Nov-2016 00:11:30 ALS Bottle#: 6 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003656-008
Misc. Info.: 067936
Operator ID: 007126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Nov-2016 13:55:40 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh Date: 28-Nov-2016 11:54:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.644	8.640	0.004	98	347139	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.844	10.843	0.001	95	1567181	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.610	15.609	0.001	89	1375951	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.251	17.254	-0.003	96	914153	4.00	4.20	
6 Chlorodifluoromethane	67	3.566	3.568	-0.002	98	118844	4.00	3.80	
7 Propene	41	3.577	3.578	-0.002	98	416325	4.00	3.85	
8 Dichlorodifluoromethane	85	3.625	3.627	-0.002	100	1115556	4.00	3.97	
9 Chloromethane	52	3.802	3.806	-0.004	98	158851	4.00	3.96	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.808	3.810	-0.002	91	586542	4.00	3.78	
11 Acetaldehyde	44	3.953	3.953	0.000	95	758197	20.0	17.5	
12 Vinyl chloride	62	3.969	3.969	0.000	99	484487	4.00	4.03	
13 Butane	43	4.055	4.055	0.000	86	809131	4.00	3.86	
14 Butadiene	54	4.055	4.057	-0.002	66	385793	4.00	4.00	
15 Bromomethane	94	4.367	4.367	0.000	98	433625	4.00	4.06	
16 Chloroethane	64	4.502	4.504	-0.002	89	227227	4.00	3.99	
17 Ethanol	31	4.599	4.602	-0.003	97	876962	20.0	19.1	
18 Vinyl bromide	106	4.798	4.797	0.001	99	418434	4.00	4.00	
19 2-Methylbutane	43	4.846	4.845	0.001	94	607591	4.00	3.96	
20 Trichlorofluoromethane	101	5.061	5.060	0.001	99	1151548	4.00	4.03	
21 Acrolein	56	5.072	5.074	-0.002	96	118346	4.00	3.52	
22 Acetonitrile	40	5.137	5.138	-0.001	98	155542	4.00	3.76	
23 Acetone	58	5.185	5.192	-0.007	99	407996	12.0	11.3	
24 Isopropyl alcohol	45	5.266	5.273	-0.007	93	2009448	12.0	12.0	
25 Pentane	72	5.276	5.279	-0.003	95	64760	4.00	4.03	
26 Ethyl ether	31	5.443	5.451	-0.008	89	450555	4.00	3.82	
27 1,1-Dichloroethene	96	5.755	5.758	-0.003	95	409463	4.00	3.92	
29 Acrylonitrile	53	5.863	5.865	-0.002	93	243769	4.00	3.68	
28 2-Methyl-2-propanol	59	5.852	5.868	-0.016	95	701844	4.00	4.16	
30 1,1,2-Trichloro-1,2,2-trif	101	5.933	5.931	0.002	97	912233	4.00	3.94	
31 Methylene Chloride	84	6.105	6.105	0.000	95	371333	4.00	3.63	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.121	6.121	0.000	95	461294	4.00	3.83	
33 Carbon disulfide	76	6.266	6.264	0.002	100	1200814	4.00	3.90	
34 trans-1,2-Dichloroethene	96	6.906	6.908	-0.002	95	406768	4.00	3.87	
35 2-Methylpentane	43	6.923	6.923	0.000	96	1048110	4.00	3.86	
36 Methyl tert-butyl ether	73	7.036	7.049	-0.013	97	792821	4.00	3.69	
37 1,1-Dichloroethane	63	7.326	7.326	0.000	100	741147	4.00	3.71	
38 Vinyl acetate	43	7.434	7.435	-0.001	100	922514	4.00	3.75	
39 2-Butanone (MEK)	72	7.885	7.895	-0.010	95	124487	4.00	3.96	
40 Hexane	56	7.902	7.901	0.001	90	345145	4.00	3.73	
41 Isopropyl ether	45	8.063	8.072	-0.009	96	1258094	4.00	3.85	
42 cis-1,2-Dichloroethene	96	8.310	8.307	0.003	98	374711	4.00	3.62	
43 Ethyl acetate	43	8.504	8.508	-0.004	98	706434	4.00	3.85	
44 Chloroform	83	8.655	8.651	0.004	96	773414	4.00	3.55	
45 Tert-butyl ethyl ether	59	8.741	8.750	-0.009	97	982477	4.00	3.91	
46 Tetrahydrofuran	42	9.069	9.083	-0.014	93	375805	4.00	3.68	
47 1,1,1-Trichloroethane	97	9.677	9.679	-0.002	97	817437	4.00	3.64	
48 1,2-Dichloroethane	62	9.790	9.792	-0.002	97	518857	4.00	3.55	
49 n-Butanol	31	10.252	10.272	-0.020	89	189813	4.00	4.06	
50 Cyclohexane	69	10.285	10.285	0.000	81	188882	4.00	3.64	
51 Benzene	78	10.285	10.285	0.000	98	998620	4.00	3.51	
52 Carbon tetrachloride	117	10.312	10.308	0.004	96	943611	4.00	3.76	
53 2,3-Dimethylpentane	71	10.408	10.407	0.001	92	234828	4.00	3.59	
54 Thiophene	84	10.564	10.565	-0.001	97	579159	4.00	3.56	
55 Tert-amyl methyl ether	73	10.780	10.796	-0.016	95	826406	4.00	3.86	
56 Isooctane	57	11.059	11.058	0.001	97	1909813	4.00	3.54	
57 n-Heptane	71	11.441	11.441	0.000	96	344303	4.00	3.45	
58 1,2-Dichloropropane	63	11.527	11.526	0.001	89	418060	4.00	3.62	
59 Trichloroethene	130	11.560	11.561	-0.001	96	471497	4.00	3.52	
60 Dibromomethane	93	11.651	11.648	0.003	95	446341	4.00	3.51	
62 Dichlorobromomethane	83	11.796	11.795	0.001	97	774474	4.00	3.50	
61 1,4-Dioxane	88	11.823	11.835	-0.012	97	123907	4.00	4.11	
63 Methyl methacrylate	41	11.899	11.902	-0.003	93	430899	4.00	3.95	
64 Methylcyclohexane	83	12.334	12.336	-0.002	91	775502	4.00	3.58	
65 4-Methyl-2-pentanone (MIBK	43	12.759	12.764	-0.005	98	845642	4.00	3.92	
66 cis-1,3-Dichloropropene	75	12.808	12.808	0.000	98	567162	4.00	3.79	
67 trans-1,3-Dichloropropene	75	13.507	13.509	-0.002	96	440824	4.00	3.72	
68 Toluene	91	13.631	13.630	0.001	93	1091996	4.00	3.69	
69 1,1,2-Trichloroethane	83	13.711	13.709	0.002	98	333675	4.00	3.59	
70 2-Methylthiophene	97	13.781	13.784	-0.003	99	924136	4.00	3.72	
71 3-Methylthiophene	97	13.986	13.985	0.001	100	893344	4.00	3.77	
72 2-Hexanone	58	14.104	14.106	-0.002	91	376223	4.00	4.36	
73 n-Octane	85	14.325	14.322	0.003	97	348881	4.00	3.52	
74 Chlorodibromomethane	129	14.411	14.412	-0.001	98	808128	4.00	3.73	
75 Ethylene Dibromide	107	14.707	14.706	0.001	98	581436	4.00	3.72	
76 Tetrachloroethene	129	14.777	14.777	0.000	95	445648	4.00	3.44	
78 Chlorobenzene	112	15.659	15.658	0.001	94	862198	4.00	3.71	
77 2,3-Dimethylheptane	43	15.675	15.677	-0.002	94	1349555	4.00	3.65	
79 Ethylbenzene	91	15.944	15.947	-0.003	99	1262362	4.00	3.60	
80 2-Ethylthiophene	97	16.051	16.050	0.001	98	977657	4.00	3.73	
81 m-Xylene & p-Xylene	91	16.111	16.110	0.001	100	1919976	8.00	7.42	
82 n-Nonane	57	16.530	16.528	0.002	94	834807	4.00	3.77	
83 Bromoform	173	16.557	16.559	-0.002	97	809091	4.00	3.92	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.573	16.575	-0.002	98	713753	4.00	3.88	
85 o-Xylene	91	16.632	16.634	-0.002	98	1000055	4.00	3.58	
86 1,1,2,2-Tetrachloroethane	83	16.961	16.962	-0.001	99	775460	4.00	3.82	
87 1,2,3-Trichloropropane	110	17.122	17.122	0.000	96	180195	4.00	3.86	
88 Isopropylbenzene	105	17.219	17.221	-0.002	97	1358053	4.00	3.60	
89 N-Propylbenzene	120	17.768	17.767	0.001	99	342915	4.00	3.86	
90 2-Chlorotoluene	126	17.811	17.813	-0.002	97	357053	4.00	3.78	
91 4-Ethyltoluene	105	17.918	17.921	-0.003	98	1225761	4.00	3.88	
92 1,3,5-Trimethylbenzene	120	17.993	17.995	-0.002	92	603355	4.00	3.79	
93 Alpha Methyl Styrene	118	18.230	18.229	0.001	86	499500	4.00	4.06	
94 n-Decane	57	18.284	18.287	-0.003	88	903971	4.00	4.04	
95 tert-Butylbenzene	119	18.424	18.422	0.002	92	1191702	4.00	3.71	
96 1,2,4-Trimethylbenzene	105	18.435	18.436	-0.001	96	1063039	4.00	3.87	
97 sec-Butylbenzene	105	18.693	18.694	-0.001	98	1590827	4.00	3.77	
98 1,3-Dichlorobenzene	146	18.709	18.710	-0.001	98	605637	4.00	3.93	
99 Benzyl chloride	91	18.784	18.786	-0.002	97	633760	4.00	4.75	
100 1,4-Dichlorobenzene	146	18.800	18.799	0.001	95	526340	4.00	4.38	
101 4-Isopropyltoluene	119	18.860	18.857	0.003	97	1267933	4.00	3.86	
102 1,2,3-Trimethylbenzene	105	18.913	18.912	0.001	99	779253	4.00	3.77	
103 Butylcyclohexane	83	18.962	18.964	-0.002	89	1003008	4.00	3.77	
104 2,3-Dihydroindene	117	19.161	19.159	0.002	93	930740	4.00	3.87	
105 1,2-Dichlorobenzene	146	19.161	19.159	0.002	80	616546	4.00	3.95	
107 Indene	116	19.290	19.290	0.000	89	607320	4.00	4.06	
106 n-Butylbenzene	91	19.295	19.294	0.001	98	1100830	4.00	3.99	
108 Undecane	57	19.607	19.605	0.002	93	811824	4.00	4.04	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.667	19.667	-0.001	98	837435	4.00	4.13	
110 1,2-Dibromo-3-Chloropropan	157	19.763	19.765	-0.002	96	249204	4.00	4.64	
111 1,2,4,5-Tetramethylbenzene	119	20.054	20.052	0.002	97	983706	4.00	4.15	
112 1,2,3,5-Tetramethylbenzene	119	20.108	20.108	0.000	95	608119	4.00	4.17	
113 1,2,3,4-Tetramethylbenzene	119	20.506	20.505	0.001	98	752440	4.00	4.08	
114 Dodecane	57	20.667	20.665	0.002	92	665748	4.00	4.01	
115 1,2,4-Trichlorobenzene	180	20.866	20.865	0.001	94	234735	4.00	5.23	
116 Naphthalene	128	21.006	21.007	-0.001	99	538060	4.00	4.48	
117 Benzo(b)thiophene	134	21.114	21.112	0.002	99	221729	4.00	4.74	
118 Hexachlorobutadiene	225	21.227	21.225	0.002	95	646694	4.00	3.72	
119 1,2,3-Trichlorobenzene	180	21.296	21.297	-0.001	94	266581	4.00	4.54	
120 2-Methylnaphthalene	142	21.969	21.967	0.002	98	170697	12.5	14.5	
121 1-Methylnaphthalene	142	22.093	22.095	-0.002	98	194863	12.5	14.8	
A 124 Toluene Range	1	13.631	(13.601-13.661)		0	2791156	4.00	3.60	
A 125 C8 Range	1	14.310	(14.286-14.333)		0	3867680	4.00	3.67	
S 126 Xylenes, Total	100				0		12.0	11.0	
S 127 1,2-Dichloroethene, Total	1				0		8.00	7.49	

Reagents:

40L7DNP_00008	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

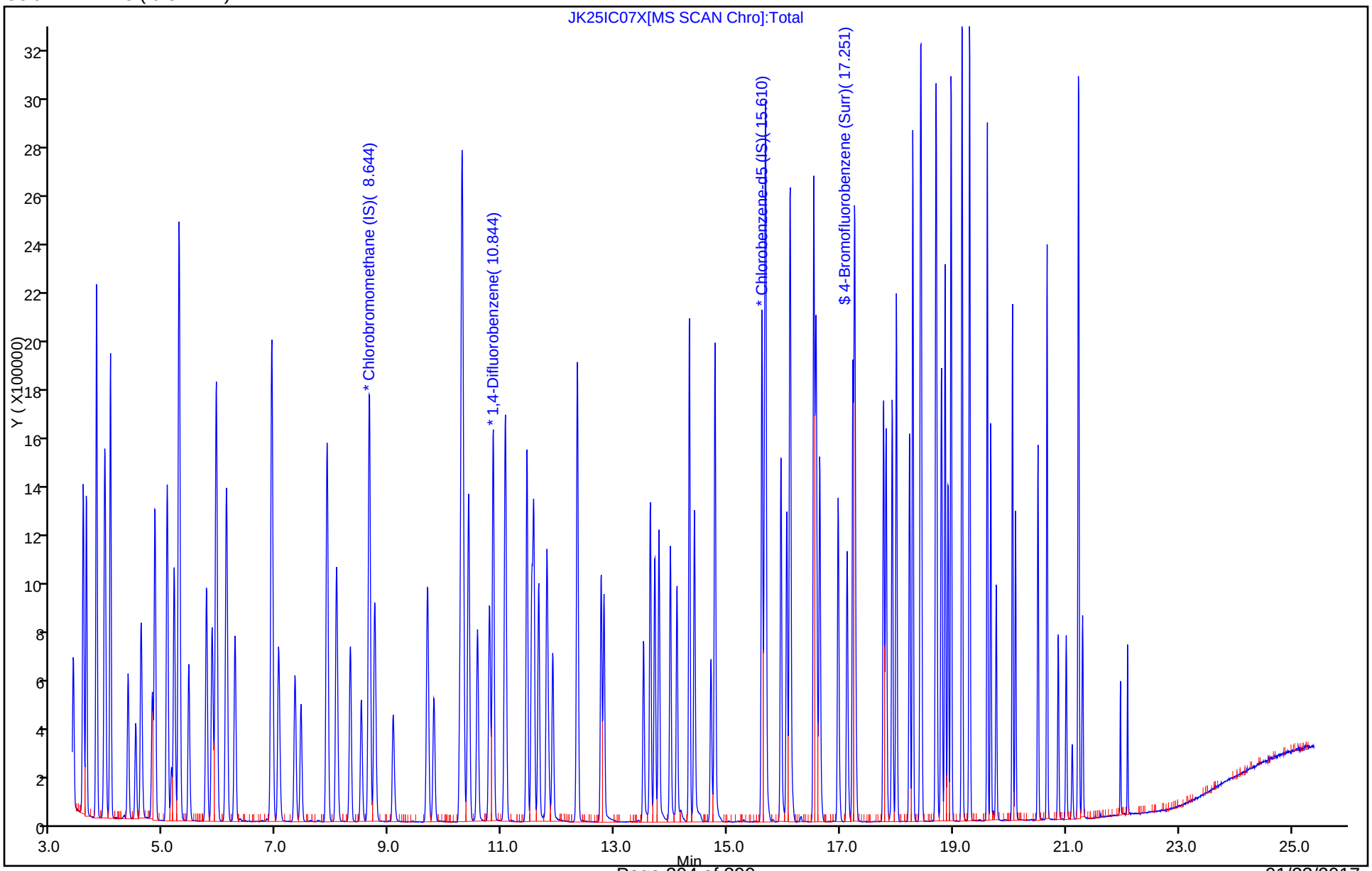
Report Date: 28-Nov-2016 13:55:40 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC07X.D

Injection Date:	26-Nov-2016 00:11:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	IC L7			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

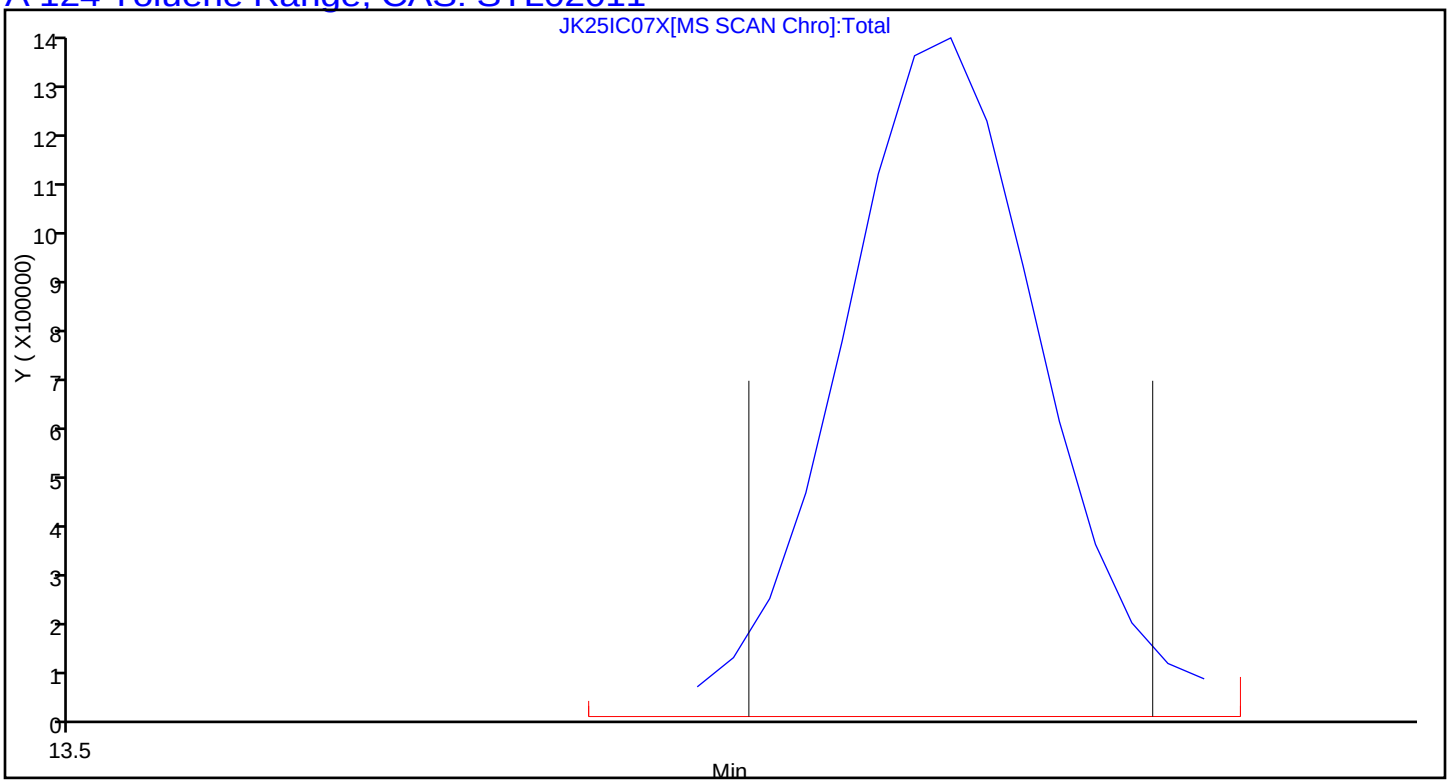


Report Date: 28-Nov-2016 13:55:40 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC07X.D				
Injection Date:	26-Nov-2016 00:11:30	Instrument ID:	MJ		
Lims ID:	IC L7				
Client ID:					
Operator ID:	007126	ALS Bottle#:	6	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

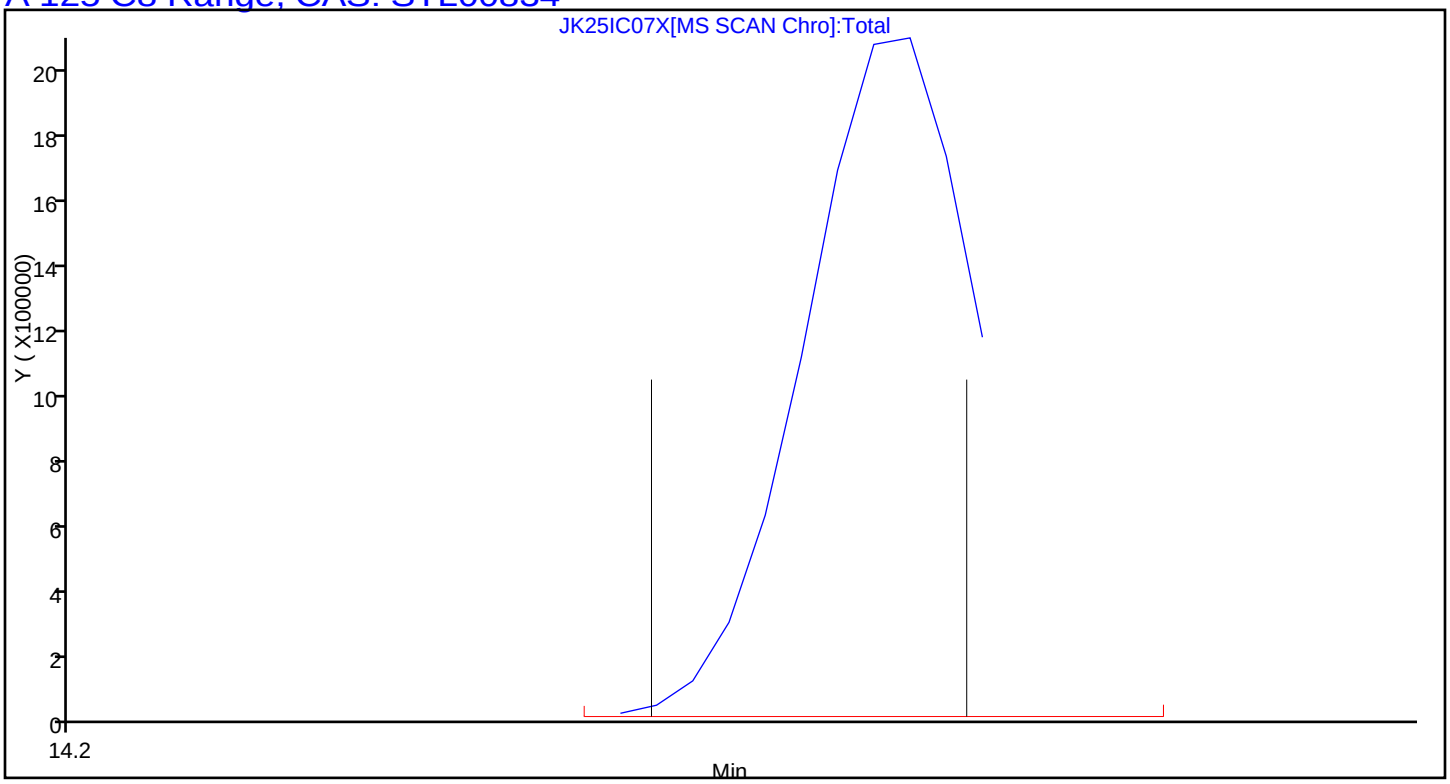


Report Date: 28-Nov-2016 13:55:41 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC07X.D				
Injection Date:	26-Nov-2016 00:11:30	Instrument ID:	MJ		
Lims ID:	IC L7				
Client ID:					
Operator ID:	007126	ALS Bottle#:	6	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC08X.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 26-Nov-2016 01:05:30 ALS Bottle#: 7 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003656-009
Misc. Info.: 067935
Operator ID: 007126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Nov-2016 13:55:44 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh Date: 28-Nov-2016 11:54:50

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	8.641	8.640	0.001	98	345274	4.00	4.00	
*	2 1,4-Difluorobenzene	114	10.847	10.843	0.004	95	1520526	4.00	4.00	
*	3 Chlorobenzene-d5 (IS)	117	15.613	15.609	0.004	88	1363260	4.00	4.00	
$	4 4-Bromofluorobenzene (Surr	95	17.254	17.254	0.000	97	927094	4.00	4.29	
	6 Chlorodifluoromethane	67	3.568	3.568	0.000	97	235313	8.00	7.56	
	7 Propene	41	3.574	3.578	-0.004	98	875090	8.00	8.14	
	8 Dichlorodifluoromethane	85	3.628	3.627	0.001	100	2198367	8.00	7.86	
	9 Chloromethane	52	3.805	3.806	-0.001	98	316299	8.00	7.93	
	10 1,2-Dichloro-1,1,2,2-tetra	135	3.811	3.810	0.001	90	1100458	8.00	7.12	
	11 Acetaldehyde	44	3.950	3.953	-0.003	96	1629284	40.0	37.8	
	12 Vinyl chloride	62	3.967	3.969	-0.002	99	964833	8.00	8.07	
	13 Butane	43	4.053	4.055	-0.002	86	1638360	8.00	7.86	
	14 Butadiene	54	4.053	4.057	-0.004	66	774881	8.00	8.08	
	15 Bromomethane	94	4.365	4.367	-0.002	99	870033	8.00	8.18	
	16 Chloroethane	64	4.504	4.504	0.000	90	460075	8.00	8.11	
	17 Ethanol	31	4.601	4.602	-0.001	97	1720033	40.0	37.7	
	18 Vinyl bromide	106	4.800	4.797	0.003	98	846638	8.00	8.13	
	19 2-Methylbutane	43	4.843	4.845	-0.002	93	1229715	8.00	8.06	
	20 Trichlorofluoromethane	101	5.059	5.060	-0.001	100	2330072	8.00	8.19	
	21 Acrolein	56	5.075	5.074	0.001	96	244387	8.00	7.30	
	22 Acetonitrile	40	5.139	5.138	0.001	98	323650	8.00	7.86	
	23 Acetone	58	5.182	5.192	-0.010	99	817306	24.0	22.8	
	24 Isopropyl alcohol	45	5.274	5.273	0.001	93	3985916	24.0	24.0	
	25 Pentane	72	5.279	5.279	0.000	94	133194	8.00	8.33	
	26 Ethyl ether	31	5.446	5.451	-0.005	90	913954	8.00	7.80	
	27 1,1-Dichloroethene	96	5.758	5.758	0.000	95	833287	8.00	8.02	
	29 Acrylonitrile	53	5.865	5.865	0.000	93	511675	8.00	7.76	
	28 2-Methyl-2-propanol	59	5.860	5.868	-0.008	96	1406893	8.00	8.39	
	30 1,1,2-Trichloro-1,2,2-trif	101	5.930	5.931	-0.001	97	1884507	8.00	8.18	
	31 Methylene Chloride	84	6.108	6.105	0.003	95	758999	8.00	7.46	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.124	6.121	0.003	95	938863	8.00	7.84	
33 Carbon disulfide	76	6.264	6.264	0.000	100	2443791	8.00	7.98	
34 trans-1,2-Dichloroethene	96	6.909	6.908	0.001	95	835250	8.00	8.00	
35 2-Methylpentane	43	6.925	6.923	0.002	96	2177430	8.00	8.06	
36 Methyl tert-butyl ether	73	7.038	7.049	-0.011	97	1617852	8.00	7.58	
37 1,1-Dichloroethane	63	7.329	7.326	0.003	100	1527772	8.00	7.69	
38 Vinyl acetate	43	7.436	7.435	0.001	100	1903842	8.00	7.79	
39 2-Butanone (MEK)	72	7.888	7.895	-0.007	97	253927	8.00	8.11	
40 Hexane	56	7.899	7.901	-0.002	85	724504	8.00	7.88	
41 Isopropyl ether	45	8.066	8.072	-0.006	96	2603004	8.00	8.00	
42 cis-1,2-Dichloroethene	96	8.313	8.307	0.006	98	775858	8.00	7.54	
43 Ethyl acetate	43	8.507	8.508	-0.001	98	1424609	8.00	7.80	
44 Chloroform	83	8.657	8.651	0.006	97	1591650	8.00	7.35	
45 Tert-butyl ethyl ether	59	8.744	8.750	-0.006	97	2036709	8.00	8.15	
46 Tetrahydrofuran	42	9.066	9.083	-0.017	93	768341	8.00	7.56	
47 1,1,1-Trichloroethane	97	9.680	9.679	0.001	97	1658324	8.00	7.42	
48 1,2-Dichloroethane	62	9.793	9.792	0.000	97	1078779	8.00	7.61	
49 n-Butanol	31	10.255	10.272	-0.017	86	385011	8.00	8.48	
50 Cyclohexane	69	10.287	10.285	0.002	84	378419	8.00	7.52	
51 Benzene	78	10.287	10.285	0.002	98	2072736	8.00	7.50	
52 Carbon tetrachloride	117	10.309	10.308	0.001	96	1562157	8.00	6.42	
53 2,3-Dimethylpentane	71	10.406	10.407	-0.001	92	486787	8.00	7.68	
54 Thiophene	84	10.567	10.565	0.002	97	1190849	8.00	7.54	
55 Tert-amyl methyl ether	73	10.777	10.794	-0.017	95	1687255	8.00	7.96	
56 Isooctane	57	11.062	11.058	0.004	97	3937619	8.00	7.52	
57 n-Heptane	71	11.444	11.441	0.003	95	710384	8.00	7.34	
58 1,2-Dichloropropane	63	11.530	11.526	0.004	88	860195	8.00	7.69	
59 Trichloroethene	130	11.568	11.561	0.007	96	965984	8.00	7.43	
60 Dibromomethane	93	11.654	11.648	0.006	94	912301	8.00	7.39	
62 Dichlorobromomethane	83	11.799	11.795	0.004	98	1600155	8.00	7.44	
61 1,4-Dioxane	88	11.821	11.835	-0.014	98	248451	8.00	8.49	
63 Methyl methacrylate	41	11.901	11.902	-0.001	93	896296	8.00	8.47	
64 Methylcyclohexane	83	12.337	12.336	0.001	90	1595324	8.00	7.59	
65 4-Methyl-2-pentanone (MIBK	43	12.762	12.764	-0.002	98	1726160	8.00	8.25	
66 cis-1,3-Dichloropropene	75	12.810	12.808	0.002	98	1195443	8.00	8.23	
67 trans-1,3-Dichloropropene	75	13.510	13.509	0.001	97	934863	8.00	7.97	
68 Toluene	91	13.633	13.630	0.003	93	2328051	8.00	7.94	
69 1,1,2-Trichloroethane	83	13.709	13.709	0.000	98	701197	8.00	7.61	
70 2-Methylthiophene	97	13.784	13.784	0.000	98	1973707	8.00	8.02	
71 3-Methylthiophene	97	13.988	13.985	0.003	100	1877320	8.00	7.99	
72 2-Hexanone	58	14.101	14.106	-0.005	91	759406	8.00	8.87	
73 n-Octane	85	14.322	14.322	0.000	97	731653	8.00	7.45	
74 Chlorodibromomethane	129	14.413	14.412	0.001	98	1708750	8.00	7.95	
75 Ethylene Dibromide	107	14.709	14.706	0.003	98	1233456	8.00	7.96	
76 Tetrachloroethene	129	14.779	14.777	0.002	95	942886	8.00	7.34	
78 Chlorobenzene	112	15.662	15.658	0.004	94	1839152	8.00	7.99	
77 2,3-Dimethylheptane	43	15.678	15.677	0.001	94	2768264	8.00	7.55	
79 Ethylbenzene	91	15.947	15.947	0.000	99	2721372	8.00	7.83	
80 2-Ethylthiophene	97	16.054	16.050	0.004	98	2115122	8.00	8.14	
81 m-Xylene & p-Xylene	91	16.113	16.110	0.003	99	4180493	16.0	16.3	
82 n-Nonane	57	16.528	16.528	0.000	94	1783024	8.00	8.13	
83 Bromoform	173	16.560	16.559	0.001	97	1777546	8.00	8.69	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.576	16.575	0.001	99	1596019	8.00	8.75	
85 o-Xylene	91	16.635	16.634	0.001	99	2147893	8.00	7.76	
86 1,1,2,2-Tetrachloroethane	83	16.963	16.962	0.001	99	1682135	8.00	8.35	
87 1,2,3-Trichloropropane	110	17.125	17.122	0.003	96	400421	8.00	8.66	
88 Isopropylbenzene	105	17.222	17.221	0.001	97	2941806	8.00	7.86	
89 N-Propylbenzene	120	17.770	17.767	0.003	99	761562	8.00	8.65	
90 2-Chlorotoluene	126	17.813	17.813	0.000	97	784198	8.00	8.38	
91 4-Ethyltoluene	105	17.921	17.921	0.000	98	2722956	8.00	8.70	
92 1,3,5-Trimethylbenzene	120	17.996	17.995	0.001	93	1334976	8.00	8.46	
93 Alpha Methyl Styrene	118	18.228	18.229	-0.001	87	1159461	8.00	9.52	
94 n-Decane	57	18.287	18.287	0.000	88	2015482	8.00	9.09	
95 tert-Butylbenzene	119	18.421	18.422	-0.001	92	2650102	8.00	8.32	
96 1,2,4-Trimethylbenzene	105	18.437	18.436	0.001	96	2361494	8.00	8.67	
97 sec-Butylbenzene	105	18.696	18.694	0.002	98	3508321	8.00	8.40	
98 1,3-Dichlorobenzene	146	18.712	18.710	0.002	97	1475008	8.00	9.67	
99 Benzyl chloride	91	18.787	18.786	0.001	98	1586115	8.00	12.0	
100 1,4-Dichlorobenzene	146	18.798	18.799	-0.001	95	1315653	8.00	11.1	
101 4-Isopropyltoluene	119	18.857	18.857	0.000	97	2823302	8.00	8.67	
102 1,2,3-Trimethylbenzene	105	18.911	18.912	-0.001	99	1720307	8.00	8.41	
103 Butylcyclohexane	83	18.964	18.964	0.000	89	2185035	8.00	8.29	
104 2,3-Dihydroindene	117	19.158	19.159	-0.001	93	2141880	8.00	8.99	
105 1,2-Dichlorobenzene	146	19.158	19.159	-0.001	82	1494867	8.00	9.68	
107 Indene	116	19.293	19.290	0.003	89	1455216	8.00	9.83	
106 n-Butylbenzene	91	19.293	19.294	-0.001	98	2538094	8.00	9.29	
108 Undecane	57	19.605	19.605	0.000	93	1865694	8.00	9.37	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.669	19.667	0.002	98	1893275	8.00	9.43	
110 1,2-Dibromo-3-Chloropropan	157	19.766	19.765	0.001	96	600110	8.00	11.3	
111 1,2,4,5-Tetramethylbenzene	119	20.051	20.052	-0.001	97	2206639	8.00	9.39	
112 1,2,3,5-Tetramethylbenzene	119	20.110	20.108	0.002	95	1340133	8.00	9.27	
113 1,2,3,4-Tetramethylbenzene	119	20.508	20.505	0.003	98	1698919	8.00	9.30	
114 Dodecane	57	20.664	20.665	-0.001	91	1515010	8.00	9.20	
115 1,2,4-Trichlorobenzene	180	20.863	20.865	-0.002	94	642323	8.00	14.5	
116 Naphthalene	128	21.009	21.007	0.002	99	1375773	8.00	11.6	
117 Benzo(b)thiophene	134	21.111	21.112	-0.001	99	590694	8.00	12.7	
118 Hexachlorobutadiene	225	21.224	21.225	-0.001	94	1494370	8.00	8.69	
119 1,2,3-Trichlorobenzene	180	21.299	21.297	0.002	94	670480	8.00	11.5	
120 2-Methylnaphthalene	142	21.966	21.967	-0.001	99	389989	25.0	33.4	
121 1-Methylnaphthalene	142	22.095	22.095	0.000	98	411293	25.0	31.6	
A 124 Toluene Range	1	13.633	(13.603-13.663)		0	5917756	8.00	7.71	
A 125 C8 Range	1	14.307	(14.284-14.330)		0	8082975	8.00	7.73	
S 126 Xylenes, Total	100				0		24.0	24.1	
S 127 1,2-Dichloroethene, Total	1				0		16.0	15.5	

Reagents:

40L8DNP_00008	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

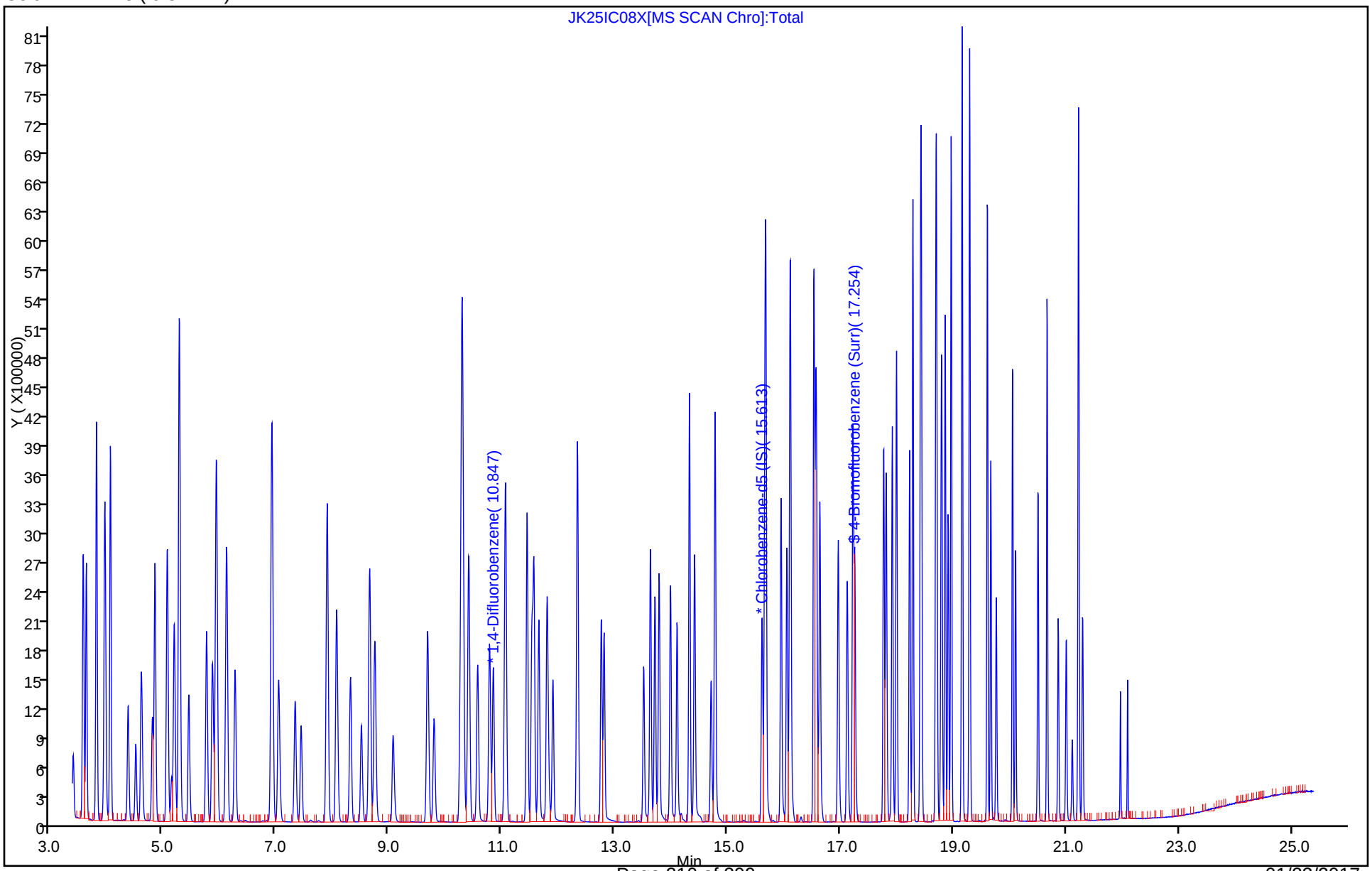
Report Date: 28-Nov-2016 13:55:44 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC08X.D

Injection Date:	26-Nov-2016 01:05:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	IC L8			Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

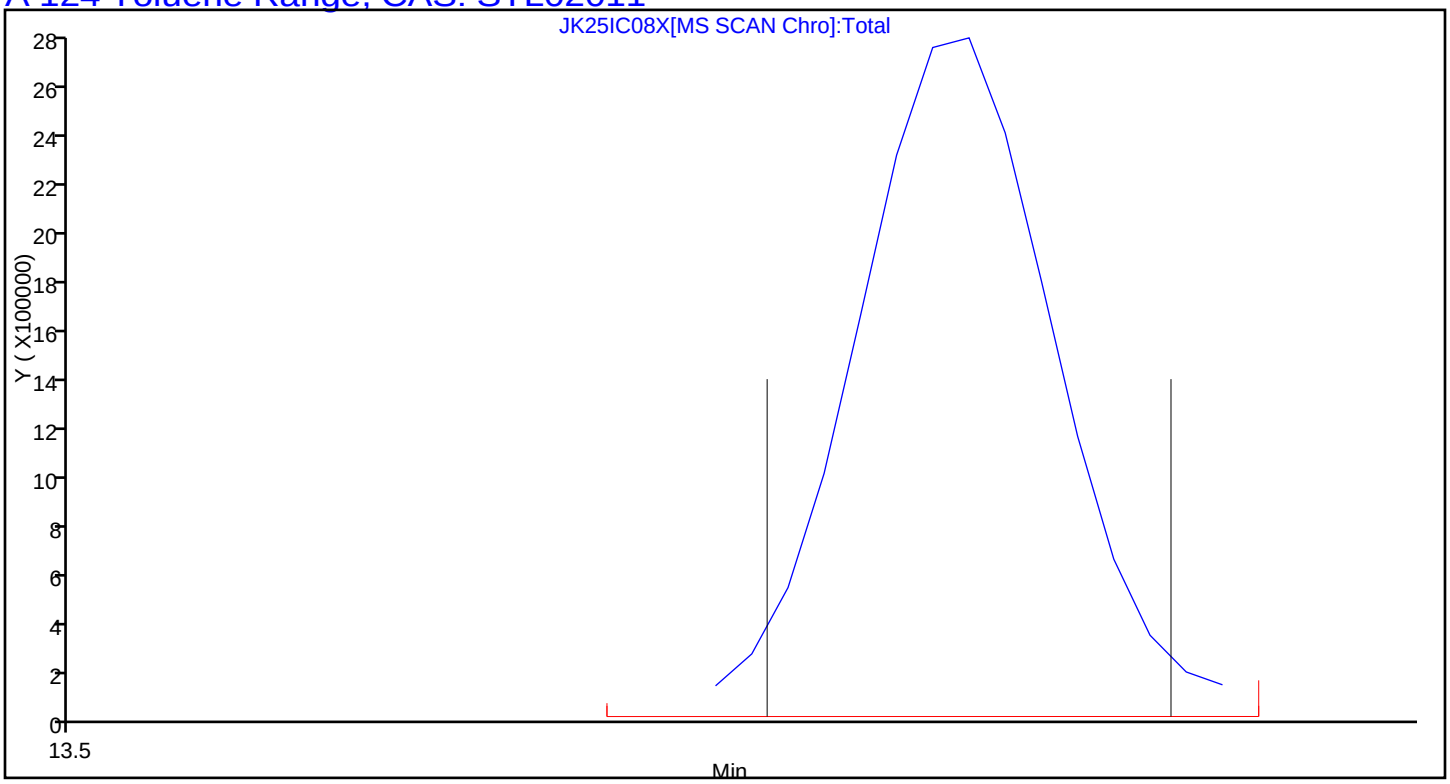


Report Date: 28-Nov-2016 13:55:45 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC08X.D				
Injection Date:	26-Nov-2016 01:05:30	Instrument ID:	MJ		
Lims ID:	IC L8				
Client ID:					
Operator ID:	007126	ALS Bottle#:	7	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

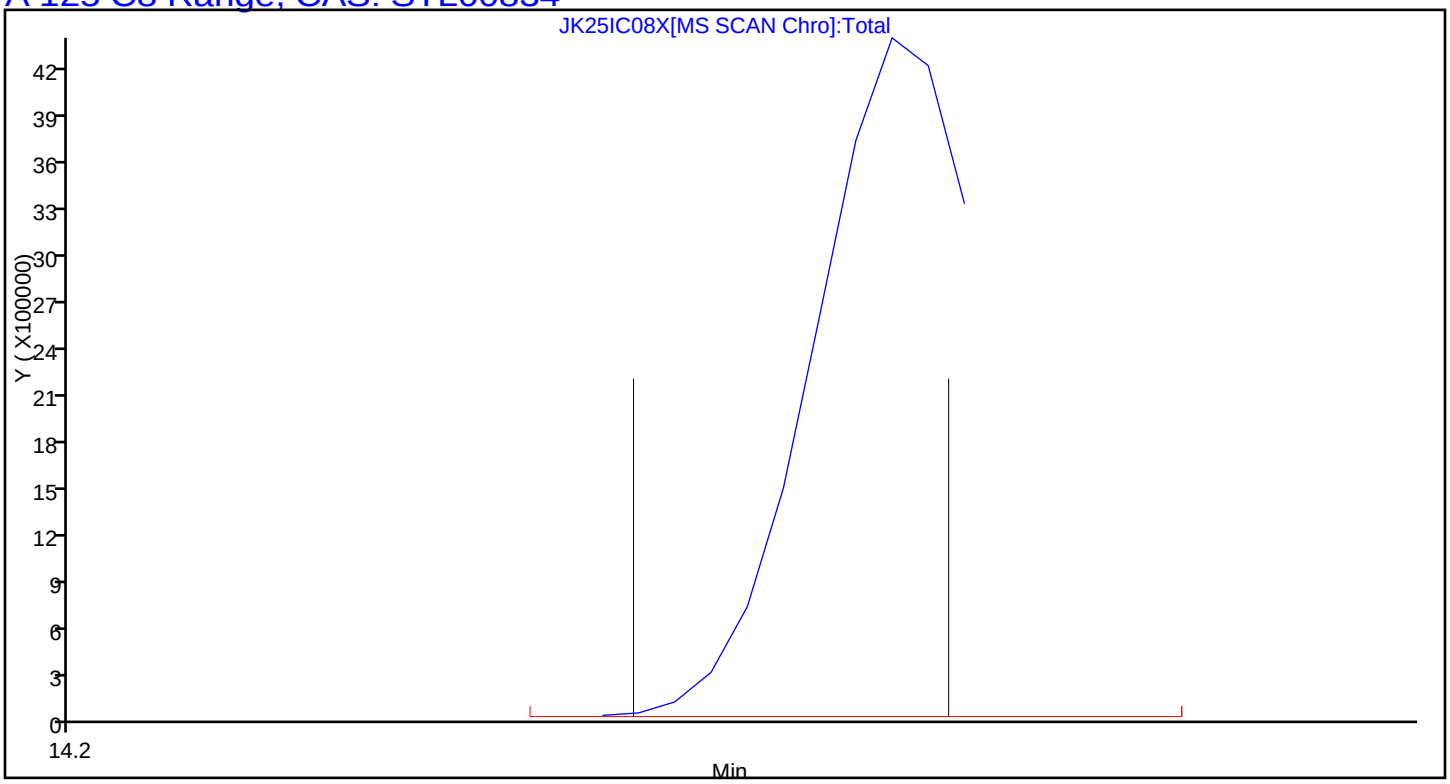


Report Date: 28-Nov-2016 13:55:45 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC08X.D				
Injection Date:	26-Nov-2016 01:05:30	Instrument ID:	MJ		
Lims ID:	IC L8				
Client ID:					
Operator ID:	007126	ALS Bottle#:	7	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 26-Nov-2016 01:58:30 ALS Bottle#: 8 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003656-010
Misc. Info.: 067934
Operator ID: 007126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Nov-2016 13:55:48 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: barlozhetskayaa Date: 26-Nov-2016 11:03:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.651	8.640	0.011	98	346703	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.851	10.843	0.008	95	1440637	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.612	15.609	0.003	88	1350914	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.258	17.254	0.004	97	948626	4.00	4.43	
6 Chlorodifluoromethane	67	3.567	3.568	-0.001	98	484336	16.0	15.5	
7 Propene	41	3.578	3.578	0.000	98	1745617	16.0	16.2	
8 Dichlorodifluoromethane	85	3.626	3.627	-0.001	99	4459893	16.0	15.9	
9 Chloromethane	52	3.804	3.806	-0.002	99	666251	16.0	16.6	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.809	3.810	-0.001	90	2318437	16.0	14.9	
11 Acetaldehyde	44	3.955	3.953	0.002	98	3557537	80.0	82.3	
12 Vinyl chloride	62	3.971	3.969	0.002	99	1982759	16.0	16.5	
13 Butane	43	4.051	4.055	-0.004	86	3367418	16.0	16.1	
14 Butadiene	54	4.057	4.057	0.000	67	1623732	16.0	16.9	
15 Bromomethane	94	4.369	4.367	0.002	99	1785611	16.0	16.7	
16 Chloroethane	64	4.509	4.504	0.005	88	928476	16.0	16.3	
17 Ethanol	31	4.611	4.602	0.009	97	3315415	80.0	72.4	
18 Vinyl bromide	106	4.799	4.797	0.002	99	1728904	16.0	16.5	
19 2-Methylbutane	43	4.848	4.845	0.003	93	2517794	16.0	16.4	
20 Trichlorofluoromethane	101	5.063	5.060	0.003	100	4710858	16.0	16.5	
21 Acrolein	56	5.074	5.074	0.000	96	587930	16.0	17.5	
22 Acetonitrile	40	5.143	5.138	0.005	98	723270	16.0	17.5	
23 Acetone	58	5.186	5.192	-0.006	99	1736723	48.0	48.3	
24 Isopropyl alcohol	45	5.283	5.273	0.010	96	7921894	48.0	47.4	
25 Pentane	72	5.278	5.279	-0.001	97	276851	16.0	17.2	
26 Ethyl ether	31	5.445	5.451	-0.006	90	1992033	16.0	16.9	
27 1,1-Dichloroethene	96	5.762	5.758	0.004	95	1701547	16.0	16.3	
29 Acrylonitrile	53	5.870	5.865	0.005	93	1160939	16.0	17.5	
28 2-Methyl-2-propanol	59	5.875	5.868	0.007	94	2768624	16.0	16.4	
30 1,1,2-Trichloro-1,2,2-trif	101	5.934	5.931	0.003	97	3896999	16.0	16.9	
31 Methylene Chloride	84	6.112	6.105	0.007	95	1535696	16.0	15.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.123	6.121	0.001	95	1971589	16.0	16.4	
33 Carbon disulfide	76	6.268	6.264	0.004	100	4948271	16.0	16.1	
34 trans-1,2-Dichloroethene	96	6.913	6.908	0.005	95	1702361	16.0	16.2	
35 2-Methylpentane	43	6.924	6.923	0.001	96	4491353	16.0	16.6	
36 Methyl tert-butyl ether	73	7.042	7.049	-0.007	98	3376773	16.0	15.7	
37 1,1-Dichloroethane	63	7.333	7.326	0.007	100	3204866	16.0	16.1	
38 Vinyl acetate	43	7.440	7.435	0.005	100	4258617	16.0	17.3	
39 2-Butanone (MEK)	72	7.892	7.895	-0.003	95	526678	16.0	16.8	
40 Hexane	56	7.903	7.901	0.002	83	1534885	16.0	16.6	
41 Isopropyl ether	45	8.070	8.072	-0.002	96	5389640	16.0	16.5	
42 cis-1,2-Dichloroethene	96	8.317	8.307	0.010	98	1655099	16.0	16.0	
43 Ethyl acetate	43	8.511	8.508	0.003	98	2953037	16.0	16.1	
44 Chloroform	83	8.662	8.651	0.011	97	3398489	16.0	15.6	
45 Tert-butyl ethyl ether	59	8.748	8.750	-0.002	97	4201218	16.0	16.7	
46 Tetrahydrofuran	42	9.070	9.083	-0.013	93	1684106	16.0	16.5	
47 1,1,1-Trichloroethane	97	9.684	9.679	0.005	97	3520443	16.0	15.7	
48 1,2-Dichloroethane	62	9.797	9.792	0.005	96	2324578	16.0	17.3	
49 n-Butanol	31	10.265	10.272	-0.007	82	770202	16.0	17.9	
50 Cyclohexane	69	10.286	10.285	0.001	92	799986	16.0	16.8	
51 Benzene	78	10.292	10.285	0.007	97	4580943	16.0	17.5	
52 Carbon tetrachloride	117	10.313	10.308	0.005	97	3985428	16.0	17.3	
53 2,3-Dimethylpentane	71	10.410	10.407	0.003	91	1047976	16.0	17.5	
54 Thiophene	84	10.571	10.565	0.006	97	2564706	16.0	17.1	
55 Tert-amyl methyl ether	73	10.781	10.792	-0.011	96	3478703	16.0	16.6	
56 Isooctane	57	11.061	11.058	0.003	97	8541251	16.0	17.2	
57 n-Heptane	71	11.448	11.441	0.007	95	1568743	16.0	17.1	
58 1,2-Dichloropropane	63	11.534	11.526	0.008	88	1914762	16.0	18.1	
59 Trichloroethene	130	11.567	11.561	0.006	97	2143254	16.0	17.4	
60 Dibromomethane	93	11.653	11.648	0.005	93	2007775	16.0	17.2	
62 Dichlorobromomethane	83	11.803	11.795	0.008	98	3517359	16.0	17.3	
61 1,4-Dioxane	88	11.825	11.835	-0.010	98	487655	16.0	17.6	
63 Methyl methacrylate	41	11.905	11.902	0.003	93	1872520	16.0	18.7	
64 Methylcyclohexane	83	12.341	12.336	0.005	90	3440508	16.0	17.3	
65 4-Methyl-2-pentanone (MIBK	43	12.766	12.764	0.002	97	3495706	16.0	17.6	
66 cis-1,3-Dichloropropene	75	12.815	12.808	0.007	98	2556154	16.0	18.6	
67 trans-1,3-Dichloropropene	75	13.514	13.509	0.005	97	2140300	16.0	18.4	
68 Toluene	91	13.638	13.630	0.008	93	5184820	16.0	17.9	
69 1,1,2-Trichloroethane	83	13.713	13.709	0.004	98	1557835	16.0	17.1	
70 2-Methylthiophene	97	13.788	13.784	0.004	98	4336537	16.0	17.8	
71 3-Methylthiophene	97	13.993	13.985	0.008	99	4176696	16.0	17.9	
72 2-Hexanone	58	14.106	14.106	0.000	91	1613389	16.0	19.0	
73 n-Octane	85	14.326	14.322	0.004	97	1650234	16.0	17.0	
74 Chlorodibromomethane	129	14.418	14.412	0.006	98	3856951	16.0	18.1	
75 Ethylene Dibromide	107	14.708	14.706	0.002	98	2796441	16.0	18.2	
76 Tetrachloroethene	129	14.778	14.777	0.001	96	2120157	16.0	16.7	
78 Chlorobenzene	112	15.660	15.658	0.002	94	4192705	16.0	18.4	
77 2,3-Dimethylheptane	43	15.682	15.677	0.005	94	6016570	16.0	16.6	
79 Ethylbenzene	91	15.951	15.947	0.004	98	6074677	16.0	17.6	
80 2-Ethylthiophene	97	16.053	16.050	0.003	98	4761553	16.0	18.5	
81 m-Xylene & p-Xylene	91	16.112	16.110	0.002	98	9362617	32.0	36.8	
82 n-Nonane	57	16.532	16.528	0.004	94	4054710	16.0	18.7	
83 Bromoform	173	16.564	16.559	0.005	97	4346492	16.0	21.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.580	16.575	0.005	99	3775896	16.0	20.9	
85 o-Xylene	91	16.639	16.634	0.005	99	4777380	16.0	17.4	
86 1,1,2,2-Tetrachloroethane	83	16.968	16.962	0.006	99	3662446	16.0	18.4	
87 1,2,3-Trichloropropane	110	17.124	17.122	0.002	96	894821	16.0	19.5	
88 Isopropylbenzene	105	17.226	17.221	0.005	97	6500407	16.0	17.5	
89 N-Propylbenzene	120	17.769	17.767	0.002	99	1767252	16.0	20.3	
90 2-Chlorotoluene	126	17.817	17.813	0.004	96	1803940	16.0	19.5	
91 4-Ethyltoluene	105	17.925	17.921	0.004	98	6169617	16.0	19.9	
92 1,3,5-Trimethylbenzene	120	18.000	17.995	0.005	93	3048962	16.0	19.5	
93 Alpha Methyl Styrene	118	18.232	18.229	0.003	87	2723428	16.0	22.6	
94 n-Decane	57	18.291	18.287	0.004	89	4633466	16.0	21.1	
95 tert-Butylbenzene	119	18.425	18.422	0.003	91	6011355	16.0	19.1	
96 1,2,4-Trimethylbenzene	105	18.441	18.436	0.005	96	5401392	16.0	20.0	
97 sec-Butylbenzene	105	18.700	18.694	0.006	97	7846256	16.0	19.0	
98 1,3-Dichlorobenzene	146	18.710	18.710	0.000	97	3715351	16.0	24.6	
99 Benzyl chloride	91	18.791	18.786	0.005	98	3895610	16.0	29.7	
100 1,4-Dichlorobenzene	146	18.802	18.799	0.003	94	3392724	16.0	28.8	
101 4-Isopropyltoluene	119	18.861	18.857	0.004	96	6240921	16.0	19.3	
102 1,2,3-Trimethylbenzene	105	18.915	18.912	0.003	99	3809531	16.0	18.8	
103 Butylcyclohexane	83	18.969	18.964	0.005	89	4800601	16.0	18.4	
104 2,3-Dihydroindene	117	19.162	19.159	0.003	94	4983494	16.0	21.1	
105 1,2-Dichlorobenzene	146	19.162	19.159	0.003	84	3643973	16.0	23.8	
107 Indene	116	19.291	19.290	0.001	89	3487774	16.0	23.8	
106 n-Butylbenzene	91	19.297	19.294	0.003	99	5693195	16.0	21.0	
108 Undecane	57	19.609	19.605	0.004	94	4338903	16.0	22.0	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.668	19.667	0.001	98	4196638	16.0	21.1	
110 1,2-Dibromo-3-Chloropropan	157	19.770	19.765	0.005	96	1430687	16.0	27.2	
111 1,2,4,5-Tetramethylbenzene	119	20.055	20.052	0.003	98	4847664	16.0	20.8	
112 1,2,3,5-Tetramethylbenzene	119	20.109	20.108	0.001	96	2942221	16.0	20.5	
113 1,2,3,4-Tetramethylbenzene	119	20.507	20.505	0.002	98	3711528	16.0	20.5	
114 Dodecane	57	20.669	20.665	0.004	93	3383807	16.0	20.7	
115 1,2,4-Trichlorobenzene	180	20.868	20.865	0.003	94	1719710	16.0	39.1	
116 Naphthalene	128	21.007	21.007	0.000	99	3348078	16.0	28.4	
117 Benzo(b)thiophene	134	21.115	21.112	0.003	99	1572555	16.0	34.3	
118 Hexachlorobutadiene	225	21.228	21.225	0.003	94	3588165	16.0	21.0	
119 1,2,3-Trichlorobenzene	180	21.298	21.297	0.001	95	1635288	16.0	28.4	
120 2-Methylnaphthalene	142	21.965	21.967	-0.002	98	844376	50.0	73.0	
121 1-Methylnaphthalene	142	22.094	22.095	-0.001	99	786213	50.0	61.0	
A 124 Toluene Range	1	13.638	(13.608-13.668)		0	13161341	16.0	17.3	
A 125 C8 Range	1	14.314	(14.282-14.345)		0	18025464	16.0	17.4	
S 126 Xylenes, Total	100				0		48.0	54.3	
S 127 1,2-Dichloroethene, Total	1				0		32.0	32.2	

Reagents:

40L9DNP_00011	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

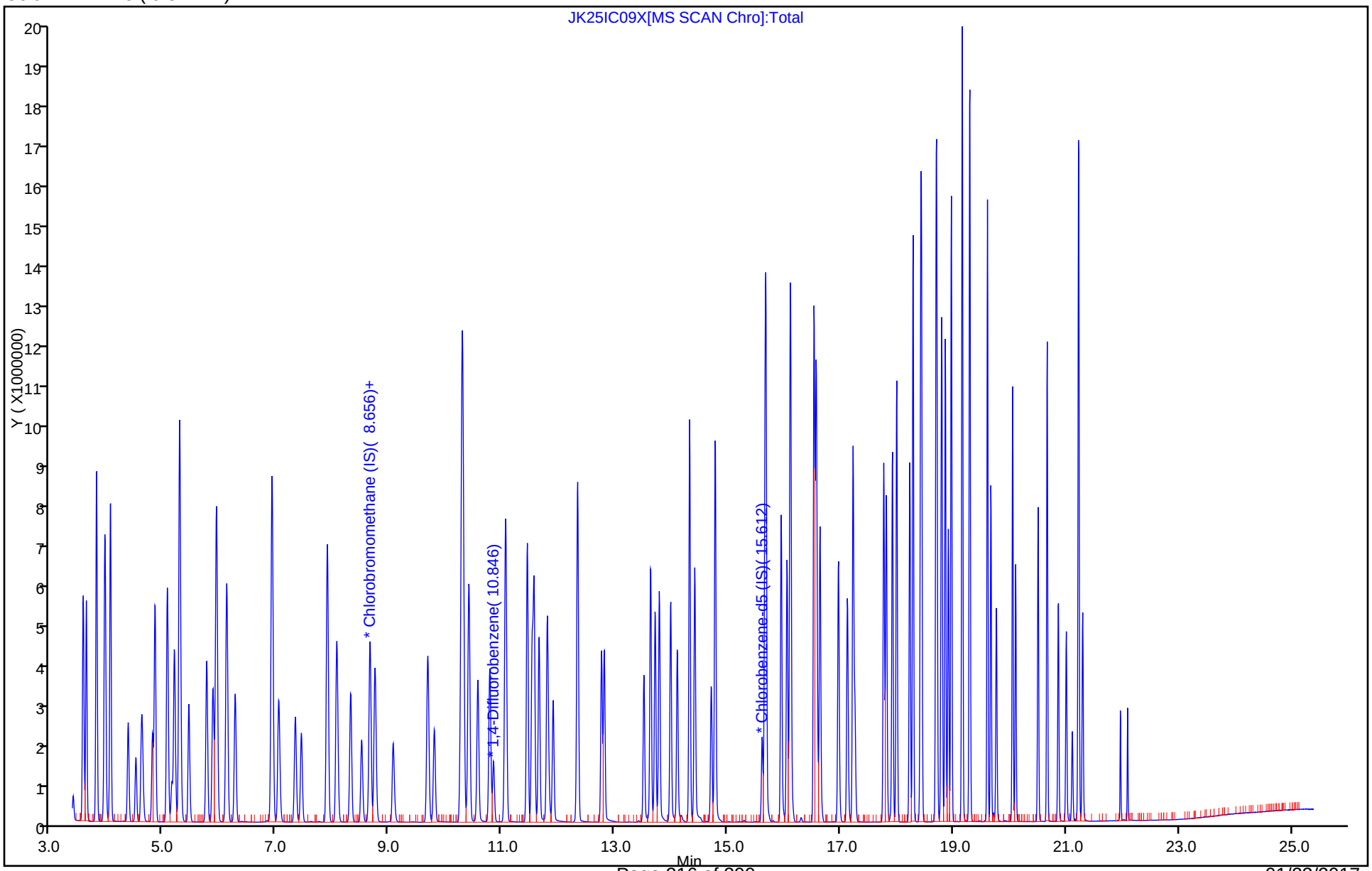
Report Date: 28-Nov-2016 13:55:48 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Injection Date:	26-Nov-2016 01:58:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	IC L9			Worklist Smp#:	10
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

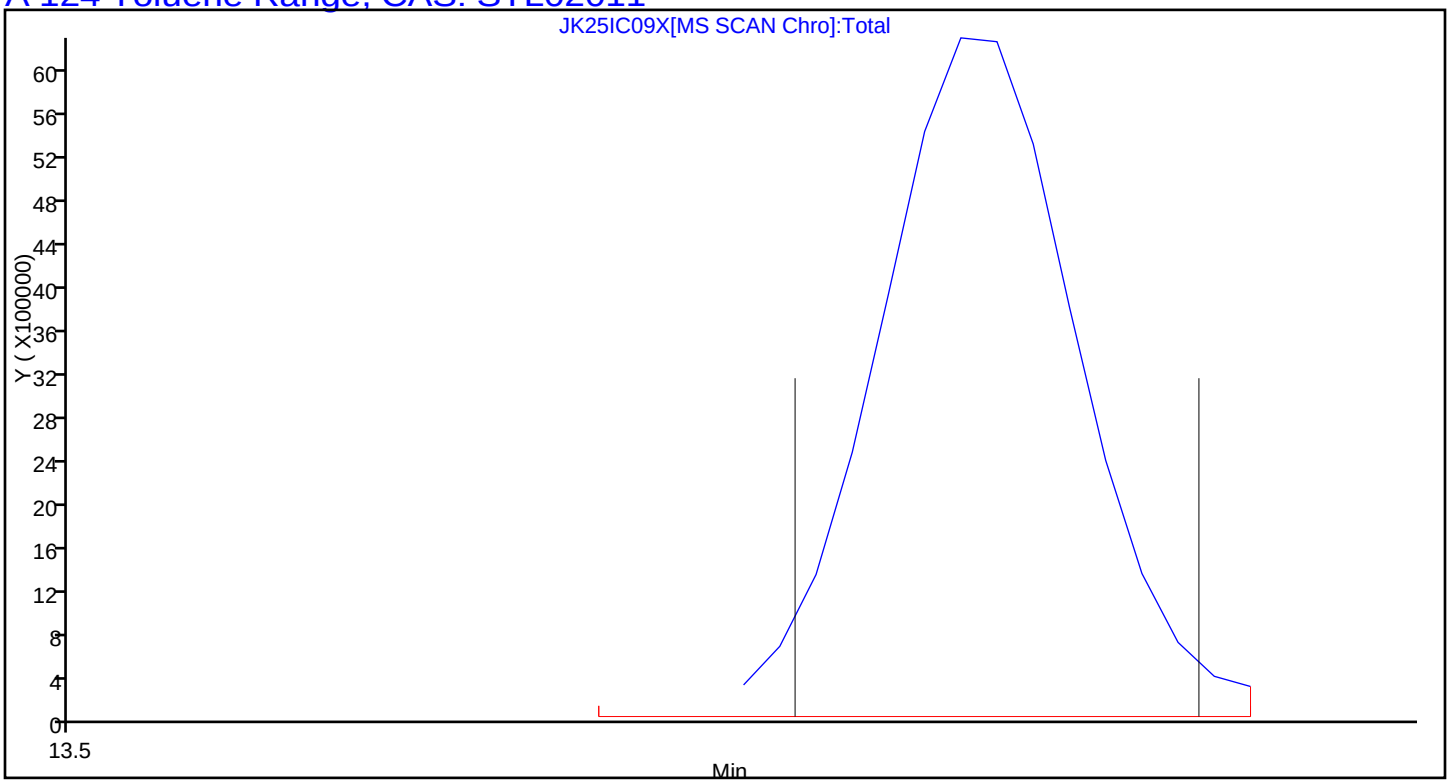


Report Date: 28-Nov-2016 13:55:48 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Injection Date:	26-Nov-2016 01:58:30	Instrument ID:	MJ		
Lims ID:	IC L9				
Client ID:					
Operator ID:	007126	ALS Bottle#:	8	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

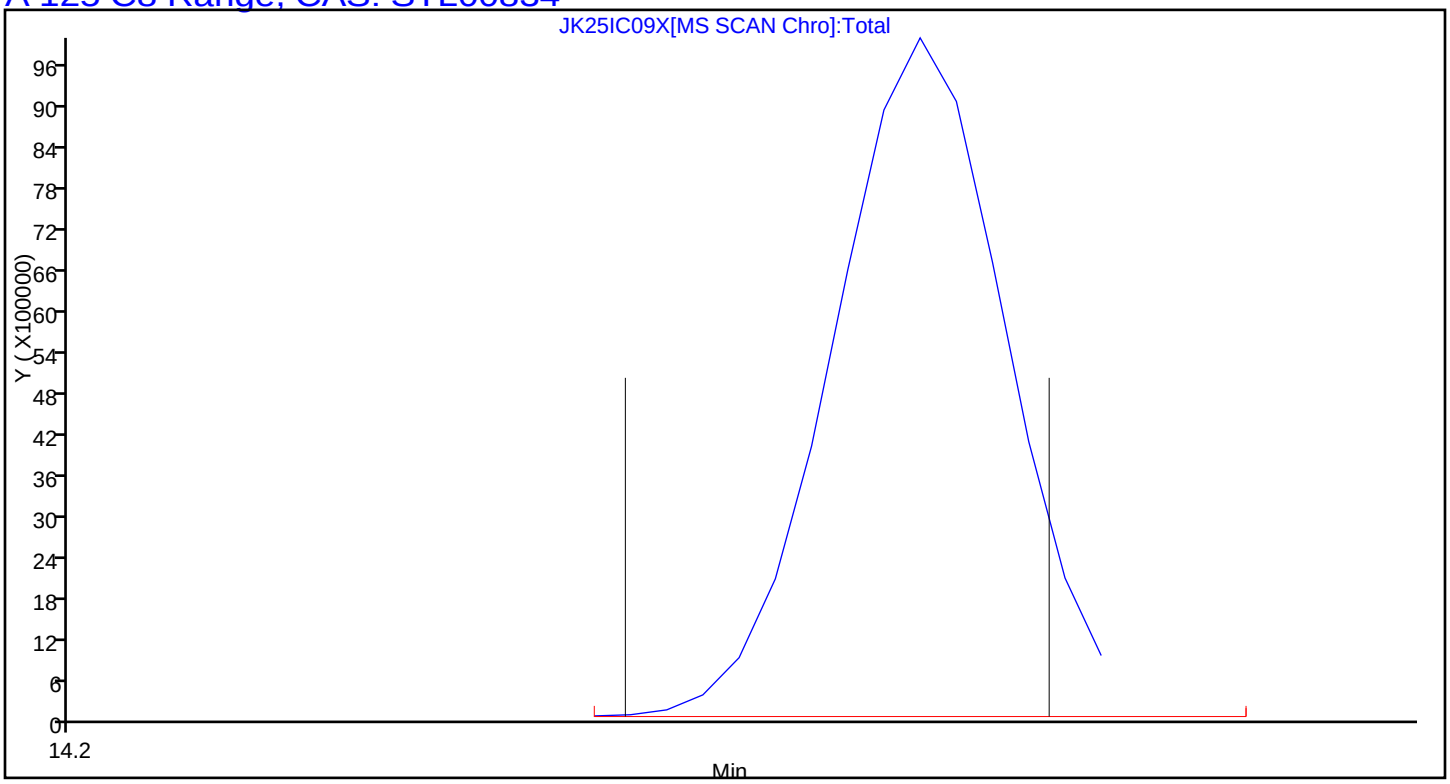


Report Date: 28-Nov-2016 13:55:48 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Injection Date:	26-Nov-2016 01:58:30	Instrument ID:	MJ		
Lims ID:	IC L9				
Client ID:					
Operator ID:	007126	ALS Bottle#:	8	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-7852/24	RA16IC01R.D
Level 2	IC 140-7852/4	RA16IC02.D
Level 3	IC 140-7852/5	RA16IC03.D
Level 4	IC 140-7852/6	RA16IC04.D
Level 5	IC 140-7852/7	RA16IC05.D
Level 6	ICIS 140-7852/8	RA16IC06.D
Level 7	IC 140-7852/9	RA16IC07.D
Level 8	IC 140-7852/10	RA16IC08.D
Level 9	IC 140-7852/11	RA16IC09.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.2161	0.2441 0.2201	0.2289 0.2230	0.2134 0.2141	0.2156	Ave		0.2219				4.7		30.0			
Propene	+++++ 1.0755	1.2246 1.0498	1.0808 1.0117	0.9919 0.8540	1.0336	Ave		1.0402				9.9		30.0			
Dichlorodifluoromethane	+++++ 1.8016	1.9272 1.8187	1.8464 1.7431	1.7140 1.7881	1.8455	Ave		1.8106				3.7		30.0			
Chloromethane	+++++ 0.3330	+++++ 0.3365	0.4280 0.3217	0.3393 0.2593	0.3620	Ave		0.3400				14.8		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++ 1.9747	2.3813 1.9453	2.3124 1.8494	2.1620 1.6090	2.1698	Ave		2.0505				12.5		30.0			
Acetaldehyde	+++++ 0.2866	+++++ 0.2755	+++++ 0.2504	0.4390 0.2061	0.3736	Ave		0.3052				28.0		30.0			
Vinyl chloride	1.0021 0.8866	1.2091 0.8748	1.1435 0.7929	1.1172 0.6718	1.0767	Ave		0.9750				18.4		30.0			
1,3-Butadiene	0.8237 0.6260	0.8413 0.5908	0.8414 0.5487	0.7789 0.4583	0.6918	Ave		0.6890				20.5		30.0			
Butane	+++++ 1.1797	+++++ 1.1260	1.6540 1.0290	1.4768 0.8581	1.3359	Ave		1.2371				22.0		30.0			
Bromomethane	+++++ 0.8112	1.0396 0.7778	1.0414 0.7209	0.9255 0.6263	0.8817	Ave		0.8530				17.3		30.0			
Chloroethane	+++++ 0.3815	0.4691 0.3696	0.4476 0.3378	0.4046 0.2903	0.3749	Ave		0.3844				14.9		30.0			
Ethanol	+++++ 0.2521	0.3207 0.2389	0.2859 0.2163	0.2799 0.1810	0.2722	Ave		0.2559				17.1		30.0			
Vinyl bromide	+++++ 0.7716	0.9408 0.7696	0.8812 0.6992	0.8575 0.6099	0.8352	Ave		0.7956				13.3		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	+++++ 0.7241	0.8786 0.7020	0.9758 0.6221	0.8106 0.5320	0.7515	Ave		0.7496				18.7		30.0			
Acrolein	+++++ 0.2708	+++++ 0.2471	0.3730 0.2433	0.3627 0.2201	0.2980	Ave		0.2879				20.8		30.0			
Trichlorofluoromethane	2.9543 2.4463	2.5611 2.3911	2.5585 2.3598	2.4007 2.1985	2.5019	Ave		2.4858				8.4		30.0			
Acetonitrile	+++++ 0.4295	0.3891 0.4213	0.5115 0.4450	0.3882 0.4114	0.4584	Ave		0.4318				9.4		30.0			
Acetone	+++++ 0.4378	0.5374 0.4358	0.5047 0.4394	0.4667 0.4153	0.4473	Ave		0.4605				8.9		30.0			
Isopropyl alcohol	+++++ 1.3969	1.3713 1.4324	1.3011 1.3858	1.2896 1.2702	1.3886	Ave		1.3545				4.4		30.0			
Pentane	+++++ 0.2003	0.2025 0.1965	0.1804 0.2003	0.1872 0.1857	0.2044	Ave		0.1947				4.6		30.0			
Ethyl ether	+++++ 1.1837	1.1102 1.2161	1.0606 1.2091	1.0838 1.0667	1.1181	Ave		1.1310				5.6		30.0			
1,1-Dichloroethene	1.3463 1.0721	1.0778 1.0552	1.0360 1.0738	1.0532 1.0715	1.1251	Ave		1.1012				8.6		30.0			
Acrylonitrile	+++++ 0.7151	0.6443 0.7392	0.6691 0.7653	0.6648 0.7419	0.7102	Ave		0.7062				6.1		30.0			
tert-Butyl alcohol	+++++ 1.5098	1.3294 1.5499	1.3375 1.6371	1.3720 1.6064	1.5006	Ave		1.4803				8.1		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++ 2.1233	2.2008 2.0996	2.0666 2.1228	2.1218 2.0087	2.1519	Ave		2.1119				2.7		30.0			
Methylene Chloride	+++++ 0.9523	+++++ 0.9293	1.4019 0.9267	1.1057 0.9125	1.0261	Ave		1.0363				16.9		30.0			
3-Chloropropene	+++++ 0.7696	0.7141 0.7976	0.8874 0.8077	0.7119 0.7821	0.7629	Ave		0.7792				7.2		30.0			
Carbon disulfide	+++++ 2.8568	2.7858 2.8574	2.6419 2.9952	2.7646 2.9174	2.8945	Ave		2.8392				3.8		30.0			
trans-1,2-Dichloroethene	1.4931 1.1241	1.1692 1.1042	1.1151 1.1323	1.1161 1.1241	1.1546	Ave		1.1703				10.5		30.0			
2-Methylpentane	+++++ 2.1922	2.1213 2.2706	2.0350 2.2896	2.0228 2.1056	2.1795	Ave		2.1521				4.6		30.0			
Methyl tert-butyl ether	+++++ 2.4749	2.2835 2.5215	2.2652 2.6956	2.3430 2.7007	2.4921	Ave		2.4721				6.8		30.0			
1,1-Dichloroethane	2.4072 1.7643	1.7106 1.8202	1.6421 1.8786	1.7212 1.8604	1.7954	Ave		1.8444				12.1		30.0			
Vinyl acetate	+++++ 2.7065	2.1705 2.8988	2.2221 3.0080	2.3836 2.9229	2.5896	Ave		2.6128				12.5		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.4934	0.4322 0.4958	0.4300 0.5195	0.4619 0.5256	0.4992	Ave		0.4822				7.6		30.0			
Hexane	+++++ 0.7586	0.7517 0.7698	0.7050 0.7993	0.7313 0.7679	0.7748	Ave		0.7573				3.8		30.0			
C6 Range	+++++ 1.3569	+++++ 1.4029	1.3756 1.4097	1.3452 1.3030	1.3559	Ave		1.3642				2.7		30.0			
Isopropyl ether	+++++ 3.5132	3.2867 3.6681	3.2391 3.7256	3.3292 3.4148	3.4796	Ave		3.4570				5.1		30.0			
cis-1,2-Dichloroethene	1.5958 1.1710	1.1793 1.1511	1.1491 1.1718	1.1642 1.1842	1.2033	Ave		1.2189				11.7		30.0			
Ethyl acetate	+++++ 2.2624	1.8663 2.3977	1.9812 2.4846	2.0544 2.3670	2.1890	Ave		2.2003				9.9		30.0			
Chloroform	2.6747 1.9405	2.0331 2.0010	1.9556 2.0748	1.9733 2.1026	1.9813	Ave		2.0819				11.0		30.0			
Tert-butyl ethyl ether	+++++ 2.5192	2.2509 2.6638	2.2506 2.7923	2.3886 2.7716	2.5280	Ave		2.5206				8.5		30.0			
Tetrahydrofuran	+++++ 1.1882	1.1429 1.2590	1.1877 1.2978	1.1028 1.2251	1.1717	Ave		1.1969				5.2		30.0			
1,1,1-Trichloroethane	2.7744 1.9164	1.9201 2.0299	1.8245 2.1626	1.8713 2.2488	1.9512	Ave		2.0777				14.2		30.0			
1,2-Dichloroethane	0.3022 0.2283	0.2249 0.2377	0.2236 0.2507	0.2157 0.2546	0.2293	Ave		0.2408				10.9		30.0			
1-Butanol	+++++ 0.0863	+++++ 0.0924	0.0576 0.0956	0.0653 0.0862	0.0827	Ave		0.0809				17.4		30.0			
Benzene	0.9386 0.6683	0.7102 0.6690	0.6717 0.6752	0.6631 0.5946	0.6694	Ave		0.6956				13.8		30.0			
Cyclohexane	+++++ 0.1009	0.1076 0.1049	0.0920 0.1045	0.0996 0.0864	0.0991	Ave		0.0994				7.1		30.0			
Carbon tetrachloride	0.4863 0.4132	0.3986 0.4405	0.3766 0.4708	0.3788 0.4627	0.4018	Ave		0.4255				9.6		30.0			
2,3-Dimethylpentane	+++++ 0.1469	0.1544 0.1500	0.1392 0.1539	0.1408 0.1479	0.1473	Ave		0.1475				3.7		30.0			
Thiophene	+++++ 0.3665	0.3443 0.3653	0.3490 0.3728	0.3564 0.3684	0.3667	Ave		0.3612				2.8		30.0			
Tert-amyl methyl ether	+++++ 0.5651	0.3709 0.5849	0.4583 0.6043	0.4968 0.5908	0.5755	Ave		0.5308				15.5		30.0			
2,2,4-Trimethylpentane	+++++ 0.9657	0.9347 1.0023	0.9196 1.0215	0.8959 0.9164	0.9346	Ave		0.9488				4.6		30.0			
1,2-Dichloropropane	+++++ 0.2463	0.2535 0.2524	0.2317 0.2560	0.2270 0.2130	0.2429	Ave		0.2404				6.3		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Heptane	+++++ 0.2311	0.2261 0.2368	0.2226 0.2423	0.2170 0.2059	0.2292	Ave		0.2264				5.1		30.0			
Trichloroethene	0.4212 0.3043	0.3214 0.3025	0.2896 0.3028	0.2949 0.2842	0.3091	Ave		0.3144				13.2		30.0			
Dibromomethane	+++++ 0.2424	0.2445 0.2465	0.2315 0.2585	0.2259 0.2445	0.2414	Ave		0.2419				4.1		30.0			
Bromodichloromethane	0.4769 0.4011	0.3439 0.4243	0.3474 0.4496	0.3472 0.4396	0.3889	Ave		0.4021				12.2		30.0			
1,4-Dioxane	0.1619 0.1092	0.1078 0.1080	0.1046 0.1095	0.0980 0.0978	0.1066	Ave		0.1115				17.4		30.0			
Methyl methacrylate	+++++ 0.2628	0.2088 0.2897	0.2060 0.2972	0.2128 0.2789	0.2501	Ave		0.2508				14.9		30.0			
Methylcyclohexane	+++++ 0.4739	0.4415 0.4776	0.4456 0.4883	0.4538 0.4420	0.4721	Ave		0.4619				4.0		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.4864	0.4096 0.5279	0.4237 0.5364	0.4260 0.4785	0.4674	Ave		0.4695				10.1		30.0			
cis-1,3-Dichloropropene	0.4244 0.3472	0.3101 0.3609	0.2982 0.3771	0.3035 0.3725	0.3345	Ave		0.3476				11.8		30.0			
trans-1,3-Dichloropropene	0.4499 0.3466	0.2964 0.3728	0.2973 0.3987	0.3013 0.3963	0.3351	Ave		0.3550				15.1		30.0			
Toluene	+++++ 0.8880	0.8620 0.8943	0.8516 0.8992	0.8666 0.8292	0.8999	Ave		0.8739				2.9		30.0			
1,1,2-Trichloroethane	0.3817 0.2637	0.2536 0.2680	0.2616 0.2711	0.2616 0.2471	0.2699	Ave		0.2754				14.8		30.0			
2-Methylthiophene	+++++ 0.7758	0.7388 0.7838	0.7323 0.7918	0.7429 0.7344	0.7875	Ave		0.7609				3.4		30.0			
3-Methylthiophene	+++++ 0.7617	0.7225 0.7775	0.7012 0.7852	0.7403 0.7242	0.7828	Ave		0.7494				4.2		30.0			
2-Hexanone	+++++ 0.2699	+++++ 0.2886	0.1937 0.2996	0.2255 0.2701	0.2558	Ave		0.2576				14.3		30.0			
Dibromochloromethane	0.5793 0.5279	0.4113 0.5707	0.4202 0.5782	0.4316 0.5056	0.5074	Ave		0.5036				13.5		30.0			
Octane	0.3472 0.2867	0.2696 0.2912	0.2560 0.2834	0.2625 0.2238	0.2830	Ave		0.2781				11.9		30.0			
1,2-Dibromoethane (EDB)	+++++ 0.4967	0.4402 0.5116	0.4464 0.5180	0.4561 0.4839	0.4980	Ave		0.4814				6.2		30.0			
Tetrachloroethene	0.4692 0.3215	0.3324 0.3236	0.3203 0.3258	0.3056 0.2873	0.3348	Ave		0.3356				15.5		30.0			
Chlorobenzene	+++++ 0.7259	0.7484 0.7230	0.7374 0.7182	0.7116 0.6475	0.7443	Ave		0.7195				4.4		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2,3-Dimethylheptane	+++++ 0.7904	0.7439 0.8271	0.7468 0.8098	0.7410 0.6163	0.7664	Ave		0.7552				8.6		30.0			
Ethylbenzene	1.7023 1.1357	1.0544 1.1671	1.0753 1.1835	1.0795 1.0387	1.1286	Ave		1.1739				17.4		30.0			
2-Ethylthiophene	+++++ 0.8882	0.7955 0.9175	0.8086 0.9353	0.8217 0.8461	0.8934	Ave		0.8633				6.1		30.0			
m-Xylene & p-Xylene	1.2599 0.8607	0.8137 0.9057	0.8188 0.8823	0.8125 0.7206	0.8630	Ave		0.8819				17.2		30.0			
Bromoform	0.6861 0.7163	0.4437 0.7741	0.4862 0.7955	0.5299 0.7441	0.6591	Ave		0.6483				20.0		30.0			
Styrene	0.7753 0.6717	0.4846 0.6917	0.4922 0.6930	0.5548 0.6071	0.6594	Ave		0.6255				15.7		30.0			
Nonane	+++++ 0.5411	0.4588 0.5683	0.4951 0.5572	0.4984 0.4136	0.5280	Ave		0.5076				10.3		30.0			
o-Xylene	1.3054 0.8887	0.8596 0.9092	0.8356 0.9298	0.8483 0.8223	0.9052	Ave		0.9227				16.0		30.0			
1,1,2,2-Tetrachloroethane	0.9422 0.6940	0.6565 0.7104	0.6280 0.7176	0.6542 0.6131	0.6943	Ave		0.7011				13.9		30.0			
1,2,3-Trichloropropane	+++++ 0.1982	0.2030 0.2008	0.1860 0.2082	0.1841 0.2001	0.1970	Ave		0.1972				4.2		30.0			
Isopropylbenzene	+++++ 1.3247	1.3507 1.3494	1.3109 1.3185	1.2845 1.1344	1.3389	Ave		1.3015				5.5		30.0			
Propylbenzene	+++++ 0.3763	0.3528 0.3842	0.3441 0.3804	0.3516 0.3187	0.3762	Ave		0.3605				6.3		30.0			
2-Chlorotoluene	+++++ 0.3537	0.3311 0.3527	0.3387 0.3518	0.3329 0.2953	0.3599	Ave		0.3395				6.1		30.0			
4-Ethyltoluene	+++++ 1.3661	1.2174 1.3895	1.2210 1.4140	1.2635 1.2128	1.3602	Ave		1.3056				6.5		30.0			
1,3,5-Trimethylbenzene	0.9392 0.6317	0.5507 0.6354	0.5775 0.6270	0.5766 0.5277	0.6366	Ave		0.6336				19.2		30.0			
Alpha Methyl Styrene	0.5904 0.5588	0.3474 0.5854	0.3659 0.6079	0.4096 0.5337	0.5223	Ave		0.5024				20.1		30.0			
Decane	+++++ 0.6911	0.5865 0.7379	0.6016 0.6982	0.6157 0.5475	0.6875	Ave		0.6458				10.3		30.0			
tert-Butylbenzene	+++++ 1.1776	1.1390 1.1855	1.1072 1.1279	1.1011 0.8991	1.1800	Ave		1.1147				8.4		30.0			
1,2,4-Trimethylbenzene	1.6231 1.1358	1.0125 1.1689	1.0486 1.1266	1.0569 0.9064	1.1345	Ave		1.1348				17.6		30.0			
1,3-Dichlorobenzene	+++++ 0.8561	0.8070 0.8560	0.8072 0.8026	0.7890 0.6437	0.8640	Ave		0.8032				8.8		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	+++++ 1.7106	1.5949 1.7289	1.5615 1.6139	1.5928 1.2434	1.7065	Ave		1.5941				9.7		30.0			
Benzyl chloride	+++++ 0.9514	0.7071 1.0142	0.7338 1.0281	0.7811 0.8898	0.9044	Ave		0.8762				14.1		30.0			
1,4-Dichlorobenzene	+++++ 0.8706	0.7754 0.8698	0.8124 0.8394	0.8115 0.6886	0.8688	Ave		0.8171				7.6		30.0			
4-Isopropyltoluene	+++++ 1.3928	1.2255 1.4009	1.2422 1.3875	1.2399 1.1292	1.3969	Ave		1.3018				8.1		30.0			
1,2,3-Trimethylbenzene	1.3033 0.8830	0.8215 0.9012	0.7971 0.9256	0.8091 0.8224	0.8773	Ave		0.9045				17.3		30.0			
Butylcyclohexane	+++++ 0.8825	0.8437 0.8902	0.8408 0.8735	0.8238 0.6968	0.8842	Ave		0.8419				7.5		30.0			
1,2-Dichlorobenzene	+++++ 0.8397	0.7902 0.8367	0.7873 0.7782	0.7748 0.6206	0.8488	Ave		0.7845				9.3		30.0			
Indane	+++++ 1.0987	0.9605 1.1041	0.9941 1.0206	1.0038 0.7865	1.0982	Ave		1.0083				10.4		30.0			
Indene	+++++ 0.8541	0.6374 0.8793	0.6758 0.9031	0.7135 0.7861	0.8349	QuaF		0.9604	-0.010717						0.9990		0.9900
Butylbenzene	+++++ 1.3440	1.1569 1.3698	1.1996 1.3464	1.1946 1.0880	1.3486	Ave		1.2560				8.6		30.0			
Undecane	+++++ 0.8321	0.6653 0.8595	0.7098 0.7275	0.7183 0.4985	0.8361	Ave		0.7309				16.1		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 1.0715	0.8891 1.0760	0.9196 0.9884	0.9318 0.7578	1.0937	QuaF		1.1910	-0.026987						1.0000		0.9900
1,2-Dibromo-3-Chloropropane	0.4940 0.4626	0.2795 0.4805	0.3006 0.4824	0.3299 0.4259	0.4516	Ave		0.4119				20.6		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 1.2464	1.0436 1.2551	1.0362 1.2415	1.0471 1.0211	1.2850	Ave		1.1470				10.3		30.0			
1,2,3,5-Tetramethylbenzene	+++++ 0.7591	0.6553 0.7808	0.6410 0.7842	0.6442 0.6901	0.8000	Ave		0.7194				9.5		30.0			
1,2,3,4-Tetramethylbenzene	+++++ 1.0367	0.8709 1.0592	0.8885 1.0668	0.8468 0.8959	1.1099	Ave		0.9719				10.9		30.0			
Dodecane	0.8078 0.8344	0.6213 0.9193	0.7035 0.8233	0.6262 0.5948	0.9299	Ave		0.7623				17.0		30.0			
1,2,4-Trichlorobenzene	1.4485 0.9517	0.7356 0.9624	0.7974 0.9465	0.7020 0.8071	1.0481	Ave		0.9333				24.2		30.0			
Naphthalene	2.6231 1.7137	1.3040 1.7585	1.4612 1.7338	1.2911 1.4009	2.2215	Ave		1.7231				25.9		30.0			
Benzo(b)thiophene	+++++ 0.9905	0.7231 1.0354	0.7911 1.0590	0.7009 0.9299	1.3297	Ave		0.9449				22.1		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Hexachlorobutadiene	1.1212 0.8326	0.7169 0.8674	0.6881 0.9192	0.6703 0.8331	0.8444	Ave		0.8326				16.6		30.0			
1,2,3-Trichlorobenzene	+++++ 0.9134	0.7341 0.9225	0.7883 0.9086	0.6686 0.7772	1.0768	Ave		0.8487				15.4		30.0			
2-Methylnaphthalene	0.1384 0.2432	0.0607 0.2466	0.1481 0.2379	0.0847 0.2008	0.4691	Ave		0.2033				59.5	*	50.0			
1-Methylnaphthalene	+++++ 0.1910	+++++ 0.1905	0.1492 0.1871	0.0766 0.1578	0.3770	Ave		0.1899				48.3		50.0			
4-Bromofluorobenzene (Surr)	0.6350 0.6438	0.6060 0.6544	0.6133 0.6548	0.6217 0.5795	0.6228	Ave		0.6257				3.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-7852/24	RA16IC01R.D
Level 2	IC 140-7852/4	RA16IC02.D
Level 3	IC 140-7852/5	RA16IC03.D
Level 4	IC 140-7852/6	RA16IC04.D
Level 5	IC 140-7852/7	RA16IC05.D
Level 6	ICIS 140-7852/8	RA16IC06.D
Level 7	IC 140-7852/9	RA16IC07.D
Level 8	IC 140-7852/10	RA16IC08.D
Level 9	IC 140-7852/11	RA16IC09.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 44683	1661 95528	3264 200958	7868 408661	20894	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propene	CBM	Ave	+++++ 222355	8333 455692	15412 911591	36575 1629703	100161	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	+++++ 372486	13114 789485	26328 1570542	63202 3412348	178843	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	+++++ 68851	+++++ 146075	6103 289828	12511 494899	35084	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	+++++ 408268	16204 844447	32973 1666341	79723 3070600	210273	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 296274	+++++ 597951	+++++ 1128284	80942 1966956	181019	+++++ 9.99	+++++ 20.0	+++++ 40.0	2.00 80.0	5.01
Vinyl chloride	CBM	Ave	3960 183309	8228 379730	16305 714433	41198 1282078	104342	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	3255 129425	5725 256462	11998 494386	28720 874525	67044	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butane	CBM	Ave	+++++ 243917	+++++ 488808	23585 927124	54455 1637500	129454	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	+++++ 167720	7074 337645	14849 649522	34126 1195161	85440	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	+++++ 78880	3192 160420	6383 304357	14921 554082	36329	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	+++++ 260637	10913 518594	20387 974530	51601 1726674	131905	+++++ 9.99	0.392 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl bromide	CBM	Ave	+++++ 159526	6402 334058	12566 630026	31621 1163867	80932	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	+++++ 149714	5979 304726	13914 560541	29892 1015242	72823	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Acrolein	CBM	Ave	+++++ 55989	+++++ 107246	5319 219248	13376 420060	28874	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Trichlorofluoromethane	CBM	Ave	11674 505777	17428 1037976	36483 2126205	88526 4195509	242451	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 88808	2648 182904	7294 400939	14314 785119	44418	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 271574	10972 567636	21592 1187796	51628 2377763	130034	+++++ 5.99	0.235 12.0	0.476 24.0	1.20 48.0	3.01
Isopropyl alcohol	CBM	Ave	+++++ 866507	27997 1865554	55661 3746271	142667 7272319	403731	+++++ 5.99	0.235 12.0	0.476 24.0	1.20 48.0	3.01
Pentane	CBM	Ave	+++++ 41403	1378 85310	2573 180510	6904 354459	19811	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl ether	CBM	Ave	+++++ 244725	7555 527904	15123 1089447	39965 2035713	108355	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	5320 221671	7334 458052	14773 967528	38836 2044882	109033	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	+++++ 147847	4384 320898	9541 689539	24515 1415761	68828	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butyl alcohol	CBM	Ave	+++++ 312157	9046 672816	19072 1475064	50591 3065580	145418	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroetha ne	CBM	Ave	+++++ 439012	14976 911407	29469 1912665	78240 3833335	208533	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 196893	+++++ 403392	19990 835002	40772 1741347	99432	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	+++++ 159118	4859 346245	12654 727739	26252 1492611	73933	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	+++++ 590648	18957 1240384	37672 2698758	101944 5567432	280500	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	5900 232406	7956 479340	15901 1020192	41157 2145105	111888	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylpentane	CBM	Ave	+++++ 453241	14435 985644	29018 2062991	74591 4018277	211207	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	+++++ 511696	15539 1094582	32300 2428743	86399 5153893	241503	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	9512 364771	11640 790113	23416 1692604	63469 3550291	173985	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	+++++ 559575	14770 1258365	31686 2710284	87896 5577891	250951	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Butanone (MEK)	CBM	Ave	+++++ 102021	2941 215237	6131 468077	17033 1003055	48379	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Hexane	CBM	Ave	+++++ 156852	5115 334174	10053 720175	26968 1465350	75081	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
C6 Range	DFBZ	Ave	+++++ 1371214	+++++ 2975398	97182 6229109	245781 12330332	650061	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Isopropyl ether	CBM	Ave	+++++ 726368	22365 1592277	46188 3356833	122765 6516624	337195	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	6306 242118	8025 499668	16385 1055779	42929 2259890	116608	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	+++++ 467758	12700 1040805	28251 2238695	75757 4517125	212128	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroform	CBM	Ave	10569 401198	13835 868630	27886 1869398	72764 4012562	192000	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	+++++ 520851	15317 1156354	32092 2515911	88078 5289215	244976	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	+++++ 245656	7777 546503	16936 1169335	40664 2337928	113550	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	10963 396220	13066 881154	26016 1948514	69004 4291452	189083	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFBZ	Ave	5803 230738	7562 504175	15796 1107907	39418 2409618	109924	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1-Butanol	DFBZ	Ave	+++++ 87183	+++++ 196047	4070 422395	11937 815757	39645	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Benzene	DFBZ	Ave	18024 675385	23876 1418818	47452 2983633	121155 5626343	320927	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Cyclohexane	DFBZ	Ave	+++++ 102016	3617 222381	6499 461730	18191 817744	47496	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFBZ	Ave	9338 417535	13402 934318	26604 2080493	69218 4378793	192620	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylpentane	DFBZ	Ave	+++++ 148408	5190 318046	9833 679988	25724 1400028	70633	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Thiophene	DFBZ	Ave	+++++ 370335	11576 774783	24658 1647044	65113 3486321	175811	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-amyl methyl ether	DFBZ	Ave	+++++ 571096	12468 1240524	32380 2670160	90767 5591059	275898	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 975928	31423 2125744	64969 4513728	163689 8671845	448067	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFBZ	Ave	+++++ 248903	8524 535380	16372 1131282	41479 2015496	116456	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Heptane	DFBZ	Ave	+++++ 233537	7601 502236	15727 1070503	39647 1948044	109902	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Trichloroethene	DFBZ	Ave	8089 307549	10807 641583	20458 1337924	53875 2689565	148182	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromomethane	DFBZ	Ave	+++++ 245001	8220 522746	16356 1142397	41278 2313341	115739	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Bromodichloromethane	DFBZ	Ave	9159 405343	11561 899835	24543 1986552	63430 4159657	186452	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,4-Dioxane	DFBZ	Ave	3109 110327	3625 229087	7391 483811	17900 925447	51127	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl methacrylate	DFBZ	Ave	+++++ 265612	7020 614457	14557 1313409	38875 2639577	119922	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylcyclohexane	DFBZ	Ave	+++++ 478964	14844 1012881	31484 2157606	82912 4182340	226363	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	+++++ 491559	13772 1119558	29934 2370240	77833 4528099	224067	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFBZ	Ave	8151 350840	10425 765394	21066 1666244	55449 3524574	160378	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZd 5	Ave	7298 298731	8385 673680	17514 1522679	46301 3277150	136400	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene	CBZd 5	Ave	+++++ 765289	24383 1616062	50162 3434233	133147 6856744	366316	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZd 5	Ave	6192 227282	7172 484227	15408 1035226	40194 2043617	109867	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylthiophene	CBZd 5	Ave	+++++ 668558	20898 1416277	43137 3023751	114137 6073558	320571	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
3-Methylthiophene	CBZd 5	Ave	+++++ 656449	20436 1404868	41306 2998597	113741 5988983	318684	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Hexanone	CBZd 5	Ave	+++++ 232613	+++++ 521509	11411 1144315	34640 2233901	104152	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZd 5	Ave	9397 454968	11634 1031168	24752 2208273	66311 4180918	206547	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Octane	CBZd 5	Ave	5631 247038	7627 526170	15082 1082269	40330 1850963	115184	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	+++++ 428002	12452 924538	26297 1978394	70072 4001584	202714	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZd 5	Ave	7610 277054	9403 584686	18869 1244199	46954 2375762	136286	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chlorobenzene	CBZd 5	Ave	+++++ 625543	21168 1306533	43438 2742751	109332 5354812	303004	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylheptane	CBZd 5	Ave	+++++ 681133	21043 1494597	43988 3092749	113853 5096793	311980	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethylbenzene	CBZd 5	Ave	27613 978749	29825 2108922	63338 4519837	165857 8589676	459447	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Ethylthiophene	CBZd 5	Ave	+++++ 765397	22501 1657834	47630 3572042	126251 6997219	363700	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
m-Xylene & p-Xylene	CBZd 5	Ave	40874 1483468	46032 3273024	96457 6738733	249678 11917796	702600	0.0784 3.99	0.157 8.00	0.317 16.0	0.800 32.0	2.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Bromoform	CBZd 5	Ave	11129 617297	12551 1398733	28641 3037906	81415 6153703	268311	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Styrene	CBZd 5	Ave	12575 578840	13707 1249828	28992 2646737	85239 5020713	268432	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Nonane	CBZd 5	Ave	+++++ 466328	12978 1026919	29165 2128023	76571 3420328	214951	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
o-Xylene	CBZd 5	Ave	21175 765823	24314 1642978	49222 3550963	130345 6800409	368491	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	15283 598106	18569 1283721	36992 2740331	100520 5070297	282619	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZd 5	Ave	+++++ 170828	5743 362915	10957 795101	28283 1654343	80177	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Isopropylbenzene	CBZd 5	Ave	+++++ 1141588	38207 2438291	77215 5035195	197365 9381159	545051	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propylbenzene	CBZd 5	Ave	+++++ 324318	9980 694201	20267 1452626	54030 2635364	153153	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZd 5	Ave	+++++ 304799	9366 637350	19953 1343683	51145 2441631	146515	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZd 5	Ave	+++++ 1177295	34435 2510766	71922 5400070	194133 10029684	553733	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZd 5	Ave	15234 544369	15578 1148204	34016 2394702	88594 4364039	259131	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZd 5	Ave	9576 481523	9827 1057771	21551 2321622	62931 4413169	212623	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Decane	CBZd 5	Ave	+++++ 595564	16591 1333389	35435 2666611	94600 4527461	279878	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butylbenzene	CBZd 5	Ave	+++++ 1014819	32218 2142114	65220 4307394	169175 7434970	480365	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZd 5	Ave	26327 978766	28641 2112255	61769 4302436	162397 7495827	461852	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Dichlorobenzene	CBZd 5	Ave	+++++ 737746	22826 1546869	47546 3065047	121224 5323509	351729	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZd 5	Ave	+++++ 1474176	45113 3124184	91976 6163445	244731 10282209	694694	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzyl chloride	CBZd 5	Ave	+++++ 819866	20001 1832699	43224 3926456	120019 7358133	368163	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,4-Dichlorobenzene	CBZd 5	Ave	+++++ 750220	21934 1571693	47852 3205771	124690 5694211	353669	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Isopropyltoluene	CBZd 5	Ave	+++++ 1200274	34664 2531332	73168 5298681	190507 9338084	568655	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trimethylbenzene	CBZd 5	Ave	21140 760919	23236 1628428	46953 3534922	124321 6800840	357137	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Butylcyclohexane	CBZd 5	Ave	+++++ 760524	23864 1608626	49526 3335838	126579 5762440	359936	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorobenzene	CBZd 5	Ave	+++++ 723605	22351 1511871	46373 2971893	119048 5132316	345512	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indane	CBZd 5	Ave	+++++ 946819	27170 1995040	58558 3897507	154233 6504175	447073	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indene	CBZd 5	QuaF	+++++ 736039	18029 1588890	39805 3448800	109625 6501047	339863	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylbenzene	CBZd 5	Ave	+++++ 1158211	32723 2475180	70660 5141734	183545 8997517	548974	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Undecane	CBZd 5	Ave	+++++ 717061	18819 1553035	41811 2778444	110364 4122448	340377	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	QuaF	+++++ 923383	25150 1944399	54167 3774698	143169 6266512	445240	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	8013 398684	7907 868224	17704 1842254	50695 3521605	183845	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 1074131	29520 2267880	61038 4741194	160888 8444468	523086	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 654167	18537 1410963	37758 2994841	98979 5707097	325678	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	+++++ 893407	24634 1914011	52336 4074204	130114 7409018	451826	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dodecane	CBZd 5	Ave	13103 719032	17575 1661177	41438 3144288	96211 4919118	378566	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZd 5	Ave	23496 820181	20808 1739115	46967 3614528	107856 6674555	426643	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Naphthalene	CBZd 5	Ave	42548 1476806	36884 3177551	86072 6621298	198379 11584991	904334	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzo(b)thiophene	CBZd 5	Ave	+++++ 853628	20453 1870974	46597 4044337	107686 7689569	541307	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Hexachlorobutadiene	CBZd 5	Ave	18186 717540	20278 1567346	40529 3510409	102983 6889790	343721	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZd 5	Ave	+++++ 787102	20765 1667019	46436 3469925	102724 6426986	438340	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylnaphthalene	CBZd 5	Ave	7017 654883	5364 1392307	27262 2839351	40667 5188631	596748	0.122 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
1-Methylnaphthalene	CBZd 5	Ave	+++++ 514457	+++++ 1075620	27467 2232500	36793 4077774	479579	+++++ 6.24	+++++ 12.5	0.496 25.0	1.25 50.0	3.13
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1051035 1111047	874628 1182570	910745 1250364	955166 1198131	1012516	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

Curve Type Legend:

Ave = Average ISTD
QuaF = Quadratic ISTD forced zero

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC02.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 16-Jan-2017 18:15:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003844-004
Misc. Info.: 073145
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jan-2017 14:55:12 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: barlozhetskayaa Date: 17-Jan-2017 10:11:08

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.231	8.242	-0.011	86	347183	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.399	10.407	-0.008	93	1715283	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.290	15.293	-0.003	84	1443170	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.983	16.984	-0.001	95	874628	4.00	3.87	
6 Chlorodifluoromethane	67	3.729	3.724	0.005	96	1661	0.0784	0.0862	
7 Propene	41	3.729	3.728	0.001	65	8333	0.0784	0.0923	
8 Dichlorodifluoromethane	85	3.777	3.776	0.001	99	13114	0.0784	0.0834	
9 Chloromethane	52	3.917	3.923	-0.006	99	3628	0.0784	0.1229	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.950	3.951	-0.001	93	16204	0.0784	0.0910	
11 Acetaldehyde	44	4.068	4.070	-0.002	97	21913	0.3920	0.8272	
12 Vinyl chloride	62	4.074	4.075	-0.001	53	8228	0.0784	0.0972	
13 Butadiene	54	4.155	4.155	0.000	70	5725	0.0784	0.0957	
14 Butane	43	4.160	4.158	0.002	86	11939	0.0784	0.1112	
15 Bromomethane	94	4.413	4.416	-0.003	97	7074	0.0784	0.0955	
16 Chloroethane	64	4.537	4.541	-0.004	95	3192	0.0784	0.0957	
17 Ethanol	31	4.645	4.651	-0.006	97	10913	0.3920	0.4914	
18 Vinyl bromide	106	4.791	4.797	-0.006	96	6402	0.0784	0.0927	
19 2-Methylbutane	43	4.856	4.856	0.000	88	5979	0.0784	0.0919	
20 Acrolein	56	5.034	5.033	0.001	34	2894	0.0784	0.1158	
21 Trichlorofluoromethane	101	5.034	5.036	-0.002	100	17428	0.0784	0.0808	
22 Acetonitrile	40	5.077	5.083	-0.006	99	2648	0.0784	0.0707	
23 Acetone	58	5.136	5.133	0.003	97	10972	0.2352	0.2745	
24 Isopropyl alcohol	45	5.228	5.232	-0.004	82	27997	0.2352	0.2381	
25 Pentane	72	5.238	5.238	0.000	79	1378	0.0784	0.0815	
26 Ethyl ether	31	5.379	5.377	0.002	93	7555	0.0784	0.0770	
27 1,1-Dichloroethene	96	5.627	5.639	-0.012	96	7334	0.0784	0.0767	
28 Acrylonitrile	53	5.708	5.712	-0.004	93	4384	0.0784	0.0715	
29 2-Methyl-2-propanol	59	5.756	5.746	0.010	96	9046	0.0784	0.0704	
30 1,1,2-Trichloro-1,2,2-trif	101	5.815	5.819	-0.004	93	14976	0.0784	0.0817	
31 Methylene Chloride	84	5.918	5.931	-0.013	92	12873	0.0784	0.1431	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.945	5.952	-0.007	93	4859	0.0784	0.0718	
33 Carbon disulfide	76	6.069	6.072	-0.003	98	18957	0.0784	0.0769	
34 trans-1,2-Dichloroethene	96	6.657	6.667	-0.010	95	7956	0.0784	0.0783	
35 2-Methylpentane	43	6.716	6.719	-0.003	94	14435	0.0784	0.0773	
36 Methyl tert-butyl ether	73	6.813	6.797	0.016	96	15539	0.0784	0.0724	
37 1,1-Dichloroethane	63	7.023	7.035	-0.012	97	11640	0.0784	0.0727	
38 Vinyl acetate	43	7.147	7.147	0.000	99	14770	0.0784	0.0651	
39 2-Butanone (MEK)	72	7.546	7.536	0.010	99	2941	0.0784	0.0703	
40 Hexane	56	7.617	7.622	-0.006	91	5115	0.0784	0.0778	
41 Isopropyl ether	45	7.767	7.761	0.006	95	22365	0.0784	0.0745	
42 cis-1,2-Dichloroethene	96	7.935	7.944	-0.009	83	8025	0.0784	0.0759	
43 Ethyl acetate	43	8.140	8.132	0.008	99	12700	0.0784	0.0665	
44 Chloroform	83	8.264	8.274	-0.010	92	13835	0.0784	0.0766	
45 Tert-butyl ethyl ether	59	8.404	8.396	0.008	94	15317	0.0784	0.0700	
46 Tetrahydrofuran	42	8.657	8.639	0.018	96	7777	0.0784	0.0749	
47 1,1,1-Trichloroethane	97	9.245	9.254	-0.009	95	13066	0.0784	0.0725	
48 1,2-Dichloroethane	62	9.321	9.328	-0.008	94	7562	0.0784	0.0732	
49 n-Butanol	31	9.844	9.825	0.019	66	1785	0.0784	0.0515	
50 Benzene	78	9.833	9.838	-0.005	95	23876	0.0784	0.0800	
51 Cyclohexane	69	9.865	9.866	-0.001	94	3617	0.0784	0.0849	
52 Carbon tetrachloride	117	9.876	9.878	-0.002	89	13402	0.0784	0.0735	
53 2,3-Dimethylpentane	71	10.027	10.026	0.001	90	5190	0.0784	0.0820	
54 Thiophene	84	10.102	10.107	-0.005	95	11576	0.0784	0.0747	
55 Tert-amyl methyl ether	73	10.367	10.361	0.006	70	12468	0.0784	0.0548	
56 Isooctane	57	10.690	10.692	-0.002	98	31423	0.0784	0.0772	
57 1,2-Dichloropropane	63	11.078	11.078	0.000	70	8524	0.0784	0.0827	
58 n-Heptane	71	11.078	11.086	-0.008	86	7601	0.0784	0.0783	
59 Trichloroethene	130	11.138	11.141	-0.003	89	10807	0.0784	0.0801	
60 Dibromomethane	93	11.181	11.186	-0.005	86	8220	0.0784	0.0792	
61 Dichlorobromomethane	83	11.353	11.354	-0.001	97	11561	0.0784	0.0670	
62 1,4-Dioxane	88	11.380	11.365	0.015	77	3625	0.0784	0.0758	
63 Methyl methacrylate	41	11.488	11.488	0.000	87	7020	0.0784	0.0653	
64 Methylcyclohexane	83	11.963	11.963	0.000	95	14844	0.0784	0.0749	
65 4-Methyl-2-pentanone (MIBK	43	12.356	12.355	0.001	95	13772	0.0784	0.0684	
66 cis-1,3-Dichloropropene	75	12.405	12.405	0.000	89	10425	0.0784	0.0699	
67 trans-1,3-Dichloropropene	75	13.122	13.126	-0.004	95	8385	0.0784	0.0655	
68 Toluene	91	13.268	13.269	-0.001	95	24383	0.0784	0.0773	
69 1,1,2-Trichloroethane	83	13.316	13.323	-0.007	91	7172	0.0784	0.0722	
70 2-Methylthiophene	97	13.413	13.417	-0.004	96	20898	0.0784	0.0761	
71 3-Methylthiophene	97	13.624	13.625	-0.001	98	20436	0.0784	0.0756	
72 2-Hexanone	58	13.758	13.752	0.006	88	5156	0.0784	0.0555	
73 Chlorodibromomethane	129	14.039	14.042	-0.003	97	11634	0.0784	0.0640	
74 n-Octane	85	14.060	14.060	0.000	93	7627	0.0784	0.0760	
75 Ethylene Dibromide	107	14.335	14.336	-0.001	96	12452	0.0784	0.0717	
76 Tetrachloroethene	129	14.454	14.456	-0.002	94	9403	0.0784	0.0777	
77 Chlorobenzene	112	15.344	15.342	0.002	96	21168	0.0784	0.0815	
78 2,3-Dimethylheptane	43	15.441	15.444	-0.003	97	21043	0.0784	0.0772	
79 Ethylbenzene	91	15.657	15.660	-0.003	98	29825	0.0784	0.0704	
80 2-Ethylthiophene	97	15.754	15.758	-0.004	97	22501	0.0784	0.0722	
81 m-Xylene & p-Xylene	91	15.829	15.830	-0.001	96	46032	0.1568	0.1447	
82 Bromoform	173	16.234	16.235	-0.001	96	12551	0.0784	0.0537	
83 Styrene	104	16.298	16.296	0.002	96	13707	0.0784	0.0607	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.320	16.324	-0.004	96	12978	0.0784	0.0709	
85 o-Xylene	91	16.358	16.359	-0.001	98	24314	0.0784	0.0730	
86 1,1,2,2-Tetrachloroethane	83	16.670	16.671	-0.001	98	18569	0.0784	0.0734	
87 1,2,3-Trichloropropane	110	16.827	16.831	-0.004	96	5743	0.0784	0.0807	
88 Isopropylbenzene	105	16.978	16.977	0.001	66	38207	0.0784	0.0814	
89 N-Propylbenzene	120	17.555	17.552	0.003	99	9980	0.0784	0.0767	
90 2-Chlorotoluene	126	17.576	17.578	-0.002	87	9366	0.0784	0.0765	
91 4-Ethyltoluene	105	17.722	17.718	0.004	99	34435	0.0784	0.0731	
92 1,3,5-Trimethylbenzene	120	17.797	17.802	-0.005	92	15578	0.0784	0.0681	
93 Alpha Methyl Styrene	118	18.045	18.042	0.003	92	9827	0.0784	0.0542	
94 n-Decane	57	18.164	18.166	-0.002	90	16591	0.0784	0.0712	
95 tert-Butylbenzene	119	18.250	18.251	-0.001	97	32218	0.0784	0.0801	
96 1,2,4-Trimethylbenzene	105	18.261	18.267	-0.006	95	28641	0.0784	0.0700	
97 1,3-Dichlorobenzene	146	18.531	18.531	0.000	93	22826	0.0784	0.0788	
98 sec-Butylbenzene	105	18.541	18.543	-0.002	99	45113	0.0784	0.0784	
99 Benzyl chloride	91	18.606	18.607	-0.001	99	20001	0.0784	0.0633	
100 1,4-Dichlorobenzene	146	18.622	18.625	-0.003	93	21934	0.0784	0.0744	
101 4-Isopropyltoluene	119	18.719	18.720	-0.001	97	34664	0.0784	0.0738	
102 1,2,3-Trimethylbenzene	105	18.763	18.762	0.001	97	23236	0.0784	0.0712	
103 Butylcyclohexane	83	18.849	18.851	-0.002	97	23864	0.0784	0.0786	
104 1,2-Dichlorobenzene	146	19.005	19.003	0.002	98	22351	0.0784	0.0790	
105 2,3-Dihydroindene	117	19.011	19.012	-0.001	95	27170	0.0784	0.0747	
106 Indene	116	19.145	19.146	-0.001	91	18029	0.0784	0.0521	
107 n-Butylbenzene	91	19.183	19.183	0.000	97	32723	0.0784	0.0722	
108 Undecane	57	19.561	19.561	0.000	94	18819	0.0784	0.0714	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.571	19.574	-0.003	98	25150	0.0784	0.0586	
110 1,2-Dibromo-3-Chloropropan	157	19.631	19.631	0.000	90	7907	0.0784	0.0532	
111 1,2,4,5-Tetramethylbenzene	119	19.976	19.977	-0.001	99	29520	0.0784	0.0713	
112 1,2,3,5-Tetramethylbenzene	119	20.030	20.031	-0.001	97	18537	0.0784	0.0714	
113 1,2,3,4-Tetramethylbenzene	119	20.440	20.439	0.001	98	24634	0.0784	0.0703	
114 Dodecane	57	20.666	20.664	0.002	94	17575	0.0784	0.0639	
115 1,2,4-Trichlorobenzene	180	20.785	20.788	-0.003	93	20808	0.0784	0.0618	
116 Naphthalene	128	20.919	20.922	-0.003	99	36884	0.0784	0.0593	
117 Benzo(b)thiophene	134	21.022	21.024	-0.002	99	20453	0.0784	0.0600	
118 Hexachlorobutadiene	225	21.173	21.173	0.000	93	20278	0.0784	0.0675	
119 1,2,3-Trichlorobenzene	180	21.216	21.217	-0.001	95	20765	0.0784	0.0678	
120 2-Methylnaphthalene	142	21.933	21.933	0.000	97	5364	0.2450	0.0731	
121 1-Methylnaphthalene	142	22.057	22.057	0.000	95	6533	0.2450	0.0954	
A 122 C6 Range	1	7.609	(7.573-7.630)		0	49495	0.0784	0.0846	
S 124 Xylenes, Total	100				0		0.2352	0.2177	
S 125 1,2-Dichloroethene, Total	1				0		0.1568	0.1542	

Reagents:

40L12DNP_00009	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

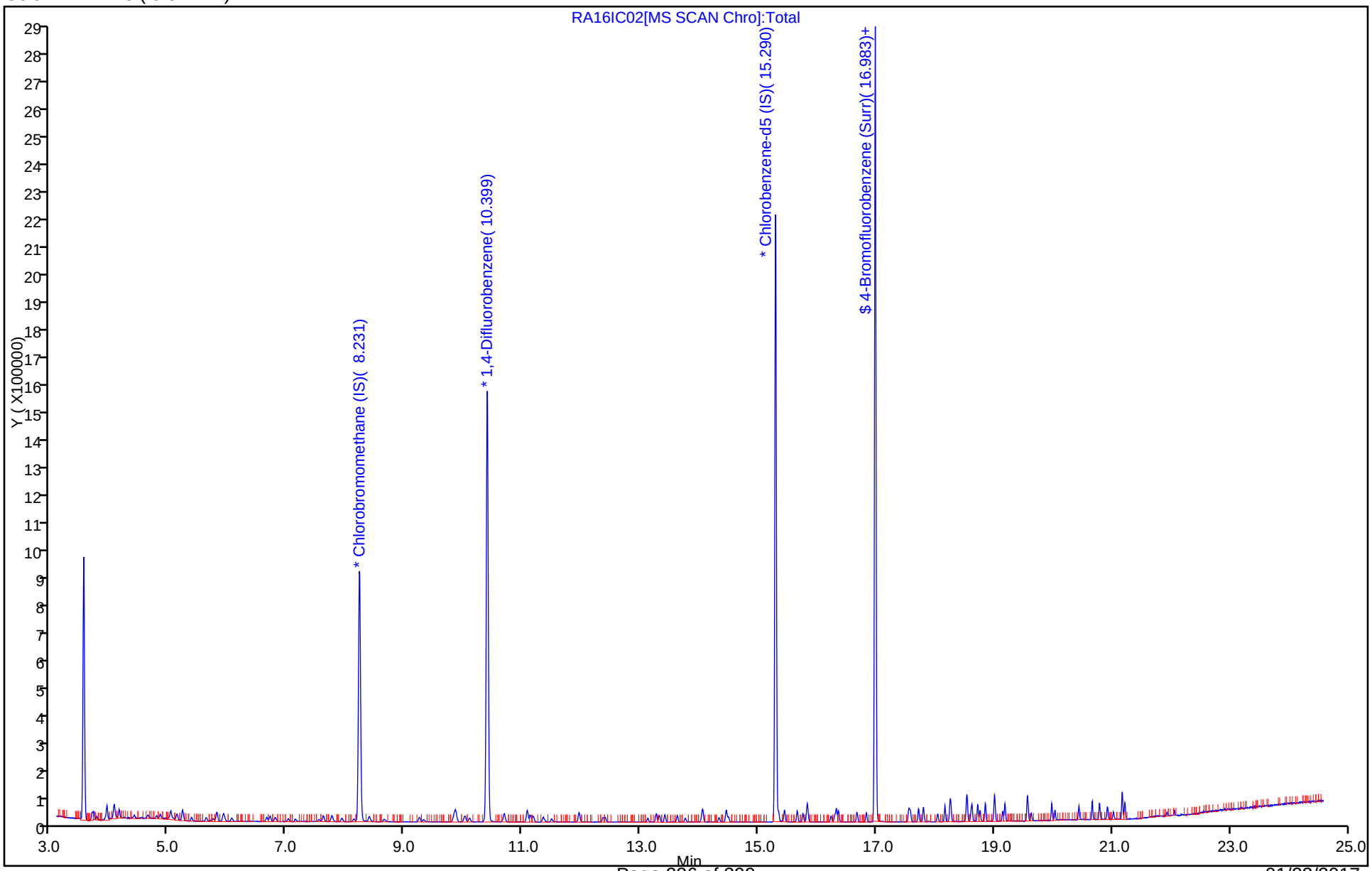
Report Date: 17-Jan-2017 14:55:13 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC02.D

Injection Date:	16-Jan-2017 18:15:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L2			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

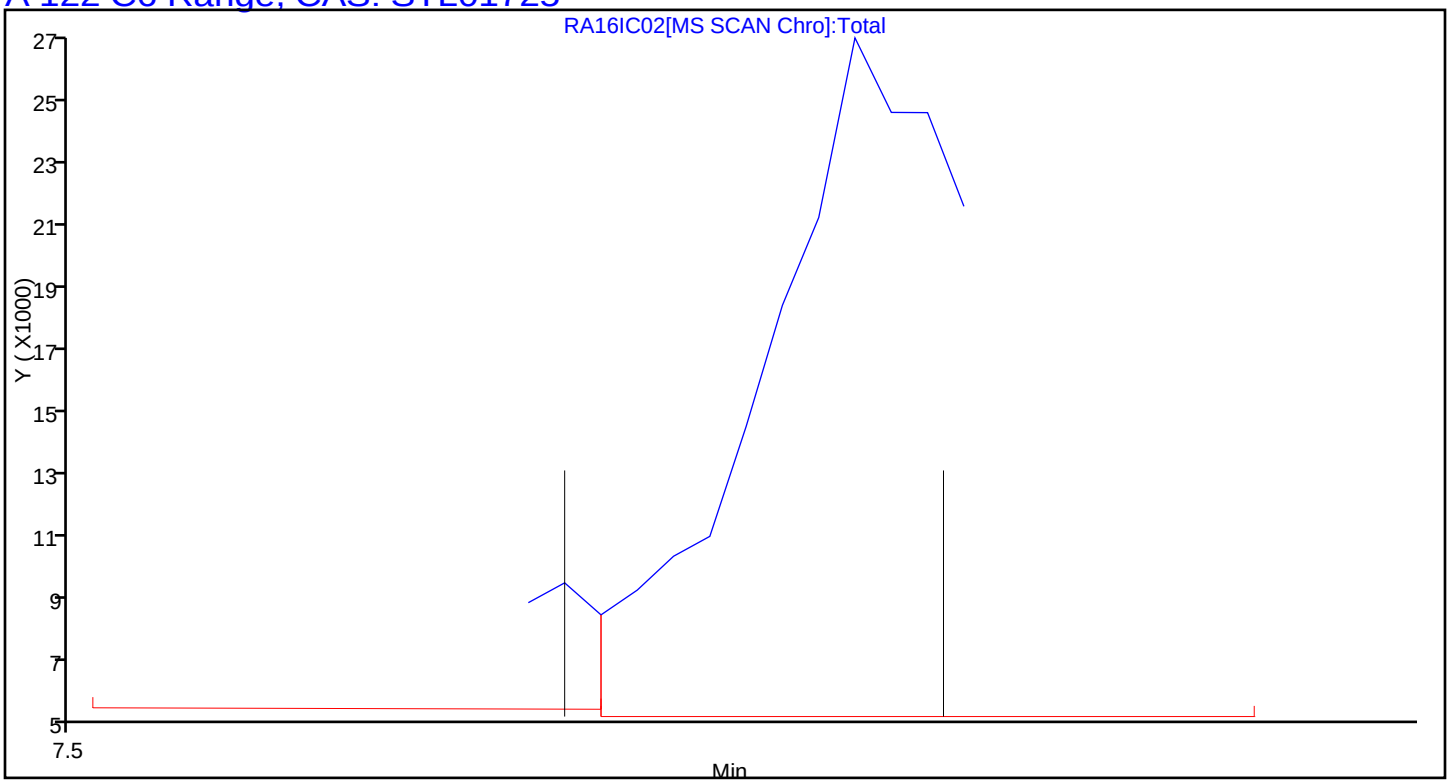


Report Date: 17-Jan-2017 14:55:13 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC02.D				
Injection Date:	16-Jan-2017 18:15:30	Instrument ID:	MR		
Lims ID:	IC L2				
Client ID:					
Operator ID:		ALS Bottle#:	3	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC03.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 16-Jan-2017 19:03:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003844-005
Misc. Info.: 073146
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jan-2017 14:55:16 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: barlozhetskayaa Date: 17-Jan-2017 10:11:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.236	8.242	-0.006	86	359480	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.399	10.407	-0.008	93	1781075	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.290	15.293	-0.003	84	1484960	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.983	16.984	-0.001	96	910745	4.00	3.92	
6 Chlorodifluoromethane	67	3.728	3.724	0.004	97	3264	0.1587	0.1637	
7 Propene	41	3.728	3.728	0.000	73	15412	0.1587	0.1649	
8 Dichlorodifluoromethane	85	3.777	3.776	0.001	99	26328	0.1587	0.1618	
9 Chloromethane	52	3.923	3.923	0.000	98	6103	0.1587	0.1997	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.950	3.951	-0.001	89	32973	0.1587	0.1789	
11 Acetaldehyde	44	4.068	4.070	-0.002	100	37677	0.7933	1.37	
12 Vinyl chloride	62	4.074	4.075	-0.001	98	16305	0.1587	0.1861	
13 Butadiene	54	4.154	4.155	-0.001	65	11998	0.1587	0.1938	
14 Butane	43	4.154	4.158	-0.004	86	23585	0.1587	0.2121	
15 Bromomethane	94	4.413	4.416	-0.003	95	14849	0.1587	0.1937	
16 Chloroethane	64	4.537	4.541	-0.004	98	6383	0.1587	0.1848	
17 Ethanol	31	4.640	4.651	-0.011	96	20387	0.7933	0.8865	
18 Vinyl bromide	106	4.785	4.797	-0.012	95	12566	0.1587	0.1757	
19 2-Methylbutane	43	4.855	4.856	-0.001	89	13914	0.1587	0.2065	
20 Acrolein	56	5.039	5.033	0.006	33	5319	0.1587	0.2056	
21 Trichlorofluoromethane	101	5.028	5.036	-0.008	98	36483	0.1587	0.1633	
22 Acetonitrile	40	5.077	5.083	-0.006	98	7294	0.1587	0.1880	
23 Acetone	58	5.136	5.133	0.003	97	21592	0.4760	0.5217	
24 Isopropyl alcohol	45	5.228	5.232	-0.004	92	55661	0.4760	0.4573	
25 Pentane	72	5.233	5.238	-0.005	98	2573	0.1587	0.1471	
26 Ethyl ether	31	5.379	5.377	0.001	91	15123	0.1587	0.1488	
27 1,1-Dichloroethene	96	5.637	5.639	-0.002	97	14773	0.1587	0.1493	
28 Acrylonitrile	53	5.707	5.712	-0.005	99	9541	0.1587	0.1503	
29 2-Methyl-2-propanol	59	5.745	5.746	-0.001	96	19072	0.1587	0.1434	
30 1,1,2-Trichloro-1,2,2-trif	101	5.815	5.819	-0.004	92	29469	0.1587	0.1553	
31 Methylene Chloride	84	5.923	5.931	-0.008	96	19990	0.1587	0.2146	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.950	5.952	-0.002	94	12654	0.1587	0.1807	
33 Carbon disulfide	76	6.069	6.072	-0.003	99	37672	0.1587	0.1476	
34 trans-1,2-Dichloroethene	96	6.656	6.667	-0.011	91	15901	0.1587	0.1512	
35 2-Methylpentane	43	6.716	6.719	-0.003	94	29018	0.1587	0.1500	
36 Methyl tert-butyl ether	73	6.797	6.797	0.000	97	32300	0.1587	0.1454	
37 1,1-Dichloroethane	63	7.029	7.035	-0.006	99	23416	0.1587	0.1413	
38 Vinyl acetate	43	7.142	7.147	-0.005	100	31686	0.1587	0.1349	
39 2-Butanone (MEK)	72	7.541	7.536	0.005	99	6131	0.1587	0.1415	
40 Hexane	56	7.616	7.622	-0.006	91	10053	0.1587	0.1477	
41 Isopropyl ether	45	7.757	7.761	-0.004	97	46188	0.1587	0.1487	
42 cis-1,2-Dichloroethene	96	7.934	7.944	-0.010	88	16385	0.1587	0.1496	
43 Ethyl acetate	43	8.129	8.132	-0.003	100	28251	0.1587	0.1429	
44 Chloroform	83	8.263	8.274	-0.011	92	27886	0.1587	0.1490	
45 Tert-butyl ethyl ether	59	8.398	8.396	0.002	93	32092	0.1587	0.1417	
46 Tetrahydrofuran	42	8.646	8.639	0.007	96	16936	0.1587	0.1575	
47 1,1,1-Trichloroethane	97	9.245	9.254	-0.009	94	26016	0.1587	0.1393	
48 1,2-Dichloroethane	62	9.320	9.328	-0.008	95	15796	0.1587	0.1473	
49 n-Butanol	31	9.838	9.825	0.013	65	4070	0.1587	0.1130	
50 Benzene	78	9.827	9.838	-0.011	94	47452	0.1587	0.1532	
51 Cyclohexane	69	9.865	9.866	-0.001	92	6499	0.1587	0.1469	
52 Carbon tetrachloride	117	9.870	9.878	-0.008	92	26604	0.1587	0.1404	
53 2,3-Dimethylpentane	71	10.027	10.026	0.001	91	9833	0.1587	0.1497	
54 Thiophene	84	10.108	10.107	0.001	92	24658	0.1587	0.1533	
55 Tert-amyl methyl ether	73	10.366	10.361	0.005	98	32380	0.1587	0.1370	M
56 Isooctane	57	10.690	10.692	-0.002	99	64969	0.1587	0.1538	
57 1,2-Dichloropropane	63	11.078	11.078	0.000	78	16372	0.1587	0.1530	
58 n-Heptane	71	11.084	11.086	-0.002	88	15727	0.1587	0.1560	
59 Trichloroethene	130	11.138	11.141	-0.003	88	20458	0.1587	0.1461	
60 Dibromomethane	93	11.181	11.186	-0.005	88	16356	0.1587	0.1518	
61 Dichlorobromomethane	83	11.348	11.354	-0.006	97	24543	0.1587	0.1371	
62 1,4-Dioxane	88	11.369	11.365	0.004	84	7391	0.1587	0.1489	
63 Methyl methacrylate	41	11.488	11.488	0.000	90	14557	0.1587	0.1303	
64 Methylcyclohexane	83	11.963	11.963	0.000	95	31484	0.1587	0.1531	
65 4-Methyl-2-pentanone (MIBK	43	12.356	12.355	0.001	95	29934	0.1587	0.1432	
66 cis-1,3-Dichloropropene	75	12.399	12.405	-0.006	92	21066	0.1587	0.1361	
67 trans-1,3-Dichloropropene	75	13.122	13.126	-0.004	97	17514	0.1587	0.1329	
68 Toluene	91	13.268	13.269	-0.001	94	50162	0.1587	0.1546	
69 1,1,2-Trichloroethane	83	13.321	13.323	-0.002	92	15408	0.1587	0.1507	
70 2-Methylthiophene	97	13.413	13.417	-0.004	97	43137	0.1587	0.1527	
71 3-Methylthiophene	97	13.623	13.625	-0.002	98	41306	0.1587	0.1485	
72 2-Hexanone	58	13.758	13.752	0.006	93	11411	0.1587	0.1193	
73 Chlorodibromomethane	129	14.044	14.042	0.002	98	24752	0.1587	0.1324	
74 n-Octane	85	14.055	14.060	-0.005	94	15082	0.1587	0.1461	
75 Ethylene Dibromide	107	14.335	14.336	-0.001	99	26297	0.1587	0.1472	
76 Tetrachloroethene	129	14.454	14.456	-0.002	93	18869	0.1587	0.1514	
77 Chlorobenzene	112	15.338	15.342	-0.004	98	43438	0.1587	0.1626	
78 2,3-Dimethylheptane	43	15.441	15.444	-0.003	98	43988	0.1587	0.1569	
79 Ethylbenzene	91	15.656	15.660	-0.004	97	63338	0.1587	0.1453	
80 2-Ethylthiophene	97	15.753	15.758	-0.005	97	47630	0.1587	0.1486	
81 m-Xylene & p-Xylene	91	15.829	15.830	-0.001	99	96457	0.3173	0.2946	
82 Bromoform	173	16.233	16.235	-0.002	97	28641	0.1587	0.1190	
83 Styrene	104	16.293	16.296	-0.003	96	28992	0.1587	0.1248	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.320	16.324	-0.004	95	29165	0.1587	0.1548	
85 o-Xylene	91	16.357	16.359	-0.002	98	49222	0.1587	0.1437	
86 1,1,2,2-Tetrachloroethane	83	16.670	16.671	-0.001	98	36992	0.1587	0.1421	
87 1,2,3-Trichloropropane	110	16.827	16.831	-0.005	97	10957	0.1587	0.1497	
88 Isopropylbenzene	105	16.972	16.977	-0.005	95	77215	0.1587	0.1598	
89 N-Propylbenzene	120	17.549	17.552	-0.003	99	20267	0.1587	0.1514	
90 2-Chlorotoluene	126	17.576	17.578	-0.002	96	19953	0.1587	0.1583	
91 4-Ethyltoluene	105	17.716	17.718	-0.002	99	71922	0.1587	0.1484	
92 1,3,5-Trimethylbenzene	120	17.803	17.802	0.001	94	34016	0.1587	0.1446	
93 Alpha Methyl Styrene	118	18.040	18.042	-0.002	90	21551	0.1587	0.1156	
94 n-Decane	57	18.164	18.166	-0.002	91	35435	0.1587	0.1478	
95 tert-Butylbenzene	119	18.250	18.251	-0.001	96	65220	0.1587	0.1576	
96 1,2,4-Trimethylbenzene	105	18.266	18.267	-0.001	95	61769	0.1587	0.1466	
97 1,3-Dichlorobenzene	146	18.530	18.531	-0.001	95	47546	0.1587	0.1595	
98 sec-Butylbenzene	105	18.541	18.543	-0.002	99	91976	0.1587	0.1554	
99 Benzyl chloride	91	18.606	18.607	-0.001	99	43224	0.1587	0.1329	
100 1,4-Dichlorobenzene	146	18.622	18.625	-0.003	96	47852	0.1587	0.1578	
101 4-Isopropyltoluene	119	18.719	18.720	-0.001	97	73168	0.1587	0.1514	
102 1,2,3-Trimethylbenzene	105	18.757	18.762	-0.005	96	46953	0.1587	0.1398	
103 Butylcyclohexane	83	18.849	18.851	-0.002	98	49526	0.1587	0.1585	
104 1,2-Dichlorobenzene	146	19.000	19.003	-0.003	97	46373	0.1587	0.1592	
105 2,3-Dihydroindene	117	19.010	19.012	-0.002	94	58558	0.1587	0.1564	
106 Indene	116	19.145	19.146	-0.001	92	39805	0.1587	0.1118	
107 n-Butylbenzene	91	19.183	19.183	0.000	97	70660	0.1587	0.1515	
108 Undecane	57	19.560	19.561	-0.001	95	41811	0.1587	0.1541	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.571	19.574	-0.003	99	54167	0.1587	0.1229	
110 1,2-Dibromo-3-Chloropropan	157	19.631	19.631	0.000	88	17704	0.1587	0.1158	
111 1,2,4,5-Tetramethylbenzene	119	19.976	19.977	-0.001	99	61038	0.1587	0.1433	
112 1,2,3,5-Tetramethylbenzene	119	20.030	20.031	-0.001	97	37758	0.1587	0.1414	
113 1,2,3,4-Tetramethylbenzene	119	20.439	20.439	0.000	98	52336	0.1587	0.1451	
114 Dodecane	57	20.660	20.664	-0.004	94	41438	0.1587	0.1464	
115 1,2,4-Trichlorobenzene	180	20.785	20.788	-0.004	93	46967	0.1587	0.1356	
116 Naphthalene	128	20.925	20.922	0.003	100	86072	0.1587	0.1346	
117 Benzo(b)thiophene	134	21.027	21.024	0.003	100	46597	0.1587	0.1328	
118 Hexachlorobutadiene	225	21.173	21.173	0.000	94	40529	0.1587	0.1311	
119 1,2,3-Trichlorobenzene	180	21.216	21.217	-0.001	94	46436	0.1587	0.1474	
120 2-Methylnaphthalene	142	21.933	21.933	0.000	100	27262	0.4958	0.3612	
121 1-Methylnaphthalene	142	22.057	22.057	0.000	96	27467	0.4958	0.3896	
A 122 C6 Range	1	7.617	(7.568-7.646)		0	97182	0.1587	0.1600	
S 124 Xylenes, Total	100				0		0.4760	0.4383	
S 125 1,2-Dichloroethene, Total	1				0		0.3173	0.3008	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L3DNP_00010	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

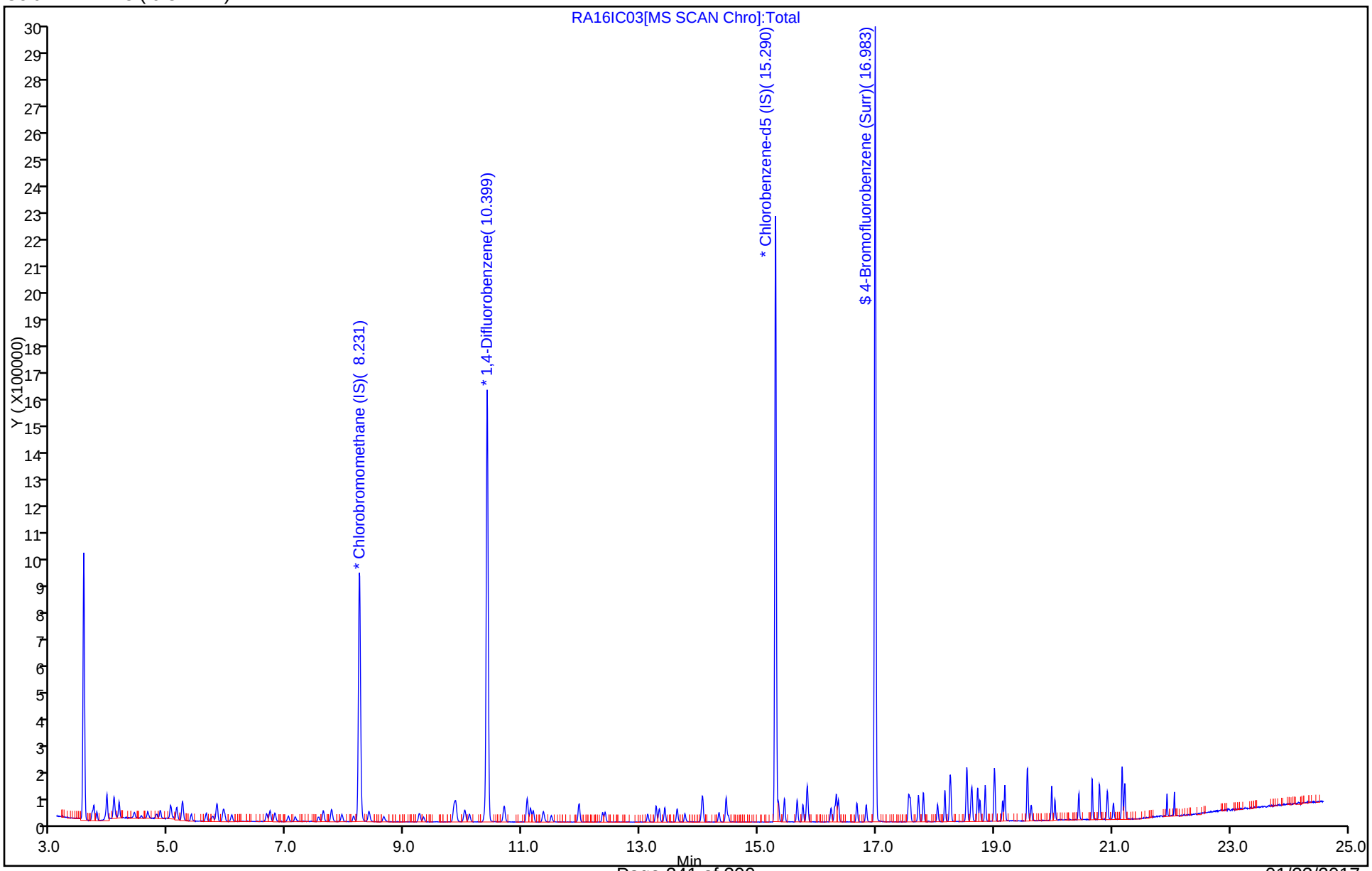
Report Date: 17-Jan-2017 14:55:17 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC03.D

Injection Date:	16-Jan-2017 19:03:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L3			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

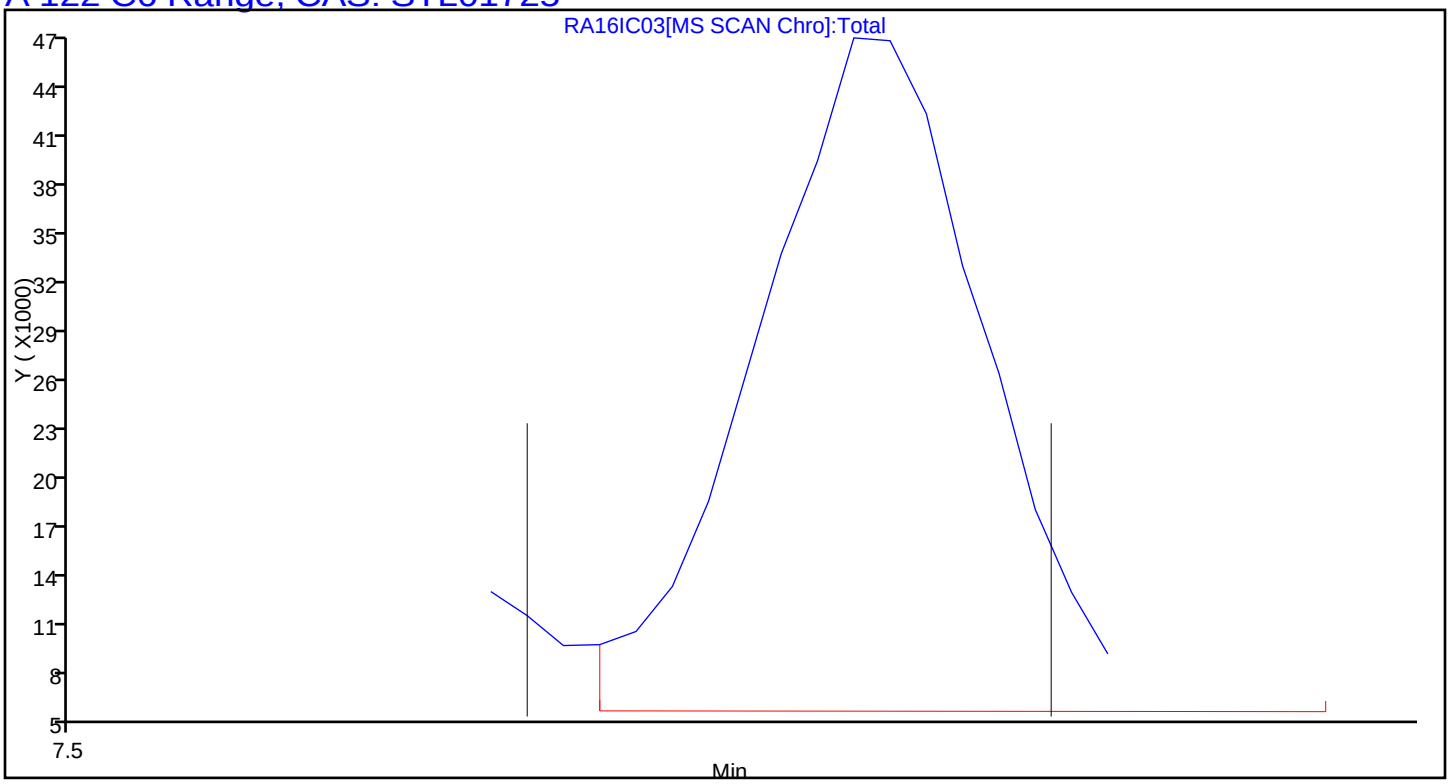


Report Date: 17-Jan-2017 14:55:17 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC03.D				
Injection Date:	16-Jan-2017 19:03:30	Instrument ID:	MR		
Lims ID:	IC L3				
Client ID:					
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

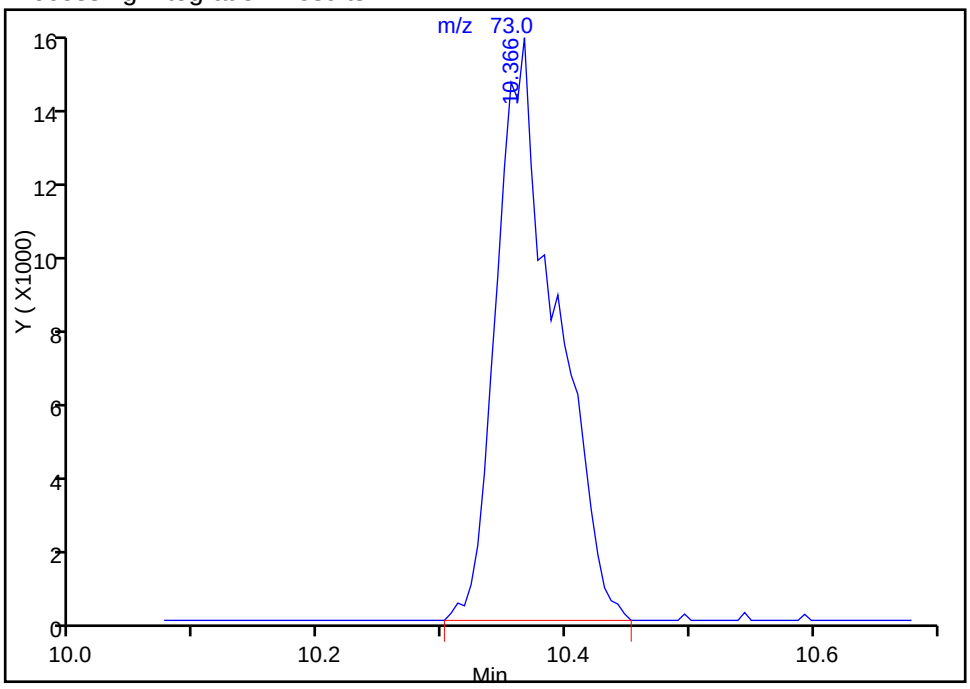
Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC03.D
Injection Date: 16-Jan-2017 19:03:30 Instrument ID: MR
Lims ID: IC L3
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

55 Tert-amyl methyl ether, CAS: 994-05-8

Signal: 1

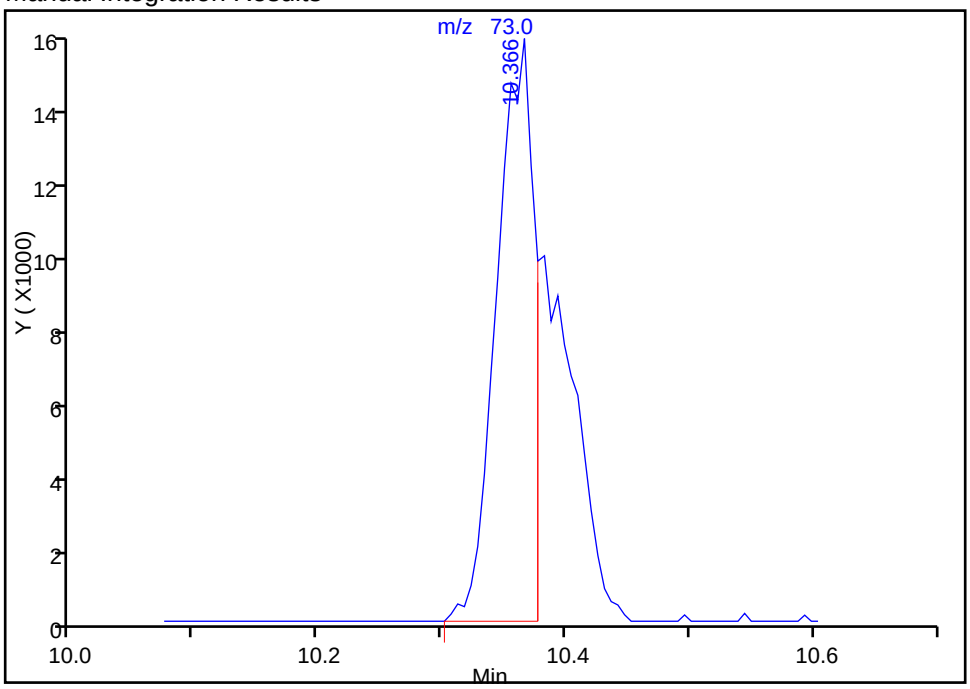
Processing Integration Results

RT: 10.37
Area: 50771
Amount: 0.198424
Amount Units: ppb v/v



Manual Integration Results

RT: 10.37
Area: 32380
Amount: 0.136995
Amount Units: ppb v/v



Reviewer: barlozhetskayaa, 17-Jan-2017 13:10:13
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC04.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 16-Jan-2017 19:50:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003844-006
Misc. Info.: 073144
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jan-2017 14:55:19 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: barlozhetskayaa Date: 17-Jan-2017 10:11:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.242	8.242	0.000	87	368748	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.404	10.407	-0.003	93	1827068	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.290	15.293	-0.003	84	1536471	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.983	16.984	-0.001	95	955166	4.00	3.97	
6 Chlorodifluoromethane	67	3.734	3.724	0.010	96	7868	0.4000	0.3846	
7 Propene	41	3.739	3.728	0.011	95	36575	0.4000	0.3814	
8 Dichlorodifluoromethane	85	3.788	3.776	0.012	99	63202	0.4000	0.3787	
9 Chloromethane	52	3.933	3.923	0.010	100	12511	0.4000	0.3992	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.960	3.951	0.009	90	79723	0.4000	0.4218	
11 Acetaldehyde	44	4.074	4.070	0.004	99	80942	2.00	2.88	
12 Vinyl chloride	62	4.084	4.075	0.009	98	41198	0.4000	0.4584	
13 Butadiene	54	4.160	4.155	0.005	96	28720	0.4000	0.4522	
14 Butane	43	4.165	4.158	0.007	93	54455	0.4000	0.4775	
15 Bromomethane	94	4.424	4.416	0.008	97	34126	0.4000	0.4340	
16 Chloroethane	64	4.543	4.541	0.002	97	14921	0.4000	0.4210	
17 Ethanol	31	4.645	4.651	-0.006	97	51601	2.00	2.19	
18 Vinyl bromide	106	4.802	4.797	0.005	99	31621	0.4000	0.4311	
19 2-Methylbutane	43	4.861	4.856	0.005	92	29892	0.4000	0.4326	
20 Acrolein	56	5.028	5.033	-0.005	33	13376	0.4000	0.5041	
21 Trichlorofluoromethane	101	5.039	5.036	0.003	99	88526	0.4000	0.3863	
22 Acetonitrile	40	5.082	5.083	-0.001	99	14314	0.4000	0.3596	
23 Acetone	58	5.136	5.133	0.003	97	51628	1.20	1.22	
24 Isopropyl alcohol	45	5.228	5.232	-0.004	95	142667	1.20	1.14	
25 Pentane	72	5.244	5.238	0.006	96	6904	0.4000	0.3847	
26 Ethyl ether	31	5.384	5.377	0.007	94	39965	0.4000	0.3833	
27 1,1-Dichloroethene	96	5.643	5.639	0.004	94	38836	0.4000	0.3825	
28 Acrylonitrile	53	5.713	5.712	0.001	97	24515	0.4000	0.3765	
29 2-Methyl-2-propanol	59	5.740	5.746	-0.006	96	50591	0.4000	0.3707	
30 1,1,2-Trichloro-1,2,2-trif	101	5.821	5.819	0.002	95	78240	0.4000	0.4019	
31 Methylene Chloride	84	5.929	5.931	-0.002	92	40772	0.4000	0.4268	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.956	5.952	0.004	94	26252	0.4000	0.3655	
33 Carbon disulfide	76	6.080	6.072	0.008	98	101944	0.4000	0.3895	
34 trans-1,2-Dichloroethene	96	6.667	6.667	0.000	94	41157	0.4000	0.3815	
35 2-Methylpentane	43	6.721	6.719	0.002	94	74591	0.4000	0.3760	
36 Methyl tert-butyl ether	73	6.797	6.797	0.000	97	86399	0.4000	0.3791	
37 1,1-Dichloroethane	63	7.034	7.035	-0.001	99	63469	0.4000	0.3733	
38 Vinyl acetate	43	7.147	7.147	0.000	100	87896	0.4000	0.3649	
39 2-Butanone (MEK)	72	7.536	7.536	0.000	100	17033	0.4000	0.3832	
40 Hexane	56	7.627	7.622	0.005	91	26968	0.4000	0.3863	
41 Isopropyl ether	45	7.757	7.761	-0.004	98	122765	0.4000	0.3852	
42 cis-1,2-Dichloroethene	96	7.940	7.944	-0.004	87	42929	0.4000	0.3821	
43 Ethyl acetate	43	8.129	8.132	-0.003	99	75757	0.4000	0.3735	
44 Chloroform	83	8.269	8.274	-0.005	93	72764	0.4000	0.3791	
45 Tert-butyl ethyl ether	59	8.398	8.396	0.002	94	88078	0.4000	0.3790	
46 Tetrahydrofuran	42	8.636	8.639	-0.003	96	40664	0.4000	0.3685	
47 1,1,1-Trichloroethane	97	9.256	9.254	0.002	94	69004	0.4000	0.3603	
48 1,2-Dichloroethane	62	9.326	9.328	-0.002	95	39418	0.4000	0.3584	
49 n-Butanol	31	9.827	9.825	0.002	61	11937	0.4000	0.3231	
50 Benzene	78	9.838	9.838	0.000	94	121155	0.4000	0.3813	
51 Cyclohexane	69	9.865	9.866	-0.001	94	18191	0.4000	0.4008	
52 Carbon tetrachloride	117	9.876	9.878	-0.002	98	69218	0.4000	0.3562	
53 2,3-Dimethylpentane	71	10.027	10.026	0.001	93	25724	0.4000	0.3817	
54 Thiophene	84	10.102	10.107	-0.005	92	65113	0.4000	0.3947	
55 Tert-amyl methyl ether	73	10.356	10.361	-0.005	98	90767	0.4000	0.3744	M
56 Isooctane	57	10.690	10.692	-0.002	99	163689	0.4000	0.3777	
57 1,2-Dichloropropane	63	11.073	11.078	-0.005	72	41479	0.4000	0.3778	
58 n-Heptane	71	11.084	11.086	-0.002	88	39647	0.4000	0.3834	
59 Trichloroethene	130	11.143	11.141	0.002	90	53875	0.4000	0.3751	
60 Dibromomethane	93	11.181	11.186	-0.005	85	41278	0.4000	0.3736	
61 Dichlorobromomethane	83	11.348	11.354	-0.006	99	63430	0.4000	0.3454	
62 1,4-Dioxane	88	11.364	11.365	-0.001	83	17900	0.4000	0.3515	
63 Methyl methacrylate	41	11.488	11.488	0.000	89	38875	0.4000	0.3393	
64 Methylcyclohexane	83	11.963	11.963	0.000	95	82912	0.4000	0.3930	
65 4-Methyl-2-pentanone (MIBK	43	12.356	12.355	0.001	96	77833	0.4000	0.3629	
66 cis-1,3-Dichloropropene	75	12.399	12.405	-0.006	91	55449	0.4000	0.3492	
67 trans-1,3-Dichloropropene	75	13.127	13.126	0.001	98	46301	0.4000	0.3396	
68 Toluene	91	13.268	13.269	-0.001	93	133147	0.4000	0.3967	
69 1,1,2-Trichloroethane	83	13.322	13.323	-0.001	93	40194	0.4000	0.3800	
70 2-Methylthiophene	97	13.413	13.417	-0.004	97	114137	0.4000	0.3905	
71 3-Methylthiophene	97	13.624	13.625	-0.001	98	113741	0.4000	0.3951	
72 2-Hexanone	58	13.753	13.752	0.001	91	34640	0.4000	0.3501	
73 Chlorodibromomethane	129	14.039	14.042	-0.003	97	66311	0.4000	0.3428	
74 n-Octane	85	14.060	14.060	0.000	95	40330	0.4000	0.3775	
75 Ethylene Dibromide	107	14.335	14.336	-0.001	99	70072	0.4000	0.3790	
76 Tetrachloroethene	129	14.454	14.456	-0.002	94	46954	0.4000	0.3642	
77 Chlorobenzene	112	15.344	15.342	0.002	97	109332	0.4000	0.3956	
78 2,3-Dimethylheptane	43	15.441	15.444	-0.003	97	113853	0.4000	0.3925	
79 Ethylbenzene	91	15.662	15.660	0.002	97	165857	0.4000	0.3678	
80 2-Ethylthiophene	97	15.759	15.758	0.001	97	126251	0.4000	0.3807	
81 m-Xylene & p-Xylene	91	15.829	15.830	-0.001	98	249678	0.8000	0.7371	
82 Bromoform	173	16.233	16.235	-0.002	97	81415	0.4000	0.3269	
83 Styrene	104	16.298	16.296	0.002	96	85239	0.4000	0.3548	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.325	16.324	0.001	96	76571	0.4000	0.3927	
85 o-Xylene	91	16.357	16.359	-0.002	98	130345	0.4000	0.3678	
86 1,1,2,2-Tetrachloroethane	83	16.670	16.671	-0.001	98	100520	0.4000	0.3732	
87 1,2,3-Trichloropropane	110	16.832	16.831	0.001	97	28283	0.4000	0.3734	
88 Isopropylbenzene	105	16.978	16.977	0.001	96	197365	0.4000	0.3948	
89 N-Propylbenzene	120	17.549	17.552	-0.003	100	54030	0.4000	0.3901	
90 2-Chlorotoluene	126	17.576	17.578	-0.002	96	51145	0.4000	0.3922	
91 4-Ethyltoluene	105	17.716	17.718	-0.002	99	194133	0.4000	0.3871	
92 1,3,5-Trimethylbenzene	120	17.803	17.802	0.001	93	88594	0.4000	0.3640	
93 Alpha Methyl Styrene	118	18.045	18.042	0.003	94	62931	0.4000	0.3261	
94 n-Decane	57	18.164	18.166	-0.002	90	94600	0.4000	0.3814	
95 tert-Butylbenzene	119	18.250	18.251	-0.001	96	169175	0.4000	0.3951	
96 1,2,4-Trimethylbenzene	105	18.266	18.267	-0.001	95	162397	0.4000	0.3725	
97 1,3-Dichlorobenzene	146	18.531	18.531	0.000	94	121224	0.4000	0.3929	
98 sec-Butylbenzene	105	18.541	18.543	-0.002	99	244731	0.4000	0.3997	
99 Benzyl chloride	91	18.606	18.607	-0.001	99	120019	0.4000	0.3566	
100 1,4-Dichlorobenzene	146	18.622	18.625	-0.003	96	124690	0.4000	0.3973	
101 4-Isopropyltoluene	119	18.719	18.720	-0.001	97	190507	0.4000	0.3810	
102 1,2,3-Trimethylbenzene	105	18.762	18.762	0.000	96	124321	0.4000	0.3578	
103 Butylcyclohexane	83	18.849	18.851	-0.002	98	126579	0.4000	0.3914	
104 1,2-Dichlorobenzene	146	19.000	19.003	-0.003	98	119048	0.4000	0.3951	
105 2,3-Dihydroindene	117	19.010	19.012	-0.002	95	154233	0.4000	0.3982	
106 Indene	116	19.145	19.146	-0.001	92	109625	0.4000	0.2982	
107 n-Butylbenzene	91	19.183	19.183	0.000	98	183545	0.4000	0.3805	
108 Undecane	57	19.561	19.561	-0.001	97	110364	0.4000	0.3931	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.571	19.574	-0.003	99	143169	0.4000	0.3152	
110 1,2-Dibromo-3-Chloropropan	157	19.631	19.631	0.000	88	50695	0.4000	0.3204	
111 1,2,4,5-Tetramethylbenzene	119	19.976	19.977	-0.001	98	160888	0.4000	0.3652	
112 1,2,3,5-Tetramethylbenzene	119	20.030	20.031	-0.001	97	98979	0.4000	0.3582	
113 1,2,3,4-Tetramethylbenzene	119	20.439	20.439	0.000	98	130114	0.4000	0.3485	
114 Dodecane	57	20.666	20.664	0.002	95	96211	0.4000	0.3286	
115 1,2,4-Trichlorobenzene	180	20.790	20.788	0.002	93	107856	0.4000	0.3009	
116 Naphthalene	128	20.919	20.922	-0.003	100	198379	0.4000	0.2997	
117 Benzo(b)thiophene	134	21.022	21.024	-0.002	100	107686	0.4000	0.2967	
118 Hexachlorobutadiene	225	21.173	21.173	0.000	93	102983	0.4000	0.3220	
119 1,2,3-Trichlorobenzene	180	21.216	21.217	-0.001	94	102724	0.4000	0.3151	
120 2-Methylnaphthalene	142	21.933	21.933	0.000	99	40667	1.25	0.5208	
121 1-Methylnaphthalene	142	22.057	22.057	0.000	100	36793	1.25	0.5044	
A 122 C6 Range	1	7.617	(7.568-7.646)		0	245781	0.4000	0.3944	
S 124 Xylenes, Total	100				0		1.20	1.10	
S 125 1,2-Dichloroethene, Total	1				0		0.8000	0.7635	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L4DNP_00009	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

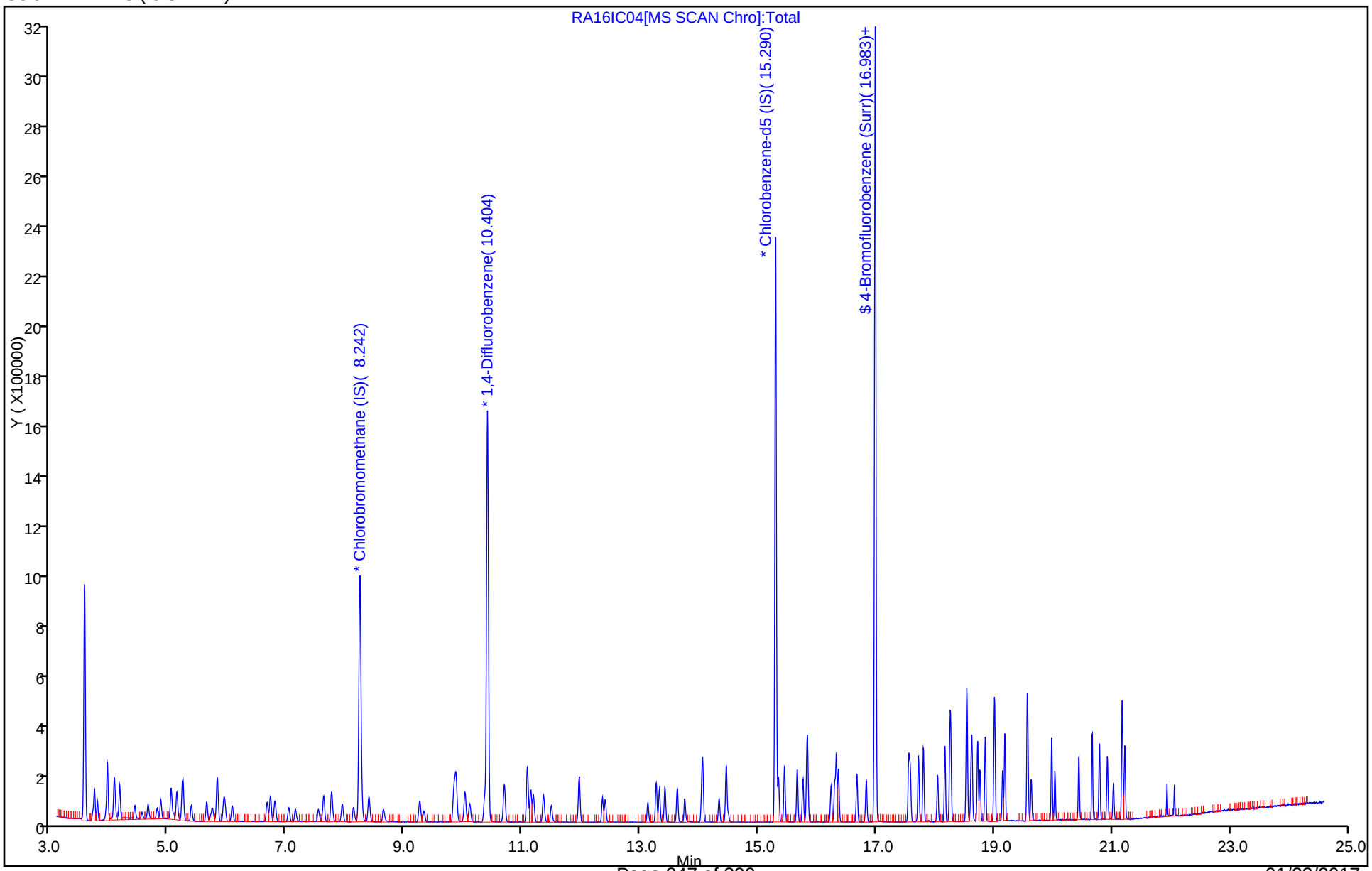
Report Date: 17-Jan-2017 14:55:20 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC04.D

Injection Date:	16-Jan-2017 19:50:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L4			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

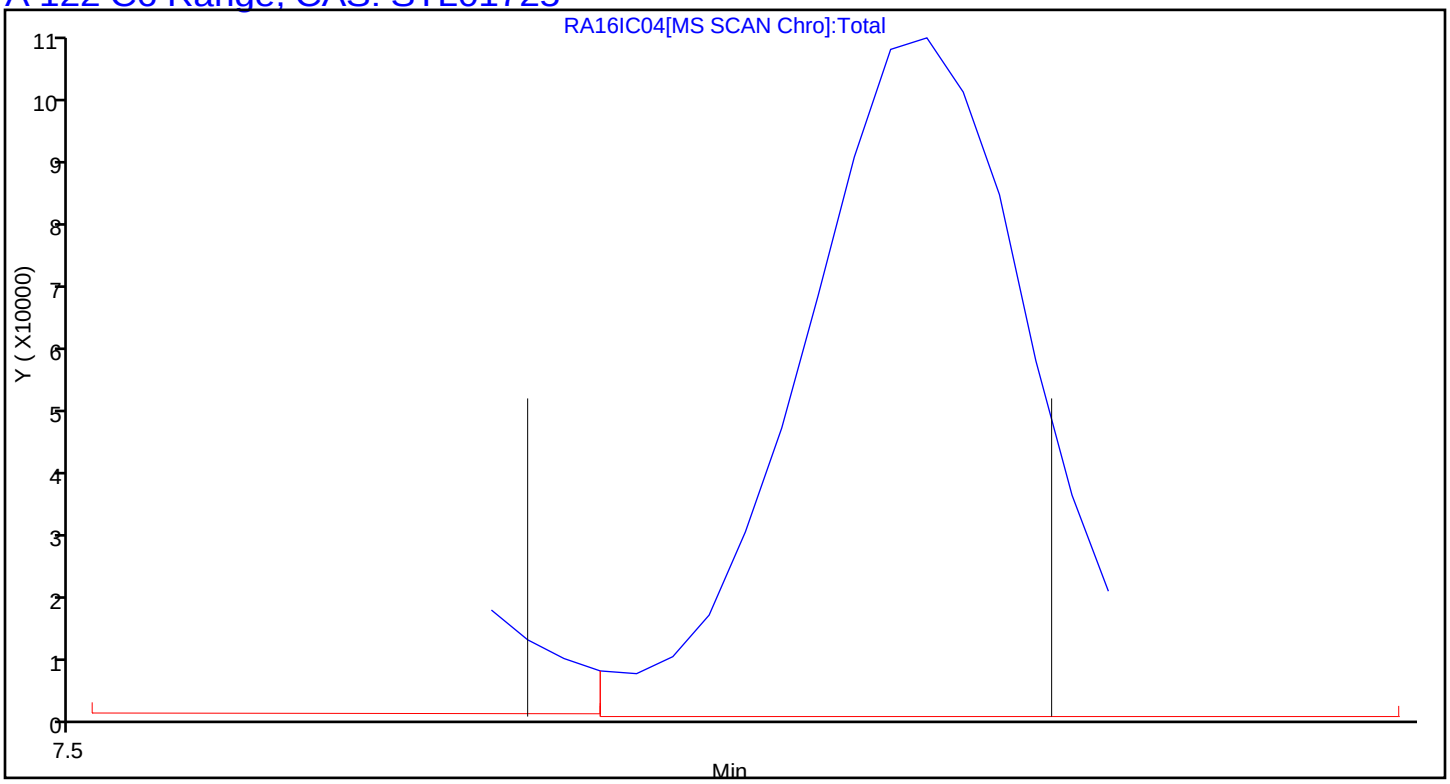


Report Date: 17-Jan-2017 14:55:21 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC04.D				
Injection Date:	16-Jan-2017 19:50:30	Instrument ID:	MR		
Lims ID:	IC L4				
Client ID:					
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

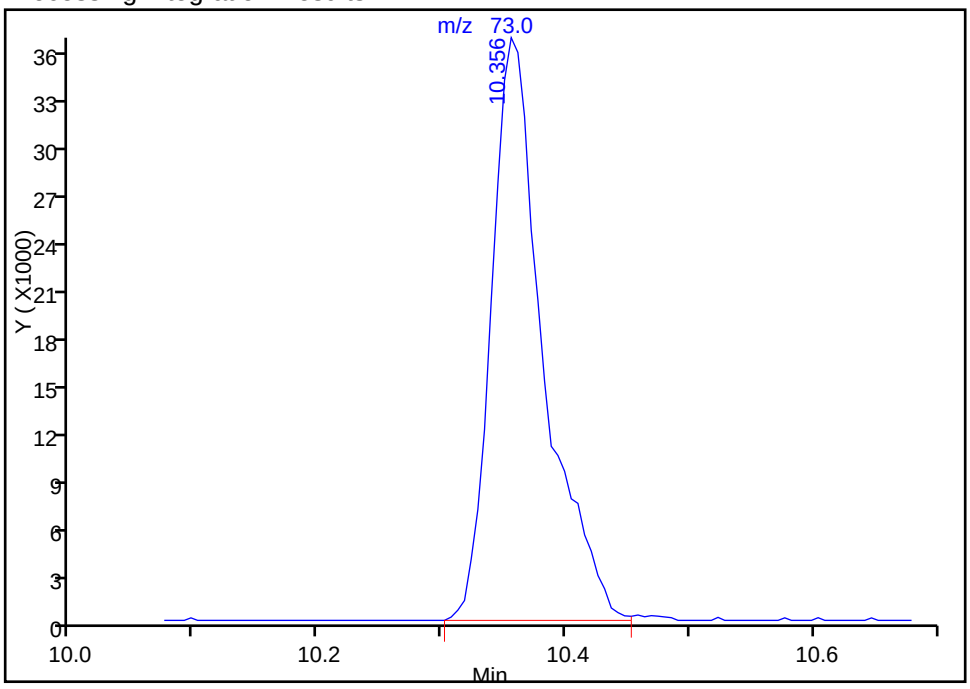
Data File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC04.D				
Injection Date:	16-Jan-2017 19:50:30	Instrument ID:	MR		
Lims ID:	IC L4				
Client ID:					
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

55 Tert-amyl methyl ether, CAS: 994-05-8

Signal: 1

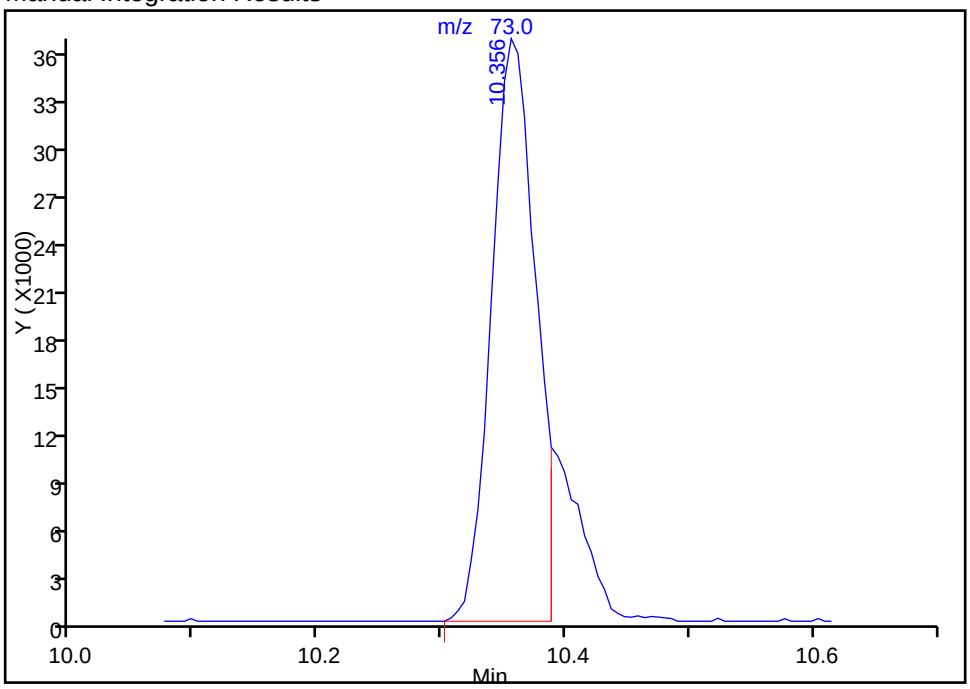
Processing Integration Results

RT: 10.36
Area: 107259
Amount: 0.433166
Amount Units: ppb v/v



Manual Integration Results

RT: 10.36
Area: 90767
Amount: 0.374355
Amount Units: ppb v/v



Reviewer: barlozhetskayaa, 17-Jan-2017 13:12:08

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC05.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 16-Jan-2017 20:38:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003844-007
Misc. Info.: 073143
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jan-2017 14:55:23 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: barlozhetskayaa Date: 17-Jan-2017 10:01:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.237	8.242	-0.005	87	387008	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.404	10.407	-0.003	93	1914665	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.290	15.293	-0.003	84	1625728	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.983	16.984	-0.001	95	1012516	4.00	3.98	
6 Chlorodifluoromethane	67	3.718	3.724	-0.006	97	20894	1.00	0.9731	
7 Propene	41	3.723	3.728	-0.005	97	100161	1.00	1.00	
8 Dichlorodifluoromethane	85	3.772	3.776	-0.004	99	178843	1.00	1.02	
9 Chloromethane	52	3.917	3.923	-0.006	99	35084	1.00	1.07	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.944	3.951	-0.007	91	210273	1.00	1.06	
11 Acetaldehyde	44	4.063	4.070	-0.007	100	181019	5.01	6.13	
12 Vinyl chloride	62	4.068	4.075	-0.007	98	104342	1.00	1.11	
13 Butadiene	54	4.149	4.155	-0.006	95	67044	1.00	1.01	
14 Butane	43	4.155	4.158	-0.003	92	129454	1.00	1.08	
15 Bromomethane	94	4.408	4.416	-0.008	97	85440	1.00	1.04	
16 Chloroethane	64	4.532	4.541	-0.009	95	36329	1.00	0.9767	
17 Ethanol	31	4.645	4.651	-0.006	99	131905	5.01	5.33	
18 Vinyl bromide	106	4.791	4.797	-0.006	99	80932	1.00	1.05	
19 2-Methylbutane	43	4.850	4.856	-0.006	89	72823	1.00	1.00	
20 Acrolein	56	5.028	5.033	-0.005	32	28874	1.00	1.04	
21 Trichlorofluoromethane	101	5.033	5.036	-0.003	98	242451	1.00	1.01	
22 Acetonitrile	40	5.071	5.083	-0.012	100	44418	1.00	1.06	
23 Acetone	58	5.125	5.133	-0.008	97	130034	3.01	2.92	
24 Isopropyl alcohol	45	5.222	5.232	-0.010	95	403731	3.01	3.08	
25 Pentane	72	5.233	5.238	-0.005	95	19811	1.00	1.05	
26 Ethyl ether	31	5.368	5.377	-0.009	95	108355	1.00	0.99	
27 1,1-Dichloroethene	96	5.632	5.639	-0.007	94	109033	1.00	1.02	
28 Acrylonitrile	53	5.708	5.712	-0.004	96	68828	1.00	1.01	
29 2-Methyl-2-propanol	59	5.735	5.746	-0.012	96	145418	1.00	1.02	
30 1,1,2-Trichloro-1,2,2-trif	101	5.815	5.819	-0.004	94	208533	1.00	1.02	
31 Methylene Chloride	84	5.923	5.931	-0.008	93	99432	1.00	0.99	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.945	5.952	-0.007	93	73933	1.00	0.9807	
33 Carbon disulfide	76	6.063	6.072	-0.009	98	280500	1.00	1.02	
34 trans-1,2-Dichloroethene	96	6.657	6.667	-0.010	95	111888	1.00	0.9882	
35 2-Methylpentane	43	6.716	6.719	-0.003	95	211207	1.00	1.01	
36 Methyl tert-butyl ether	73	6.791	6.797	-0.006	97	241503	1.00	1.01	
37 1,1-Dichloroethane	63	7.029	7.035	-0.006	99	173985	1.00	0.9750	
38 Vinyl acetate	43	7.142	7.147	-0.005	100	250951	1.00	0.99	
39 2-Butanone (MEK)	72	7.530	7.536	-0.006	100	48379	1.00	1.04	
40 Hexane	56	7.616	7.622	-0.006	91	75081	1.00	1.02	
41 Isopropyl ether	45	7.757	7.761	-0.004	97	337195	1.00	1.01	
42 cis-1,2-Dichloroethene	96	7.940	7.944	-0.004	89	116608	1.00	0.9888	
43 Ethyl acetate	43	8.123	8.132	-0.009	100	212128	1.00	1.00	
44 Chloroform	83	8.274	8.274	0.000	97	192000	1.00	0.9532	
45 Tert-butyl ethyl ether	59	8.388	8.396	-0.008	93	244976	1.00	1.00	
46 Tetrahydrofuran	42	8.630	8.639	-0.009	95	113550	1.00	0.9806	
47 1,1,1-Trichloroethane	97	9.250	9.254	-0.004	95	189083	1.00	0.9406	
48 1,2-Dichloroethane	62	9.326	9.328	-0.002	96	109924	1.00	0.9537	
49 n-Butanol	31	9.811	9.825	-0.014	83	39645	1.00	1.02	
50 Benzene	78	9.833	9.838	-0.005	94	320927	1.00	0.9639	
51 Cyclohexane	69	9.860	9.866	-0.006	94	47496	1.00	1.00	
52 Carbon tetrachloride	117	9.876	9.878	-0.002	96	192620	1.00	0.9458	
53 2,3-Dimethylpentane	71	10.021	10.026	-0.005	92	70633	1.00	1.00	
54 Thiophene	84	10.108	10.107	0.001	92	175811	1.00	1.02	
55 Tert-amyl methyl ether	73	10.350	10.361	-0.011	98	275898	1.00	1.09	
56 Isooctane	57	10.690	10.692	-0.002	99	448067	1.00	0.9866	
57 1,2-Dichloropropane	63	11.073	11.078	-0.005	91	116456	1.00	1.01	
58 n-Heptane	71	11.084	11.086	-0.002	90	109902	1.00	1.01	
59 Trichloroethene	130	11.138	11.141	-0.003	88	148182	1.00	0.9845	
60 Dibromomethane	93	11.186	11.186	0.000	86	115739	1.00	1.00	
61 Dichlorobromomethane	83	11.353	11.354	-0.001	99	186452	1.00	0.9687	
62 1,4-Dioxane	88	11.359	11.365	-0.006	41	51127	1.00	0.9580	
63 Methyl methacrylate	41	11.483	11.488	-0.005	90	119922	1.00	1.00	
64 Methylcyclohexane	83	11.957	11.963	-0.006	95	226363	1.00	1.02	
65 4-Methyl-2-pentanone (MIBK	43	12.351	12.355	-0.004	97	224067	1.00	1.00	
66 cis-1,3-Dichloropropene	75	12.405	12.405	0.000	92	160378	1.00	0.9639	
67 trans-1,3-Dichloropropene	75	13.122	13.126	-0.004	98	136400	1.00	0.9455	
68 Toluene	91	13.268	13.269	-0.001	93	366316	1.00	1.03	
69 1,1,2-Trichloroethane	83	13.322	13.323	-0.001	94	109867	1.00	0.9817	
70 2-Methylthiophene	97	13.413	13.417	-0.004	97	320571	1.00	1.04	
71 3-Methylthiophene	97	13.624	13.625	-0.001	98	318684	1.00	1.05	
72 2-Hexanone	58	13.748	13.752	-0.004	92	104152	1.00	0.99	
73 Chlorodibromomethane	129	14.039	14.042	-0.003	97	206547	1.00	1.01	
74 n-Octane	85	14.060	14.060	0.000	94	115184	1.00	1.02	
75 Ethylene Dibromide	107	14.335	14.336	-0.001	97	202714	1.00	1.04	
76 Tetrachloroethene	129	14.454	14.456	-0.002	94	136286	1.00	1.00	
77 Chlorobenzene	112	15.338	15.342	-0.004	97	303004	1.00	1.04	
78 2,3-Dimethylheptane	43	15.441	15.444	-0.003	97	311980	1.00	1.02	
79 Ethylbenzene	91	15.656	15.660	-0.004	97	459447	1.00	0.9630	
80 2-Ethylthiophene	97	15.754	15.758	-0.004	97	363700	1.00	1.04	
81 m-Xylene & p-Xylene	91	15.829	15.830	-0.001	98	702600	2.00	1.96	
82 Bromoform	173	16.233	16.235	-0.002	97	268311	1.00	1.02	
83 Styrene	104	16.293	16.296	-0.003	96	268432	1.00	1.06	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.320	16.324	-0.004	94	214951	1.00	1.04	
85 o-Xylene	91	16.357	16.359	-0.002	98	368491	1.00	0.9826	
86 1,1,2,2-Tetrachloroethane	83	16.670	16.671	-0.001	98	282619	1.00	0.99	
87 1,2,3-Trichloropropane	110	16.832	16.831	0.001	97	80177	1.00	1.00	
88 Isopropylbenzene	105	16.978	16.977	0.001	96	545051	1.00	1.03	
89 N-Propylbenzene	120	17.549	17.552	-0.003	100	153153	1.00	1.05	
90 2-Chlorotoluene	126	17.576	17.578	-0.002	96	146515	1.00	1.06	
91 4-Ethyltoluene	105	17.716	17.718	-0.002	100	553733	1.00	1.04	
92 1,3,5-Trimethylbenzene	120	17.803	17.802	0.001	94	259131	1.00	1.01	
93 Alpha Methyl Styrene	118	18.040	18.042	-0.002	93	212623	1.00	1.04	
94 n-Decane	57	18.164	18.166	-0.002	90	279878	1.00	1.07	
95 tert-Butylbenzene	119	18.250	18.251	-0.001	94	480365	1.00	1.06	
96 1,2,4-Trimethylbenzene	105	18.266	18.267	-0.001	96	461852	1.00	1.00	
97 1,3-Dichlorobenzene	146	18.531	18.531	0.000	94	351729	1.00	1.08	
98 sec-Butylbenzene	105	18.541	18.543	-0.002	99	694694	1.00	1.07	
99 Benzyl chloride	91	18.606	18.607	-0.001	100	368163	1.00	1.03	
100 1,4-Dichlorobenzene	146	18.622	18.625	-0.003	96	353669	1.00	1.07	
101 4-Isopropyltoluene	119	18.719	18.720	-0.001	97	568655	1.00	1.07	
102 1,2,3-Trimethylbenzene	105	18.762	18.762	0.000	96	357137	1.00	0.9715	
103 Butylcyclohexane	83	18.849	18.851	-0.002	98	359936	1.00	1.05	
104 1,2-Dichlorobenzene	146	19.000	19.003	-0.003	97	345512	1.00	1.08	
105 2,3-Dihydroindene	117	19.011	19.012	-0.001	94	447073	1.00	1.09	
106 Indene	116	19.145	19.146	-0.001	91	339863	1.00	0.8793	
107 n-Butylbenzene	91	19.183	19.183	0.000	97	548974	1.00	1.08	
108 Undecane	57	19.561	19.561	0.000	95	340377	1.00	1.15	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.571	19.574	-0.003	99	445240	1.00	0.9398	
110 1,2-Dibromo-3-Chloropropan	157	19.631	19.631	0.000	89	183845	1.00	1.10	
111 1,2,4,5-Tetramethylbenzene	119	19.976	19.977	-0.001	99	523086	1.00	1.12	
112 1,2,3,5-Tetramethylbenzene	119	20.030	20.031	-0.001	97	325678	1.00	1.11	
113 1,2,3,4-Tetramethylbenzene	119	20.434	20.439	-0.005	99	451826	1.00	1.14	
114 Dodecane	57	20.661	20.664	-0.003	94	378566	1.00	1.22	
115 1,2,4-Trichlorobenzene	180	20.785	20.788	-0.003	93	426643	1.00	1.12	
116 Naphthalene	128	20.919	20.922	-0.003	100	904334	1.00	1.29	
117 Benzo(b)thiophene	134	21.022	21.024	-0.002	100	541307	1.00	1.41	
118 Hexachlorobutadiene	225	21.173	21.173	0.000	94	343721	1.00	1.02	
119 1,2,3-Trichlorobenzene	180	21.216	21.217	-0.001	95	438340	1.00	1.27	
120 2-Methylnaphthalene	142	21.933	21.933	0.000	99	596748	3.13	7.22	
121 1-Methylnaphthalene	142	22.057	22.057	0.000	98	479579	3.13	6.21	
A 122 C6 Range	1	7.620	(7.563-7.651)		0	650061	1.00	1.00	
S 124 Xylenes, Total	100				0		3.00	2.94	
S 125 1,2-Dichloroethene, Total	1				0		2.00	1.98	

Reagents:

40L5DNP_00009	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

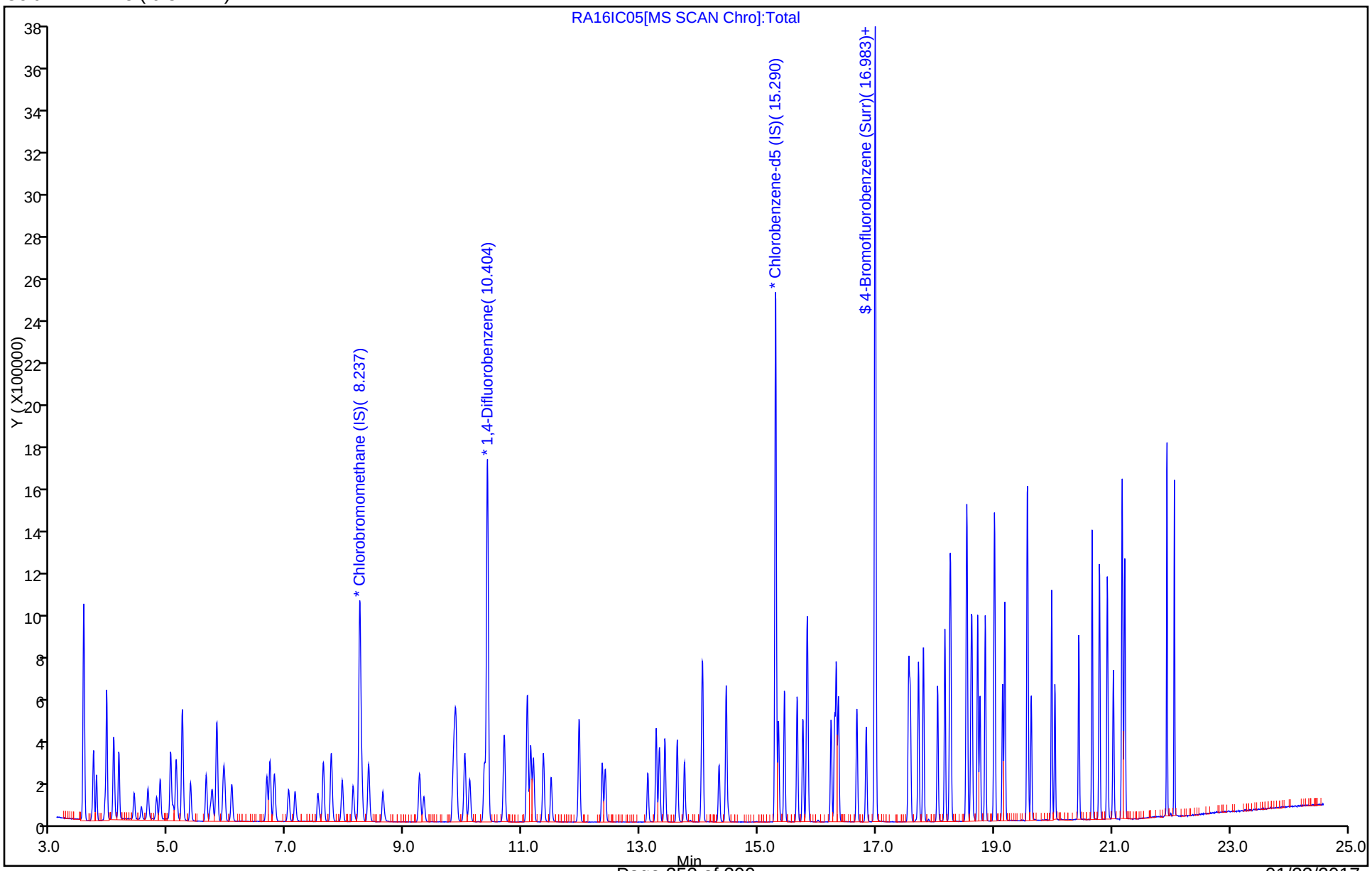
Report Date: 17-Jan-2017 14:55:24 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC05.D

Injection Date:	16-Jan-2017 20:38:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L5			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

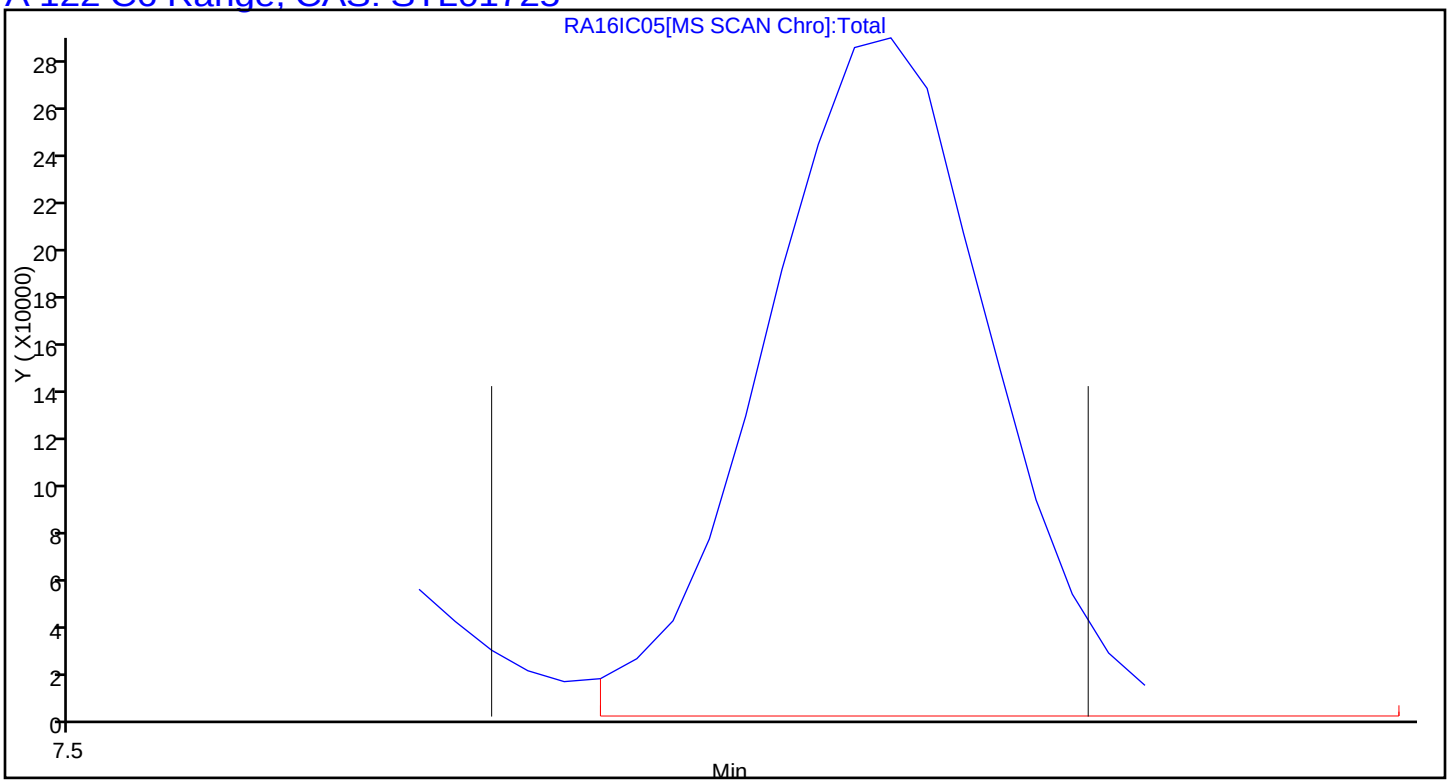


Report Date: 17-Jan-2017 14:55:24 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC05.D				
Injection Date:	16-Jan-2017 20:38:30	Instrument ID:	MR		
Lims ID:	IC L5				
Client ID:					
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC06.D
Lims ID: ICIS L6
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 16-Jan-2017 21:26:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003844-008
Misc. Info.: 073142
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jan-2017 14:55:27 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: tajh Date: 17-Jan-2017 09:39:09

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.242	8.242	0.000	90	414061	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.410	10.407	0.003	93	2023869	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.295	15.293	0.002	84	1725846	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.983	16.984	-0.001	95	1111047	4.00	4.12	
6 Chlorodifluoromethane	67	3.728	3.724	0.004	97	44683	2.00	1.95	
7 Propene	41	3.734	3.728	0.006	95	222355	2.00	2.06	
8 Dichlorodifluoromethane	85	3.782	3.776	0.006	99	372486	2.00	1.99	
9 Chloromethane	52	3.928	3.923	0.005	100	68851	2.00	1.96	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.955	3.951	0.004	91	408268	2.00	1.92	
11 Acetaldehyde	44	4.068	4.070	-0.002	99	296274	9.99	9.38	
12 Vinyl chloride	62	4.079	4.075	0.004	99	183309	2.00	1.82	
13 Butadiene	54	4.160	4.155	0.005	95	129425	2.00	1.81	
14 Butane	43	4.160	4.158	0.002	93	243917	2.00	1.90	
15 Bromomethane	94	4.419	4.416	0.003	96	167720	2.00	1.90	
16 Chloroethane	64	4.543	4.541	0.002	98	78880	2.00	1.98	
17 Ethanol	31	4.650	4.651	-0.001	98	260637	9.99	9.84	
18 Vinyl bromide	106	4.801	4.797	0.004	97	159526	2.00	1.94	
19 2-Methylbutane	43	4.861	4.856	0.005	87	149714	2.00	1.93	
20 Acrolein	56	5.033	5.033	0.000	96	55989	2.00	1.88	
21 Trichlorofluoromethane	101	5.039	5.036	0.003	99	505777	2.00	1.97	
22 Acetonitrile	40	5.082	5.083	-0.001	100	88808	2.00	1.99	
23 Acetone	58	5.125	5.133	-0.008	97	271574	5.99	5.70	
24 Isopropyl alcohol	45	5.227	5.232	-0.005	94	866507	5.99	6.18	
25 Pentane	72	5.238	5.238	0.000	96	41403	2.00	2.05	
26 Ethyl ether	31	5.373	5.377	-0.004	94	244725	2.00	2.09	
27 1,1-Dichloroethene	96	5.643	5.639	0.004	95	221671	2.00	1.94	
28 Acrylonitrile	53	5.713	5.712	0.001	96	147847	2.00	2.02	
29 2-Methyl-2-propanol	59	5.740	5.746	-0.006	96	312157	2.00	2.04	
30 1,1,2-Trichloro-1,2,2-trif	101	5.821	5.819	0.002	94	439012	2.00	2.01	
31 Methylene Chloride	84	5.934	5.931	0.003	95	196893	2.00	1.84	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.955	5.952	0.003	93	159118	2.00	1.97	
33 Carbon disulfide	76	6.074	6.072	0.002	98	590648	2.00	2.01	
34 trans-1,2-Dichloroethene	96	6.673	6.667	0.006	95	232406	2.00	1.92	
35 2-Methylpentane	43	6.721	6.719	0.002	96	453241	2.00	2.03	
36 Methyl tert-butyl ether	73	6.791	6.797	-0.006	97	511696	2.00	2.00	
37 1,1-Dichloroethane	63	7.039	7.035	0.004	99	364771	2.00	1.91	
38 Vinyl acetate	43	7.147	7.147	0.000	100	559575	2.00	2.07	
39 2-Butanone (MEK)	72	7.530	7.536	-0.006	100	102021	2.00	2.04	
40 Hexane	56	7.622	7.622	0.000	92	156852	2.00	2.00	
41 Isopropyl ether	45	7.756	7.761	-0.005	98	726368	2.00	2.03	
42 cis-1,2-Dichloroethene	96	7.945	7.944	0.001	89	242118	2.00	1.92	
43 Ethyl acetate	43	8.129	8.132	-0.003	100	467758	2.00	2.05	
44 Chloroform	83	8.280	8.274	0.006	94	401198	2.00	1.86	
45 Tert-butyl ethyl ether	59	8.393	8.396	-0.003	93	520851	2.00	2.00	
46 Tetrahydrofuran	42	8.630	8.639	-0.009	97	245656	2.00	1.98	
47 1,1,1-Trichloroethane	97	9.256	9.254	0.002	95	396220	2.00	1.84	
48 1,2-Dichloroethane	62	9.331	9.328	0.003	95	230738	2.00	1.89	
49 n-Butanol	31	9.811	9.825	-0.014	89	87183	2.00	2.13	
50 Benzene	78	9.838	9.838	0.000	94	675385	2.00	1.92	
51 Cyclohexane	69	9.865	9.866	-0.001	94	102016	2.00	2.03	
52 Carbon tetrachloride	117	9.881	9.878	0.003	98	417535	2.00	1.94	
53 2,3-Dimethylpentane	71	10.027	10.026	0.001	93	148408	2.00	1.99	
54 Thiophene	84	10.108	10.107	0.001	92	370335	2.00	2.03	
55 Tert-amyl methyl ether	73	10.350	10.361	-0.011	98	571096	2.00	2.13	
56 Isooctane	57	10.690	10.692	-0.002	99	975928	2.00	2.03	
57 1,2-Dichloropropane	63	11.078	11.078	0.000	94	248903	2.00	2.05	
58 n-Heptane	71	11.084	11.086	-0.002	92	233537	2.00	2.04	
59 Trichloroethene	130	11.143	11.141	0.002	90	307549	2.00	1.93	
60 Dibromomethane	93	11.186	11.186	0.000	86	245001	2.00	2.00	
61 Dichlorobromomethane	83	11.353	11.354	-0.001	99	405343	2.00	1.99	
62 1,4-Dioxane	88	11.359	11.365	-0.006	42	110327	2.00	1.96	
63 Methyl methacrylate	41	11.488	11.488	0.000	90	265612	2.00	2.09	
64 Methylcyclohexane	83	11.963	11.963	0.000	96	478964	2.00	2.05	
65 4-Methyl-2-pentanone (MIBK	43	12.351	12.355	-0.004	97	491559	2.00	2.07	
66 cis-1,3-Dichloropropene	75	12.405	12.405	0.000	92	350840	2.00	1.99	
67 trans-1,3-Dichloropropene	75	13.127	13.126	0.001	98	298731	2.00	1.95	
68 Toluene	91	13.267	13.269	-0.002	93	765289	2.00	2.03	
69 1,1,2-Trichloroethane	83	13.321	13.323	-0.002	94	227282	2.00	1.91	
70 2-Methylthiophene	97	13.418	13.417	0.001	96	668558	2.00	2.04	
71 3-Methylthiophene	97	13.623	13.625	-0.002	98	656449	2.00	2.03	
72 2-Hexanone	58	13.747	13.752	-0.005	91	232613	2.00	2.09	
73 Chlorodibromomethane	129	14.044	14.042	0.002	97	454968	2.00	2.09	
74 n-Octane	85	14.060	14.060	0.000	94	247038	2.00	2.06	
75 Ethylene Dibromide	107	14.335	14.336	-0.001	97	428002	2.00	2.06	
76 Tetrachloroethene	129	14.454	14.456	-0.002	95	277054	2.00	1.91	
77 Chlorobenzene	112	15.344	15.342	0.002	97	625543	2.00	2.01	
78 2,3-Dimethylheptane	43	15.446	15.444	0.002	98	681133	2.00	2.09	
79 Ethylbenzene	91	15.662	15.660	0.002	97	978749	2.00	1.93	
80 2-Ethylthiophene	97	15.759	15.758	0.001	97	765397	2.00	2.05	
81 m-Xylene & p-Xylene	91	15.829	15.830	-0.001	99	1483468	3.99	3.90	
82 Bromoform	173	16.233	16.235	-0.002	97	617297	2.00	2.21	
83 Styrene	104	16.293	16.296	-0.003	97	578840	2.00	2.14	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.325	16.324	0.001	95	466328	2.00	2.13	
85 o-Xylene	91	16.357	16.359	-0.002	99	765823	2.00	1.92	
86 1,1,2,2-Tetrachloroethane	83	16.670	16.671	-0.001	98	598106	2.00	1.98	
87 1,2,3-Trichloropropane	110	16.832	16.831	0.001	97	170828	2.00	2.01	
88 Isopropylbenzene	105	16.977	16.977	0.000	95	1141588	2.00	2.03	
89 N-Propylbenzene	120	17.554	17.552	0.002	100	324318	2.00	2.08	
90 2-Chlorotoluene	126	17.576	17.578	-0.002	96	304799	2.00	2.08	
91 4-Ethyltoluene	105	17.716	17.718	-0.002	99	1177295	2.00	2.09	
92 1,3,5-Trimethylbenzene	120	17.802	17.802	0.000	94	544369	2.00	1.99	
93 Alpha Methyl Styrene	118	18.040	18.042	-0.002	93	481523	2.00	2.22	
94 n-Decane	57	18.164	18.166	-0.002	89	595564	2.00	2.14	
95 tert-Butylbenzene	119	18.250	18.251	-0.001	96	1014819	2.00	2.11	
96 1,2,4-Trimethylbenzene	105	18.266	18.267	-0.001	95	978766	2.00	2.00	
97 1,3-Dichlorobenzene	146	18.530	18.531	-0.001	95	737746	2.00	2.13	
98 sec-Butylbenzene	105	18.541	18.543	-0.002	99	1474176	2.00	2.14	
99 Benzyl chloride	91	18.606	18.607	-0.001	100	819866	2.00	2.17	
100 1,4-Dichlorobenzene	146	18.622	18.625	-0.003	96	750220	2.00	2.13	
101 4-Isopropyltoluene	119	18.719	18.720	-0.001	97	1200274	2.00	2.14	
102 1,2,3-Trimethylbenzene	105	18.762	18.762	0.000	96	760919	2.00	1.95	
103 Butylcyclohexane	83	18.849	18.851	-0.002	98	760524	2.00	2.09	
104 1,2-Dichlorobenzene	146	19.005	19.003	0.002	97	723605	2.00	2.14	
105 2,3-Dihydroindene	117	19.010	19.012	-0.002	95	946819	2.00	2.18	
106 Indene	116	19.145	19.146	-0.001	92	736039	2.00	1.81	
107 n-Butylbenzene	91	19.183	19.183	0.000	97	1158211	2.00	2.14	
108 Undecane	57	19.560	19.561	-0.001	96	717061	2.00	2.27	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.571	19.574	-0.003	98	923383	2.00	1.88	
110 1,2-Dibromo-3-Chloropropan	157	19.630	19.631	-0.001	88	398684	2.00	2.24	
111 1,2,4,5-Tetramethylbenzene	119	19.976	19.977	-0.001	98	1074131	2.00	2.17	
112 1,2,3,5-Tetramethylbenzene	119	20.030	20.031	-0.001	97	654167	2.00	2.11	
113 1,2,3,4-Tetramethylbenzene	119	20.439	20.439	0.000	98	893407	2.00	2.13	
114 Dodecane	57	20.660	20.664	-0.004	94	719032	2.00	2.19	
115 1,2,4-Trichlorobenzene	180	20.790	20.788	0.002	92	820181	2.00	2.04	
116 Naphthalene	128	20.919	20.922	-0.003	100	1476806	2.00	1.99	
117 Benzo(b)thiophene	134	21.022	21.024	-0.002	100	853628	2.00	2.09	
118 Hexachlorobutadiene	225	21.173	21.173	0.000	93	717540	2.00	2.00	
119 1,2,3-Trichlorobenzene	180	21.216	21.217	-0.001	95	787102	2.00	2.15	
120 2-Methylnaphthalene	142	21.933	21.933	0.000	99	654883	6.24	7.47	
121 1-Methylnaphthalene	142	22.057	22.057	0.000	98	514457	6.24	6.28	
A 122 C6 Range	1	7.631	(7.562-7.673)		0	1371214	2.00	1.99	
S 124 Xylenes, Total	100				0		5.99	5.82	
S 125 1,2-Dichloroethene, Total	1				0		3.99	3.84	

Reagents:

40L6DNP_00010	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

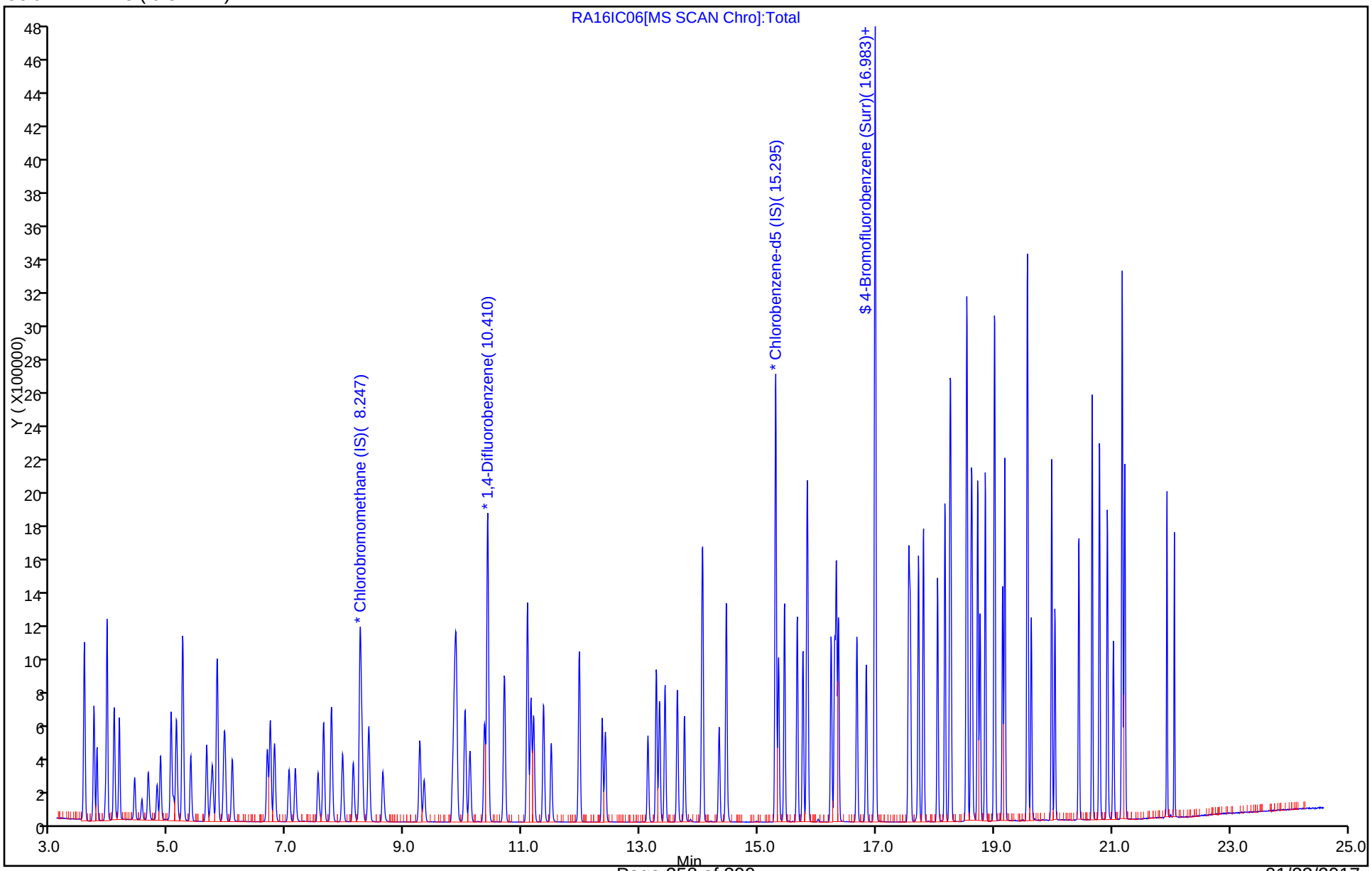
Report Date: 17-Jan-2017 14:55:28 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC06.D

Injection Date:	16-Jan-2017 21:26:30	Instrument ID:	MR	Operator ID:	
Lims ID:	ICIS L6			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

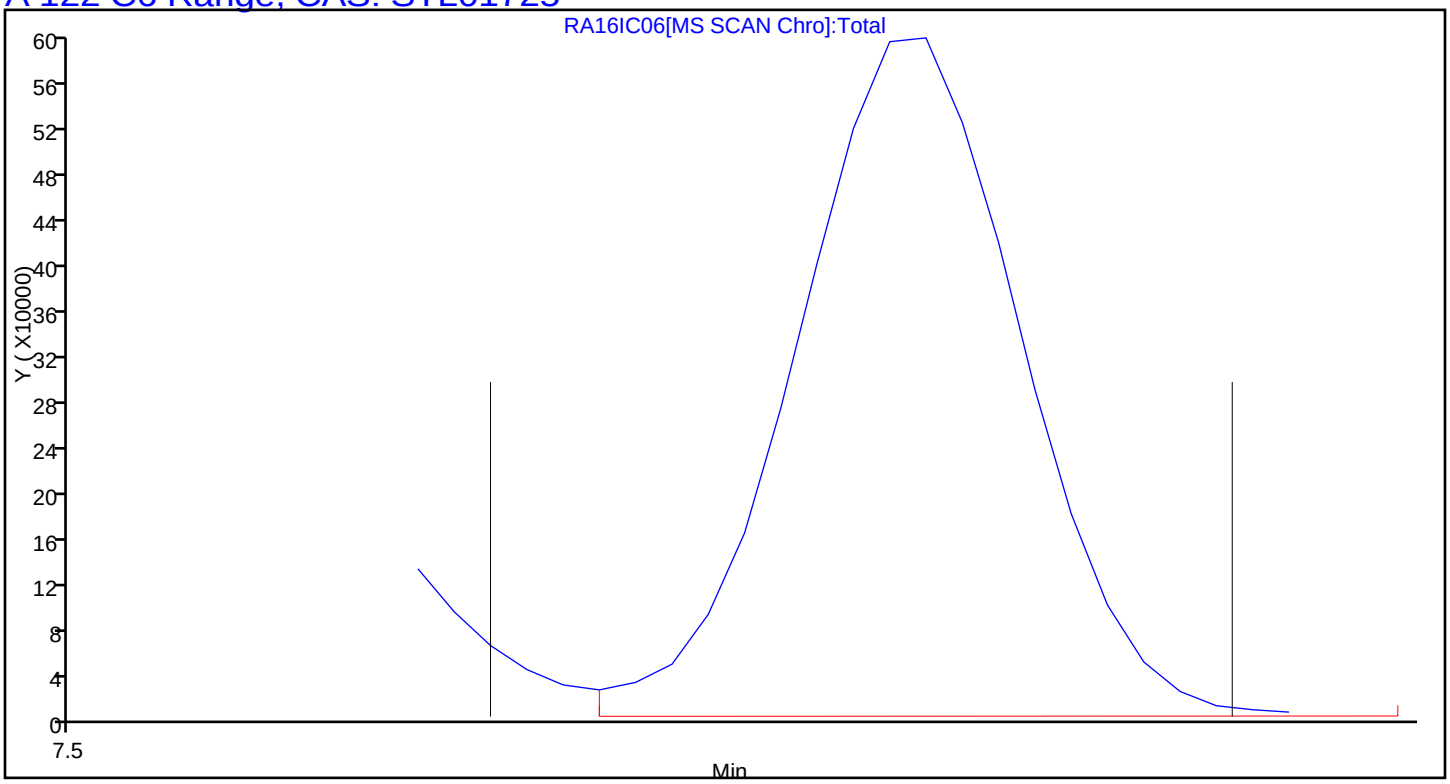


Report Date: 17-Jan-2017 14:55:28 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC06.D				
Injection Date:	16-Jan-2017 21:26:30	Instrument ID:	MR		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC07.D
Lims ID: IC L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 16-Jan-2017 22:14:30 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003844-009
Misc. Info.: 073141
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jan-2017 14:55:31 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: barlozhetskayaa Date: 17-Jan-2017 10:16:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.253	8.242	0.011	92	434092	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.410	10.407	0.003	93	2120884	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.295	15.293	0.002	85	1806991	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.983	16.984	-0.001	96	1182570	4.00	4.18	
6 Chlorodifluoromethane	67	3.718	3.724	-0.006	96	95528	4.00	3.97	
7 Propene	41	3.723	3.728	-0.005	97	455692	4.00	4.04	
8 Dichlorodifluoromethane	85	3.772	3.776	-0.004	99	789485	4.00	4.02	
9 Chloromethane	52	3.923	3.923	0.000	99	146075	4.00	3.96	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.950	3.951	-0.001	90	844447	4.00	3.79	
11 Acetaldehyde	44	4.068	4.070	-0.002	99	597951	20.0	18.1	
12 Vinyl chloride	62	4.074	4.075	-0.001	98	379730	4.00	3.59	
13 Butadiene	54	4.155	4.155	0.000	96	256462	4.00	3.43	
14 Butane	43	4.155	4.158	-0.003	92	488808	4.00	3.64	
15 Bromomethane	94	4.413	4.416	-0.003	97	337645	4.00	3.65	
16 Chloroethane	64	4.543	4.541	0.002	98	160420	4.00	3.85	
17 Ethanol	31	4.656	4.651	0.005	97	518594	20.0	18.7	
18 Vinyl bromide	106	4.802	4.797	0.005	99	334058	4.00	3.87	
19 2-Methylbutane	43	4.856	4.856	0.000	90	304726	4.00	3.75	
20 Acrolein	56	5.034	5.033	0.001	95	107246	4.00	3.43	
21 Trichlorofluoromethane	101	5.039	5.036	0.003	98	1037976	4.00	3.85	
22 Acetonitrile	40	5.088	5.083	0.005	99	182904	4.00	3.90	
23 Acetone	58	5.131	5.133	-0.002	97	567636	12.0	11.4	
24 Isopropyl alcohol	45	5.239	5.232	0.006	93	1865554	12.0	12.7	
25 Pentane	72	5.239	5.238	0.000	91	85310	4.00	4.04	
26 Ethyl ether	31	5.373	5.377	-0.004	94	527904	4.00	4.30	
27 1,1-Dichloroethene	96	5.643	5.639	0.004	97	458052	4.00	3.83	
28 Acrylonitrile	53	5.713	5.712	0.001	94	320898	4.00	4.19	
29 2-Methyl-2-propanol	59	5.745	5.746	-0.001	96	672816	4.00	4.19	
30 1,1,2-Trichloro-1,2,2-trif	101	5.821	5.819	0.002	94	911407	4.00	3.98	
31 Methylene Chloride	84	5.940	5.931	0.009	95	403392	4.00	3.59	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.956	5.952	0.004	92	346245	4.00	4.09	
33 Carbon disulfide	76	6.074	6.072	0.002	98	1240384	4.00	4.03	
34 trans-1,2-Dichloroethene	96	6.673	6.667	0.006	97	479340	4.00	3.77	
35 2-Methylpentane	43	6.721	6.719	0.002	96	985644	4.00	4.22	
36 Methyl tert-butyl ether	73	6.792	6.797	-0.005	97	1094582	4.00	4.08	
37 1,1-Dichloroethane	63	7.045	7.035	0.010	99	790113	4.00	3.95	
38 Vinyl acetate	43	7.147	7.147	0.000	100	1258365	4.00	4.44	
39 2-Butanone (MEK)	72	7.530	7.536	-0.006	99	215237	4.00	4.11	
40 Hexane	56	7.627	7.622	0.005	92	334174	4.00	4.07	
41 Isopropyl ether	45	7.762	7.761	0.001	98	1592277	4.00	4.24	
42 cis-1,2-Dichloroethene	96	7.951	7.944	0.007	91	499668	4.00	3.78	
43 Ethyl acetate	43	8.129	8.132	-0.003	99	1040805	4.00	4.36	
44 Chloroform	83	8.280	8.274	0.006	95	868630	4.00	3.84	
45 Tert-butyl ethyl ether	59	8.393	8.396	-0.003	94	1156354	4.00	4.23	
46 Tetrahydrofuran	42	8.630	8.639	-0.009	97	546503	4.00	4.21	
47 1,1,1-Trichloroethane	97	9.261	9.254	0.007	95	881154	4.00	3.91	
48 1,2-Dichloroethane	62	9.331	9.328	0.003	96	504175	4.00	3.95	
49 n-Butanol	31	9.811	9.825	-0.014	89	196047	4.00	4.57	
50 Benzene	78	9.844	9.838	0.006	95	1418818	4.00	3.85	
51 Cyclohexane	69	9.865	9.866	-0.001	95	222381	4.00	4.22	
52 Carbon tetrachloride	117	9.881	9.878	0.003	98	934318	4.00	4.14	
53 2,3-Dimethylpentane	71	10.027	10.026	0.001	93	318046	4.00	4.07	
54 Thiophene	84	10.113	10.107	0.006	93	774783	4.00	4.05	
55 Tert-amyl methyl ether	73	10.356	10.361	-0.005	98	1240524	4.00	4.41	
56 Isooctane	57	10.696	10.692	0.004	99	2125744	4.00	4.23	
57 1,2-Dichloropropane	63	11.084	11.078	0.006	92	535380	4.00	4.20	
58 n-Heptane	71	11.089	11.086	0.003	91	502236	4.00	4.18	
59 Trichloroethene	130	11.143	11.141	0.002	94	641583	4.00	3.85	
60 Dibromomethane	93	11.192	11.186	0.006	86	522746	4.00	4.08	
61 Dichlorobromomethane	83	11.359	11.354	0.005	99	899835	4.00	4.22	
62 1,4-Dioxane	88	11.359	11.365	-0.006	41	229087	4.00	3.88	
63 Methyl methacrylate	41	11.488	11.488	0.000	92	614457	4.00	4.62	
64 Methylcyclohexane	83	11.968	11.963	0.005	96	1012881	4.00	4.14	
65 4-Methyl-2-pentanone (MIBK	43	12.351	12.355	-0.004	97	1119558	4.00	4.50	
66 cis-1,3-Dichloropropene	75	12.410	12.405	0.005	92	765394	4.00	4.15	
67 trans-1,3-Dichloropropene	75	13.128	13.126	0.002	98	673680	4.00	4.20	
68 Toluene	91	13.273	13.269	0.004	93	1616062	4.00	4.09	
69 1,1,2-Trichloroethane	83	13.322	13.323	-0.001	95	484227	4.00	3.89	
70 2-Methylthiophene	97	13.419	13.417	0.002	97	1416277	4.00	4.12	
71 3-Methylthiophene	97	13.629	13.625	0.004	99	1404868	4.00	4.15	
72 2-Hexanone	58	13.748	13.752	-0.004	91	521509	4.00	4.48	
73 Chlorodibromomethane	129	14.044	14.042	0.002	97	1031168	4.00	4.53	
74 n-Octane	85	14.060	14.060	0.000	94	526170	4.00	4.19	
75 Ethylene Dibromide	107	14.335	14.336	-0.001	98	924538	4.00	4.25	
76 Tetrachloroethene	129	14.459	14.456	0.003	95	584686	4.00	3.86	
77 Chlorobenzene	112	15.344	15.342	0.002	96	1306533	4.00	4.02	
78 2,3-Dimethylheptane	43	15.446	15.444	0.002	98	1494597	4.00	4.38	
79 Ethylbenzene	91	15.662	15.660	0.002	97	2108922	4.00	3.98	
80 2-Ethylthiophene	97	15.759	15.758	0.001	97	1657834	4.00	4.25	
81 m-Xylene & p-Xylene	91	15.829	15.830	-0.001	99	3273024	8.00	8.22	
82 Bromoform	173	16.234	16.235	-0.001	98	1398733	4.00	4.78	
83 Styrene	104	16.298	16.296	0.002	97	1249828	4.00	4.42	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.325	16.324	0.001	95	1026919	4.00	4.48	
85 o-Xylene	91	16.358	16.359	-0.001	99	1642978	4.00	3.94	
86 1,1,2,2-Tetrachloroethane	83	16.670	16.671	-0.001	98	1283721	4.00	4.05	
87 1,2,3-Trichloropropane	110	16.832	16.831	0.001	98	362915	4.00	4.07	
88 Isopropylbenzene	105	16.978	16.977	0.001	95	2438291	4.00	4.15	
89 N-Propylbenzene	120	17.549	17.552	-0.003	99	694201	4.00	4.26	
90 2-Chlorotoluene	126	17.582	17.578	0.004	95	637350	4.00	4.16	
91 4-Ethyltoluene	105	17.716	17.718	-0.002	99	2510766	4.00	4.26	
92 1,3,5-Trimethylbenzene	120	17.803	17.802	0.001	93	1148204	4.00	4.01	
93 Alpha Methyl Styrene	118	18.040	18.042	-0.002	91	1057771	4.00	4.66	
94 n-Decane	57	18.164	18.166	-0.002	88	1333389	4.00	4.57	
95 tert-Butylbenzene	119	18.250	18.251	-0.001	94	2142114	4.00	4.25	
96 1,2,4-Trimethylbenzene	105	18.266	18.267	-0.001	96	2112255	4.00	4.12	
97 1,3-Dichlorobenzene	146	18.531	18.531	0.000	96	1546869	4.00	4.26	
98 sec-Butylbenzene	105	18.541	18.543	-0.002	99	3124184	4.00	4.34	
99 Benzyl chloride	91	18.606	18.607	-0.001	99	1832699	4.00	4.63	
100 1,4-Dichlorobenzene	146	18.628	18.625	0.003	95	1571693	4.00	4.26	
101 4-Isopropyltoluene	119	18.719	18.720	-0.001	97	2531332	4.00	4.30	
102 1,2,3-Trimethylbenzene	105	18.763	18.762	0.001	96	1628428	4.00	3.99	
103 Butylcyclohexane	83	18.849	18.851	-0.002	96	1608626	4.00	4.23	
104 1,2-Dichlorobenzene	146	19.005	19.003	0.002	98	1511871	4.00	4.27	
105 2,3-Dihydroindene	117	19.011	19.012	-0.001	96	1995040	4.00	4.38	
106 Indene	116	19.145	19.146	-0.001	92	1588890	4.00	3.83	
107 n-Butylbenzene	91	19.183	19.183	0.000	98	2475180	4.00	4.36	
108 Undecane	57	19.561	19.561	0.000	97	1553035	4.00	4.70	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.571	19.574	-0.003	98	1944399	4.00	3.97	
110 1,2-Dibromo-3-Chloropropan	157	19.631	19.631	0.000	89	868224	4.00	4.67	
111 1,2,4,5-Tetramethylbenzene	119	19.976	19.977	-0.001	98	2267880	4.00	4.38	
112 1,2,3,5-Tetramethylbenzene	119	20.030	20.031	-0.001	97	1410963	4.00	4.34	
113 1,2,3,4-Tetramethylbenzene	119	20.440	20.439	0.001	98	1914011	4.00	4.36	
114 Dodecane	57	20.666	20.664	0.002	95	1661177	4.00	4.82	
115 1,2,4-Trichlorobenzene	180	20.790	20.788	0.002	93	1739115	4.00	4.13	
116 Naphthalene	128	20.920	20.922	-0.002	100	3177551	4.00	4.08	
117 Benzo(b)thiophene	134	21.022	21.024	-0.002	100	1870974	4.00	4.38	
118 Hexachlorobutadiene	225	21.173	21.173	0.000	93	1567346	4.00	4.17	
119 1,2,3-Trichlorobenzene	180	21.216	21.217	-0.001	95	1667019	4.00	4.35	
120 2-Methylnaphthalene	142	21.933	21.933	0.000	98	1392307	12.5	15.2	
121 1-Methylnaphthalene	142	22.057	22.057	0.000	98	1075620	12.5	12.5	
A 122 C6 Range	1	7.631	(7.563-7.673)		0	2975398	4.00	4.11	
S 124 Xylenes, Total	100				0		12.0	12.2	
S 125 1,2-Dichloroethene, Total	1				0		8.00	7.55	

Reagents:

40L7DNP_00009	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

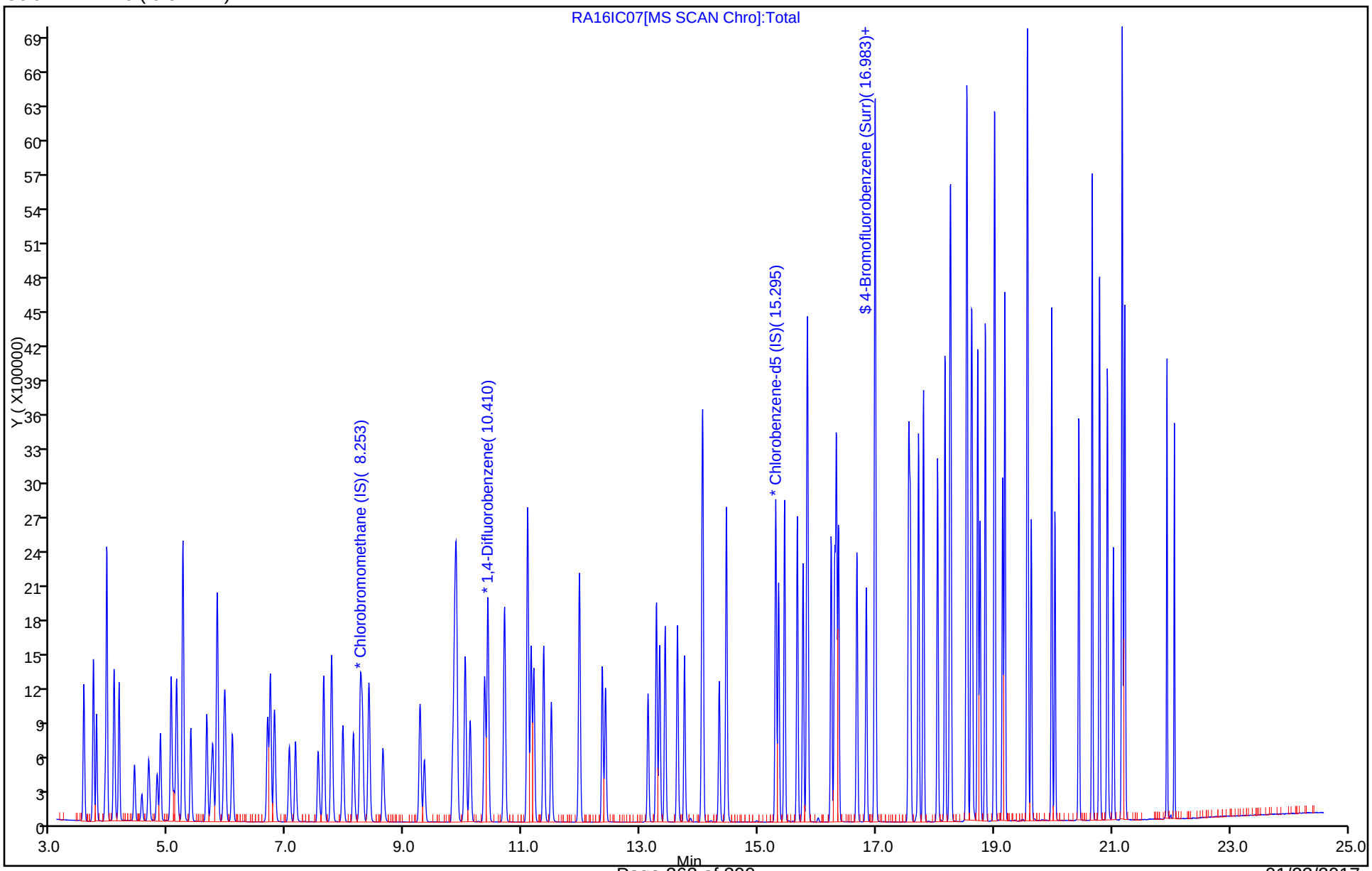
Report Date: 17-Jan-2017 14:55:32 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC07.D

Injection Date:	16-Jan-2017 22:14:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L7			Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

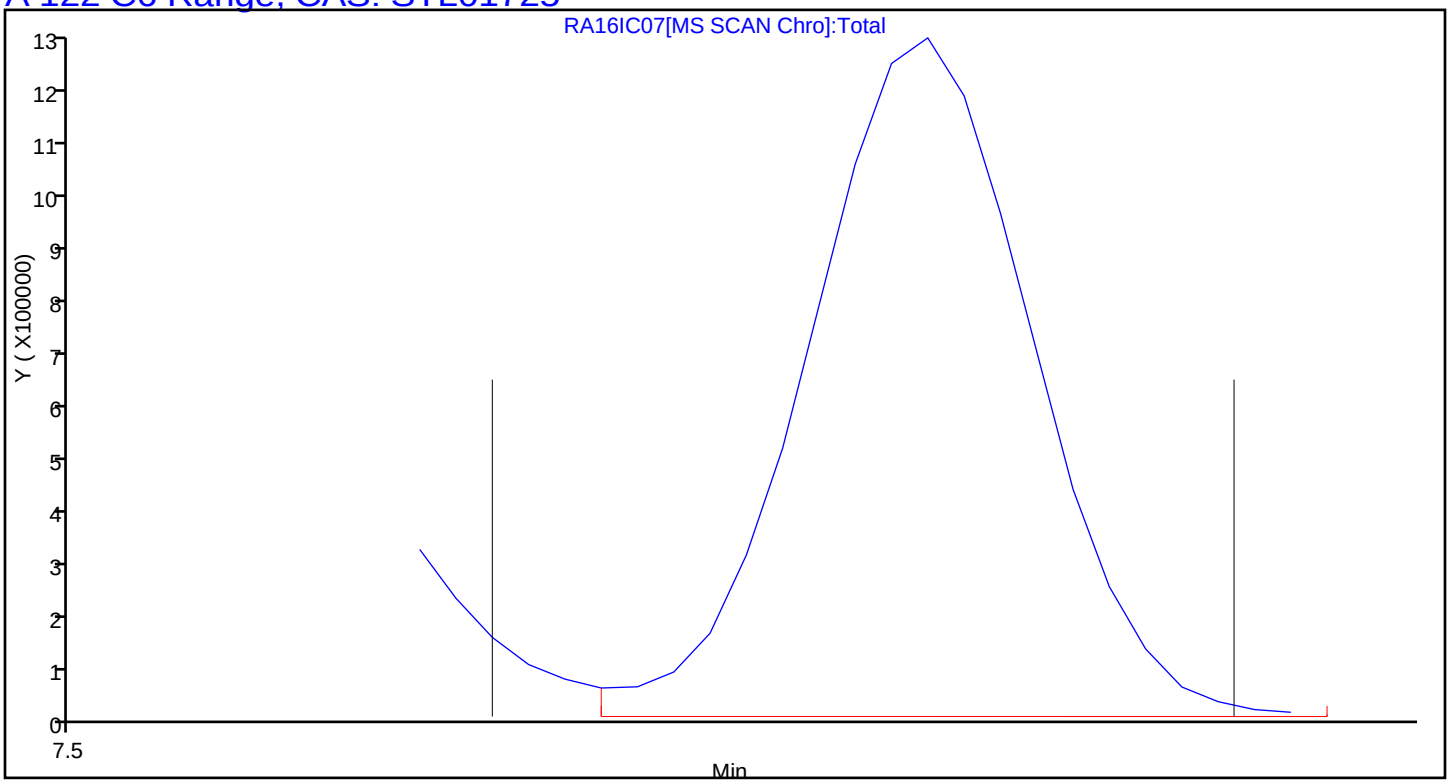


Report Date: 17-Jan-2017 14:55:32 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC07.D				
Injection Date:	16-Jan-2017 22:14:30	Instrument ID:	MR		
Lims ID:	IC L7				
Client ID:					
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC08.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 16-Jan-2017 23:01:30 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003844-010
Misc. Info.: 073140
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jan-2017 14:55:34 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: barlozhetskayaa Date: 17-Jan-2017 11:20:46

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.253	8.242	0.011	91	450508	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.415	10.407	0.008	93	2209311	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.295	15.293	0.002	85	1909501	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.988	16.984	0.004	95	1250364	4.00	4.19	
6 Chlorodifluoromethane	67	3.718	3.724	-0.006	96	200958	8.00	8.04	
7 Propene	41	3.723	3.728	-0.005	96	911591	8.00	7.78	
8 Dichlorodifluoromethane	85	3.772	3.776	-0.004	99	1570542	8.00	7.70	
9 Chloromethane	52	3.923	3.923	0.000	99	289828	8.00	7.57	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.950	3.951	-0.001	98	1666341	8.00	7.22	
11 Acetaldehyde	44	4.074	4.070	0.004	97	1128284	40.0	32.8	
12 Vinyl chloride	62	4.074	4.075	-0.001	70	714433	8.00	6.51	
13 Butadiene	54	4.155	4.155	0.000	91	494386	8.00	6.37	
14 Butane	43	4.160	4.158	0.002	91	927124	8.00	6.65	
15 Bromomethane	94	4.419	4.416	0.003	96	649522	8.00	6.76	
16 Chloroethane	64	4.548	4.541	0.007	97	304357	8.00	7.03	
17 Ethanol	31	4.667	4.651	0.016	98	974530	40.0	33.8	
18 Vinyl bromide	106	4.807	4.797	0.010	98	630026	8.00	7.03	
19 2-Methylbutane	43	4.856	4.856	0.000	88	560541	8.00	6.64	
20 Acrolein	56	5.039	5.033	0.006	96	219248	8.00	6.76	
21 Trichlorofluoromethane	101	5.044	5.036	0.008	99	2126205	8.00	7.59	
22 Acetonitrile	40	5.087	5.083	0.004	99	400939	8.00	8.24	
23 Acetone	58	5.136	5.133	0.003	97	1187796	24.0	22.9	
24 Isopropyl alcohol	45	5.244	5.232	0.012	93	3746271	24.0	24.6	
25 Pentane	72	5.244	5.238	0.006	95	180510	8.00	8.23	
26 Ethyl ether	31	5.373	5.377	-0.004	95	1089447	8.00	8.55	
27 1,1-Dichloroethene	96	5.648	5.639	0.009	97	967528	8.00	7.80	
28 Acrylonitrile	53	5.718	5.712	0.006	95	689539	8.00	8.67	
29 2-Methyl-2-propanol	59	5.751	5.746	0.005	96	1475064	8.00	8.85	
30 1,1,2-Trichloro-1,2,2-trif	101	5.826	5.819	0.007	95	1912665	8.00	8.04	
31 Methylene Chloride	84	5.945	5.931	0.014	95	835002	8.00	7.15	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.961	5.952	0.009	93	727739	8.00	8.29	
33 Carbon disulfide	76	6.080	6.072	0.008	98	2698758	8.00	8.44	
34 trans-1,2-Dichloroethene	96	6.678	6.667	0.011	98	1020192	8.00	7.74	
35 2-Methylpentane	43	6.727	6.719	0.008	96	2062991	8.00	8.51	
36 Methyl tert-butyl ether	73	6.797	6.797	0.000	97	2428743	8.00	8.72	
37 1,1-Dichloroethane	63	7.050	7.035	0.015	100	1692604	8.00	8.15	
38 Vinyl acetate	43	7.153	7.147	0.006	100	2710284	8.00	9.21	
39 2-Butanone (MEK)	72	7.536	7.536	0.000	99	468077	8.00	8.62	
40 Hexane	56	7.633	7.622	0.011	91	720175	8.00	8.44	
41 Isopropyl ether	45	7.762	7.761	0.001	98	3356833	8.00	8.62	
42 cis-1,2-Dichloroethene	96	7.956	7.944	0.012	91	1055779	8.00	7.69	
43 Ethyl acetate	43	8.134	8.132	0.002	100	2238695	8.00	9.03	
44 Chloroform	83	8.285	8.274	0.011	97	1869398	8.00	7.97	
45 Tert-butyl ethyl ether	59	8.398	8.396	0.002	93	2515911	8.00	8.86	
46 Tetrahydrofuran	42	8.636	8.639	-0.003	97	1169335	8.00	8.67	
47 1,1,1-Trichloroethane	97	9.267	9.254	0.013	94	1948514	8.00	8.33	
48 1,2-Dichloroethane	62	9.337	9.328	0.009	96	1107907	8.00	8.33	
49 n-Butanol	31	9.811	9.825	-0.014	89	422395	8.00	9.46	
50 Benzene	78	9.849	9.838	0.011	95	2983633	8.00	7.77	
51 Cyclohexane	69	9.871	9.866	0.005	95	461730	8.00	8.41	
52 Carbon tetrachloride	117	9.887	9.878	0.009	97	2080493	8.00	8.85	
53 2,3-Dimethylpentane	71	10.032	10.026	0.006	92	679988	8.00	8.34	
54 Thiophene	84	10.113	10.107	0.006	93	1647044	8.00	8.26	
55 Tert-amyl methyl ether	73	10.361	10.361	0.000	98	2670160	8.00	9.11	
56 Isooctane	57	10.696	10.692	0.004	99	4513728	8.00	8.61	
57 1,2-Dichloropropane	63	11.084	11.078	0.006	91	1131282	8.00	8.52	
58 n-Heptane	71	11.095	11.086	0.009	91	1070503	8.00	8.56	
59 Trichloroethene	130	11.149	11.141	0.008	94	1337924	8.00	7.70	
60 Dibromomethane	93	11.197	11.186	0.011	88	1142397	8.00	8.55	
61 Dichlorobromomethane	83	11.364	11.354	0.010	98	1986552	8.00	8.94	
62 1,4-Dioxane	88	11.359	11.365	-0.006	84	483811	8.00	7.86	
63 Methyl methacrylate	41	11.488	11.488	0.000	92	1313409	8.00	9.48	
64 Methylcyclohexane	83	11.968	11.963	0.005	97	2157606	8.00	8.46	
65 4-Methyl-2-pentanone (MIBK	43	12.356	12.355	0.001	97	2370240	8.00	9.14	
66 cis-1,3-Dichloropropene	75	12.410	12.405	0.005	92	1666244	8.00	8.68	
67 trans-1,3-Dichloropropene	75	13.133	13.126	0.007	98	1522679	8.00	8.99	
68 Toluene	91	13.273	13.269	0.004	93	3434233	8.00	8.23	
69 1,1,2-Trichloroethane	83	13.327	13.323	0.004	94	1035226	8.00	7.88	
70 2-Methylthiophene	97	13.424	13.417	0.007	97	3023751	8.00	8.32	
71 3-Methylthiophene	97	13.629	13.625	0.004	98	2998597	8.00	8.38	
72 2-Hexanone	58	13.748	13.752	-0.004	92	1144315	8.00	9.30	
73 Chlorodibromomethane	129	14.044	14.042	0.002	97	2208273	8.00	9.19	
74 n-Octane	85	14.066	14.060	0.006	93	1082269	8.00	8.15	
75 Ethylene Dibromide	107	14.341	14.336	0.005	98	1978394	8.00	8.61	
76 Tetrachloroethene	129	14.459	14.456	0.003	96	1244199	8.00	7.77	
77 Chlorobenzene	112	15.344	15.342	0.002	95	2742751	8.00	7.98	
78 2,3-Dimethylheptane	43	15.446	15.444	0.002	97	3092749	8.00	8.58	
79 Ethylbenzene	91	15.662	15.660	0.002	97	4519837	8.00	8.07	
80 2-Ethylthiophene	97	15.759	15.758	0.001	97	3572042	8.00	8.67	
81 m-Xylene & p-Xylene	91	15.834	15.830	0.004	99	6738733	16.0	16.0	
82 Bromoform	173	16.239	16.235	0.004	98	3037906	8.00	9.82	
83 Styrene	104	16.298	16.296	0.002	98	2646737	8.00	8.86	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.325	16.324	0.001	94	2128023	8.00	8.78	
85 o-Xylene	91	16.363	16.359	0.004	99	3550963	8.00	8.06	
86 1,1,2,2-Tetrachloroethane	83	16.676	16.671	0.005	99	2740331	8.00	8.19	
87 1,2,3-Trichloropropane	110	16.832	16.831	0.001	98	795101	8.00	8.45	
88 Isopropylbenzene	105	16.978	16.977	0.001	96	5035195	8.00	8.10	
89 N-Propylbenzene	120	17.555	17.552	0.003	100	1452626	8.00	8.44	
90 2-Chlorotoluene	126	17.582	17.578	0.004	96	1343683	8.00	8.29	
91 4-Ethyltoluene	105	17.722	17.718	0.004	99	5400070	8.00	8.66	
92 1,3,5-Trimethylbenzene	120	17.803	17.802	0.001	93	2394702	8.00	7.92	
93 Alpha Methyl Styrene	118	18.045	18.042	0.003	91	2321622	8.00	9.68	
94 n-Decane	57	18.169	18.166	0.003	91	2666611	8.00	8.65	
95 tert-Butylbenzene	119	18.256	18.251	0.005	91	4307394	8.00	8.09	
96 1,2,4-Trimethylbenzene	105	18.272	18.267	0.005	96	4302436	8.00	7.94	
97 1,3-Dichlorobenzene	146	18.531	18.531	0.000	96	3065047	8.00	7.99	
98 sec-Butylbenzene	105	18.547	18.543	0.004	99	6163445	8.00	8.10	
99 Benzyl chloride	91	18.612	18.607	0.005	99	3926456	8.00	9.39	
100 1,4-Dichlorobenzene	146	18.628	18.625	0.003	95	3205771	8.00	8.22	
101 4-Isopropyltoluene	119	18.725	18.720	0.005	96	5298681	8.00	8.53	
102 1,2,3-Trimethylbenzene	105	18.763	18.762	0.001	97	3534922	8.00	8.19	
103 Butylcyclohexane	83	18.854	18.851	0.003	97	3335838	8.00	8.30	
104 1,2-Dichlorobenzene	146	19.005	19.003	0.002	96	2971893	8.00	7.94	
105 2,3-Dihydroindene	117	19.016	19.012	0.004	94	3897507	8.00	8.10	
106 Indene	116	19.145	19.146	-0.001	92	3448800	8.00	8.29	
107 n-Butylbenzene	91	19.183	19.183	0.000	98	5141734	8.00	8.58	
108 Undecane	57	19.561	19.561	0.000	96	2778444	8.00	7.96	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.577	19.574	0.003	98	3774698	8.00	8.14	
110 1,2-Dibromo-3-Chloropropan	157	19.631	19.631	0.000	90	1842254	8.00	9.37	
111 1,2,4,5-Tetramethylbenzene	119	19.981	19.977	0.004	97	4741194	8.00	8.66	
112 1,2,3,5-Tetramethylbenzene	119	20.035	20.031	0.004	96	2994841	8.00	8.72	
113 1,2,3,4-Tetramethylbenzene	119	20.440	20.439	0.001	97	4074204	8.00	8.78	
114 Dodecane	57	20.666	20.664	0.002	95	3144288	8.00	8.64	
115 1,2,4-Trichlorobenzene	180	20.790	20.788	0.002	93	3614528	8.00	8.11	
116 Naphthalene	128	20.925	20.922	0.003	99	6621298	8.00	8.05	
117 Benzo(b)thiophene	134	21.027	21.024	0.003	100	4044337	8.00	8.97	
118 Hexachlorobutadiene	225	21.173	21.173	0.000	91	3510409	8.00	8.83	
119 1,2,3-Trichlorobenzene	180	21.216	21.217	-0.001	95	3469925	8.00	8.56	
120 2-Methylnaphthalene	142	21.933	21.933	0.000	98	2839351	25.0	29.3	
121 1-Methylnaphthalene	142	22.057	22.057	0.000	98	2232500	25.0	24.6	
A 122 C6 Range	1	7.628	(7.568-7.667)		0	6229109	8.00	8.27	
S 124 Xylenes, Total	100				0		24.0	24.1	
S 125 1,2-Dichloroethene, Total	1				0		16.0	15.4	

Reagents:

40L8DNP_00009	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

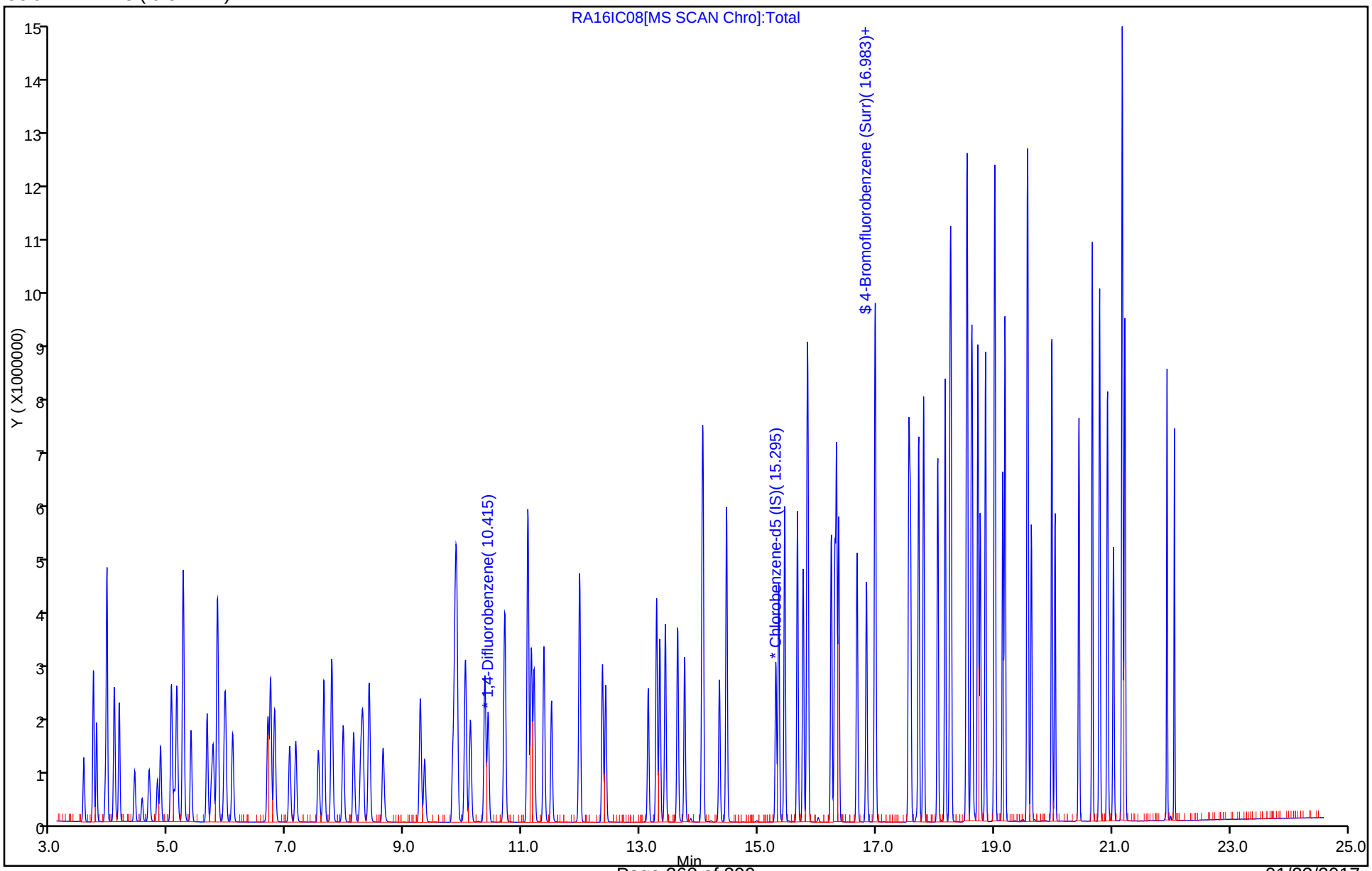
Report Date: 17-Jan-2017 14:55:35 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC08.D

Injection Date:	16-Jan-2017 23:01:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L8			Worklist Smp#:	10
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

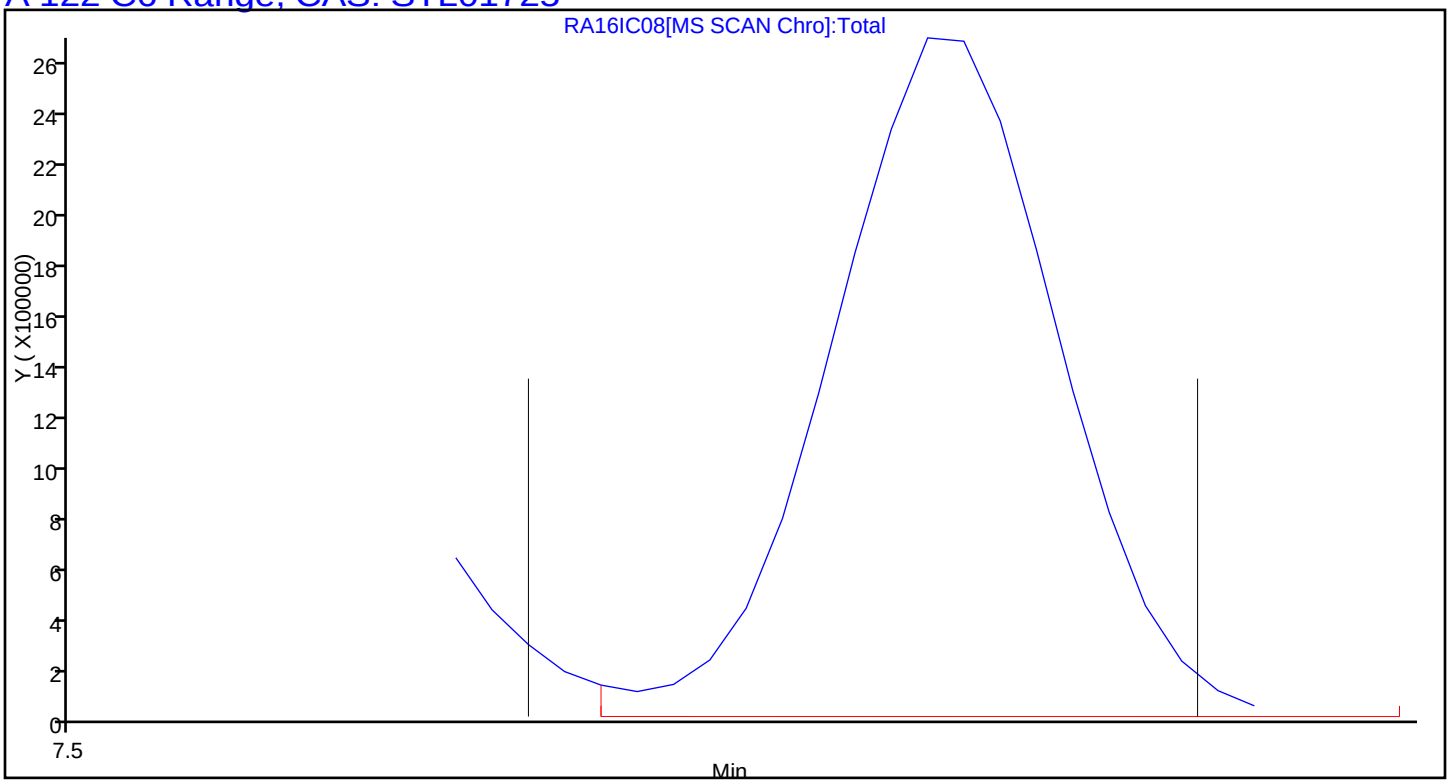


Report Date: 17-Jan-2017 14:55:35 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC08.D				
Injection Date:	16-Jan-2017 23:01:30	Instrument ID:	MR		
Lims ID:	IC L8				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC09.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 16-Jan-2017 23:49:30 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003844-011
Misc. Info.: 073138
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jan-2017 14:55:38 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: barlozhetskayaa Date: 17-Jan-2017 11:21:04

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.258	8.242	0.016	91	477090	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.420	10.407	0.013	93	2365749	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.300	15.293	0.007	85	2067393	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.988	16.984	0.004	94	1198131	4.00	3.70	
6 Chlorodifluoromethane	67	3.718	3.724	-0.006	96	408661	16.0	15.4	
7 Propene	41	3.723	3.728	-0.005	97	1629703	16.0	13.1	
8 Dichlorodifluoromethane	85	3.772	3.776	-0.004	99	3412348	16.0	15.8	
9 Chloromethane	52	3.923	3.923	0.000	100	494899	16.0	12.2	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.950	3.951	-0.001	90	3070600	16.0	12.6	
11 Acetaldehyde	44	4.079	4.070	0.009	95	1966956	80.0	54.0	
12 Vinyl chloride	62	4.074	4.075	-0.001	67	1282078	16.0	11.0	
13 Butadiene	54	4.160	4.155	0.005	90	874525	16.0	10.6	
14 Butane	43	4.160	4.158	0.002	92	1637500	16.0	11.1	
15 Bromomethane	94	4.424	4.416	0.008	96	1195161	16.0	11.7	
16 Chloroethane	64	4.553	4.541	0.012	95	554082	16.0	12.1	
17 Ethanol	31	4.672	4.651	0.021	99	1726674	80.0	56.6	
18 Vinyl bromide	106	4.812	4.797	0.015	98	1163867	16.0	12.3	
19 2-Methylbutane	43	4.861	4.856	0.005	88	1015242	16.0	11.4	
20 Acrolein	56	5.039	5.033	0.006	98	420060	16.0	12.2	
21 Trichlorofluoromethane	101	5.044	5.036	0.008	99	4195509	16.0	14.2	
22 Acetonitrile	40	5.098	5.083	0.015	99	785119	16.0	15.2	
23 Acetone	58	5.141	5.133	0.008	97	2377763	48.0	43.3	
24 Isopropyl alcohol	45	5.254	5.232	0.022	96	7272319	48.0	45.0	
25 Pentane	72	5.244	5.238	0.006	97	354459	16.0	15.3	
26 Ethyl ether	31	5.379	5.377	0.001	95	2035713	16.0	15.1	
27 1,1-Dichloroethene	96	5.654	5.639	0.015	97	2044882	16.0	15.6	
28 Acrylonitrile	53	5.724	5.712	0.012	95	1415761	16.0	16.8	
29 2-Methyl-2-propanol	59	5.756	5.746	0.010	95	3065580	16.0	17.4	
30 1,1,2-Trichloro-1,2,2-trif	101	5.826	5.819	0.007	94	3833335	16.0	15.2	
31 Methylene Chloride	84	5.950	5.931	0.019	94	1741347	16.0	14.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.966	5.952	0.014	94	1492611	16.0	16.1	
33 Carbon disulfide	76	6.085	6.072	0.013	98	5567432	16.0	16.4	
34 trans-1,2-Dichloroethene	96	6.683	6.667	0.016	98	2145105	16.0	15.4	
35 2-Methylpentane	43	6.727	6.719	0.008	95	4018277	16.0	15.7	
36 Methyl tert-butyl ether	73	6.797	6.797	0.000	97	5153893	16.0	17.5	
37 1,1-Dichloroethane	63	7.050	7.035	0.015	100	3550291	16.0	16.1	
38 Vinyl acetate	43	7.158	7.147	0.011	100	5577891	16.0	17.9	
39 2-Butanone (MEK)	72	7.541	7.536	0.005	99	1003055	16.0	17.4	
40 Hexane	56	7.633	7.622	0.011	90	1465350	16.0	16.2	
41 Isopropyl ether	45	7.767	7.761	0.006	97	6516624	16.0	15.8	
42 cis-1,2-Dichloroethene	96	7.961	7.944	0.017	91	2259890	16.0	15.5	
43 Ethyl acetate	43	8.139	8.132	0.007	100	4517125	16.0	17.2	
44 Chloroform	83	8.290	8.274	0.016	96	4012562	16.0	16.2	
45 Tert-butyl ethyl ether	59	8.398	8.396	0.002	93	5289215	16.0	17.6	
46 Tetrahydrofuran	42	8.636	8.639	-0.003	95	2337928	16.0	16.4	
47 1,1,1-Trichloroethane	97	9.266	9.254	0.012	94	4291452	16.0	17.3	
48 1,2-Dichloroethane	62	9.342	9.328	0.014	97	2409618	16.0	16.9	
49 n-Butanol	31	9.822	9.825	-0.003	87	815757	16.0	17.1	
50 Benzene	78	9.854	9.838	0.016	95	5626343	16.0	13.7	
51 Cyclohexane	69	9.870	9.866	0.004	92	817744	16.0	13.9	
52 Carbon tetrachloride	117	9.887	9.878	0.009	98	4378793	16.0	17.4	
53 2,3-Dimethylpentane	71	10.032	10.026	0.006	91	1400028	16.0	16.0	
54 Thiophene	84	10.118	10.107	0.011	93	3486321	16.0	16.3	
55 Tert-amyl methyl ether	73	10.361	10.361	0.000	98	5591059	16.0	17.8	
56 Isooctane	57	10.701	10.692	0.009	99	8671845	16.0	15.5	
57 1,2-Dichloropropane	63	11.089	11.078	0.011	91	2015496	16.0	14.2	
58 n-Heptane	71	11.100	11.086	0.014	90	1948044	16.0	14.6	
59 Trichloroethene	130	11.154	11.141	0.013	96	2689565	16.0	14.5	
60 Dibromomethane	93	11.197	11.186	0.011	87	2313341	16.0	16.2	
61 Dichlorobromomethane	83	11.364	11.354	0.010	98	4159657	16.0	17.5	
62 1,4-Dioxane	88	11.364	11.365	-0.001	91	925447	16.0	14.0	
63 Methyl methacrylate	41	11.493	11.488	0.005	89	2639577	16.0	17.8	
64 Methylcyclohexane	83	11.968	11.963	0.005	96	4182340	16.0	15.3	
65 4-Methyl-2-pentanone (MIBK	43	12.356	12.355	0.001	96	4528099	16.0	16.3	
66 cis-1,3-Dichloropropene	75	12.416	12.405	0.011	92	3524574	16.0	17.1	
67 trans-1,3-Dichloropropene	75	13.133	13.126	0.007	97	3277150	16.0	17.9	
68 Toluene	91	13.278	13.269	0.009	94	6856744	16.0	15.2	
69 1,1,2-Trichloroethane	83	13.332	13.323	0.009	95	2043617	16.0	14.4	
70 2-Methylthiophene	97	13.424	13.417	0.007	96	6073558	16.0	15.4	
71 3-Methylthiophene	97	13.634	13.625	0.009	98	5988983	16.0	15.5	
72 2-Hexanone	58	13.753	13.752	0.001	93	2233901	16.0	16.8	
73 Chlorodibromomethane	129	14.049	14.042	0.007	96	4180918	16.0	16.1	
74 n-Octane	85	14.066	14.060	0.006	91	1850963	16.0	12.9	
75 Ethylene Dibromide	107	14.341	14.336	0.005	97	4001584	16.0	16.1	
76 Tetrachloroethene	129	14.465	14.456	0.009	95	2375762	16.0	13.7	
77 Chlorobenzene	112	15.349	15.342	0.007	96	5354812	16.0	14.4	
78 2,3-Dimethylheptane	43	15.446	15.444	0.002	93	5096793	16.0	13.1	
79 Ethylbenzene	91	15.667	15.660	0.007	98	8589676	16.0	14.2	
80 2-Ethylthiophene	97	15.764	15.758	0.006	98	6997219	16.0	15.7	
81 m-Xylene & p-Xylene	91	15.840	15.830	0.010	99	11917796	32.0	26.1	
82 Bromoform	173	16.239	16.235	0.004	98	6153703	16.0	18.4	
83 Styrene	104	16.298	16.296	0.002	98	5020713	16.0	15.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.330	16.324	0.006	91	3420328	16.0	13.0	
85 o-Xylene	91	16.363	16.359	0.004	99	6800409	16.0	14.3	
86 1,1,2,2-Tetrachloroethane	83	16.676	16.671	0.005	100	5070297	16.0	14.0	
87 1,2,3-Trichloropropane	110	16.837	16.831	0.006	97	1654343	16.0	16.2	
88 Isopropylbenzene	105	16.978	16.977	0.001	97	9381159	16.0	13.9	
89 N-Propylbenzene	120	17.554	17.552	0.002	99	2635364	16.0	14.1	
90 2-Chlorotoluene	126	17.581	17.578	0.003	96	2441631	16.0	13.9	
91 4-Ethyltoluene	105	17.722	17.718	0.004	99	10029684	16.0	14.9	
92 1,3,5-Trimethylbenzene	120	17.808	17.802	0.006	92	4364039	16.0	13.3	
93 Alpha Methyl Styrene	118	18.045	18.042	0.003	90	4413169	16.0	17.0	
94 n-Decane	57	18.175	18.166	0.009	93	4527461	16.0	13.6	
95 tert-Butylbenzene	119	18.255	18.251	0.004	94	7434970	16.0	12.9	
96 1,2,4-Trimethylbenzene	105	18.272	18.267	0.005	97	7495827	16.0	12.8	
97 1,3-Dichlorobenzene	146	18.536	18.531	0.005	97	5323509	16.0	12.8	
98 sec-Butylbenzene	105	18.552	18.543	0.009	98	10282209	16.0	12.5	
99 Benzyl chloride	91	18.611	18.607	0.004	99	7358133	16.0	16.2	
100 1,4-Dichlorobenzene	146	18.633	18.625	0.008	95	5694211	16.0	13.5	
101 4-Isopropyltoluene	119	18.725	18.720	0.005	95	9338084	16.0	13.9	
102 1,2,3-Trimethylbenzene	105	18.768	18.762	0.006	97	6800840	16.0	14.5	
103 Butylcyclohexane	83	18.859	18.851	0.008	95	5762440	16.0	13.2	
104 1,2-Dichlorobenzene	146	19.005	19.003	0.002	96	5132316	16.0	12.7	
105 2,3-Dihydroindene	117	19.021	19.012	0.009	94	6504175	16.0	12.5	
106 Indene	116	19.151	19.146	0.005	92	6501047	16.0	15.9	
107 n-Butylbenzene	91	19.183	19.183	0.000	98	8997517	16.0	13.9	
108 Undecane	57	19.560	19.561	-0.001	92	4122448	16.0	10.9	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.582	19.574	0.008	97	6266512	16.0	15.9	
110 1,2-Dibromo-3-Chloropropan	157	19.636	19.631	0.005	92	3521605	16.0	16.5	
111 1,2,4,5-Tetramethylbenzene	119	19.981	19.977	0.004	97	8444468	16.0	14.2	
112 1,2,3,5-Tetramethylbenzene	119	20.035	20.031	0.004	96	5707097	16.0	15.4	
113 1,2,3,4-Tetramethylbenzene	119	20.439	20.439	0.000	97	7409018	16.0	14.8	
114 Dodecane	57	20.666	20.664	0.002	92	4919118	16.0	12.5	
115 1,2,4-Trichlorobenzene	180	20.790	20.788	0.002	93	6674555	16.0	13.8	
116 Naphthalene	128	20.925	20.922	0.003	99	11584991	16.0	13.0	
117 Benzo(b)thiophene	134	21.027	21.024	0.003	99	7689569	16.0	15.7	
118 Hexachlorobutadiene	225	21.178	21.173	0.005	91	6889790	16.0	16.0	
119 1,2,3-Trichlorobenzene	180	21.221	21.217	0.004	95	6426986	16.0	14.7	
120 2-Methylnaphthalene	142	21.933	21.933	0.000	98	5188631	50.0	49.4	
121 1-Methylnaphthalene	142	22.057	22.057	0.000	98	4077774	50.0	41.5	
A 122 C6 Range	1	7.636	(7.573-7.673)		0	12330332	16.0	15.3	
S 124 Xylenes, Total	100				0		48.0	40.4	
S 125 1,2-Dichloroethene, Total	1				0		32.0	30.9	

Reagents:

40L9DNP_00012	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

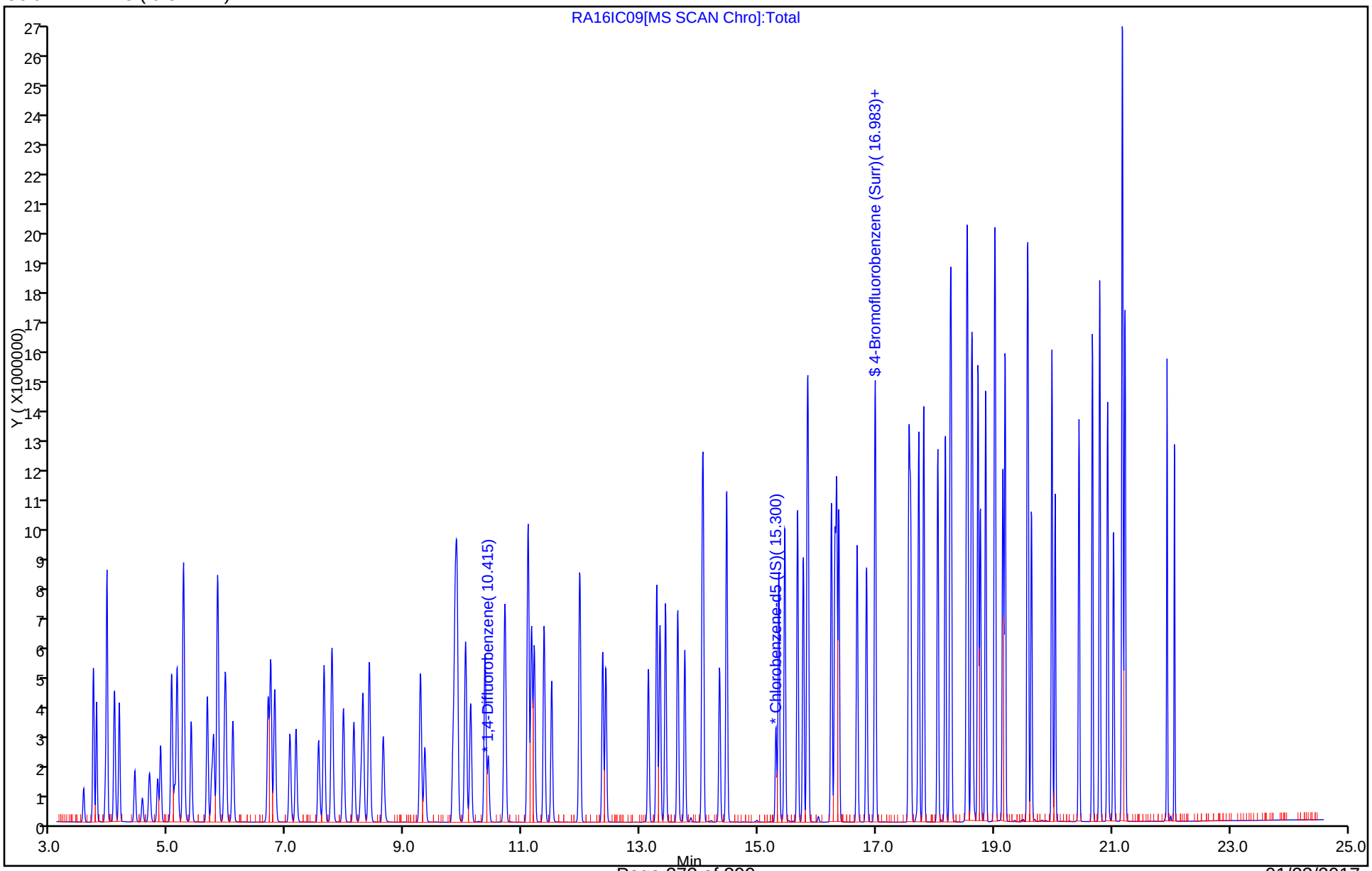
Report Date: 17-Jan-2017 14:55:38 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC09.D

Injection Date:	16-Jan-2017 23:49:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L9			Worklist Smp#:	11
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

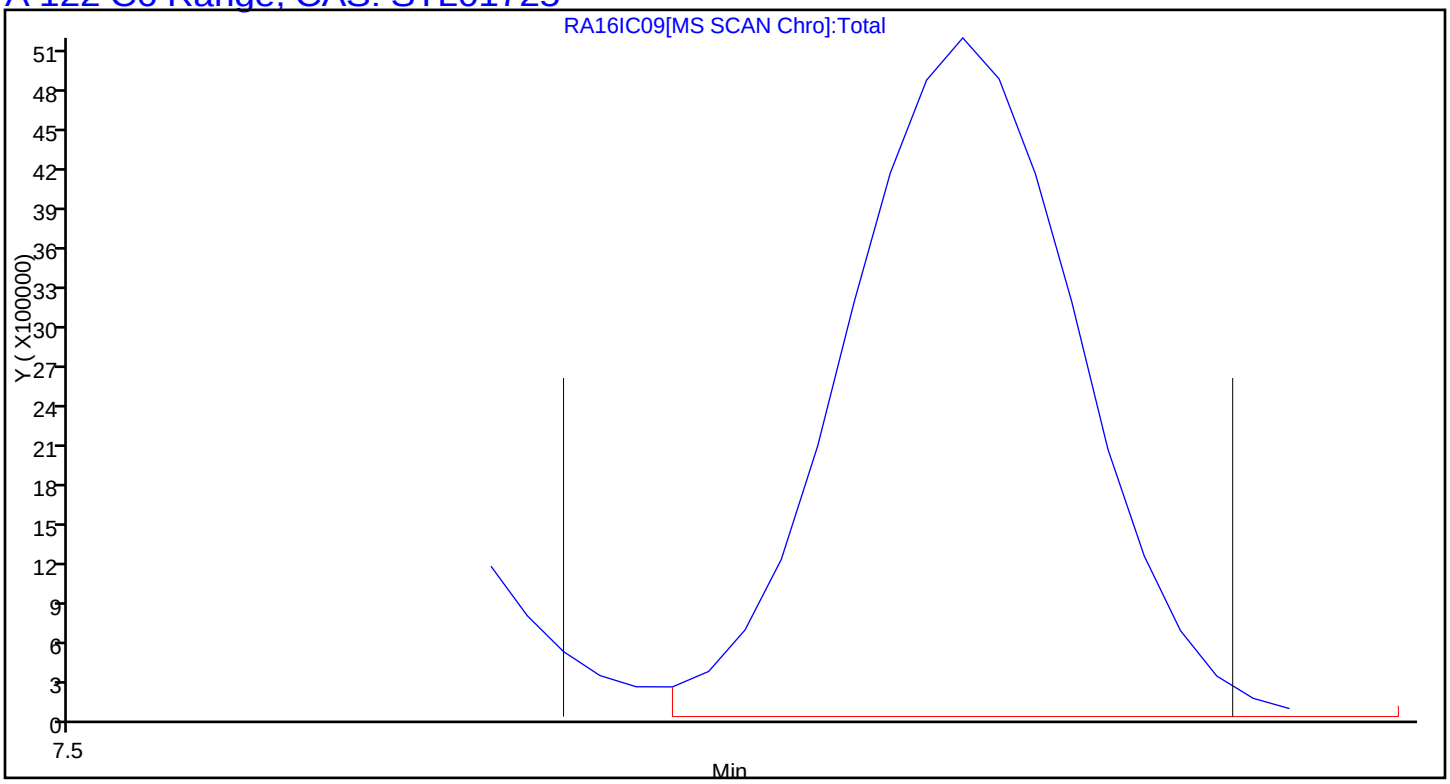


Report Date: 17-Jan-2017 14:55:39 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC09.D				
Injection Date:	16-Jan-2017 23:49:30	Instrument ID:	MR		
Lims ID:	IC L9				
Client ID:					
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 17-Jan-2017 10:29:30 ALS Bottle#: 2 Worklist Smp#: 24
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003844-003
Misc. Info.: 073145
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jan-2017 14:55:41 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: barlozhetskayaa Date: 17-Jan-2017 11:10:44

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.226	8.242	-0.016	89	403216	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.399	10.407	-0.008	93	1959565	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.290	15.293	-0.003	85	1655158	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.983	16.984	-0.001	95	1051035	4.00	4.06	
6 Chlorodifluoromethane	67	3.728	3.724	0.004	95	1272	0.0392	0.0569	
7 Propene	41	3.728	3.728	0.000	74	7577	0.0392	0.0723	
8 Dichlorodifluoromethane	85	3.777	3.776	0.001	99	11457	0.0392	0.0628	
9 Chloromethane	52	3.923	3.923	-0.001	99	1674	0.0392	0.0488	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.949	3.951	-0.002	87	10733	0.0392	0.0519	
11 Acetaldehyde	44	4.068	4.070	-0.002	93	14974	0.1960	0.4867	
12 Vinyl chloride	62	4.073	4.075	-0.002	46	3960	0.0392	0.0403	
13 Butadiene	54	4.149	4.155	-0.006	69	3255	0.0392	0.0469	
14 Butane	43	4.154	4.158	-0.004	83	6315	0.0392	0.0506	
15 Bromomethane	94	4.413	4.416	-0.003	98	4821	0.0392	0.0561	
16 Chloroethane	64	4.532	4.541	-0.009	51	1858	0.0392	0.0479	
17 Ethanol	31	4.640	4.651	-0.011	94	7799	0.1960	0.3023	
18 Vinyl bromide	106	4.785	4.797	-0.012	94	4091	0.0392	0.0510	
19 2-Methylbutane	43	4.850	4.856	-0.006	92	4787	0.0392	0.0634	
20 Acrolein	56	5.028	5.033	-0.005	33	2738	0.0392	0.0944	
21 Trichlorofluoromethane	101	5.028	5.036	-0.008	96	11674	0.0392	0.0466	
23 Acetone	58	5.130	5.133	-0.003	97	9410	0.1176	0.2027	
24 Isopropyl alcohol	45	5.222	5.232	-0.010	86	26966	0.1176	0.1975	
25 Pentane	72	5.233	5.238	-0.005	69	891	0.0392	0.0454	
26 Ethyl ether	31	5.384	5.377	0.007	95	6507	0.0392	0.0571	
27 1,1-Dichloroethene	96	5.626	5.639	-0.013	95	5320	0.0392	0.0479	
28 Acrylonitrile	53	5.707	5.712	-0.005	88	4003	0.0392	0.0562	
29 2-Methyl-2-propanol	59	5.751	5.746	0.004	96	8728	0.0392	0.0585	
30 1,1,2-Trichloro-1,2,2-trif	101	5.810	5.819	-0.009	91	10810	0.0392	0.0508	
31 Methylene Chloride	84	5.918	5.931	-0.013	94	12665	0.0392	0.1212	
32 3-Chloro-1-propene	39	5.934	5.952	-0.018	92	4948	0.0392	0.0630	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.058	6.072	-0.014	99	14281	0.0392	0.0499	
34 trans-1,2-Dichloroethene	96	6.656	6.667	-0.011	93	5900	0.0392	0.0500	
35 2-Methylpentane	43	6.710	6.719	-0.009	93	11826	0.0392	0.0545	
36 Methyl tert-butyl ether	73	6.802	6.797	0.005	96	13500	0.0392	0.0542	
37 1,1-Dichloroethane	63	7.012	7.035	-0.023	99	9512	0.0392	0.0512	
38 Vinyl acetate	43	7.142	7.147	-0.005	99	14427	0.0392	0.0548	
39 2-Butanone (MEK)	72	7.535	7.536	-0.001	98	2617	0.0392	0.0538	
40 Hexane	56	7.611	7.622	-0.011	90	4305	0.0392	0.0564	
41 Isopropyl ether	45	7.767	7.761	0.006	96	19838	0.0392	0.0569	
42 cis-1,2-Dichloroethene	96	7.934	7.944	-0.010	88	6306	0.0392	0.0513	
43 Ethyl acetate	43	8.134	8.132	0.002	99	12773	0.0392	0.0576	
44 Chloroform	83	8.263	8.274	-0.011	91	10569	0.0392	0.0504	
45 Tert-butyl ethyl ether	59	8.398	8.396	0.002	93	14238	0.0392	0.0560	
46 Tetrahydrofuran	42	8.652	8.639	0.013	91	6444	0.0392	0.0534	
47 1,1,1-Trichloroethane	97	9.245	9.254	-0.009	94	10963	0.0392	0.0523	
48 1,2-Dichloroethane	62	9.315	9.328	-0.013	94	5803	0.0392	0.0492	
49 n-Butanol	31	9.849	9.825	0.024	70	2466	0.0392	0.0622	
50 Benzene	78	9.827	9.838	-0.011	95	18024	0.0392	0.0529	
51 Cyclohexane	69	9.865	9.866	-0.001	93	2706	0.0392	0.0556	
52 Carbon tetrachloride	117	9.865	9.878	-0.013	97	9338	0.0392	0.0448	
53 2,3-Dimethylpentane	71	10.016	10.026	-0.010	94	3908	0.0392	0.0541	
54 Thiophene	84	10.091	10.107	-0.016	91	9121	0.0392	0.0516	
55 Tert-amyl methyl ether	73	10.377	10.361	0.016	47	17664	0.0392	0.0679	
56 Isooctane	57	10.685	10.692	-0.007	99	25576	0.0392	0.0550	
57 1,2-Dichloropropane	63	11.067	11.078	-0.011	72	6389	0.0392	0.0543	
58 n-Heptane	71	11.078	11.086	-0.008	88	5918	0.0392	0.0534	
59 Trichloroethene	130	11.127	11.141	-0.014	85	8089	0.0392	0.0525	
60 Dibromomethane	93	11.175	11.186	-0.011	82	6462	0.0392	0.0545	
61 Dichlorobromomethane	83	11.342	11.354	-0.012	97	9159	0.0392	0.0465	
62 1,4-Dioxane	88	11.369	11.365	0.004	72	3109	0.0392	0.0569	
63 Methyl methacrylate	41	11.488	11.488	0.000	90	7298	0.0392	0.0594	
64 Methylcyclohexane	83	11.952	11.963	-0.011	95	12097	0.0392	0.0535	
65 4-Methyl-2-pentanone (MIBK	43	12.362	12.355	0.007	96	13688	0.0392	0.0595	
66 cis-1,3-Dichloropropene	75	12.394	12.405	-0.011	95	8151	0.0392	0.0479	
67 trans-1,3-Dichloropropene	75	13.116	13.126	-0.010	98	7298	0.0392	0.0497	
68 Toluene	91	13.262	13.269	-0.007	92	20790	0.0392	0.0575	
69 1,1,2-Trichloroethane	83	13.321	13.323	-0.002	95	6192	0.0392	0.0543	
70 2-Methylthiophene	97	13.418	13.417	0.001	97	17052	0.0392	0.0542	
71 3-Methylthiophene	97	13.618	13.625	-0.007	97	16974	0.0392	0.0547	
72 2-Hexanone	58	13.753	13.752	0.001	93	5289	0.0392	0.0496	
73 Chlorodibromomethane	129	14.039	14.042	-0.003	96	9397	0.0392	0.0451	
74 n-Octane	85	14.055	14.060	-0.005	95	5631	0.0392	0.0489	
75 Ethylene Dibromide	107	14.330	14.336	-0.006	97	10472	0.0392	0.0526	
76 Tetrachloroethene	129	14.454	14.456	-0.002	92	7610	0.0392	0.0548	
77 Chlorobenzene	112	15.338	15.342	-0.004	98	19315	0.0392	0.0649	
78 2,3-Dimethylheptane	43	15.446	15.444	0.002	97	19272	0.0392	0.0617	
79 Ethylbenzene	91	15.656	15.660	-0.004	97	27613	0.0392	0.0568	
80 2-Ethylthiophene	97	15.759	15.758	0.001	97	20491	0.0392	0.0574	
81 m-Xylene & p-Xylene	91	15.823	15.830	-0.007	98	40874	0.0784	0.1120	
82 Bromoform	173	16.233	16.235	-0.002	98	11129	0.0392	0.0415	
83 Styrene	104	16.293	16.296	-0.003	98	12575	0.0392	0.0486	
84 n-Nonane	57	16.325	16.324	0.001	92	13198	0.0392	0.0628	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	16.357	16.359	-0.002	98	21175	0.0392	0.0555	
86 1,1,2,2-Tetrachloroethane	83	16.670	16.671	-0.001	98	15283	0.0392	0.0527	
87 1,2,3-Trichloropropane	110	16.832	16.831	0.001	97	4448	0.0392	0.0545	
88 Isopropylbenzene	105	16.977	16.977	0.000	47	32889	0.0392	0.0611	
89 N-Propylbenzene	120	17.554	17.552	0.002	99	8851	0.0392	0.0593	
90 2-Chlorotoluene	126	17.576	17.578	-0.002	91	9006	0.0392	0.0641	
91 4-Ethyltoluene	105	17.716	17.718	-0.002	100	31303	0.0392	0.0579	
92 1,3,5-Trimethylbenzene	120	17.797	17.802	-0.005	94	15234	0.0392	0.0581	
93 Alpha Methyl Styrene	118	18.040	18.042	-0.002	91	9576	0.0392	0.0461	
94 n-Decane	57	18.164	18.166	-0.002	89	14041	0.0392	0.0525	
95 tert-Butylbenzene	119	18.250	18.251	-0.001	95	27995	0.0392	0.0607	
96 1,2,4-Trimethylbenzene	105	18.266	18.267	-0.001	94	26327	0.0392	0.0561	
97 1,3-Dichlorobenzene	146	18.530	18.531	-0.001	94	22748	0.0392	0.0684	
98 sec-Butylbenzene	105	18.541	18.543	-0.002	99	39958	0.0392	0.0606	
99 Benzyl chloride	91	18.606	18.607	-0.001	100	20327	0.0392	0.0561	
100 1,4-Dichlorobenzene	146	18.622	18.625	-0.003	95	22707	0.0392	0.0672	
101 4-Isopropyltoluene	119	18.719	18.720	-0.001	96	30360	0.0392	0.0564	
102 1,2,3-Trimethylbenzene	105	18.762	18.762	0.000	96	21140	0.0392	0.0565	
103 Butylcyclohexane	83	18.849	18.851	-0.002	97	20618	0.0392	0.0592	
104 1,2-Dichlorobenzene	146	19.000	19.003	-0.003	98	22567	0.0392	0.0695	
105 2,3-Dihydroindene	117	19.010	19.012	-0.002	94	25536	0.0392	0.0612	
106 Indene	116	19.145	19.146	-0.001	89	17799	0.0392	0.0448	
107 n-Butylbenzene	91	19.183	19.183	0.000	97	29593	0.0392	0.0569	
108 Undecane	57	19.560	19.561	-0.001	96	16395	0.0392	0.0542	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.577	19.574	0.003	98	24347	0.0392	0.0495	
110 1,2-Dibromo-3-Chloropropan	157	19.630	19.631	-0.001	90	8013	0.0392	0.0470	
111 1,2,4,5-Tetramethylbenzene	119	19.976	19.977	-0.001	99	27503	0.0392	0.0579	
112 1,2,3,5-Tetramethylbenzene	119	20.030	20.031	-0.001	98	17130	0.0392	0.0575	
113 1,2,3,4-Tetramethylbenzene	119	20.439	20.439	0.000	99	23092	0.0392	0.0574	
114 Dodecane	57	20.660	20.664	-0.004	93	13103	0.0392	0.0415	
115 1,2,4-Trichlorobenzene	180	20.790	20.788	0.002	92	23496	0.0392	0.0608	
116 Naphthalene	128	20.925	20.922	0.003	99	42548	0.0392	0.0597	
117 Benzo(b)thiophene	134	21.022	21.024	-0.002	99	28196	0.0392	0.0721	
118 Hexachlorobutadiene	225	21.173	21.173	0.000	94	18186	0.0392	0.0528	
119 1,2,3-Trichlorobenzene	180	21.216	21.217	-0.001	93	23145	0.0392	0.0659	
120 2-Methylnaphthalene	142	21.933	21.933	0.000	96	7017	0.1225	0.0834	
121 1-Methylnaphthalene	142	22.057	22.057	0.000	94	5887	0.1225	0.0749	
A 122 C6 Range	1	7.609	(7.573-7.629)		0	38605	0.0392	0.0578	
S 124 Xylenes, Total	100				0		0.1176	0.1675	
S 125 1,2-Dichloroethene, Total	1				0		0.0784	0.1013	

Reagents:

40L12DNP_00009	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

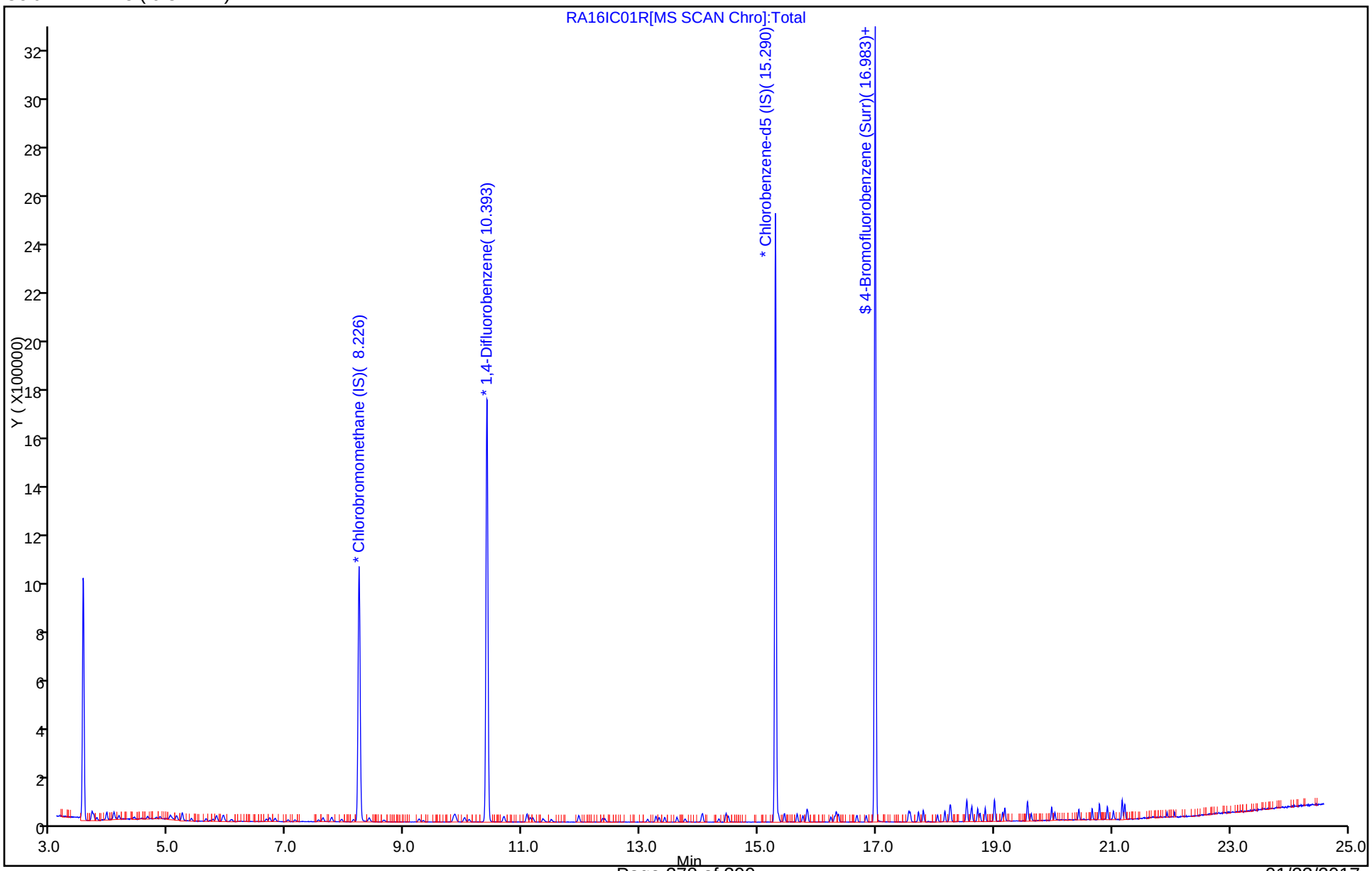
Report Date: 17-Jan-2017 14:55:42 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Injection Date:	17-Jan-2017 10:29:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L1			Worklist Smp#:	24
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

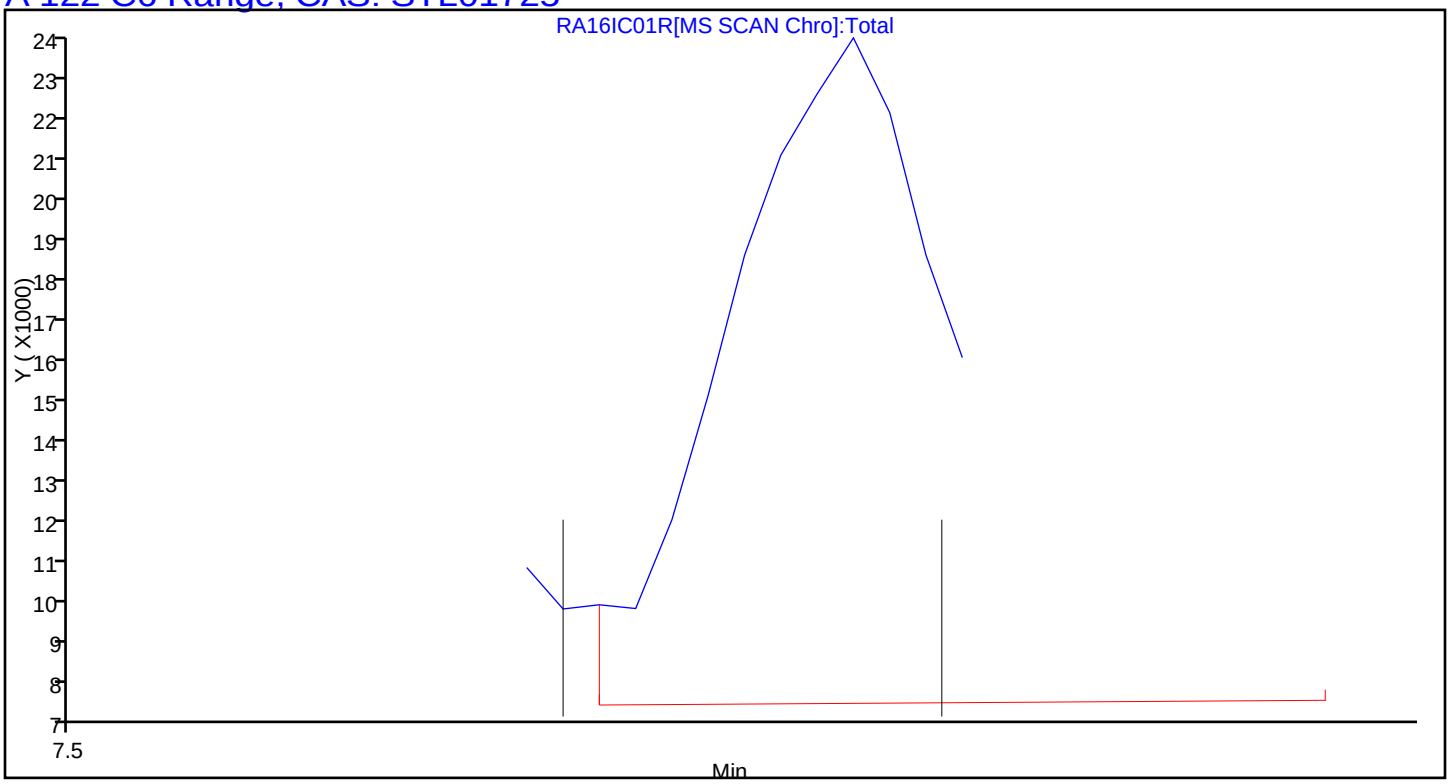


Report Date: 17-Jan-2017 14:55:42 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D				
Injection Date:	17-Jan-2017 10:29:30	Instrument ID:	MR		
Lims ID:	IC L1				
Client ID:					
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Lab Sample ID: ICV 140-7241/23 Calibration Date: 11/26/2016 12:43

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JK25ICVX.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3608	0.3705		5.14	5.00	2.7	35.0
Propene	Ave	1.245	1.241		4.99	5.00	-0.3	35.0
Dichlorodifluoromethane	Ave	3.239	3.419		5.28	5.00	5.6	35.0
Chloromethane	Ave	0.4618	0.4743		5.14	5.00	2.7	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	1.790	1.884		5.27	5.00	5.3	35.0
Acetaldehyde	Ave	0.4989	0.3583		18.0	25.0	-28.2	35.0
Vinyl chloride	Ave	1.385	1.509		5.45	5.00	8.9	35.0
1,3-Butadiene	Ave	1.112	1.176		5.29	5.00	5.8	35.0
Butane	Ave	2.414	2.507		5.20	5.00	3.9	35.0
Bromomethane	Ave	1.232	1.311		5.32	5.00	6.4	35.0
Chloroethane	Ave	0.6570	0.7069		5.38	5.00	7.6	35.0
Ethanol	Ave	0.5282	0.5157		24.4	25.0	-2.4	35.0
Vinyl bromide	Ave	1.206	1.358		5.63	5.00	12.6	35.0
2-Methylbutane	Ave	1.767	1.965		5.56	5.00	11.2	35.0
Trichlorofluoromethane	Ave	3.295	3.456		5.25	5.00	4.9	35.0
Acrolein	Ave	0.3877	0.2724		3.52	5.00	-29.7	35.0
Acetonitrile	Ave	0.4770	0.4058		4.26	5.00	-14.9	35.0
Acetone	Ave	0.4144	0.3857		14.0	15.0	-6.9	35.0
Isopropyl alcohol	Ave	1.928	1.788		13.9	15.0	-7.3	35.0
Pentane	Ave	0.1852	0.2026		5.47	5.00	9.4	35.0
Ethyl ether	Ave	1.358	1.081		3.98	5.00	-20.4	35.0
1,1-Dichloroethene	Ave	1.204	1.241		5.16	5.00	3.1	35.0
tert-Butyl alcohol	Ave	1.944	2.069		5.32	5.00	6.4	35.0
Acrylonitrile	Ave	0.7642	0.5954		3.90	5.00	-22.1	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.668	2.817		5.28	5.00	5.6	35.0
Methylene Chloride	Ave	1.179	1.175		4.98	5.00	-0.4	35.0
3-Chloropropene	Ave	1.388	1.376		4.96	5.00	-0.8	35.0
Carbon disulfide	Ave	3.546	3.662		5.17	5.00	3.2	35.0
trans-1,2-Dichloroethene	Ave	1.210	1.236		5.11	5.00	2.1	35.0
2-Methylpentane	Ave	3.129	3.555		5.68	5.00	13.6	35.0
Methyl tert-butyl ether	Ave	2.474	2.133		4.31	5.00	-13.8	35.0
1,1-Dichloroethane	Ave	2.301	2.250		4.89	5.00	-2.2	35.0
Vinyl acetate	Ave	2.833	2.267		4.00	5.00	-20.0	35.0
2-Butanone (MEK)	Ave	0.3626	0.3534		4.88	5.00	-2.5	35.0
Hexane	Ave	1.065	1.065		5.00	5.00	0.0	35.0
Isopropyl ether	Ave	3.770	3.246		4.31	5.00	-13.9	35.0
cis-1,2-Dichloroethene	Ave	1.193	1.143		4.79	5.00	-4.2	35.0
Ethyl acetate	Ave	2.116	1.904		4.50	5.00	-10.0	35.0
Chloroform	Ave	2.509	2.224		4.44	5.00	-11.3	35.0
Tert-butyl ethyl ether	Ave	2.895	2.951		5.10	5.00	1.9	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Lab Sample ID: ICV 140-7241/23 Calibration Date: 11/26/2016 12:43

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JK25ICVX.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.177	1.029		4.37	5.00	-12.6	35.0
1,1,1-Trichloroethane	Ave	2.589	2.431		4.70	5.00	-6.1	35.0
1,2-Dichloroethane	Ave	0.3728	0.3331		4.47	5.00	-10.6	35.0
1-Butanol	Ave	0.1194	0.1320		5.53	5.00	10.5	35.0
Benzene	Ave	0.7266	0.6472		4.46	5.00	-10.9	35.0
Cyclohexane	Ave	0.1325	0.1354		5.11	5.00	2.2	35.0
Carbon tetrachloride	Ave	0.6405	0.5383		4.20	5.00	-16.0	35.0
2,3-Dimethylpentane	Ave	0.1667	0.1469		4.41	5.00	-11.9	35.0
Thiophene	Ave	0.4153	0.3865		4.66	5.00	-6.9	35.0
Tert-amyl methyl ether	Ave	0.6219	0.6301		5.07	5.00	1.3	35.0
2,2,4-Trimethylpentane	Ave	1.378	1.272		4.62	5.00	-7.7	35.0
Heptane	Ave	0.2546	0.2203		4.33	5.00	-13.5	35.0
1,2-Dichloropropane	Ave	0.2944	0.2593		4.41	5.00	-11.9	35.0
Trichloroethene	Ave	0.3420	0.3070		4.49	5.00	-10.2	35.0
Dibromomethane	Ave	0.3248	0.2893		4.46	5.00	-10.9	35.0
Bromodichloromethane	Ave	0.5654	0.4828		4.27	5.00	-14.6	35.0
1,4-Dioxane	Ave	0.0770	0.0788		5.12	5.00	2.3	35.0
Methyl methacrylate	Ave	0.2784	0.2524		4.53	5.00	-9.4	35.0
Methylcyclohexane	Ave	0.5528	0.4249		3.84	5.00	-23.1	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5507	0.5440		4.94	5.00	-1.2	35.0
cis-1,3-Dichloropropene	Ave	0.3821	0.3480		4.56	5.00	-8.9	35.0
trans-1,3-Dichloropropene	Ave	0.3443	0.2824		4.10	5.00	-18.0	35.0
Toluene	Ave	0.8601	0.7365		4.28	5.00	-14.4	35.0
1,1,2-Trichloroethane	Ave	0.2704	0.2321		4.29	5.00	-14.1	35.0
2-Methylthiophene	Ave	0.7217	0.6585		4.56	5.00	-8.8	35.0
3-Methylthiophene	Ave	0.6890	0.6262		4.55	5.00	-9.1	35.0
2-Hexanone	Ave	0.2511	0.2749		5.48	5.00	9.5	35.0
Octane	Ave	0.2880	0.2562		4.45	5.00	-11.0	35.0
Dibromochloromethane	Ave	0.6304	0.5684		4.51	5.00	-9.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.4549	0.4014		4.41	5.00	-11.8	35.0
Tetrachloroethene	Ave	0.3768	0.3388		4.50	5.00	-10.1	35.0
Chlorobenzene	Ave	0.6754	0.5874		4.35	5.00	-13.0	35.0
2,3-Dimethylheptane	Ave	1.076	1.001		4.66	5.00	-6.9	35.0
Ethylbenzene	Ave	1.020	0.8619		4.23	5.00	-15.5	35.0
2-Ethylthiophene	Ave	0.7628	0.6393		4.19	5.00	-16.2	35.0
m-Xylene & p-Xylene	Ave	0.7527	0.6661		8.85	10.0	-11.5	35.0
Nonane	Ave	0.6435	0.5289		4.11	5.00	-17.8	35.0
Bromoform	Ave	0.6005	0.4851		4.04	5.00	-19.2	35.0
Styrene	Ave	0.5352	0.4649		4.35	5.00	-13.1	35.0
o-Xylene	Ave	0.8117	0.6937		4.28	5.00	-14.5	35.0
1,1,2,2-Tetrachloroethane	Ave	0.5908	0.5430		4.60	5.00	-8.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Lab Sample ID: ICV 140-7241/23 Calibration Date: 11/26/2016 12:43

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JK25ICVX.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1356	0.1254		4.63	5.00	-7.5	35.0
Isopropylbenzene	Ave	1.098	0.9755		4.44	5.00	-11.2	35.0
Propylbenzene	Ave	0.2584	0.2385		4.62	5.00	-7.7	35.0
2-Chlorotoluene	Ave	0.2744	0.2388		4.35	5.00	-13.0	35.0
4-Ethyltoluene	Ave	0.9183	0.8030		4.37	5.00	-12.6	35.0
1,3,5-Trimethylbenzene	Ave	0.4630	0.4348		4.70	5.00	-6.1	35.0
Alpha Methyl Styrene	Ave	0.3575	0.3290		4.60	5.00	-8.0	35.0
Decane	Ave	0.6508	0.5684		4.37	5.00	-12.7	35.0
tert-Butylbenzene	Ave	0.9343	0.8580		4.59	5.00	-8.2	35.0
1,2,4-Trimethylbenzene	Ave	0.7988	0.7413		4.64	5.00	-7.2	35.0
sec-Butylbenzene	Ave	1.225	1.102		4.50	5.00	-10.1	35.0
1,3-Dichlorobenzene	Ave	0.4476	0.3966		4.43	5.00	-11.4	35.0
Benzyl chloride	Ave	0.3881	0.4276		5.51	5.00	10.2	35.0
1,4-Dichlorobenzene	Ave	0.3490	0.3506		5.03	5.00	0.5	35.0
4-Isopropyltoluene	Ave	0.9555	0.8776		4.59	5.00	-8.2	35.0
1,2,3-Trimethylbenzene	Ave	0.6004	0.6092		5.08	5.00	1.5	35.0
Butylcyclohexane	Ave	0.7729	0.6164		3.99	5.00	-20.2	35.0
1,2-Dichlorobenzene	Ave	0.4533	0.4131		4.56	5.00	-8.9	35.0
Indane	Ave	0.6991	0.6137		4.39	5.00	-12.2	35.0
Indene	Ave	0.4345	0.5118		5.89	5.00	17.8	35.0
Butylbenzene	Ave	0.8017	0.7838		4.89	5.00	-2.2	35.0
Undecane	Ave	0.5842	0.6440		5.51	5.00	10.2	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.5891	0.7608		6.46	5.00	29.1	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.1560	0.1383		4.44	5.00	-11.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	0.6898	0.8152		5.91	5.00	18.2	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.4240	0.5148		6.07	5.00	21.4	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.5362	0.6309		5.89	5.00	17.7	35.0
Dodecane	Ave	0.4832	0.5920		6.13	5.00	22.5	35.0
1,2,4-Trichlorobenzene	Ave	0.1304	0.1647		6.32	5.00	26.3	35.0
Naphthalene	Ave	0.3491	0.3828		5.49	5.00	9.7	35.0
Benzo(b)thiophene	Ave	0.1359	0.1714		6.31	5.00	26.1	35.0
Hexachlorobutadiene	Ave	0.5047	0.4629		4.59	5.00	-8.3	35.0
1,2,3-Trichlorobenzene	Ave	0.1705	0.1957		5.74	5.00	14.7	35.0
2-Methylnaphthalene	Ave	0.0343	0.0305		13.9	15.6	-11.1	50.0
1-Methylnaphthalene	Ave	0.0381	0.0373		15.3	15.6	-2.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6334	0.6342		10.0	10.0	0.1	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25ICVX.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 26-Nov-2016 12:43:30 ALS Bottle#: 9 Worklist Smp#: 23
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003656-023
Misc. Info.: 059230/S19
Operator ID: 007126 Instrument ID: MJ
Sublist:

Method: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Nov-2016 15:29:56 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: liul Date: 28-Nov-2016 15:29:56

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.633	8.640	-0.007	98	319485	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.833	10.843	-0.010	96	1407958	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.605	15.609	-0.004	89	1180826	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.246	17.244	-0.008	96	748927	4.00	4.01	
6 Chlorodifluoromethane	67	3.566	3.566	-0.002	98	59211	2.00	2.05	
7 Propene	41	3.577	3.575	-0.001	98	198415	2.00	1.99	
8 Dichlorodifluoromethane	85	3.625	3.625	-0.002	99	546467	2.00	2.11	
9 Chloromethane	52	3.803	3.803	-0.004	99	75811	2.00	2.06	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.808	3.807	-0.002	92	301091	2.00	2.11	
11 Acetaldehyde	44	3.953	3.950	0.000	95	286311	10.0	7.18	
12 Vinyl chloride	62	3.969	3.966	0.000	99	241188	2.00	2.18	
13 Butane	43	4.055	4.052	0.000	86	400729	2.00	2.08	
14 Butadiene	54	4.055	4.054	-0.002	66	187991	2.00	2.12	
15 Bromomethane	94	4.367	4.364	0.000	99	209548	2.00	2.13	
16 Chloroethane	64	4.502	4.501	-0.002	88	112981	2.00	2.15	
17 Ethanol	31	4.593	4.599	-0.009	97	412136	10.0	9.77	
18 Vinyl bromide	106	4.792	4.794	-0.005	98	217122	2.00	2.25	
19 2-Methylbutane	43	4.841	4.841	-0.004	94	314019	2.00	2.22	
20 Trichlorofluoromethane	101	5.056	5.056	-0.004	100	552338	2.00	2.10	
21 Acrolein	56	5.067	5.070	-0.007	96	43541	2.00	1.41	
22 Acetonitrile	40	5.131	5.134	-0.007	98	64852	2.00	1.70	
23 Acetone	58	5.185	5.188	-0.007	99	184956	6.00	5.59	
24 Isopropyl alcohol	45	5.260	5.269	-0.013	94	857317	6.00	5.57	
25 Pentane	72	5.276	5.275	-0.003	97	32388	2.00	2.19	
26 Ethyl ether	31	5.443	5.446	-0.008	90	172764	2.00	1.59	
27 1,1-Dichloroethene	96	5.755	5.754	-0.003	95	198329	2.00	2.06	
29 Acrylonitrile	53	5.863	5.860	-0.002	93	95160	2.00	1.56	
28 2-Methyl-2-propanol	59	5.852	5.863	-0.016	95	330611	2.00	2.13	
30 1,1,2-Trichloro-1,2,2-trif	101	5.927	5.927	-0.004	97	450262	2.00	2.11	
31 Methylene Chloride	84	6.100	6.100	-0.005	95	187740	2.00	1.99	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.116	6.116	-0.005	95	219994	2.00	1.98	
33 Carbon disulfide	76	6.261	6.259	-0.003	100	585225	2.00	2.07	
34 trans-1,2-Dichloroethene	96	6.901	6.902	-0.007	95	197533	2.00	2.04	
35 2-Methylpentane	43	6.917	6.917	-0.006	96	568210	2.00	2.27	
36 Methyl tert-butyl ether	73	7.036	7.043	-0.013	97	340973	2.00	1.73	
37 1,1-Dichloroethane	63	7.321	7.320	-0.005	99	359668	2.00	1.96	
38 Vinyl acetate	43	7.428	7.429	-0.007	100	362320	2.00	1.60	
39 2-Butanone (MEK)	72	7.886	7.888	-0.009	95	56477	2.00	1.95	
40 Hexane	56	7.891	7.894	-0.010	82	170287	2.00	2.00	
41 Isopropyl ether	45	8.058	8.065	-0.014	97	518893	2.00	1.72	
42 cis-1,2-Dichloroethene	96	8.300	8.301	-0.007	98	182628	2.00	1.92	
43 Ethyl acetate	43	8.499	8.501	-0.009	97	304374	2.00	1.80	
44 Chloroform	83	8.644	8.645	-0.007	97	355453	2.00	1.77	
45 Tert-butyl ethyl ether	59	8.735	8.743	-0.015	97	471765	2.00	2.04	
46 Tetrahydrofuran	42	9.069	9.076	-0.014	93	164428	2.00	1.75	
47 1,1,1-Trichloroethane	97	9.672	9.671	-0.007	97	388517	2.00	1.88	
48 1,2-Dichloroethane	62	9.784	9.784	-0.008	96	234633	2.00	1.79	
49 n-Butanol	31	10.247	10.263	-0.025	92	92991	2.00	2.21	
50 Cyclohexane	69	10.279	10.276	-0.006	84	95347	2.00	2.04	
51 Benzene	78	10.279	10.277	-0.006	98	455865	2.00	1.78	
52 Carbon tetrachloride	117	10.301	10.300	-0.007	96	379159	2.00	1.68	
53 2,3-Dimethylpentane	71	10.398	10.398	-0.009	91	103462	2.00	1.76	
54 Thiophene	84	10.559	10.556	-0.006	96	272232	2.00	1.86	
55 Tert-amyl methyl ether	73	10.769	10.784	-0.022	95	372270	2.00	2.03	
56 Isooctane	57	11.049	11.049	-0.009	98	895651	2.00	1.85	
57 n-Heptane	71	11.436	11.431	-0.005	95	155166	2.00	1.73	
58 1,2-Dichloropropane	63	11.517	11.517	-0.009	89	182644	2.00	1.76	
59 Trichloroethene	130	11.554	11.551	-0.007	96	216204	2.00	1.80	
60 Dibromomethane	93	11.640	11.638	-0.008	95	203751	2.00	1.78	
62 Dichlorobromomethane	83	11.791	11.785	-0.004	98	340048	2.00	1.71	
61 1,4-Dioxane	88	11.818	11.825	-0.017	96	55490	2.00	2.05	
63 Methyl methacrylate	41	11.893	11.892	-0.009	93	177747	2.00	1.81	
64 Methylcyclohexane	83	12.329	12.325	-0.007	91	299244	2.00	1.54	
65 4-Methyl-2-pentanone (MIBK	43	12.754	12.753	-0.010	97	383197	2.00	1.98	
66 cis-1,3-Dichloropropene	75	12.802	12.798	-0.006	98	245081	2.00	1.82	
67 trans-1,3-Dichloropropene	75	13.502	13.501	-0.007	96	166812	2.00	1.64	
68 Toluene	91	13.625	13.622	-0.005	92	435080	2.00	1.71	
69 1,1,2-Trichloroethane	83	13.701	13.699	-0.008	98	137125	2.00	1.72	
70 2-Methylthiophene	97	13.776	13.776	-0.008	98	389010	2.00	1.83	
71 3-Methylthiophene	97	13.980	13.977	-0.005	99	369898	2.00	1.82	
72 2-Hexanone	58	14.093	14.097	-0.013	91	162397	2.00	2.19	
73 n-Octane	85	14.319	14.314	-0.003	97	151351	2.00	1.78	
74 Chlorodibromomethane	129	14.405	14.403	-0.007	98	335786	2.00	1.80	
75 Ethylene Dibromide	107	14.701	14.697	-0.005	98	237110	2.00	1.77	
76 Tetrachloroethene	129	14.771	14.769	-0.006	95	200145	2.00	1.80	
78 Chlorobenzene	112	15.653	15.649	-0.005	94	346978	2.00	1.74	
77 2,3-Dimethylheptane	43	15.670	15.668	-0.007	94	591586	2.00	1.86	
79 Ethylbenzene	91	15.939	15.938	-0.008	99	509142	2.00	1.69	
80 2-Ethylthiophene	97	16.041	16.041	-0.009	98	377633	2.00	1.68	
81 m-Xylene & p-Xylene	91	16.100	16.100	-0.010	100	786998	4.00	3.54	
82 n-Nonane	57	16.520	16.518	-0.008	94	312450	2.00	1.64	
83 Bromoform	173	16.552	16.549	-0.007	96	286564	2.00	1.62	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.568	16.565	-0.007	98	274640	2.00	1.74	
85 o-Xylene	91	16.627	16.625	-0.007	99	409811	2.00	1.71	
86 1,1,2,2-Tetrachloroethane	83	16.955	16.952	-0.007	99	320773	2.00	1.84	
87 1,2,3-Trichloropropane	110	17.117	17.112	-0.005	96	74078	2.00	1.85	
88 Isopropylbenzene	105	17.214	17.211	-0.007	97	576277	2.00	1.78	
89 N-Propylbenzene	120	17.762	17.757	-0.005	99	140866	2.00	1.85	
90 2-Chlorotoluene	126	17.805	17.803	-0.008	98	141077	2.00	1.74	
91 4-Ethyltoluene	105	17.913	17.911	-0.008	98	474329	2.00	1.75	
92 1,3,5-Trimethylbenzene	120	17.988	17.985	-0.007	92	256851	2.00	1.88	
93 Alpha Methyl Styrene	118	18.225	18.218	-0.004	86	194376	2.00	1.84	
94 n-Decane	57	18.279	18.276	-0.008	87	335757	2.00	1.75	
95 tert-Butylbenzene	119	18.413	18.411	-0.009	92	506869	2.00	1.84	
96 1,2,4-Trimethylbenzene	105	18.429	18.425	-0.007	96	437933	2.00	1.86	
97 sec-Butylbenzene	105	18.687	18.683	-0.007	98	650880	2.00	1.80	
98 1,3-Dichlorobenzene	146	18.704	18.699	-0.006	98	234301	2.00	1.77	
99 Benzyl chloride	91	18.779	18.775	-0.007	98	252607	2.00	2.20	
100 1,4-Dichlorobenzene	146	18.795	18.788	-0.004	95	207093	2.00	2.01	
101 4-Isopropyltoluene	119	18.854	18.846	-0.003	97	518443	2.00	1.84	
102 1,2,3-Trimethylbenzene	105	18.908	18.901	-0.004	99	359883	2.00	2.03	
103 Butylcyclohexane	83	18.962	18.953	-0.002	89	364150	2.00	1.60	
104 2,3-Dihydroindene	117	19.156	19.147	-0.003	93	362541	2.00	1.76	
105 1,2-Dichlorobenzene	146	19.156	19.148	-0.003	80	244034	2.00	1.82	
107 Indene	116	19.285	19.279	-0.005	89	302317	2.00	2.36	
106 n-Butylbenzene	91	19.290	19.282	-0.004	98	463024	2.00	1.96	
108 Undecane	57	19.602	19.594	-0.003	92	380441	2.00	2.21	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.661	19.656	-0.006	98	449409	2.00	2.58	
110 1,2-Dibromo-3-Chloropropan	157	19.758	19.754	-0.007	95	81710	2.00	1.77	
111 1,2,4,5-Tetramethylbenzene	119	20.049	20.041	-0.004	97	481566	2.00	2.36	
112 1,2,3,5-Tetramethylbenzene	119	20.102	20.096	-0.006	95	304107	2.00	2.43	
113 1,2,3,4-Tetramethylbenzene	119	20.500	20.493	-0.005	98	372670	2.00	2.35	
114 Dodecane	57	20.662	20.653	-0.003	91	349716	2.00	2.45	
115 1,2,4-Trichlorobenzene	180	20.861	20.853	-0.004	94	97280	2.00	2.53	
116 Naphthalene	128	21.001	20.995	-0.006	99	226137	2.00	2.19	
117 Benzo(b)thiophene	134	21.108	21.100	-0.004	99	101236	2.00	2.52	
118 Hexachlorobutadiene	225	21.221	21.213	-0.004	95	273423	2.00	1.83	
119 1,2,3-Trichlorobenzene	180	21.291	21.285	-0.006	94	115595	2.00	2.30	
120 2-Methylnaphthalene	142	21.964	21.955	-0.003	99	56246	6.25	5.56	
121 1-Methylnaphthalene	142	22.093	22.082	-0.002	99	68794	6.25	6.11	
A 124 Toluene Range	1	13.630	(13.608-13.653)		0	1111076	2.00	1.67	
A 125 C8 Range	1	14.314	(14.282-14.345)		0	1705597	2.00	1.88	
S 126 Xylenes, Total	100				0		6.00	5.25	
S 127 1,2-Dichloroethene, Total	1				0		4.00	3.96	

Reagents:

40CV101S_00019	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

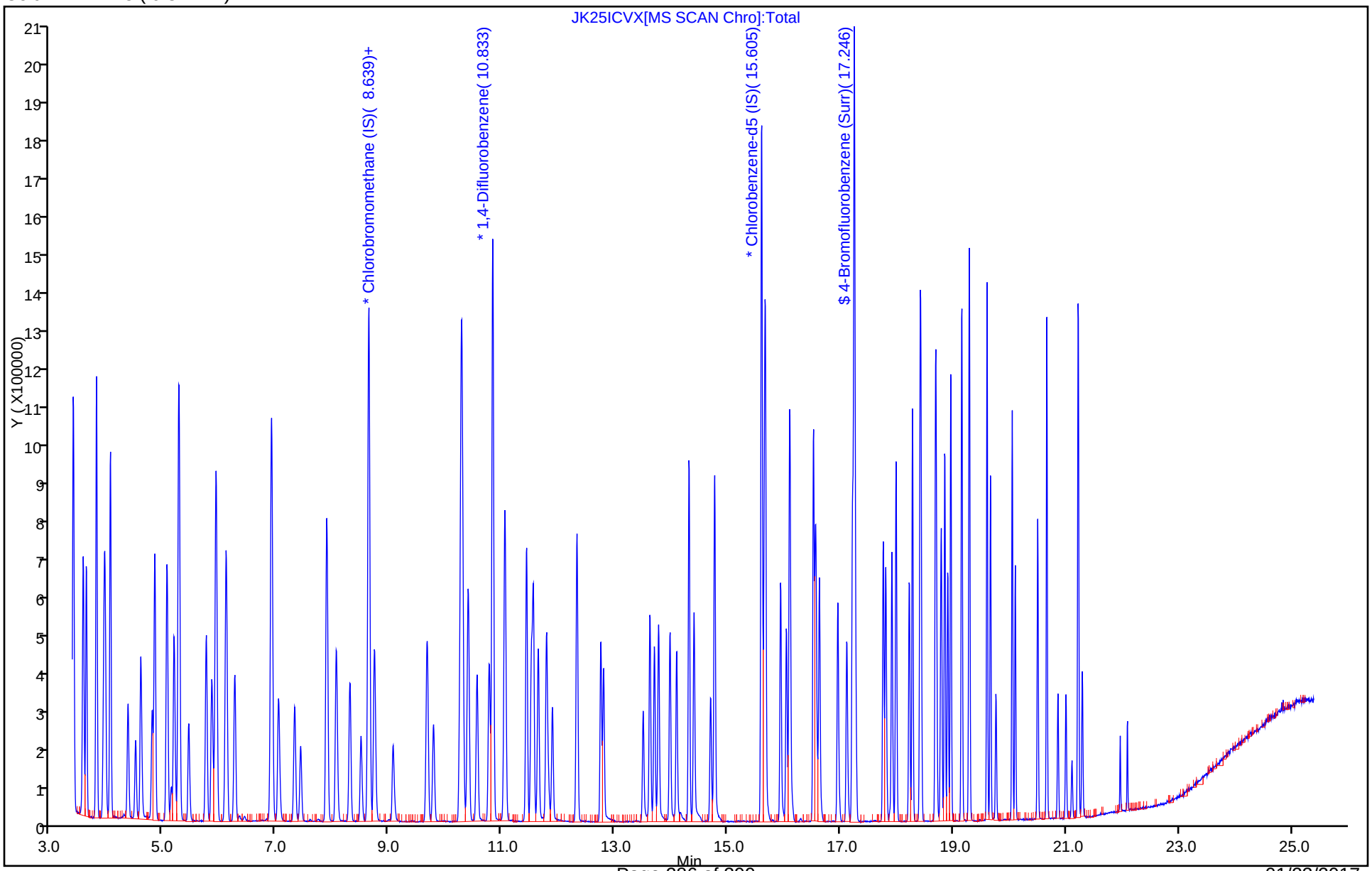
Report Date: 28-Nov-2016 15:29:57 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25ICVX.D

Injection Date:	26-Nov-2016 12:43:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	ICV			Worklist Smp#:	23
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Lab Sample ID: CCVIS 140-7893/2 Calibration Date: 01/19/2017 12:03

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JCCVA19.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3608	0.3097		1.72	2.00	-14.2	30.0
Propene	Ave	1.245	1.208		1.94	2.00	-3.0	30.0
Dichlorodifluoromethane	Ave	3.239	2.959		1.83	2.00	-8.6	30.0
Chloromethane	Ave	0.4618	0.4715		2.04	2.00	2.1	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	1.790	2.002		2.24	2.00	11.9	30.0
Acetaldehyde	Ave	0.4989	0.3560		7.14	10.0	-28.6	30.0
Vinyl chloride	Ave	1.385	1.401		2.02	2.00	1.1	30.0
1,3-Butadiene	Ave	1.112	1.117		2.01	2.00	0.5	30.0
Butane	Ave	2.414	2.345		1.94	2.00	-2.8	30.0
Bromomethane	Ave	1.232	1.237		2.01	2.00	0.4	30.0
Chloroethane	Ave	0.6570	0.6497		1.98	2.00	-1.1	30.0
Ethanol	Ave	0.5282	0.4892		9.27	10.0	-7.4	30.0
Vinyl bromide	Ave	1.206	1.171		1.94	2.00	-2.9	30.0
2-Methylbutane	Ave	1.767	1.748		1.98	2.00	-1.1	30.0
Trichlorofluoromethane	Ave	3.295	3.174		1.93	2.00	-3.7	30.0
Acrolein	Ave	0.3877	0.2668		1.38	2.00	-31.2*	30.0
Acetonitrile	Ave	0.4770	0.3866		1.62	2.00	-19.0	30.0
Acetone	Ave	0.4144	0.3347		4.85	6.00	-19.2	30.0
Isopropyl alcohol	Ave	1.928	1.636		5.09	6.00	-15.2	30.0
Pentane	Ave	0.1852	0.1774		1.92	2.00	-4.2	30.0
Ethyl ether	Ave	1.358	0.9606		1.42	2.00	-29.3	30.0
1,1-Dichloroethene	Ave	1.204	1.155		1.92	2.00	-4.1	30.0
tert-Butyl alcohol	Ave	1.944	1.858		1.91	2.00	-4.4	30.0
Acrylonitrile	Ave	0.7642	0.5995		1.57	2.00	-21.6	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.668	2.568		1.93	2.00	-3.7	30.0
Methylene Chloride	Ave	1.179	1.068		1.81	2.00	-9.4	30.0
3-Chloropropene	Ave	1.388	1.268		1.83	2.00	-8.7	30.0
Carbon disulfide	Ave	3.546	3.476		1.96	2.00	-2.0	30.0
trans-1,2-Dichloroethene	Ave	1.210	1.145		1.89	2.00	-5.4	30.0
2-Methylpentane	Ave	3.129	3.049		1.95	2.00	-2.6	30.0
Methyl tert-butyl ether	Ave	2.474	1.934		1.56	2.00	-21.8	30.0
1,1-Dichloroethane	Ave	2.301	2.057		1.79	2.00	-10.6	30.0
Vinyl acetate	Ave	2.833	2.120		1.50	2.00	-25.2	30.0
2-Butanone (MEK)	Ave	0.3626	0.3050		1.68	2.00	-15.9	30.0
Hexane	Ave	1.065	0.9836		1.85	2.00	-7.7	30.0
Isopropyl ether	Ave	3.770	3.328		1.77	2.00	-11.7	30.0
cis-1,2-Dichloroethene	Ave	1.193	1.048		1.76	2.00	-12.1	30.0
Ethyl acetate	Ave	2.116	1.745		1.65	2.00	-17.5	30.0
Chloroform	Ave	2.509	2.142		1.71	2.00	-14.6	30.0
Tert-butyl ethyl ether	Ave	2.895	2.556		1.77	2.00	-11.7	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Lab Sample ID: CCVIS 140-7893/2 Calibration Date: 01/19/2017 12:03

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JCCVA19.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.177	0.9499		1.61	2.00	-19.3	30.0
1,1,1-Trichloroethane	Ave	2.589	2.211		1.71	2.00	-14.6	30.0
1,2-Dichloroethane	Ave	0.3728	0.2941		1.58	2.00	-21.1	30.0
1-Butanol	Ave	0.1194	0.1262		2.11	2.00	5.7	30.0
Benzene	Ave	0.7266	0.5567		1.53	2.00	-23.4	30.0
Cyclohexane	Ave	0.1325	0.1196		1.81	2.00	-9.7	30.0
Carbon tetrachloride	Ave	0.6405	0.6139		1.92	2.00	-4.1	30.0
2,3-Dimethylpentane	Ave	0.1667	0.1601		1.92	2.00	-4.0	30.0
Thiophene	Ave	0.4153	0.3605		1.74	2.00	-13.2	30.0
Tert-amyl methyl ether	Ave	0.6219	0.6037		1.94	2.00	-2.9	30.0
2,2,4-Trimethylpentane	Ave	1.378	1.386		2.01	2.00	0.6	30.0
Heptane	Ave	0.2546	0.2283		1.79	2.00	-10.3	30.0
1,2-Dichloropropane	Ave	0.2944	0.2312		1.57	2.00	-21.5	30.0
Trichloroethene	Ave	0.3420	0.3179		1.86	2.00	-7.0	30.0
Dibromomethane	Ave	0.3248	0.2687		1.66	2.00	-17.3	30.0
Bromodichloromethane	Ave	0.5654	0.4929		1.74	2.00	-12.8	30.0
1,4-Dioxane	Ave	0.0770	0.0881		2.29	2.00	14.3	30.0
Methyl methacrylate	Ave	0.2784	0.2443		1.76	2.00	-12.3	30.0
Methylcyclohexane	Ave	0.5528	0.5285		1.91	2.00	-4.4	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5507	0.5263		1.91	2.00	-4.4	30.0
cis-1,3-Dichloropropene	Ave	0.3821	0.2889		1.51	2.00	-24.4	30.0
trans-1,3-Dichloropropene	Ave	0.3443	0.2697		1.57	2.00	-21.7	30.0
Toluene	Ave	0.8601	0.7185		1.67	2.00	-16.5	30.0
1,1,2-Trichloroethane	Ave	0.2704	0.2174		1.61	2.00	-19.6	30.0
2-Methylthiophene	Ave	0.7217	0.6057		1.68	2.00	-16.1	30.0
3-Methylthiophene	Ave	0.6890	0.5754		1.67	2.00	-16.5	30.0
2-Hexanone	Ave	0.2511	0.2737		2.18	2.00	9.0	30.0
Octane	Ave	0.2880	0.2462		1.71	2.00	-14.5	30.0
Dibromochloromethane	Ave	0.6304	0.5359		1.70	2.00	-15.0	30.0
1,2-Dibromoethane (EDB)	Ave	0.4549	0.3748		1.65	2.00	-17.6	30.0
Tetrachloroethene	Ave	0.3768	0.3407		1.81	2.00	-9.6	30.0
Chlorobenzene	Ave	0.6754	0.5670		1.68	2.00	-16.0	30.0
2,3-Dimethylheptane	Ave	1.076	0.8871		1.65	2.00	-17.6	30.0
Ethylbenzene	Ave	1.020	0.8663		1.70	2.00	-15.1	30.0
2-Ethylthiophene	Ave	0.7628	0.6491		1.70	2.00	-14.9	30.0
m-Xylene & p-Xylene	Ave	0.7527	0.6563		3.49	4.00	-12.8	30.0
Nonane	Ave	0.6435	0.4675		1.45	2.00	-27.3	30.0
Bromoform	Ave	0.6005	0.5125		1.71	2.00	-14.7	30.0
Styrene	Ave	0.5352	0.4516		1.69	2.00	-15.6	30.0
o-Xylene	Ave	0.8117	0.6919		1.71	2.00	-14.8	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5908	0.5046		1.71	2.00	-14.6	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Lab Sample ID: CCVIS 140-7893/2 Calibration Date: 01/19/2017 12:03

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JCCVA19.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1356	0.1167		1.72	2.00	-13.9	30.0
Isopropylbenzene	Ave	1.098	0.9342		1.70	2.00	-14.9	30.0
Propylbenzene	Ave	0.2584	0.2259		1.75	2.00	-12.6	30.0
2-Chlorotoluene	Ave	0.2744	0.2372		1.73	2.00	-13.6	30.0
4-Ethyltoluene	Ave	0.9183	0.7913		1.72	2.00	-13.8	30.0
1,3,5-Trimethylbenzene	Ave	0.4630	0.4047		1.75	2.00	-12.6	30.0
Alpha Methyl Styrene	Ave	0.3575	0.3071		1.72	2.00	-14.1	30.0
Decane	Ave	0.6508	0.5248		1.61	2.00	-19.4	30.0
tert-Butylbenzene	Ave	0.9343	0.7832		1.68	2.00	-16.2	30.0
1,2,4-Trimethylbenzene	Ave	0.7988	0.6731		1.69	2.00	-15.7	30.0
sec-Butylbenzene	Ave	1.225	1.014		1.65	2.00	-17.3	30.0
1,3-Dichlorobenzene	Ave	0.4476	0.4117		1.84	2.00	-8.0	30.0
Benzyl chloride	Ave	0.3881	0.4588		2.37	2.00	18.2	30.0
1,4-Dichlorobenzene	Ave	0.3490	0.3778		2.17	2.00	8.2	30.0
4-Isopropyltoluene	Ave	0.9555	0.8373		1.75	2.00	-12.4	30.0
1,2,3-Trimethylbenzene	Ave	0.6004	0.5106		1.70	2.00	-15.0	30.0
Butylcyclohexane	Ave	0.7729	0.5718		1.48	2.00	-26.0	30.0
1,2-Dichlorobenzene	Ave	0.4533	0.4101		1.81	2.00	-9.5	30.0
Indane	Ave	0.6991	0.6181		1.77	2.00	-11.6	30.0
Indene	Ave	0.4345	0.4073		1.88	2.00	-6.3	30.0
Butylbenzene	Ave	0.8017	0.7513		1.88	2.00	-6.3	30.0
Undecane	Ave	0.5842	0.6341		2.17	2.00	8.5	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.5891	0.5941		2.02	2.00	0.8	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.1560	0.1910		2.45	2.00	22.5	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.6898	0.7183		2.08	2.00	4.1	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.4240	0.4467		2.11	2.00	5.3	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.5362	0.5700		2.13	2.00	6.3	30.0
Dodecane	Ave	0.4832	0.6118		2.53	2.00	26.6	30.0
1,2,4-Trichlorobenzene	Ave	0.1304	0.2178		3.34	2.00	67.0*	30.0
Naphthalene	Ave	0.3491	0.4563		2.62	2.00	30.7*	30.0
Benzo(b)thiophene	Ave	0.1359	0.2128		3.13	2.00	56.5*	30.0
Hexachlorobutadiene	Ave	0.5047	0.4962		1.97	2.00	-1.7	30.0
1,2,3-Trichlorobenzene	Ave	0.1705	0.2456		2.88	2.00	44.0*	30.0
2-Methylnaphthalene	Ave	0.0343	0.0492		8.99	6.25	43.7	50.0
1-Methylnaphthalene	Ave	0.0381	0.0480		7.87	6.25	25.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6334	0.4955		3.13	4.00	-21.8	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JCCVA19.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 19-Jan-2017 12:03:30 ALS Bottle#: 15 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003854-002
Misc. Info.: P31
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Jan-2017 16:29:47 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: barlozhetskayaa Date: 19-Jan-2017 12:37:05

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.597	8.597	0.000	97	281267	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.803	10.803	0.000	95	1150447	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.574	15.574	0.000	88	982820	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.220	17.220	0.000	95	487019	4.00	3.13	
6 Chlorodifluoromethane	67	3.562	3.562	0.000	97	43571	2.00	1.72	
7 Propene	41	3.573	3.573	0.000	97	170013	2.00	1.94	
8 Dichlorodifluoromethane	85	3.621	3.621	0.000	99	416421	2.00	1.83	
9 Chloromethane	52	3.793	3.793	0.000	99	66343	2.00	2.04	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.804	3.804	0.000	90	281714	2.00	2.24	
11 Acetaldehyde	44	3.944	3.944	0.000	97	250481	10.0	7.14	
12 Vinyl chloride	62	3.960	3.960	0.000	99	197062	2.00	2.02	
14 Butadiene	54	4.046	4.046	0.000	66	157232	2.00	2.01	
13 Butane	43	4.046	4.046	0.000	86	330019	2.00	1.94	
15 Bromomethane	94	4.353	4.353	0.000	99	174110	2.00	2.01	
16 Chloroethane	64	4.487	4.487	0.000	89	91421	2.00	1.98	
17 Ethanol	31	4.579	4.579	0.000	97	344201	10.0	9.27	
18 Vinyl bromide	106	4.783	4.783	0.000	98	164786	2.00	1.94	
19 2-Methylbutane	43	4.826	4.826	0.000	94	245897	2.00	1.98	
20 Trichlorofluoromethane	101	5.041	5.041	0.000	99	446659	2.00	1.93	
21 Acrolein	56	5.052	5.052	0.000	30	37534	2.00	1.38	
22 Acetonitrile	40	5.122	5.122	0.000	98	54391	2.00	1.62	
23 Acetone	58	5.170	5.170	0.000	99	141304	6.00	4.85	
24 Isopropyl alcohol	45	5.240	5.240	0.000	95	690452	6.00	5.09	
25 Pentane	72	5.256	5.256	0.000	95	24967	2.00	1.92	
26 Ethyl ether	31	5.423	5.423	0.000	90	135161	2.00	1.42	
27 1,1-Dichloroethene	96	5.735	5.735	0.000	94	162458	2.00	1.92	
28 2-Methyl-2-propanol	59	5.827	5.827	0.000	95	261382	2.00	1.91	
29 Acrylonitrile	53	5.837	5.837	0.000	96	84352	2.00	1.57	
30 1,1,2-Trichloro-1,2,2-trif	101	5.907	5.907	0.000	97	361376	2.00	1.93	
31 Methylene Chloride	84	6.079	6.079	0.000	94	150269	2.00	1.81	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.090	6.090	0.000	94	178359	2.00	1.83	
33 Carbon disulfide	76	6.235	6.235	0.000	100	489106	2.00	1.96	
34 trans-1,2-Dichloroethene	96	6.876	6.876	0.000	95	161067	2.00	1.89	
35 2-Methylpentane	43	6.892	6.892	0.000	97	428979	2.00	1.95	
36 Methyl tert-butyl ether	73	7.010	7.010	0.000	98	272162	2.00	1.56	
37 1,1-Dichloroethane	63	7.290	7.290	0.000	99	289410	2.00	1.79	
38 Vinyl acetate	43	7.397	7.397	0.000	100	298321	2.00	1.50	
39 2-Butanone (MEK)	72	7.849	7.849	0.000	95	42921	2.00	1.68	
40 Hexane	56	7.865	7.865	0.000	84	138397	2.00	1.85	
41 Isopropyl ether	45	8.032	8.032	0.000	97	468232	2.00	1.77	
42 cis-1,2-Dichloroethene	96	8.269	8.269	0.000	97	147476	2.00	1.76	
43 Ethyl acetate	43	8.468	8.468	0.000	98	245494	2.00	1.65	
44 Chloroform	83	8.613	8.613	0.000	95	301352	2.00	1.71	
45 Tert-butyl ethyl ether	59	8.710	8.710	0.000	97	359717	2.00	1.77	
46 Tetrahydrofuran	42	9.027	9.027	0.000	94	133653	2.00	1.61	
47 1,1,1-Trichloroethane	97	9.635	9.635	0.000	97	311054	2.00	1.71	
48 1,2-Dichloroethane	62	9.748	9.748	0.000	96	169254	2.00	1.58	
49 n-Butanol	31	10.211	10.211	0.000	90	72629	2.00	2.11	
51 Benzene	78	10.243	10.243	0.000	97	320381	2.00	1.53	
50 Cyclohexane	69	10.243	10.243	0.000	87	68825	2.00	1.81	
52 Carbon tetrachloride	117	10.265	10.265	0.000	96	353315	2.00	1.92	
53 2,3-Dimethylpentane	71	10.367	10.367	0.000	91	92138	2.00	1.92	
54 Thiophene	84	10.523	10.523	0.000	96	207466	2.00	1.74	
55 Tert-amyl methyl ether	73	10.738	10.738	0.000	95	296824	2.00	1.94	
56 Isooctane	57	11.018	11.018	0.000	98	797649	2.00	2.01	
57 n-Heptane	71	11.405	11.405	0.000	95	131374	2.00	1.79	
58 1,2-Dichloropropane	63	11.486	11.486	0.000	90	133044	2.00	1.57	
59 Trichloroethene	130	11.523	11.523	0.000	96	182948	2.00	1.86	
60 Dibromomethane	93	11.610	11.610	0.000	93	154620	2.00	1.66	
62 Dichlorobromomethane	83	11.755	11.755	0.000	97	283689	2.00	1.74	
61 1,4-Dioxane	88	11.782	11.782	0.000	97	50681	2.00	2.29	
63 Methyl methacrylate	41	11.857	11.857	0.000	93	140589	2.00	1.76	
64 Methylcyclohexane	83	12.298	12.298	0.000	91	304177	2.00	1.91	
65 4-Methyl-2-pentanone (MIBK	43	12.723	12.723	0.000	97	302900	2.00	1.91	
66 cis-1,3-Dichloropropene	75	12.766	12.766	0.000	97	166258	2.00	1.51	
67 trans-1,3-Dichloropropene	75	13.471	13.471	0.000	97	132587	2.00	1.57	
68 Toluene	91	13.589	13.589	0.000	92	353278	2.00	1.67	
69 1,1,2-Trichloroethane	83	13.670	13.670	0.000	98	106868	2.00	1.61	
70 2-Methylthiophene	97	13.745	13.745	0.000	98	297819	2.00	1.68	
71 3-Methylthiophene	97	13.950	13.950	0.000	100	282905	2.00	1.67	
72 2-Hexanone	58	14.068	14.068	0.000	91	134564	2.00	2.18	
73 n-Octane	85	14.288	14.288	0.000	98	121050	2.00	1.71	
74 Chlorodibromomethane	129	14.375	14.375	0.000	98	263484	2.00	1.70	
75 Ethylene Dibromide	107	14.665	14.665	0.000	97	184298	2.00	1.65	
76 Tetrachloroethene	129	14.740	14.740	0.000	94	167525	2.00	1.81	
78 Chlorobenzene	112	15.623	15.623	0.000	95	278784	2.00	1.68	
77 2,3-Dimethylheptane	43	15.644	15.644	0.000	93	436173	2.00	1.65	
79 Ethylbenzene	91	15.913	15.913	0.000	99	425948	2.00	1.70	
80 2-Ethylthiophene	97	16.015	16.015	0.000	99	319124	2.00	1.70	
81 m-Xylene & p-Xylene	91	16.074	16.074	0.000	99	645317	4.00	3.49	
82 n-Nonane	57	16.494	16.494	0.000	95	229863	2.00	1.45	
83 Bromoform	173	16.521	16.521	0.000	97	251977	2.00	1.71	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.537	16.537	0.000	98	222020	2.00	1.69	
85 o-Xylene	91	16.602	16.602	0.000	99	340174	2.00	1.71	
86 1,1,2,2-Tetrachloroethane	83	16.924	16.924	0.000	99	248109	2.00	1.71	
87 1,2,3-Trichloropropane	110	17.086	17.086	0.000	96	57384	2.00	1.72	
88 Isopropylbenzene	105	17.188	17.188	0.000	97	459314	2.00	1.70	
89 N-Propylbenzene	120	17.731	17.731	0.000	99	111076	2.00	1.75	
90 2-Chlorotoluene	126	17.774	17.774	0.000	97	116620	2.00	1.73	
91 4-Ethyltoluene	105	17.887	17.887	0.000	99	389078	2.00	1.72	
92 1,3,5-Trimethylbenzene	120	17.963	17.963	0.000	93	198965	2.00	1.75	
93 Alpha Methyl Styrene	118	18.194	18.194	0.000	87	150971	2.00	1.72	
94 n-Decane	57	18.253	18.253	0.000	87	258007	2.00	1.61	
95 tert-Butylbenzene	119	18.388	18.388	0.000	91	385053	2.00	1.68	
96 1,2,4-Trimethylbenzene	105	18.404	18.404	0.000	96	330930	2.00	1.69	
97 sec-Butylbenzene	105	18.662	18.662	0.000	98	498309	2.00	1.65	
98 1,3-Dichlorobenzene	146	18.678	18.678	0.000	96	202414	2.00	1.84	
99 Benzyl chloride	91	18.753	18.753	0.000	98	225561	2.00	2.37	
100 1,4-Dichlorobenzene	146	18.764	18.764	0.000	95	185733	2.00	2.17	
101 4-Isopropyltoluene	119	18.829	18.829	0.000	97	411652	2.00	1.75	
102 1,2,3-Trimethylbenzene	105	18.877	18.877	0.000	98	251052	2.00	1.70	
103 Butylcyclohexane	83	18.931	18.931	0.000	90	281157	2.00	1.48	
105 1,2-Dichlorobenzene	146	19.125	19.125	0.000	81	201649	2.00	1.81	
104 2,3-Dihydroindene	117	19.125	19.125	0.000	94	303892	2.00	1.77	
107 Indene	116	19.259	19.259	0.000	89	200278	2.00	1.88	
106 n-Butylbenzene	91	19.264	19.264	0.000	97	369395	2.00	1.88	
108 Undecane	57	19.576	19.576	0.000	92	311781	2.00	2.17	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.636	19.636	0.000	98	292118	2.00	2.02	
110 1,2-Dibromo-3-Chloropropan	157	19.732	19.732	0.000	94	93910	2.00	2.45	
111 1,2,4,5-Tetramethylbenzene	119	20.023	20.023	0.000	98	353185	2.00	2.08	
112 1,2,3,5-Tetramethylbenzene	119	20.077	20.077	0.000	96	219618	2.00	2.11	
113 1,2,3,4-Tetramethylbenzene	119	20.475	20.475	0.000	98	280260	2.00	2.13	
114 Dodecane	57	20.636	20.636	0.000	90	300799	2.00	2.53	
115 1,2,4-Trichlorobenzene	180	20.835	20.835	0.000	92	107074	2.00	3.34	
116 Naphthalene	128	20.975	20.975	0.000	99	224368	2.00	2.62	
117 Benzo(b)thiophene	134	21.083	21.083	0.000	99	104626	2.00	3.13	
118 Hexachlorobutadiene	225	21.190	21.190	0.000	94	243949	2.00	1.97	
119 1,2,3-Trichlorobenzene	180	21.266	21.266	0.000	95	120728	2.00	2.88	
120 2-Methylnaphthalene	142	21.949	21.949	0.000	97	75640	6.25	8.99	
121 1-Methylnaphthalene	142	22.073	22.073	0.000	99	73735	6.25	7.87	
A 124 Toluene Range	1	13.589	(13.559-13.619)		0	880518	2.00	1.59	
A 125 C8 Range	1	14.273	(14.250-14.297)		0	1392728	2.00	1.85	
S 126 Xylenes, Total	100				0		6.00	5.19	
S 127 1,2-Dichloroethene, Total	1				0		4.00	3.65	

Reagents:

40CV101P_00031	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

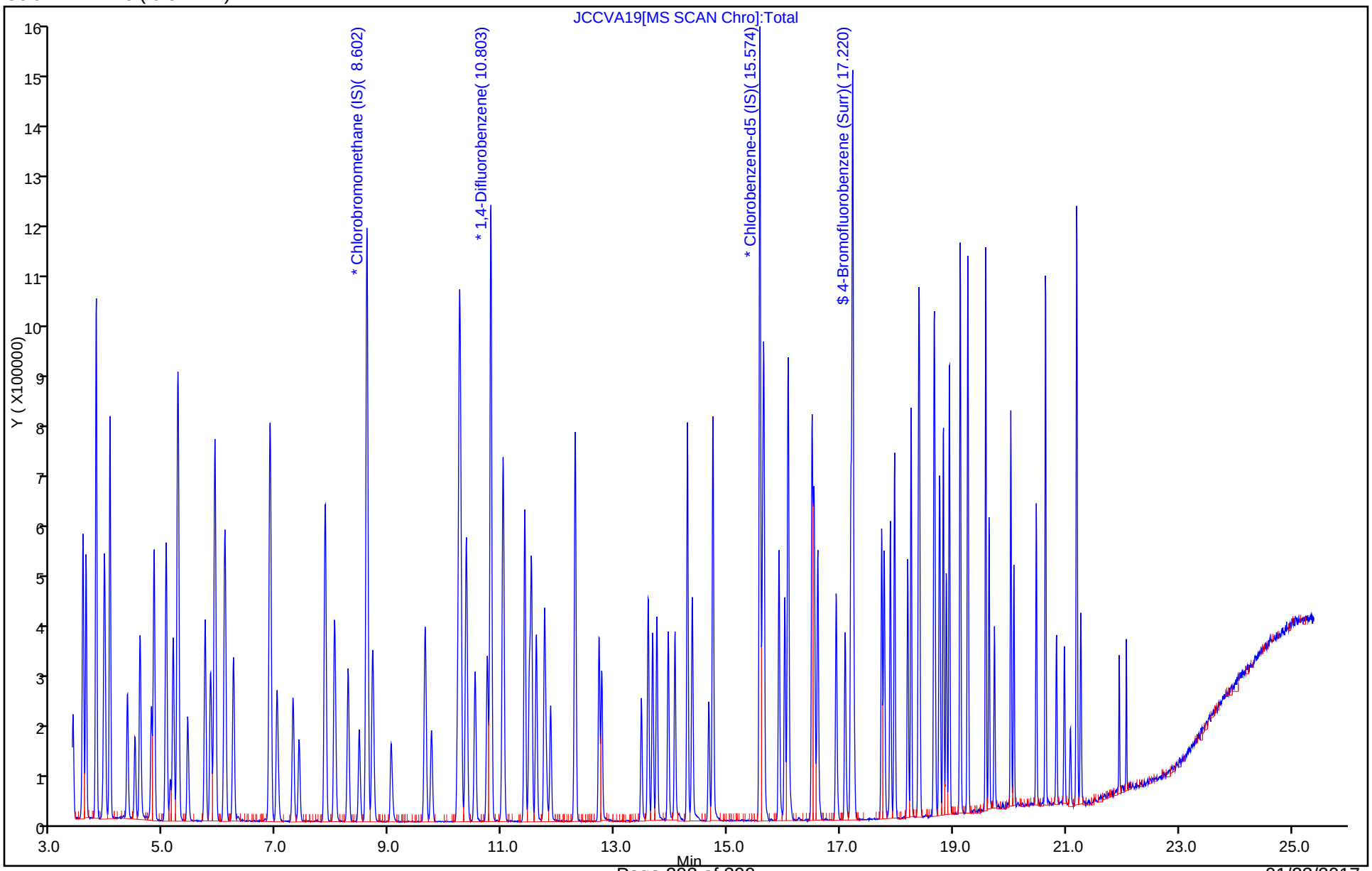
Report Date: 19-Jan-2017 16:29:48 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JCCVA19.D

Injection Date:	19-Jan-2017 12:03:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Lab Sample ID: ICV 140-7852/13 Calibration Date: 01/17/2017 01:21

Instrument ID: MR Calib Start Date: 01/16/2017 18:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/17/2017 10:29

Lab File ID: RA16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.2219	0.2158		1.95	2.00	-2.7	35.0
Propene	Ave	1.040	0.9631		1.85	2.00	-7.4	35.0
Dichlorodifluoromethane	Ave	1.811	2.114		2.33	2.00	16.7	35.0
Chloromethane	Ave	0.3400	0.3118		1.83	2.00	-8.3	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.050	2.027		1.98	2.00	-1.1	35.0
Acetaldehyde	Ave	0.3052	0.2223		7.28	10.0	-27.2	35.0
Vinyl chloride	Ave	0.9750	0.7575		1.55	2.00	-22.3	35.0
1,3-Butadiene	Ave	0.6890	0.5065		1.47	2.00	-26.5	35.0
Butane	Ave	1.237	1.012		1.64	2.00	-18.2	35.0
Bromomethane	Ave	0.8530	0.6901		1.62	2.00	-19.1	35.0
Chloroethane	Ave	0.3844	0.3209		1.67	2.00	-16.5	35.0
Ethanol	Ave	0.2559	0.2067		8.08	10.0	-19.2	35.0
Vinyl bromide	Ave	0.7956	0.7430		1.87	2.00	-6.6	35.0
2-Methylbutane	Ave	0.7496	0.6215		1.66	2.00	-17.1	35.0
Acrolein	Ave	0.2879	0.2292		1.59	2.00	-20.4	35.0
Trichlorofluoromethane	Ave	2.486	2.169		1.75	2.00	-12.7	35.0
Acetonitrile	Ave	0.4318	0.3463		1.60	2.00	-19.8	35.0
Acetone	Ave	0.4605	0.4149		5.41	6.00	-9.9	35.0
Isopropyl alcohol	Ave	1.354	1.423		6.31	6.00	5.1	35.0
Pentane	Ave	0.1947	0.1946		2.00	2.00	-0.0	35.0
Ethyl ether	Ave	1.131	1.173		2.07	2.00	3.7	35.0
1,1-Dichloroethene	Ave	1.101	1.039		1.89	2.00	-5.6	35.0
Acrylonitrile	Ave	0.7062	0.7334		2.08	2.00	3.8	35.0
tert-Butyl alcohol	Ave	1.480	1.471		1.99	2.00	-0.6	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.112	2.048		1.94	2.00	-3.0	35.0
Methylene Chloride	Ave	1.036	0.9226		1.78	2.00	-11.0	35.0
3-Chloropropene	Ave	0.7792	0.7703		1.98	2.00	-1.1	35.0
Carbon disulfide	Ave	2.839	2.781		1.96	2.00	-2.1	35.0
trans-1,2-Dichloroethene	Ave	1.170	1.082		1.85	2.00	-7.5	35.0
2-Methylpentane	Ave	2.152	2.384		2.22	2.00	10.8	35.0
Methyl tert-butyl ether	Ave	2.472	2.496		2.02	2.00	1.0	35.0
1,1-Dichloroethane	Ave	1.844	1.804		1.96	2.00	-2.2	35.0
Vinyl acetate	Ave	2.613	2.691		2.06	2.00	3.0	35.0
2-Butanone (MEK)	Ave	0.4822	0.4902		2.03	2.00	1.7	35.0
Hexane	Ave	0.7573	0.7638		2.02	2.00	0.9	35.0
Isopropyl ether	Ave	3.457	3.344		1.93	2.00	-3.3	35.0
cis-1,2-Dichloroethene	Ave	1.219	1.166		1.91	2.00	-4.4	35.0
Ethyl acetate	Ave	2.200	2.176		1.98	2.00	-1.1	35.0
Chloroform	Ave	2.082	1.999		1.92	2.00	-4.0	35.0
Tert-butyl ethyl ether	Ave	2.521	2.738		2.17	2.00	8.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Lab Sample ID: ICV 140-7852/13 Calibration Date: 01/17/2017 01:21

Instrument ID: MR Calib Start Date: 01/16/2017 18:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/17/2017 10:29

Lab File ID: RA16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.197	1.215		2.03	2.00	1.5	35.0
1,1,1-Trichloroethane	Ave	2.078	2.016		1.94	2.00	-3.0	35.0
1,2-Dichloroethane	Ave	0.2408	0.2392		1.99	2.00	-0.7	35.0
1-Butanol	Ave	0.0809	0.0657		1.62	2.00	-18.8	35.0
Benzene	Ave	0.6956	0.6884		1.98	2.00	-1.0	35.0
Cyclohexane	Ave	0.0994	0.1031		2.08	2.00	3.8	35.0
Carbon tetrachloride	Ave	0.4255	0.4418		2.08	2.00	3.8	35.0
2,3-Dimethylpentane	Ave	0.1475	0.1395		1.89	2.00	-5.5	35.0
Thiophene	Ave	0.3612	0.3817		2.11	2.00	5.7	35.0
Tert-amyl methyl ether	Ave	0.5308	0.6073		2.29	2.00	14.4	35.0
2,2,4-Trimethylpentane	Ave	0.9488	1.024		2.16	2.00	8.0	35.0
1,2-Dichloropropane	Ave	0.2404	0.2562		2.13	2.00	6.6	35.0
Heptane	Ave	0.2264	0.2358		2.08	2.00	4.2	35.0
Trichloroethene	Ave	0.3144	0.3112		1.98	2.00	-1.0	35.0
Dibromomethane	Ave	0.2419	0.2530		2.09	2.00	4.6	35.0
Bromodichloromethane	Ave	0.4021	0.4188		2.08	2.00	4.2	35.0
1,4-Dioxane	Ave	0.1115	0.1032		1.85	2.00	-7.4	35.0
Methyl methacrylate	Ave	0.2508	0.2686		2.14	2.00	7.1	35.0
Methylcyclohexane	Ave	0.4619	0.3851		1.67	2.00	-16.6	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4695	0.4814		2.05	2.00	2.5	35.0
cis-1,3-Dichloropropene	Ave	0.3476	0.3704		2.13	2.00	6.6	35.0
trans-1,3-Dichloropropene	Ave	0.3550	0.3709		2.09	2.00	4.5	35.0
Toluene	Ave	0.8739	0.9194		2.10	2.00	5.2	35.0
1,1,2-Trichloroethane	Ave	0.2754	0.2680		1.95	2.00	-2.7	35.0
2-Methylthiophene	Ave	0.7609	0.8261		2.17	2.00	8.6	35.0
3-Methylthiophene	Ave	0.7494	0.8438		2.25	2.00	12.6	35.0
2-Hexanone	Ave	0.2576	0.2626		2.04	2.00	1.9	35.0
Dibromochloromethane	Ave	0.5036	0.5478		2.18	2.00	8.8	35.0
Octane	Ave	0.2781	0.2906		2.09	2.00	4.5	35.0
1,2-Dibromoethane (EDB)	Ave	0.4814	0.4977		2.07	2.00	3.4	35.0
Tetrachloroethene	Ave	0.3356	0.3273		1.95	2.00	-2.5	35.0
Chlorobenzene	Ave	0.7195	0.7401		2.06	2.00	2.8	35.0
2,3-Dimethylheptane	Ave	0.7552	0.8374		2.22	2.00	10.9	35.0
Ethylbenzene	Ave	1.174	1.158		1.97	2.00	-1.3	35.0
2-Ethylthiophene	Ave	0.8633	0.8995		2.08	2.00	4.2	35.0
m-Xylene & p-Xylene	Ave	0.8819	0.8917		4.04	4.00	1.1	35.0
Bromoform	Ave	0.6483	0.7152		2.21	2.00	10.3	35.0
Styrene	Ave	0.6255	0.6625		2.12	2.00	5.9	35.0
Nonane	Ave	0.5076	0.5627		2.22	2.00	10.9	35.0
o-Xylene	Ave	0.9227	0.8995		1.95	2.00	-2.5	35.0
1,1,2,2-Tetrachloroethane	Ave	0.7011	0.6623		1.89	2.00	-5.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Lab Sample ID: ICV 140-7852/13 Calibration Date: 01/17/2017 01:21

Instrument ID: MR Calib Start Date: 01/16/2017 18:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/17/2017 10:29

Lab File ID: RA16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1972	0.1917		1.94	2.00	-2.8	35.0
Isopropylbenzene	Ave	1.302	1.363		2.09	2.00	4.7	35.0
Propylbenzene	Ave	0.3605	0.3824		2.12	2.00	6.1	35.0
2-Chlorotoluene	Ave	0.3395	0.3583		2.11	2.00	5.5	35.0
4-Ethyltoluene	Ave	1.306	1.292		1.98	2.00	-1.1	35.0
1,3,5-Trimethylbenzene	Ave	0.6336	0.6247		1.97	2.00	-1.4	35.0
Alpha Methyl Styrene	Ave	0.5024	0.5018		2.00	2.00	-0.1	35.0
Decane	Ave	0.6458	0.7206		2.23	2.00	11.6	35.0
tert-Butylbenzene	Ave	1.115	1.170		2.10	2.00	4.9	35.0
1,2,4-Trimethylbenzene	Ave	1.135	1.132		2.00	2.00	-0.2	35.0
1,3-Dichlorobenzene	Ave	0.8032	0.8426		2.10	2.00	4.9	35.0
sec-Butylbenzene	Ave	1.594	1.692		2.12	2.00	6.1	35.0
Benzyl chloride	Ave	0.8762	0.9065		2.07	2.00	3.5	35.0
1,4-Dichlorobenzene	Ave	0.8171	0.8439		2.07	2.00	3.3	35.0
4-Isopropyltoluene	Ave	1.302	1.357		2.09	2.00	4.3	35.0
1,2,3-Trimethylbenzene	Ave	0.9045	0.9301		2.06	2.00	2.8	35.0
Butylcyclohexane	Ave	0.8419	0.8526		2.03	2.00	1.3	35.0
1,2-Dichlorobenzene	Ave	0.7845	0.8157		2.08	2.00	4.0	35.0
Indane	Ave	1.008	1.008		2.00	2.00	0.0	35.0
Indene	QuaF		0.9943		2.12	2.00	6.0	35.0
Butylbenzene	Ave	1.256	1.300		2.07	2.00	3.5	35.0
Undecane	Ave	0.7309	0.8215		2.25	2.00	12.4	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		1.262		2.23	2.00	11.6	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.4119	0.3721		1.81	2.00	-9.7	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.147	1.264		2.20	2.00	10.2	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.7194	0.7995		2.22	2.00	11.1	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.9719	1.035		2.13	2.00	6.5	35.0
Dodecane	Ave	0.7623	0.7211		1.89	2.00	-5.4	35.0
1,2,4-Trichlorobenzene	Ave	0.9333	0.8666		1.86	2.00	-7.1	35.0
Naphthalene	Ave	1.723	1.533		1.78	2.00	-11.0	35.0
Benzo(b)thiophene	Ave	0.9449	0.8971		1.90	2.00	-5.1	35.0
Hexachlorobutadiene	Ave	0.8326	0.7864		1.89	2.00	-5.5	35.0
1,2,3-Trichlorobenzene	Ave	0.8487	0.8107		1.91	2.00	-4.5	35.0
2-Methylnaphthalene	Ave	0.2033	0.0959		2.95	6.25	-52.8*	50.0
1-Methylnaphthalene	Ave	0.1899	0.0920		3.03	6.25	-51.5*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6257	0.6564		4.20	4.00	4.9	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16ICV.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 17-Jan-2017 01:21:30 ALS Bottle#: 10 Worklist Smp#: 13
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003844-013
Misc. Info.: 073137
Operator ID: Instrument ID: MR
Sublist:

Method: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jan-2017 15:13:49 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: barlozhetskayaa Date: 17-Jan-2017 15:13:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.242	8.242	0.000	92	453735	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.410	10.407	0.003	93	2225824	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.295	15.293	0.002	85	1915858	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.983	16.987	-0.001	96	1257547	4.00	4.20	
6 Chlorodifluoromethane	67	3.718	3.727	-0.006	96	48966	2.00	1.95	
7 Propene	41	3.723	3.730	-0.005	97	218486	2.00	1.85	
8 Dichlorodifluoromethane	85	3.772	3.779	-0.004	99	479500	2.00	2.33	
9 Chloromethane	52	3.923	3.926	0.000	100	70745	2.00	1.83	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.950	3.953	-0.001	90	459941	2.00	1.98	
11 Acetaldehyde	44	4.068	4.073	-0.002	98	252102	10.0	7.28	
12 Vinyl chloride	62	4.074	4.077	-0.001	99	171851	2.00	1.55	
13 Butadiene	54	4.154	4.158	-0.001	94	114912	2.00	1.47	
14 Butane	43	4.154	4.161	-0.004	92	229561	2.00	1.64	
15 Bromomethane	94	4.413	4.419	-0.003	96	156549	2.00	1.62	
16 Chloroethane	64	4.537	4.544	-0.004	99	72794	2.00	1.67	
17 Ethanol	31	4.651	4.654	0.000	97	234432	10.0	8.08	
18 Vinyl bromide	106	4.796	4.801	-0.001	99	168563	2.00	1.87	
19 2-Methylbutane	43	4.855	4.859	-0.001	88	141007	2.00	1.66	
20 Acrolein	56	5.033	5.037	0.000	31	52003	2.00	1.59	
21 Trichlorofluoromethane	101	5.039	5.040	0.003	98	492065	2.00	1.75	
22 Acetonitrile	40	5.082	5.086	-0.001	97	78558	2.00	1.60	
23 Acetone	58	5.125	5.136	-0.008	97	282399	6.00	5.41	
24 Isopropyl alcohol	45	5.233	5.236	0.001	93	968901	6.00	6.31	
25 Pentane	72	5.233	5.242	-0.005	93	44151	2.00	2.00	
26 Ethyl ether	31	5.368	5.380	-0.009	94	266078	2.00	2.07	
27 1,1-Dichloroethene	96	5.637	5.643	-0.002	96	235775	2.00	1.89	
28 Acrylonitrile	53	5.713	5.716	0.001	96	166389	2.00	2.08	
29 2-Methyl-2-propanol	59	5.740	5.750	-0.006	96	333805	2.00	1.99	
30 1,1,2-Trichloro-1,2,2-trif	101	5.815	5.823	-0.004	93	464659	2.00	1.94	
31 Methylene Chloride	84	5.934	5.935	0.003	95	209308	2.00	1.78	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.950	5.956	-0.002	92	174754	2.00	1.98	
33 Carbon disulfide	76	6.074	6.076	0.002	98	630904	2.00	1.96	
34 trans-1,2-Dichloroethene	96	6.667	6.671	0.000	97	245570	2.00	1.85	
35 2-Methylpentane	43	6.721	6.724	0.002	96	540865	2.00	2.22	
36 Methyl tert-butyl ether	73	6.791	6.802	-0.006	97	566164	2.00	2.02	
37 1,1-Dichloroethane	63	7.039	7.039	0.004	100	409321	2.00	1.96	
38 Vinyl acetate	43	7.142	7.152	-0.005	100	610558	2.00	2.06	
39 2-Butanone (MEK)	72	7.530	7.541	-0.006	99	111209	2.00	2.03	
40 Hexane	56	7.622	7.627	0.000	91	173287	2.00	2.02	
41 Isopropyl ether	45	7.757	7.766	-0.004	98	758770	2.00	1.93	
42 cis-1,2-Dichloroethene	96	7.945	7.949	0.001	90	264476	2.00	1.91	
43 Ethyl acetate	43	8.129	8.137	-0.003	100	493689	2.00	1.98	
44 Chloroform	83	8.274	8.280	0.000	94	453412	2.00	1.92	
45 Tert-butyl ethyl ether	59	8.393	8.402	-0.003	93	621121	2.00	2.17	
46 Tetrahydrofuran	42	8.630	8.645	-0.009	97	275614	2.00	2.03	
47 1,1,1-Trichloroethane	97	9.256	9.261	0.002	94	457411	2.00	1.94	
48 1,2-Dichloroethane	62	9.331	9.325	0.003	95	266185	2.00	1.99	
49 n-Butanol	31	9.816	9.823	-0.009	63	73078	2.00	1.62	
50 Benzene	78	9.843	9.836	0.005	95	766130	2.00	1.98	
51 Cyclohexane	69	9.865	9.863	-0.001	95	114768	2.00	2.08	
52 Carbon tetrachloride	117	9.876	9.875	-0.002	97	491673	2.00	2.08	
53 2,3-Dimethylpentane	71	10.021	10.024	-0.005	93	155218	2.00	1.89	
54 Thiophene	84	10.108	10.105	0.001	93	424832	2.00	2.11	
55 Tert-amyl methyl ether	73	10.356	10.358	-0.005	98	675918	2.00	2.29	
56 Isooctane	57	10.690	10.689	-0.002	99	1139963	2.00	2.16	
57 1,2-Dichloropropane	63	11.078	11.076	0.000	91	285141	2.00	2.13	
58 n-Heptane	71	11.084	11.084	-0.002	92	262459	2.00	2.08	
59 Trichloroethene	130	11.143	11.139	0.002	91	346283	2.00	1.98	
60 Dibromomethane	93	11.186	11.184	0.000	87	281551	2.00	2.09	
61 Dichlorobromomethane	83	11.353	11.351	-0.001	99	466131	2.00	2.08	
62 1,4-Dioxane	88	11.359	11.362	-0.006	60	114858	2.00	1.85	
63 Methyl methacrylate	41	11.488	11.485	0.000	92	298943	2.00	2.14	
64 Methylcyclohexane	83	11.963	11.960	0.000	97	428550	2.00	1.67	
65 4-Methyl-2-pentanone (MIBK	43	12.351	12.352	-0.004	96	535703	2.00	2.05	
66 cis-1,3-Dichloropropene	75	12.405	12.402	0.000	91	412241	2.00	2.13	
67 trans-1,3-Dichloropropene	75	13.127	13.128	0.001	97	355302	2.00	2.09	
68 Toluene	91	13.268	13.271	-0.001	93	880673	2.00	2.10	
69 1,1,2-Trichloroethane	83	13.327	13.331	0.004	95	256703	2.00	1.95	
70 2-Methylthiophene	97	13.419	13.419	0.002	97	791351	2.00	2.17	
71 3-Methylthiophene	97	13.629	13.627	0.004	98	808296	2.00	2.25	
72 2-Hexanone	58	13.748	13.754	-0.004	92	251592	2.00	2.04	
73 Chlorodibromomethane	129	14.044	14.044	0.002	97	524720	2.00	2.18	
74 n-Octane	85	14.060	14.062	0.000	93	278392	2.00	2.09	
75 Ethylene Dibromide	107	14.335	14.338	-0.001	98	476790	2.00	2.07	
76 Tetrachloroethene	129	14.459	14.459	0.003	94	313571	2.00	1.95	
77 Chlorobenzene	112	15.344	15.345	0.002	96	708912	2.00	2.06	
78 2,3-Dimethylheptane	43	15.441	15.446	-0.003	98	802148	2.00	2.22	
79 Ethylbenzene	91	15.662	15.662	0.002	97	1109513	2.00	1.97	
80 2-Ethylthiophene	97	15.759	15.760	0.001	97	861686	2.00	2.08	
81 m-Xylene & p-Xylene	91	15.829	15.833	-0.001	98	1708280	4.00	4.04	
82 Bromoform	173	16.233	16.237	-0.002	98	685066	2.00	2.21	
83 Styrene	104	16.298	16.298	0.002	97	634593	2.00	2.12	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.320	16.326	-0.004	94	538981	2.00	2.22	
85 o-Xylene	91	16.357	16.361	-0.002	99	861675	2.00	1.95	
86 1,1,2,2-Tetrachloroethane	83	16.670	16.674	-0.001	98	634456	2.00	1.89	
87 1,2,3-Trichloropropane	110	16.832	16.834	0.001	98	183634	2.00	1.94	
88 Isopropylbenzene	105	16.978	16.980	0.001	95	1305721	2.00	2.09	
89 N-Propylbenzene	120	17.549	17.555	-0.003	99	366291	2.00	2.12	
90 2-Chlorotoluene	126	17.576	17.581	-0.002	96	343198	2.00	2.11	
91 4-Ethyltoluene	105	17.716	17.721	-0.002	100	1237263	2.00	1.98	
92 1,3,5-Trimethylbenzene	120	17.803	17.805	0.001	93	598452	2.00	1.97	
93 Alpha Methyl Styrene	118	18.040	18.045	-0.002	92	480702	2.00	2.00	
94 n-Decane	57	18.164	18.168	-0.002	89	690254	2.00	2.23	
95 tert-Butylbenzene	119	18.250	18.254	-0.001	93	1120533	2.00	2.10	
96 1,2,4-Trimethylbenzene	105	18.266	18.270	-0.001	96	1084378	2.00	2.00	
97 1,3-Dichlorobenzene	146	18.531	18.534	0.000	95	807126	2.00	2.10	
98 sec-Butylbenzene	105	18.541	18.546	-0.002	99	1620803	2.00	2.12	
99 Benzyl chloride	91	18.606	18.610	-0.001	100	868368	2.00	2.07	
100 1,4-Dichlorobenzene	146	18.628	18.628	0.003	96	808361	2.00	2.07	
101 4-Isopropyltoluene	119	18.719	18.723	-0.001	98	1300079	2.00	2.09	
102 1,2,3-Trimethylbenzene	105	18.762	18.765	0.000	96	890933	2.00	2.06	
103 Butylcyclohexane	83	18.849	18.853	-0.002	97	816712	2.00	2.03	
104 1,2-Dichlorobenzene	146	19.005	19.006	0.002	97	781348	2.00	2.08	
105 2,3-Dihydroindene	117	19.010	19.015	-0.002	95	966022	2.00	2.00	
106 Indene	116	19.145	19.149	-0.001	92	952459	2.00	2.12	
107 n-Butylbenzene	91	19.183	19.186	0.000	97	1245659	2.00	2.07	
108 Undecane	57	19.560	19.564	-0.001	98	786959	2.00	2.25	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.571	19.577	-0.003	98	1208649	2.00	2.23	
110 1,2-Dibromo-3-Chloropropan	157	19.631	19.634	0.000	89	356445	2.00	1.81	
111 1,2,4,5-Tetramethylbenzene	119	19.976	19.980	-0.001	98	1211117	2.00	2.20	
112 1,2,3,5-Tetramethylbenzene	119	20.030	20.034	-0.001	97	765858	2.00	2.22	
113 1,2,3,4-Tetramethylbenzene	119	20.434	20.442	-0.005	98	991569	2.00	2.13	
114 Dodecane	57	20.661	20.667	-0.003	95	690788	2.00	1.89	
115 1,2,4-Trichlorobenzene	180	20.790	20.791	0.002	92	830183	2.00	1.86	
116 Naphthalene	128	20.919	20.925	-0.003	100	1468661	2.00	1.78	
117 Benzo(b)thiophene	134	21.022	21.027	-0.002	100	859317	2.00	1.90	
118 Hexachlorobutadiene	225	21.173	21.177	0.000	93	753356	2.00	1.89	
119 1,2,3-Trichlorobenzene	180	21.216	21.220	-0.001	95	776614	2.00	1.91	
120 2-Methylnaphthalene	142	21.933	21.937	0.000	97	287137	6.25	2.95	
121 1-Methylnaphthalene	142	22.057	22.061	0.000	97	275508	6.25	3.03	
A 122 C6 Range	1	7.609	(7.589-7.629)		0	1506787	2.00	1.98	
S 124 Xylenes, Total	100				0		6.00	5.99	
S 125 1,2-Dichloroethene, Total	1				0		4.00	3.76	

Reagents:

40CV101S_00033	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

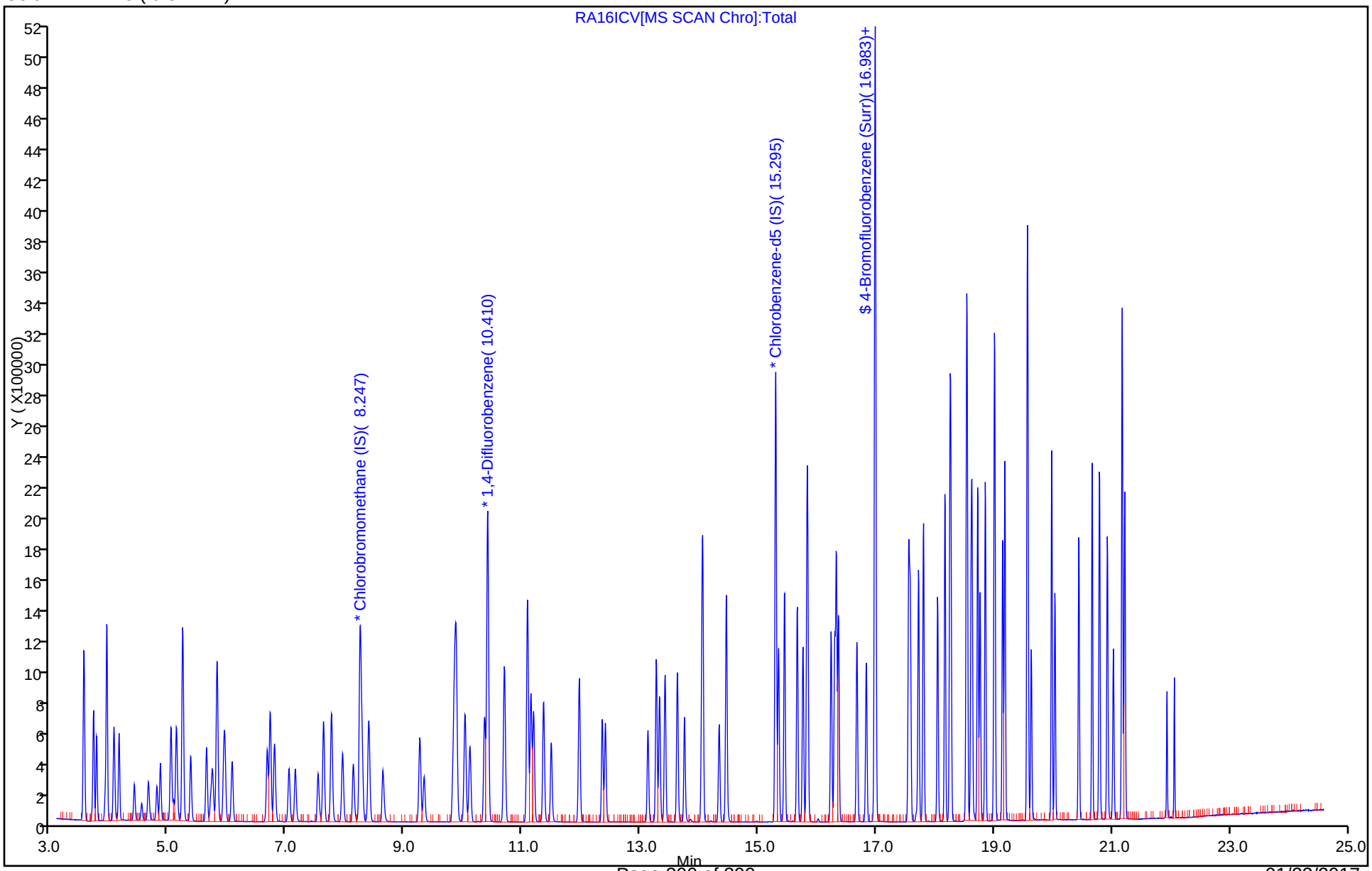
Report Date: 17-Jan-2017 15:13:50 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16ICV.D

Injection Date:	17-Jan-2017 01:21:30	Instrument ID:	MR	Operator ID:	
Lims ID:	ICV			Worklist Smp#:	13
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Lab Sample ID: CCVIS 140-7907/2 Calibration Date: 01/18/2017 10:18

Instrument ID: MR Calib Start Date: 01/16/2017 18:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/17/2017 10:29

Lab File ID: RA18CCV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.2219	0.2244		2.02	2.00	1.1	30.0
Propene	Ave	1.040	1.006		1.93	2.00	-3.3	30.0
Dichlorodifluoromethane	Ave	1.811	2.207		2.44	2.00	21.9	30.0
Chloromethane	Ave	0.3400	0.3516		2.07	2.00	3.4	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.050	2.289		2.23	2.00	11.6	30.0
Acetaldehyde	Ave	0.3052	0.3529		11.7	10.1	15.6	30.0
Vinyl chloride	Ave	0.9750	1.124		2.30	2.00	15.2	30.0
1,3-Butadiene	Ave	0.6890	0.7629		2.21	2.00	10.7	30.0
Butane	Ave	1.237	1.530		2.47	2.00	23.7	30.0
Bromomethane	Ave	0.8530	0.9205		2.16	2.00	7.9	30.0
Chloroethane	Ave	0.3844	0.4582		2.38	2.00	19.2	30.0
Ethanol	Ave	0.2559	0.2961		11.7	10.1	15.7	30.0
Vinyl bromide	Ave	0.7956	0.9098		2.29	2.00	14.3	30.0
2-Methylbutane	Ave	0.7496	0.8781		2.34	2.00	17.1	30.0
Acrolein	Ave	0.2879	0.2992		2.08	2.00	3.9	30.0
Trichlorofluoromethane	Ave	2.486	2.462		1.98	2.00	-1.0	30.0
Acetonitrile	Ave	0.4318	0.4538		2.10	2.00	5.1	30.0
Acetone	Ave	0.4605	0.4430		5.77	6.00	-3.8	30.0
Isopropyl alcohol	Ave	1.354	1.282		5.68	6.00	-5.3	30.0
Pentane	Ave	0.1947	0.1955		2.01	2.00	0.4	30.0
Ethyl ether	Ave	1.131	1.157		2.05	2.00	2.3	30.0
1,1-Dichloroethene	Ave	1.101	1.053		1.91	2.00	-4.4	30.0
Acrylonitrile	Ave	0.7062	0.7491		2.12	2.00	6.1	30.0
tert-Butyl alcohol	Ave	1.480	1.350		1.82	2.00	-8.8	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.112	2.174		2.06	2.00	3.0	30.0
Methylene Chloride	Ave	1.036	0.9491		1.83	2.00	-8.4	30.0
3-Chloropropene	Ave	0.7792	0.7791		2.00	2.00	-0.0	30.0
Carbon disulfide	Ave	2.839	2.783		1.96	2.00	-2.0	30.0
trans-1,2-Dichloroethene	Ave	1.170	1.096		1.87	2.00	-6.4	30.0
2-Methylpentane	Ave	2.152	2.325		2.18	2.02	8.0	30.0
Methyl tert-butyl ether	Ave	2.472	2.444		1.98	2.00	-1.1	30.0
1,1-Dichloroethane	Ave	1.844	1.755		1.90	2.00	-4.8	30.0
Vinyl acetate	Ave	2.613	2.772		2.12	2.00	6.1	30.0
2-Butanone (MEK)	Ave	0.4822	0.4954		2.05	2.00	2.7	30.0
Hexane	Ave	0.7573	0.7675		2.03	2.00	1.3	30.0
Isopropyl ether	Ave	3.457	3.178		1.84	2.00	-8.1	30.0
cis-1,2-Dichloroethene	Ave	1.219	1.248		2.05	2.00	2.4	30.0
Ethyl acetate	Ave	2.200	2.172		1.97	2.00	-1.3	30.0
Chloroform	Ave	2.082	2.026		1.95	2.00	-2.7	30.0
Tert-butyl ethyl ether	Ave	2.521	2.536		2.01	2.00	0.6	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Lab Sample ID: CCVIS 140-7907/2 Calibration Date: 01/18/2017 10:18

Instrument ID: MR Calib Start Date: 01/16/2017 18:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/17/2017 10:29

Lab File ID: RA18CCV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.197	1.205		2.01	2.00	0.7	30.0
1,1,1-Trichloroethane	Ave	2.078	2.013		1.94	2.00	-3.1	30.0
1,2-Dichloroethane	Ave	0.2408	0.2379		1.98	2.00	-1.2	30.0
1-Butanol	Ave	0.0809	0.0851		2.10	2.00	5.2	30.0
Benzene	Ave	0.6956	0.7181		2.06	2.00	3.2	30.0
Cyclohexane	Ave	0.0994	0.1057		2.13	2.00	6.4	30.0
Carbon tetrachloride	Ave	0.4255	0.4358		2.05	2.00	2.4	30.0
2,3-Dimethylpentane	Ave	0.1475	0.1454		1.99	2.02	-1.5	30.0
Thiophene	Ave	0.3612	0.4049		2.26	2.02	12.1	30.0
Tert-amyl methyl ether	Ave	0.5308	0.5316		2.00	2.00	0.1	30.0
2,2,4-Trimethylpentane	Ave	0.9488	1.006		2.12	2.00	6.0	30.0
1,2-Dichloropropane	Ave	0.2404	0.2622		2.18	2.00	9.1	30.0
Heptane	Ave	0.2264	0.2435		2.15	2.00	7.6	30.0
Trichloroethene	Ave	0.3144	0.3231		2.05	2.00	2.7	30.0
Dibromomethane	Ave	0.2419	0.2620		2.17	2.00	8.3	30.0
1,4-Dioxane	Ave	0.1115	0.0956		1.72	2.00	-14.2	30.0
Bromodichloromethane	Ave	0.4021	0.4146		2.06	2.00	3.1	30.0
Methyl methacrylate	Ave	0.2508	0.2685		2.14	2.00	7.1	30.0
Methylcyclohexane	Ave	0.4619	0.4038		1.76	2.02	-12.6	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4695	0.5012		2.14	2.00	6.8	30.0
cis-1,3-Dichloropropene	Ave	0.3476	0.3701		2.13	2.00	6.5	30.0
trans-1,3-Dichloropropene	Ave	0.3550	0.3594		2.02	2.00	1.2	30.0
Toluene	Ave	0.8739	0.9535		2.18	2.00	9.1	30.0
1,1,2-Trichloroethane	Ave	0.2754	0.2763		2.01	2.00	0.3	30.0
2-Methylthiophene	Ave	0.7609	0.8560		2.27	2.02	12.5	30.0
3-Methylthiophene	Ave	0.7494	0.8870		2.39	2.02	18.4	30.0
2-Hexanone	Ave	0.2576	0.2757		2.14	2.00	7.0	30.0
Dibromochloromethane	Ave	0.5036	0.5528		2.20	2.00	9.8	30.0
Octane	Ave	0.2781	0.3011		2.17	2.00	8.3	30.0
1,2-Dibromoethane (EDB)	Ave	0.4814	0.5200		2.16	2.00	8.0	30.0
Tetrachloroethene	Ave	0.3356	0.3418		2.04	2.00	1.8	30.0
Chlorobenzene	Ave	0.7195	0.7785		2.16	2.00	8.2	30.0
2,3-Dimethylheptane	Ave	0.7552	0.8267		2.21	2.02	9.5	30.0
Ethylbenzene	Ave	1.174	1.200		2.04	2.00	2.2	30.0
2-Ethylthiophene	Ave	0.8633	0.9360		2.19	2.02	8.4	30.0
m-Xylene & p-Xylene	Ave	0.8819	0.9278		4.21	4.00	5.2	30.0
Bromoform	Ave	0.6483	0.6923		2.14	2.00	6.8	30.0
Styrene	Ave	0.6255	0.7291		2.33	2.00	16.6	30.0
Nonane	Ave	0.5076	0.5699		2.25	2.00	12.3	30.0
o-Xylene	Ave	0.9227	0.9334		2.02	2.00	1.2	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7011	0.7353		2.10	2.00	4.9	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Lab Sample ID: CCVIS 140-7907/2 Calibration Date: 01/18/2017 10:18

Instrument ID: MR Calib Start Date: 01/16/2017 18:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/17/2017 10:29

Lab File ID: RA18CCV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1972	0.2095		2.12	2.00	6.2	30.0
Isopropylbenzene	Ave	1.302	1.451		2.23	2.00	11.5	30.0
Propylbenzene	Ave	0.3605	0.4147		2.30	2.00	15.0	30.0
2-Chlorotoluene	Ave	0.3395	0.3870		2.28	2.00	14.0	30.0
4-Ethyltoluene	Ave	1.306	1.381		2.12	2.00	5.8	30.0
1,3,5-Trimethylbenzene	Ave	0.6336	0.6873		2.17	2.00	8.5	30.0
Alpha Methyl Styrene	Ave	0.5024	0.5804		2.31	2.00	15.5	30.0
Decane	Ave	0.6458	0.7433		2.30	2.00	15.1	30.0
tert-Butylbenzene	Ave	1.115	1.269		2.28	2.00	13.9	30.0
1,2,4-Trimethylbenzene	Ave	1.135	1.225		2.16	2.00	7.9	30.0
1,3-Dichlorobenzene	Ave	0.8032	0.8962		2.23	2.00	11.6	30.0
sec-Butylbenzene	Ave	1.594	1.848		2.32	2.00	15.9	30.0
Benzyl chloride	Ave	0.8762	1.015		2.32	2.00	15.8	30.0
1,4-Dichlorobenzene	Ave	0.8171	0.9065		2.22	2.00	10.9	30.0
4-Isopropyltoluene	Ave	1.302	1.475		2.27	2.00	13.3	30.0
1,2,3-Trimethylbenzene	Ave	0.9045	1.014		2.26	2.02	12.1	30.0
Butylcyclohexane	Ave	0.8419	0.9278		2.22	2.02	10.2	30.0
1,2-Dichlorobenzene	Ave	0.7845	0.8703		2.22	2.00	10.9	30.0
Indane	Ave	1.008	1.092		2.19	2.02	8.3	30.0
Indene	QuaF		1.114		2.40	2.02	19.1	30.0
Butylbenzene	Ave	1.256	1.443		2.30	2.00	14.9	30.0
Undecane	Ave	0.7309	0.8609		2.36	2.00	17.8	30.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		1.393		2.50	2.02	24.0	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.4119	0.3697		1.80	2.00	-10.2	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.147	1.352		2.38	2.02	17.9	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.7194	0.8373		2.35	2.02	16.4	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.9719	1.039		2.16	2.02	6.9	30.0
Dodecane	Ave	0.7623	0.6628		1.74	2.00	-13.0	30.0
1,2,4-Trichlorobenzene	Ave	0.9333	0.7820		1.68	2.00	-16.2	30.0
Naphthalene	Ave	1.723	1.432		1.66	2.00	-16.9	30.0
Benzo(b)thiophene	Ave	0.9449	0.8367		1.79	2.02	-11.5	30.0
Hexachlorobutadiene	Ave	0.8326	0.7240		1.74	2.00	-13.0	30.0
1,2,3-Trichlorobenzene	Ave	0.8487	0.6930		1.63	2.00	-18.3	30.0
2-Methylnaphthalene	Ave	0.2033	0.0639		1.97	6.25	-68.6*	50.0
1-Methylnaphthalene	Ave	0.1899	0.0555		1.83	6.25	-70.8*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6257	0.6391		4.09	4.00	2.1	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18CCV.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 18-Jan-2017 10:18:30 ALS Bottle#: 15 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003860-002
Misc. Info.: S29
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Jan-2017 10:27:03 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: tajh Date: 18-Jan-2017 14:21:19

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.247	8.247	0.000	86	355315	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.410	10.410	0.000	93	1742464	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.295	15.295	0.000	84	1516979	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.983	16.983	0.000	95	969516	4.00	4.09	
6 Chlorodifluoromethane	67	3.723	3.723	0.000	97	39864	2.00	2.02	
7 Propene	41	3.729	3.729	0.000	97	178655	2.00	1.93	
8 Dichlorodifluoromethane	85	3.777	3.777	0.000	99	392125	2.00	2.44	
9 Chloromethane	52	3.928	3.928	0.000	100	62468	2.00	2.07	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.950	3.950	0.000	94	406644	2.00	2.23	
11 Acetaldehyde	44	4.068	4.068	0.000	98	316396	10.1	11.7	
12 Vinyl chloride	62	4.074	4.074	0.000	98	199603	2.00	2.30	
13 Butadiene	54	4.155	4.155	0.000	96	135530	2.00	2.21	
14 Butane	43	4.160	4.160	0.000	92	271773	2.00	2.47	
15 Bromomethane	94	4.419	4.419	0.000	97	163525	2.00	2.16	
16 Chloroethane	64	4.543	4.543	0.000	99	81407	2.00	2.38	
17 Ethanol	31	4.656	4.656	0.000	96	265436	10.1	11.7	
18 Vinyl bromide	106	4.802	4.802	0.000	98	161626	2.00	2.29	
19 2-Methylbutane	43	4.856	4.856	0.000	93	156008	2.00	2.34	
20 Acrolein	56	5.034	5.034	0.000	32	53146	2.00	2.08	
21 Trichlorofluoromethane	101	5.039	5.039	0.000	99	437315	2.00	1.98	
22 Acetonitrile	40	5.082	5.082	0.000	100	80622	2.00	2.10	
23 Acetone	58	5.125	5.125	0.000	97	236124	6.00	5.77	
24 Isopropyl alcohol	45	5.228	5.228	0.000	95	683386	6.00	5.68	
25 Pentane	72	5.238	5.238	0.000	95	34733	2.00	2.01	
26 Ethyl ether	31	5.373	5.373	0.000	94	205548	2.00	2.05	
27 1,1-Dichloroethene	96	5.643	5.643	0.000	96	187103	2.00	1.91	
28 Acrylonitrile	53	5.713	5.713	0.000	97	133089	2.00	2.12	
29 2-Methyl-2-propanol	59	5.740	5.740	0.000	96	239882	2.00	1.82	
30 1,1,2-Trichloro-1,2,2-trif	101	5.815	5.815	0.000	96	386289	2.00	2.06	
31 Methylene Chloride	84	5.934	5.934	0.000	94	168609	2.00	1.83	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.956	5.956	0.000	93	138407	2.00	2.00	
33 Carbon disulfide	76	6.074	6.074	0.000	98	494507	2.00	1.96	
34 trans-1,2-Dichloroethene	96	6.667	6.667	0.000	95	194702	2.00	1.87	
35 2-Methylpentane	43	6.721	6.721	0.000	95	416801	2.02	2.18	
36 Methyl tert-butyl ether	73	6.791	6.791	0.000	97	434132	2.00	1.98	
37 1,1-Dichloroethane	63	7.040	7.040	0.000	99	311790	2.00	1.90	
38 Vinyl acetate	43	7.147	7.147	0.000	100	492549	2.00	2.12	
39 2-Butanone (MEK)	72	7.536	7.536	0.000	99	88003	2.00	2.05	
40 Hexane	56	7.622	7.622	0.000	91	136354	2.00	2.03	
41 Isopropyl ether	45	7.757	7.757	0.000	98	564695	2.00	1.84	
42 cis-1,2-Dichloroethene	96	7.945	7.945	0.000	88	221644	2.00	2.05	
43 Ethyl acetate	43	8.123	8.123	0.000	100	385940	2.00	1.97	
44 Chloroform	83	8.274	8.274	0.000	95	359873	2.00	1.95	
45 Tert-butyl ethyl ether	59	8.393	8.393	0.000	93	450571	2.00	2.01	
46 Tetrahydrofuran	42	8.630	8.630	0.000	95	214055	2.00	2.01	
47 1,1,1-Trichloroethane	97	9.261	9.261	0.000	94	357574	2.00	1.94	
48 1,2-Dichloroethane	62	9.331	9.331	0.000	95	207291	2.00	1.98	
49 n-Butanol	31	9.817	9.817	0.000	83	74155	2.00	2.10	
50 Benzene	78	9.844	9.844	0.000	94	625584	2.00	2.06	
51 Cyclohexane	69	9.865	9.865	0.000	92	92125	2.00	2.13	
52 Carbon tetrachloride	117	9.876	9.876	0.000	98	379636	2.00	2.05	
53 2,3-Dimethylpentane	71	10.022	10.022	0.000	93	127800	2.02	1.99	
54 Thiophene	84	10.108	10.108	0.000	91	355995	2.02	2.26	
55 Tert-amyl methyl ether	73	10.356	10.356	0.000	98	463187	2.00	2.00	
56 Isooctane	57	10.690	10.690	0.000	99	876662	2.00	2.12	
57 1,2-Dichloropropane	63	11.078	11.078	0.000	92	228401	2.00	2.18	
58 n-Heptane	71	11.089	11.089	0.000	90	212165	2.00	2.15	
59 Trichloroethene	130	11.143	11.143	0.000	90	281463	2.00	2.05	
60 Dibromomethane	93	11.186	11.186	0.000	87	228226	2.00	2.17	
62 1,4-Dioxane	88	11.353	11.353	0.000	39	83310	2.00	1.72	
61 Dichlorobromomethane	83	11.359	11.359	0.000	99	361175	2.00	2.06	
63 Methyl methacrylate	41	11.488	11.488	0.000	91	233934	2.00	2.14	
64 Methylcyclohexane	83	11.963	11.963	0.000	95	355076	2.02	1.76	
65 4-Methyl-2-pentanone (MIBK	43	12.351	12.351	0.000	97	436677	2.00	2.14	
66 cis-1,3-Dichloropropene	75	12.405	12.405	0.000	91	322478	2.00	2.13	
67 trans-1,3-Dichloropropene	75	13.128	13.128	0.000	98	272585	2.00	2.02	
68 Toluene	91	13.268	13.268	0.000	93	723210	2.00	2.18	
69 1,1,2-Trichloroethane	83	13.322	13.322	0.000	94	209534	2.00	2.01	
70 2-Methylthiophene	97	13.419	13.419	0.000	97	655232	2.02	2.27	
71 3-Methylthiophene	97	13.629	13.629	0.000	98	678959	2.02	2.39	
72 2-Hexanone	58	13.748	13.748	0.000	92	209087	2.00	2.14	
73 Chlorodibromomethane	129	14.044	14.044	0.000	97	419279	2.00	2.20	
74 n-Octane	85	14.060	14.060	0.000	94	228394	2.00	2.17	
75 Ethylene Dibromide	107	14.335	14.335	0.000	98	394406	2.00	2.16	
76 Tetrachloroethene	129	14.454	14.454	0.000	95	259229	2.00	2.04	
77 Chlorobenzene	112	15.344	15.344	0.000	97	590451	2.00	2.16	
78 2,3-Dimethylheptane	43	15.441	15.441	0.000	98	632771	2.02	2.21	
79 Ethylbenzene	91	15.662	15.662	0.000	97	910215	2.00	2.04	
80 2-Ethylthiophene	97	15.754	15.754	0.000	97	716503	2.02	2.19	
81 m-Xylene & p-Xylene	91	15.829	15.829	0.000	98	1407402	4.00	4.21	
82 Bromoform	173	16.234	16.234	0.000	98	525126	2.00	2.14	
83 Styrene	104	16.293	16.293	0.000	96	552982	2.00	2.33	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.320	16.320	0.000	95	432290	2.00	2.25	
85 o-Xylene	91	16.358	16.358	0.000	98	707972	2.00	2.02	
86 1,1,2,2-Tetrachloroethane	83	16.670	16.670	0.000	98	557738	2.00	2.10	
87 1,2,3-Trichloropropane	110	16.832	16.832	0.000	97	158875	2.00	2.12	
88 Isopropylbenzene	105	16.978	16.978	0.000	95	1100341	2.00	2.23	
89 N-Propylbenzene	120	17.549	17.549	0.000	100	314509	2.00	2.30	
90 2-Chlorotoluene	126	17.576	17.576	0.000	96	293557	2.00	2.28	
91 4-Ethyltoluene	105	17.716	17.716	0.000	99	1047442	2.00	2.12	
92 1,3,5-Trimethylbenzene	120	17.803	17.803	0.000	94	521279	2.00	2.17	
93 Alpha Methyl Styrene	118	18.040	18.040	0.000	92	440209	2.00	2.31	
94 n-Decane	57	18.164	18.164	0.000	90	563771	2.00	2.30	
95 tert-Butylbenzene	119	18.250	18.250	0.000	93	962854	2.00	2.28	
96 1,2,4-Trimethylbenzene	105	18.266	18.266	0.000	96	928857	2.00	2.16	
97 1,3-Dichlorobenzene	146	18.531	18.531	0.000	95	679769	2.00	2.23	
98 sec-Butylbenzene	105	18.541	18.541	0.000	99	1401542	2.00	2.32	
99 Benzyl chloride	91	18.606	18.606	0.000	100	769853	2.00	2.32	
100 1,4-Dichlorobenzene	146	18.622	18.622	0.000	96	687590	2.00	2.22	
101 4-Isopropyltoluene	119	18.719	18.719	0.000	97	1118813	2.00	2.27	
102 1,2,3-Trimethylbenzene	105	18.763	18.763	0.000	96	775812	2.02	2.26	
103 Butylcyclohexane	83	18.849	18.849	0.000	98	710230	2.02	2.22	
104 1,2-Dichlorobenzene	146	19.000	19.000	0.000	98	660100	2.00	2.22	
105 2,3-Dihydroindene	117	19.011	19.011	0.000	95	835871	2.02	2.19	
106 Indene	116	19.145	19.145	0.000	91	852379	2.02	2.40	
107 n-Butylbenzene	91	19.183	19.183	0.000	98	1094659	2.00	2.30	
108 Undecane	57	19.561	19.561	0.000	97	652973	2.00	2.36	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.571	19.571	0.000	98	1066176	2.02	2.50	
110 1,2-Dibromo-3-Chloropropan	157	19.631	19.631	0.000	89	280466	2.00	1.80	
111 1,2,4,5-Tetramethylbenzene	119	19.976	19.976	0.000	98	1034754	2.02	2.38	
112 1,2,3,5-Tetramethylbenzene	119	20.030	20.030	0.000	97	640924	2.02	2.35	
113 1,2,3,4-Tetramethylbenzene	119	20.440	20.440	0.000	98	795485	2.02	2.16	
114 Dodecane	57	20.661	20.661	0.000	95	502737	2.00	1.74	
115 1,2,4-Trichlorobenzene	180	20.790	20.790	0.000	92	593166	2.00	1.68	
116 Naphthalene	128	20.920	20.920	0.000	100	1085985	2.00	1.66	
117 Benzo(b)thiophene	134	21.022	21.022	0.000	100	640471	2.02	1.79	
118 Hexachlorobutadiene	225	21.173	21.173	0.000	94	549171	2.00	1.74	
119 1,2,3-Trichlorobenzene	180	21.216	21.216	0.000	95	525625	2.00	1.63	
120 2-Methylnaphthalene	142	21.933	21.933	0.000	97	151535	6.25	1.97	
121 1-Methylnaphthalene	142	22.057	22.057	0.000	98	131526	6.25	1.83	
A 122 C6 Range	1	7.623	(7.557-7.657)		0	1191886	2.00	2.01	
S 124 Xylenes, Total	100				0		6.00	6.23	
S 125 1,2-Dichloroethene, Total	1				0		4.00	3.92	

Reagents:

40CV101S_00029	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

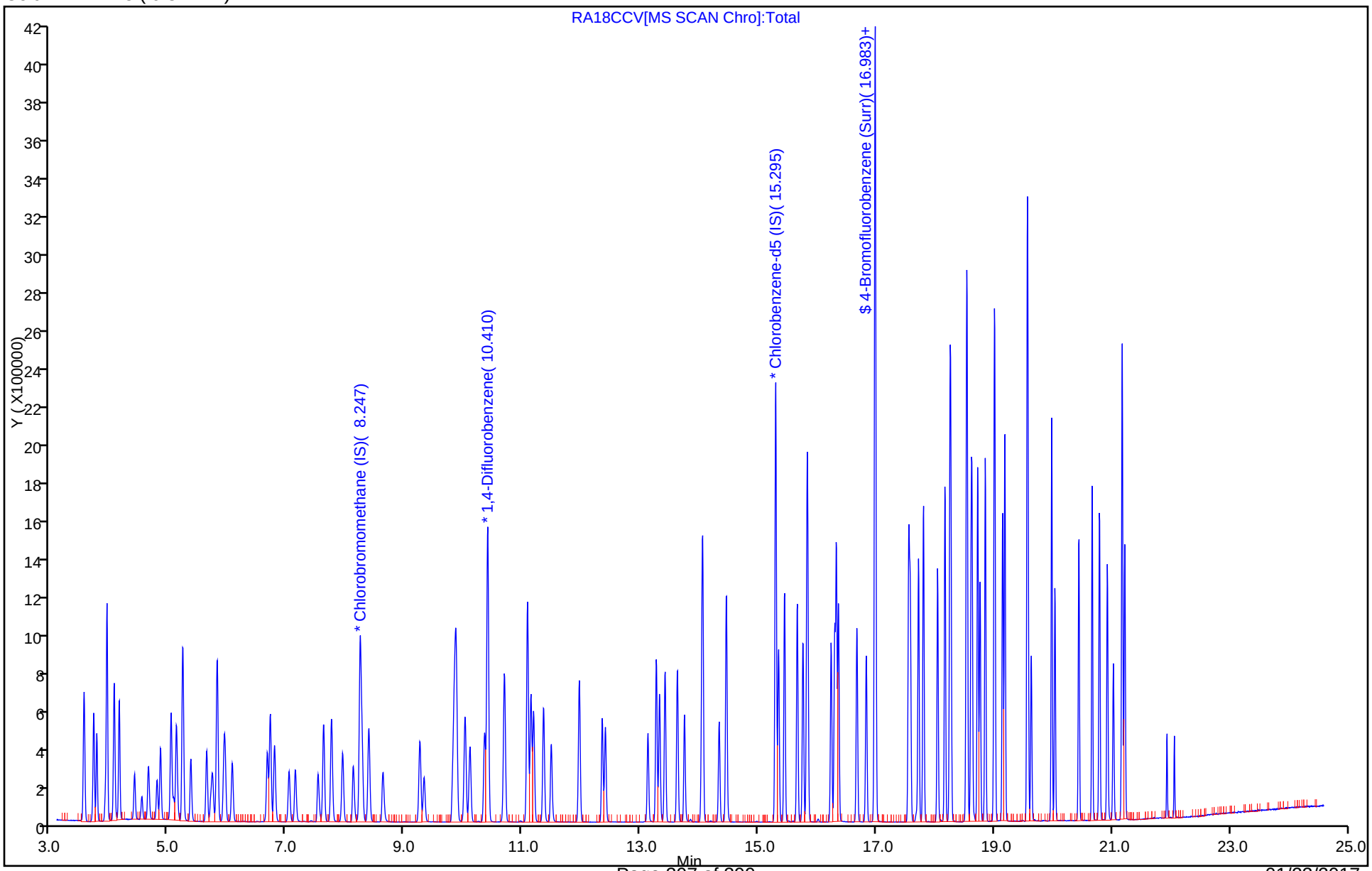
Report Date: 19-Jan-2017 10:27:04 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18CCV.D

Injection Date:	18-Jan-2017 10:18:30	Instrument ID:	MR	Operator ID:	
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JBFBK25X.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	25-Nov-2016 18:19:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003656-001				
Misc. Info.:	BFB				
Operator ID:	007126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	28-Nov-2016 14:14:29	Calib Date:	26-Nov-2016 01:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK025				
First Level Reviewer: barlozhetskayaa		Date:	26-Nov-2016 10:31:38		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	3.674	3.584	0.090	0	501199	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

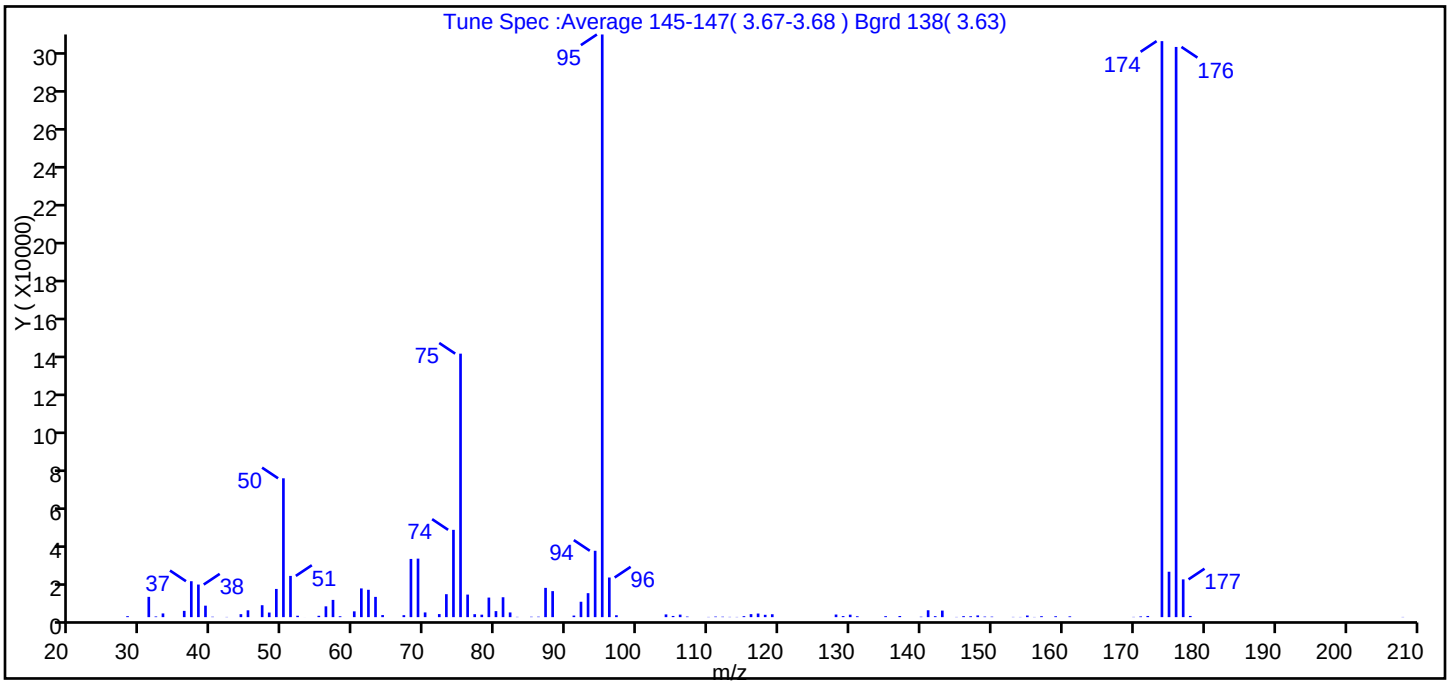
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JBFBK25X.D
Injection Date: 25-Nov-2016 18:19:30 Instrument ID: MJ
Lims ID: BFB
Client ID:
Operator ID: 007126 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	23.8
75	30 to 60% of m/z 95	45.2
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	98.9
175	5 to 9% of m/z 174	7.8 (7.9)
176	Greater than 95% but less than 101% of m/z 174	97.9 (99.0)
177	5 to 9% of m/z 176	6.5 (6.6)

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JBFBK25X.D\MJ_TO15.rslt\spectra.d
Injection Date: 25-Nov-2016 18:19:30
Spectrum: Tune Spec :Average 145-147(3.67-3.68) Bgrd 138(3.63)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 102

m/z	Y	m/z	Y	m/z	Y	m/z	Y
28.00	514	62.00	14471	94.00	35096	142.00	519
31.00	10722	63.00	10708	95.00	308096	143.00	3467
32.00	366	64.00	1094	96.00	20960	145.00	112
33.00	1961	67.00	1035	97.00	1001	146.00	513
36.00	3318	68.00	30776	104.00	1445	147.00	466
37.00	19000	69.00	30944	105.00	631	148.00	905
38.00	17240	70.00	2496	106.00	1333	149.00	293
39.00	6072	72.00	1614	107.00	296	150.00	264
40.00	214	73.00	12143	110.00	114	153.00	124
42.00	111	74.00	46168	111.00	301	154.00	104
44.00	1571	75.00	139328	112.00	230	155.00	853
45.00	3614	76.00	11930	113.00	136	156.00	101
47.00	6308	77.00	1565	114.00	111	157.00	496
48.00	2431	78.00	1305	115.00	519	159.00	480
49.00	14915	79.00	10349	116.00	1587	161.00	419
50.00	73416	80.00	3185	117.00	1910	170.00	131
51.00	21808	81.00	10521	118.00	1239	171.00	381
52.00	741	82.00	2486	119.00	1532	172.00	623
53.00	14	83.00	145	128.00	1380	174.00	304576
54.00	2	85.00	213	129.00	554	175.00	24008
55.00	712	86.00	243	130.00	1306	176.00	301504
56.00	5713	87.00	15477	131.00	472	177.00	19976
57.00	9119	88.00	13759	135.00	519	178.00	637
58.00	454	91.00	833	137.00	594	208.00	106
60.00	3065	92.00	8139	140.00	236		
61.00	15193	93.00	12681	141.00	3641		

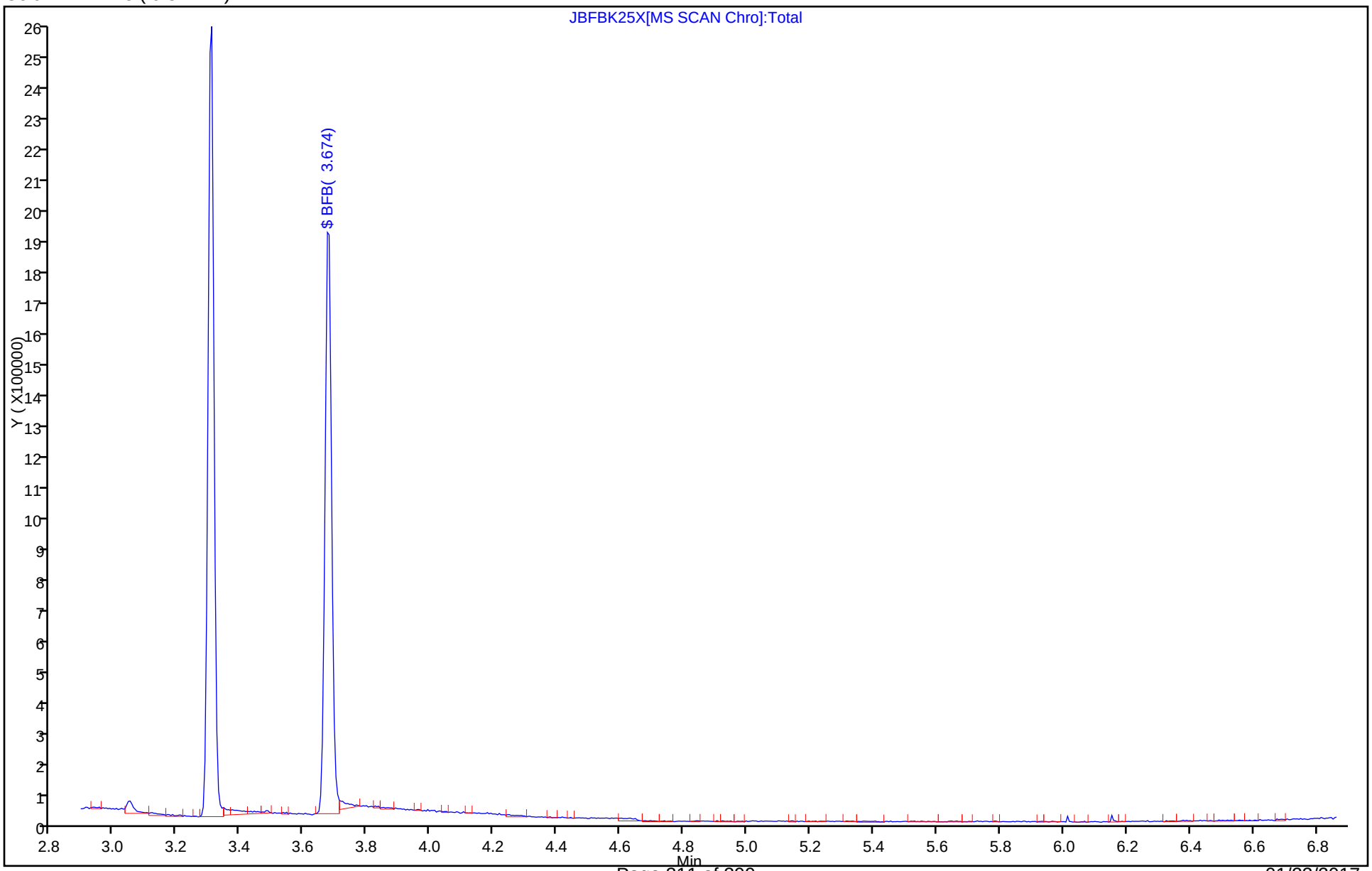
Report Date: 28-Nov-2016 14:14:30 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JBFBK25X.D

Injection Date:	25-Nov-2016 18:19:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JBFBA19.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	19-Jan-2017 11:35:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003854-001				
Misc. Info.:	BFB				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	19-Jan-2017 16:29:46	Calib Date:	26-Nov-2016 01:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK012				

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	3.658	3.658	0.000	0	396759	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

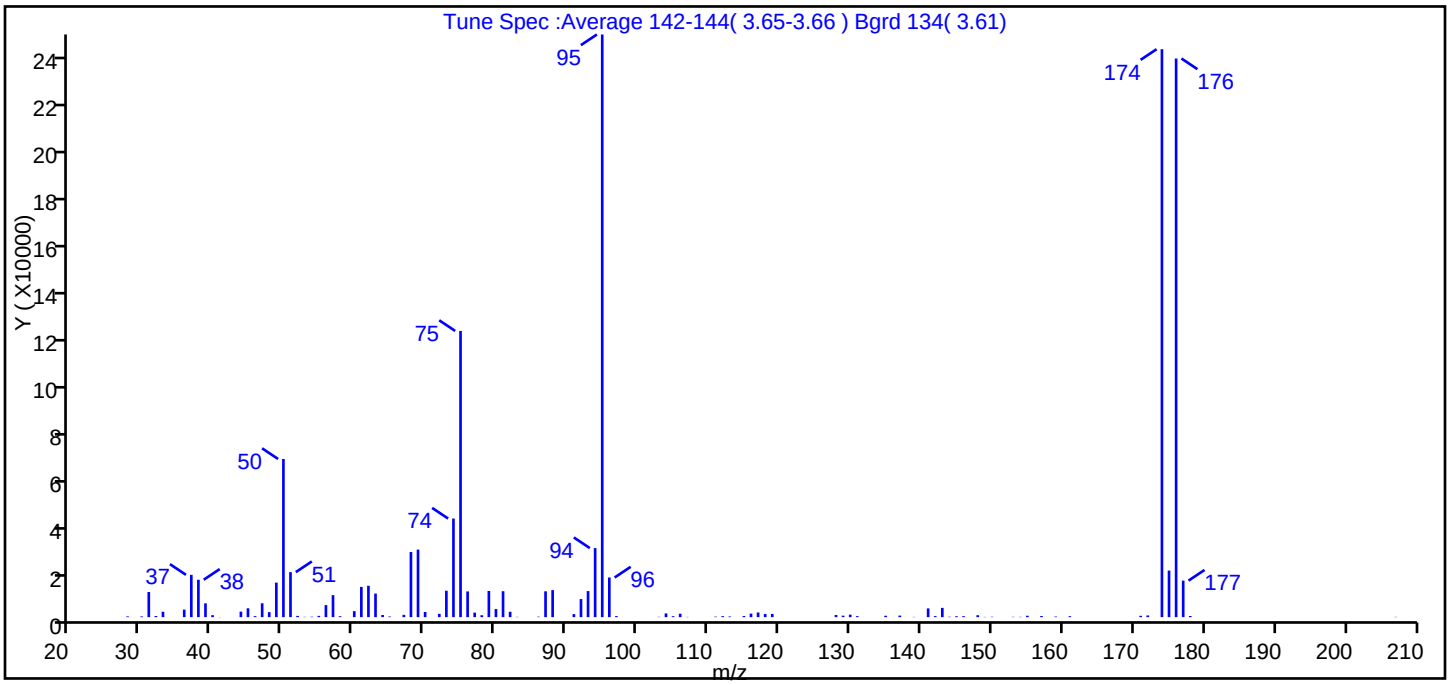
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JBFBA19.D
Injection Date: 19-Jan-2017 11:35:30 Instrument ID: MJ
Lims ID: BFB
Client ID:
Operator ID: 403648 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	27.1
75	30 to 60% of m/z 95	49.1
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	97.5
175	5 to 9% of m/z 174	8.0 (8.2)
176	Greater than 95% but less than 101% of m/z 174	95.9 (98.4)
177	5 to 9% of m/z 176	6.3 (6.5)

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JBFBA19.D\MJ_TO15.rslt\spectra.d
Injection Date: 19-Jan-2017 11:35:30
Spectrum: Tune Spec :Average 142-144(3.65-3.66) Bgrd 134(3.61)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 101

m/z	Y	m/z	Y	m/z	Y	m/z	Y
28.00	321	60.00	2556	92.00	7701	141.00	3723
30.00	301	61.00	12890	93.00	11109	142.00	450
31.00	10703	62.00	13369	94.00	29424	143.00	3948
32.00	493	63.00	10049	95.00	248320	144.00	168
33.00	2301	64.00	908	96.00	16896	145.00	385
36.00	3206	65.00	266	97.00	453	146.00	410
37.00	18032	67.00	974	103.00	127	148.00	814
38.00	15942	68.00	27752	104.00	1594	149.00	104
39.00	5889	69.00	28792	105.00	400	150.00	166
40.00	840	70.00	2199	106.00	1466	153.00	141
41.00	60	72.00	1409	107.00	106	154.00	125
44.00	2352	73.00	11260	111.00	219	155.00	593
45.00	3774	74.00	42016	112.00	421	157.00	476
46.00	433	75.00	121968	113.00	281	159.00	250
47.00	5903	76.00	10958	115.00	483	161.00	402
48.00	2123	77.00	1920	116.00	1515	171.00	576
49.00	14709	78.00	812	117.00	1984	172.00	718
50.00	67408	79.00	11138	118.00	1352	174.00	242048
51.00	19192	80.00	3461	119.00	1370	175.00	19848
52.00	528	81.00	11053	128.00	906	176.00	238080
53.00	125	82.00	2301	129.00	625	177.00	15566
54.00	179	83.00	109	130.00	1058	178.00	488
55.00	547	86.00	202	131.00	424	207.00	111
56.00	5136	87.00	11015	135.00	592		
57.00	9385	88.00	11530	137.00	669		
58.00	382	91.00	1292	139.00	104		

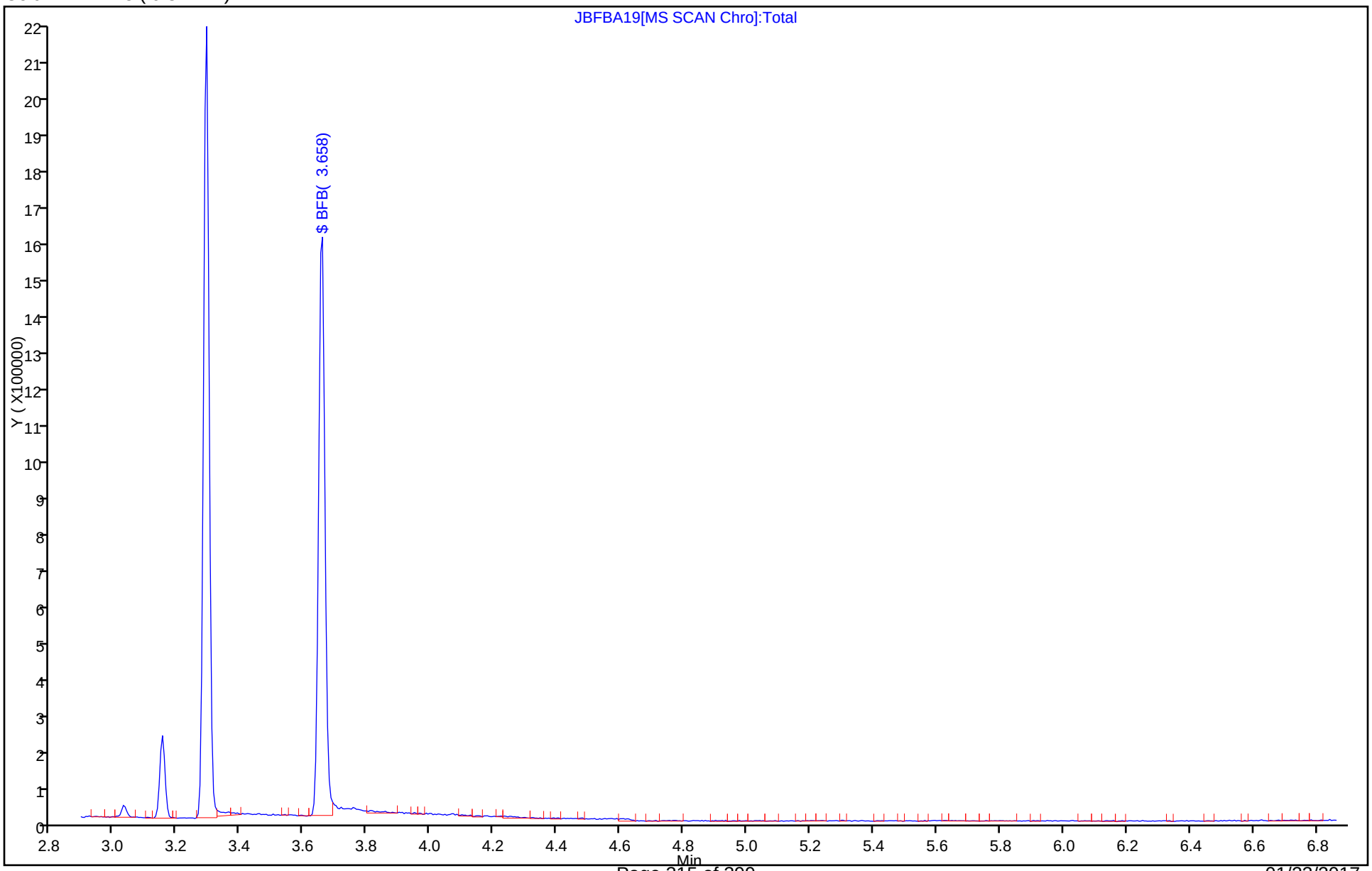
Report Date: 19-Jan-2017 16:29:46 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JBFBA19.D

Injection Date:	19-Jan-2017 11:35:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RBFBA16.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	16-Jan-2017 16:55:30	ALS Bottle#:	16	Worklist Smp#:	2
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003844-002				
Misc. Info.:	TUNE				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	17-Jan-2017 14:55:10	Calib Date:	17-Jan-2017 10:29:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK032				
First Level Reviewer: barlozhetskayaa		Date:	16-Jan-2017 17:50:50		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.563	4.563	0.000	0	786159	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

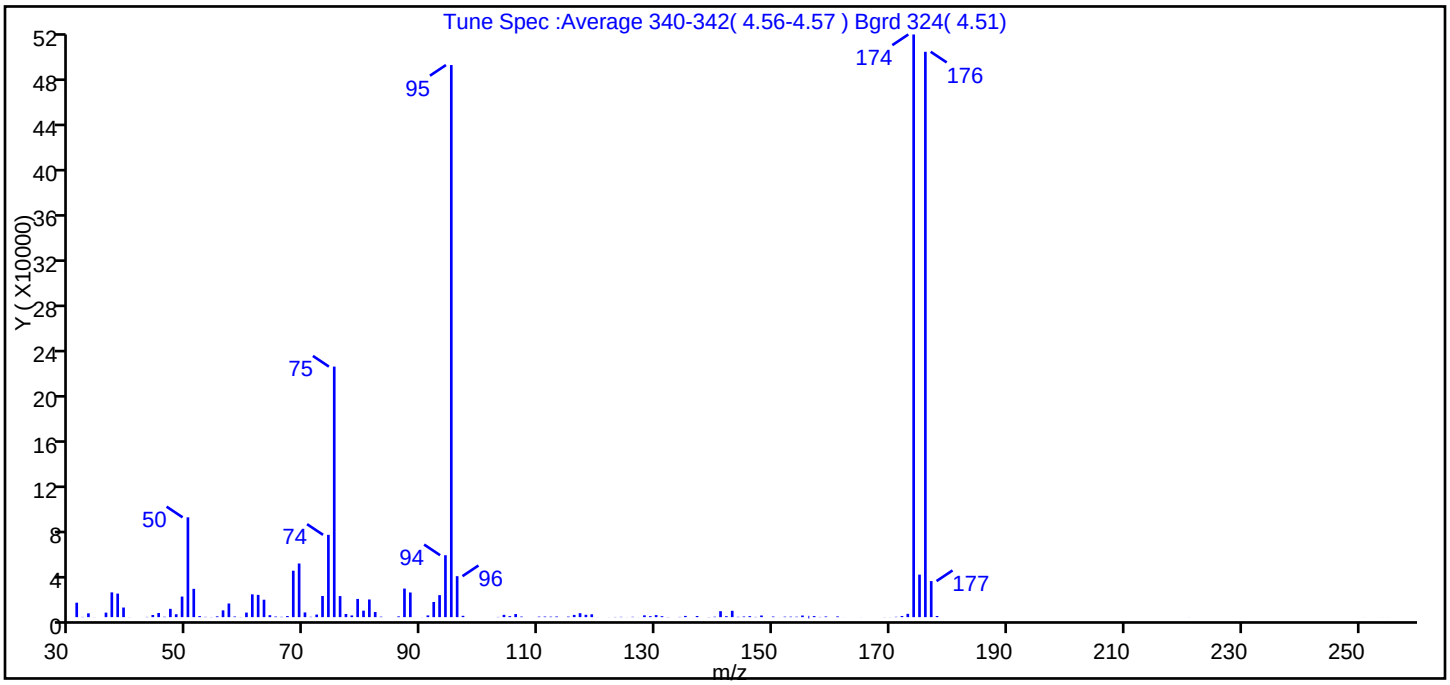
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RBFBA16.D
Injection Date: 16-Jan-2017 16:55:30 Instrument ID: MR
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 16 Worklist Smp#: 2
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.1
75	30 to 60% of m/z 95	45.4
96	5 to 9% of m/z 95	7.4
173	Less than 2% of m/z 174	0.6 (0.6)
174	50 to 120% of m/z 95	105.5
175	5 to 9% of m/z 174	7.7 (7.3)
176	Greater than 95% but less than 101% of m/z 174	102.4 (97.0)
177	5 to 9% of m/z 176	6.5 (6.4)

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RBFBA16.D\MR_TO15.rslt\spectra.d
Injection Date: 16-Jan-2017 16:55:30
Spectrum: Tune Spec :Average 340-342(4.56-4.57) Bgrd 324(4.51)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 127

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	12899	66.00	266	106.00	2755	145.00	565
32.00	203	67.00	982	107.00	494	146.00	873
33.00	3408	68.00	41424	110.00	467	147.00	216
34.00	77	69.00	47840	111.00	527	148.00	1465
36.00	4052	70.00	4206	112.00	435	150.00	530
37.00	22096	71.00	290	113.00	585	151.00	33
38.00	21016	72.00	2305	115.00	487	152.00	431
39.00	8578	73.00	18888	116.00	1987	153.00	429
40.00	86	74.00	73416	117.00	3536	154.00	387
43.00	204	75.00	223488	118.00	2106	155.00	1441
44.00	1921	76.00	18808	119.00	2539	156.00	1
45.00	3720	77.00	2811	120.00	51	157.00	937
46.00	346	78.00	1501	122.00	38	158.00	188
47.00	7410	79.00	16247	123.00	164	159.00	601
48.00	2563	80.00	5776	124.00	256	161.00	666
49.00	18344	81.00	15756	125.00	56	162.00	44
50.00	89040	82.00	4604	126.00	295	165.00	50
51.00	25256	83.00	421	127.00	43	169.00	87
52.00	905	86.00	671	128.00	1605	170.00	71
53.00	251	87.00	25480	129.00	853	171.00	296
54.00	122	88.00	22000	130.00	1812	172.00	1032
55.00	715	90.00	57	131.00	866	173.00	2947
56.00	6067	91.00	1548	132.00	135	174.00	519744
57.00	12164	92.00	13530	134.00	196	175.00	37912
58.00	573	93.00	19632	135.00	1093	176.00	504320
59.00	119	94.00	55232	137.00	1010	177.00	32168
60.00	4067	95.00	492480	139.00	119	178.00	1010
61.00	20344	96.00	36552	140.00	392	221.00	45
62.00	19872	97.00	1193	141.00	5306	251.00	39
63.00	15557	103.00	193	142.00	849	254.00	32
64.00	1751	104.00	2056	143.00	5660	255.00	17
65.00	544	105.00	899	144.00	301		

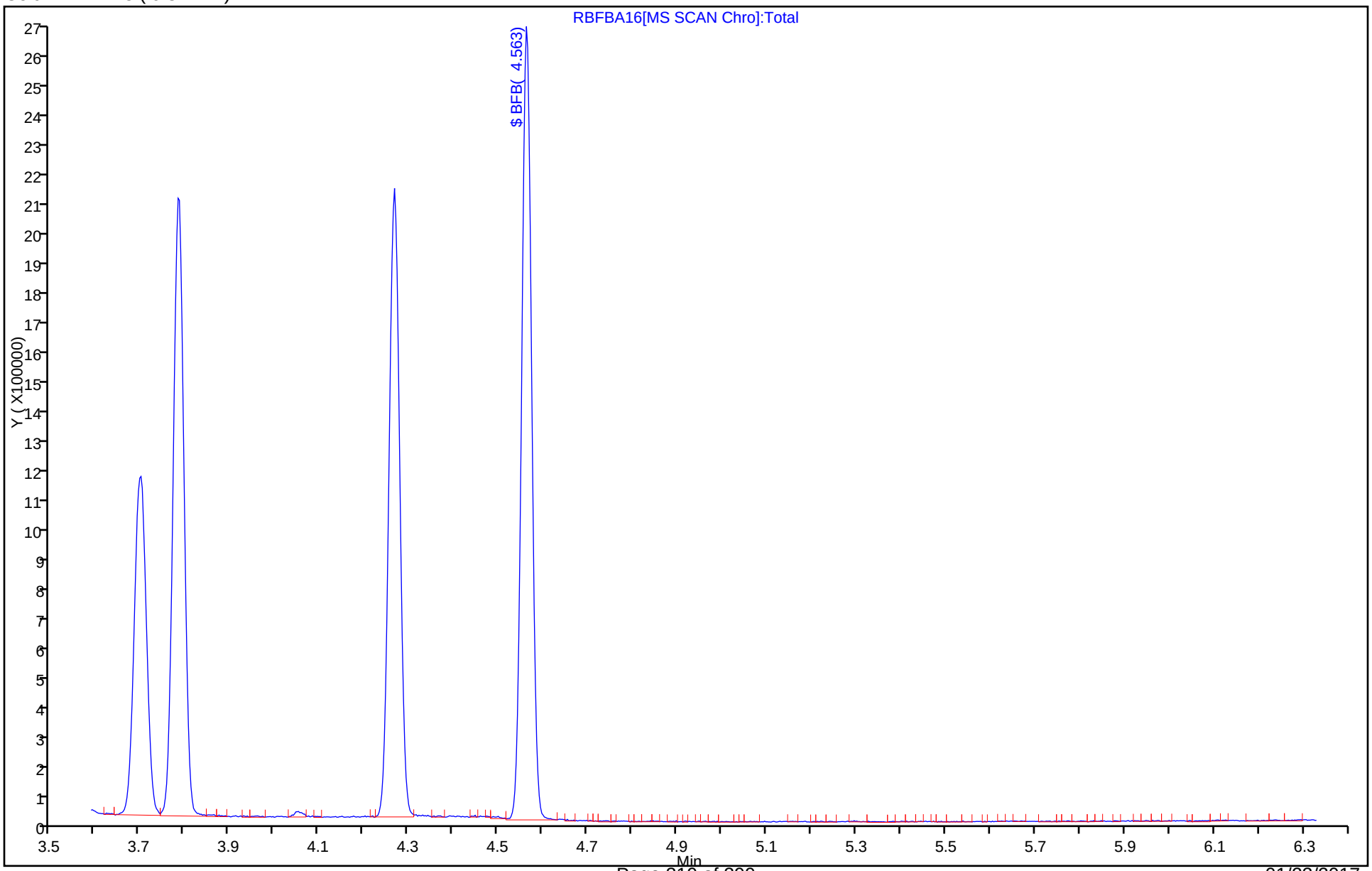
Report Date: 17-Jan-2017 14:55:10 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RBFBA16.D

Injection Date:	16-Jan-2017 16:55:30	Instrument ID:	MR	Operator ID:	
Lims ID:	BFB			Worklist Smp#:	2
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18BFB.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	18-Jan-2017 09:47:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003860-001				
Misc. Info.:	TUNE				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	19-Jan-2017 10:27:01	Calib Date:	17-Jan-2017 10:29:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK012				
First Level Reviewer: barlozhetskayaa		Date:	18-Jan-2017 10:41:54		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.569	4.569	0.000	0	885642	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

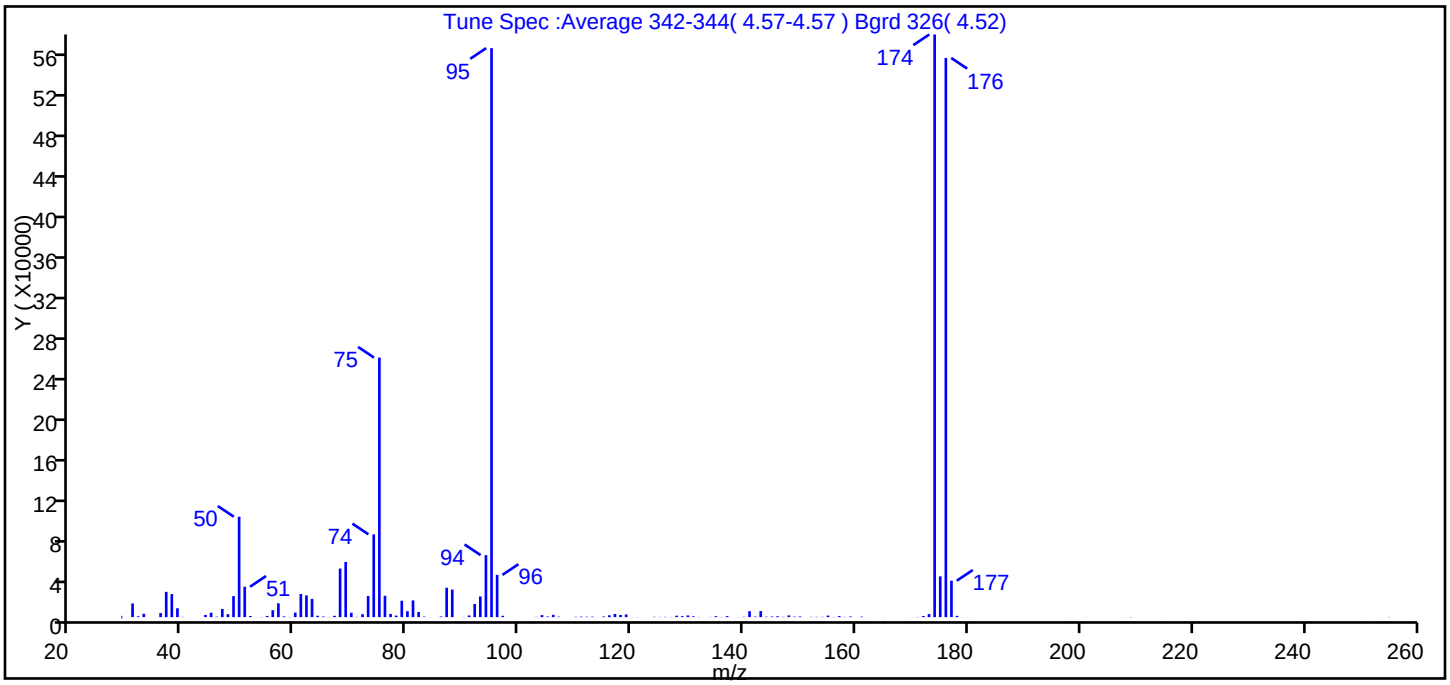
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18BFB.D
Injection Date: 18-Jan-2017 09:47:30 Instrument ID: MR
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	17.6
75	30 to 60% of m/z 95	45.6
96	5 to 9% of m/z 95	7.4
173	Less than 2% of m/z 174	0.5 (0.5)
174	50 to 120% of m/z 95	102.4
175	5 to 9% of m/z 174	7.2 (7.0)
176	Greater than 95% but less than 101% of m/z 174	98.3 (96.0)
177	5 to 9% of m/z 176	6.4 (6.5)

Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18BFB.D\MR_TO15.rslt\spectra.d
Injection Date: 18-Jan-2017 09:47:30
Spectrum: Tune Spec :Average 342-344(4.57-4.57) Bgrd 326(4.52)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 134

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	1	69.00	54336	112.00	431	150.00	690
31.00	13492	70.00	4280	113.00	477	152.00	293
32.00	830	71.00	272	115.00	671	153.00	265
33.00	3341	72.00	2880	116.00	1812	154.00	300
36.00	4031	73.00	20832	117.00	3121	155.00	1548
37.00	24920	74.00	81536	118.00	2145	156.00	179
38.00	22680	75.00	255488	119.00	2634	157.00	1035
39.00	8747	76.00	21032	120.00	106	158.00	246
40.00	233	77.00	3178	121.00	93	159.00	653
44.00	2208	78.00	1519	123.00	72	160.00	35
45.00	4370	79.00	16140	124.00	329	161.00	514
46.00	464	80.00	5867	125.00	248	162.00	43
47.00	8057	81.00	16488	126.00	296	165.00	70
48.00	2903	82.00	5092	127.00	160	170.00	91
49.00	20672	83.00	536	128.00	1423	171.00	174
50.00	98840	84.00	145	129.00	934	172.00	1162
51.00	29952	86.00	650	130.00	1680	173.00	3025
52.00	1138	87.00	28920	131.00	777	174.00	573504
53.00	29	88.00	27120	132.00	161	175.00	40128
54.00	129	90.00	135	134.00	208	176.00	550400
55.00	1160	91.00	1666	135.00	967	177.00	35888
56.00	6862	92.00	12981	136.00	158	178.00	1254
57.00	13613	93.00	20360	137.00	1025	179.00	54
58.00	730	94.00	61048	139.00	74	180.00	78
59.00	192	95.00	560064	140.00	298	198.00	42
60.00	4474	96.00	41632	141.00	5811	201.00	42
61.00	22792	97.00	1346	142.00	560	208.00	102
62.00	21432	103.00	246	143.00	5954	209.00	148
63.00	17936	104.00	2028	144.00	428	215.00	35
64.00	1353	105.00	626	145.00	594	251.00	38
65.00	616	106.00	2277	146.00	882	253.00	59
66.00	185	107.00	467	147.00	273	255.00	186
67.00	1312	110.00	353	148.00	1708		

Report Date: 19-Jan-2017 10:27:01 Chrom Revision: 2.2 18-Jan-2017 10:40:14
Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18BFB.D\MR_TO15.rslt\spectra.d
Injection Date: 18-Jan-2017 09:47:30
Spectrum: Tune Spec :Average 342-344(4.57-4.57) Bgrd 326(4.52)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 134

m/z	Y	m/z	Y	m/z	Y	m/z	Y
68.00	47824	111.00	550	149.00	501		

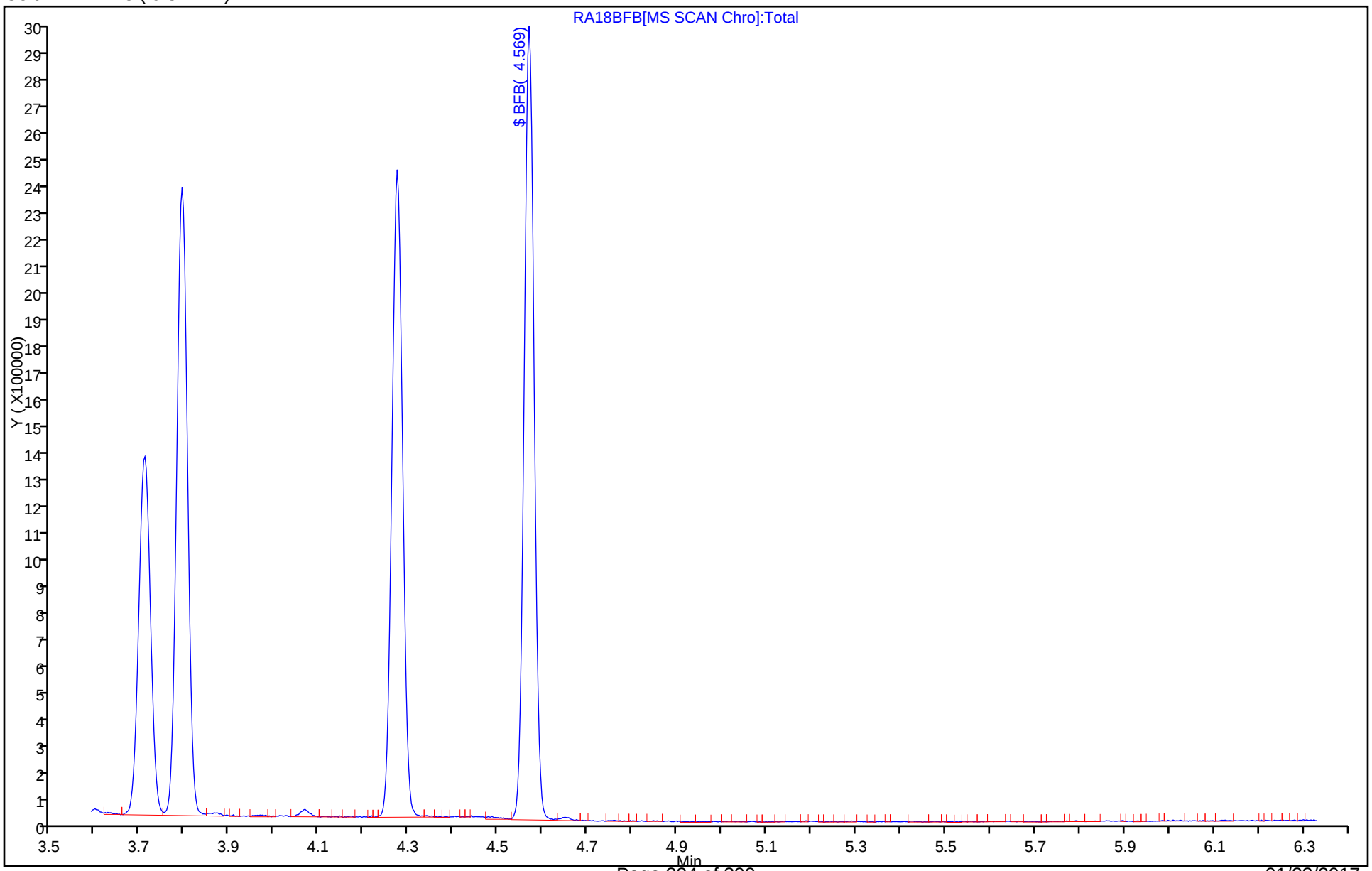
Report Date: 19-Jan-2017 10:27:01 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18BFB.D

Injection Date:	18-Jan-2017 09:47:30	Instrument ID:	MR	Operator ID:	
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-7893/4

Matrix: Air Lab File ID: J500BA19.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 01/19/2017 14:11

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7893 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	86		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-7893/4

Matrix: Air Lab File ID: J500BA19.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 01/19/2017 14:11

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7893 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	86		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\J500BA19.D
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 19-Jan-2017 14:11:30 ALS Bottle#: 16 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003854-004
Misc. Info.: 500ml blk
Operator ID: 7126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Jan-2017 16:29:47 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: tajh Date: 19-Jan-2017 14:52:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.596	8.597	-0.001	99	340064	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.796	10.803	-0.007	95	1506113	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.573	15.574	-0.001	87	1207007	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.219	17.220	-0.001	95	658067	4.00	3.44	
31 Methylene Chloride	84	6.068	6.079	-0.011	94	7234		0.0722	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

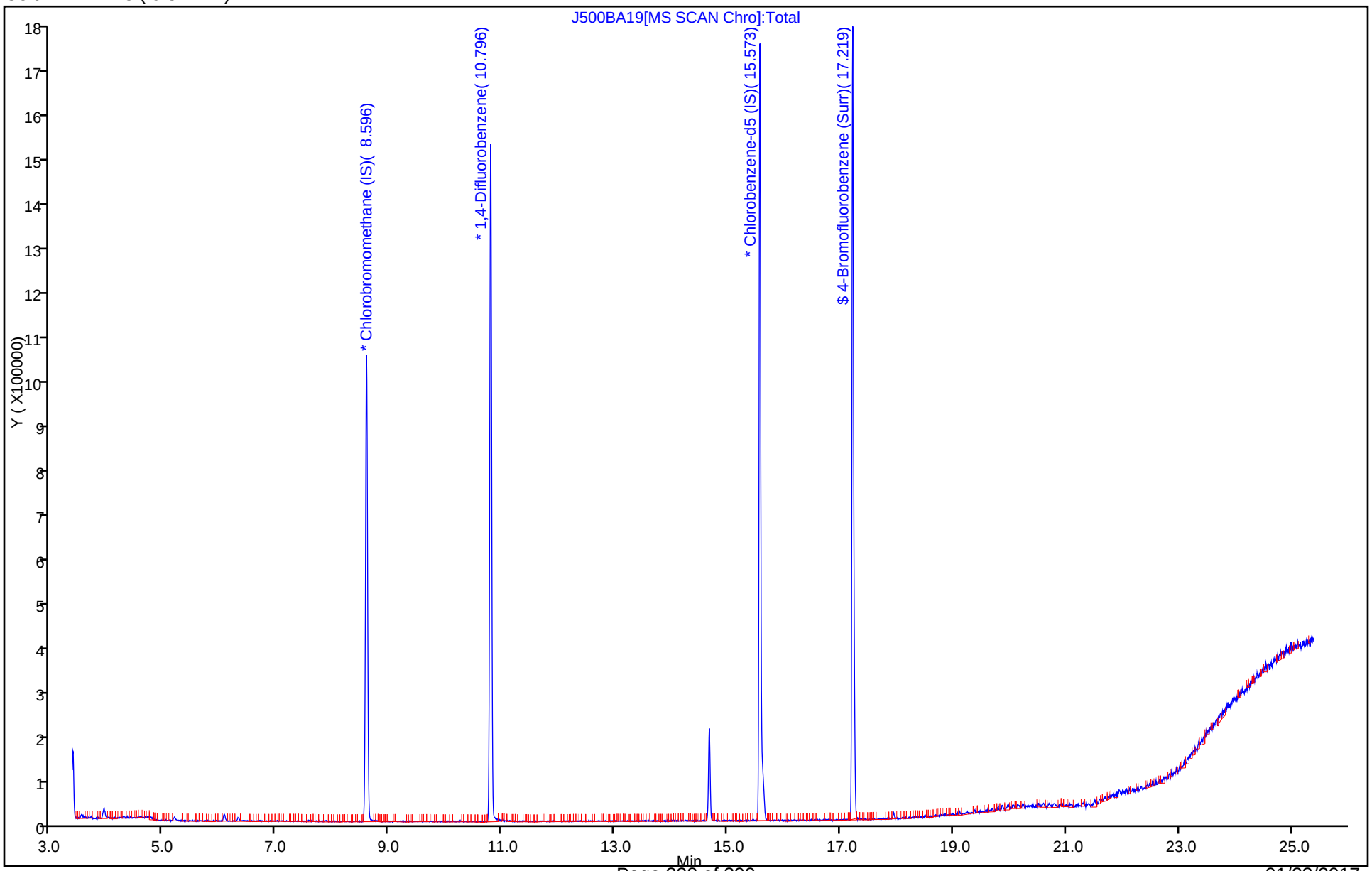
Report Date: 19-Jan-2017 16:29:52 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\J500BA19.D

Injection Date:	19-Jan-2017 14:11:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	mb			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\J500BA19.D				
Lims ID:	mb				
Client ID:					
Sample Type:	MB				
Inject. Date:	19-Jan-2017 14:11:30	ALS Bottle#:	16	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003854-004				
Misc. Info.:	500ml blk				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	19-Jan-2017 16:29:47	Calib Date:	26-Nov-2016 01:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK012				

First Level Reviewer: tajh Date: 19-Jan-2017 14:52:52

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.44	86.08

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-7907/6

Matrix: Air Lab File ID: RBK500A18.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 01/18/2017 15:17

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7907 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6811-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-7907/6

Matrix: Air | Lab File ID: RBK500A18.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 01/18/2017 15:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7907 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RBK500A18.D
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 18-Jan-2017 15:17:30 ALS Bottle#: 11 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003860-006
Misc. Info.: 500ML BLK
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Jan-2017 10:27:03 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: tajh Date: 18-Jan-2017 15:59:07

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.236	8.247	-0.011	89	334217	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.399	10.410	-0.011	93	1644151	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.290	15.295	-0.005	85	1365616	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.983	16.983	0.000	96	833550	4.00	3.90	
31 Methylene Chloride	84	5.934	5.934	0.000	90	6242		0.0721	
33 Carbon disulfide	76	6.080	6.074	0.006	75	3322		0.0140	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

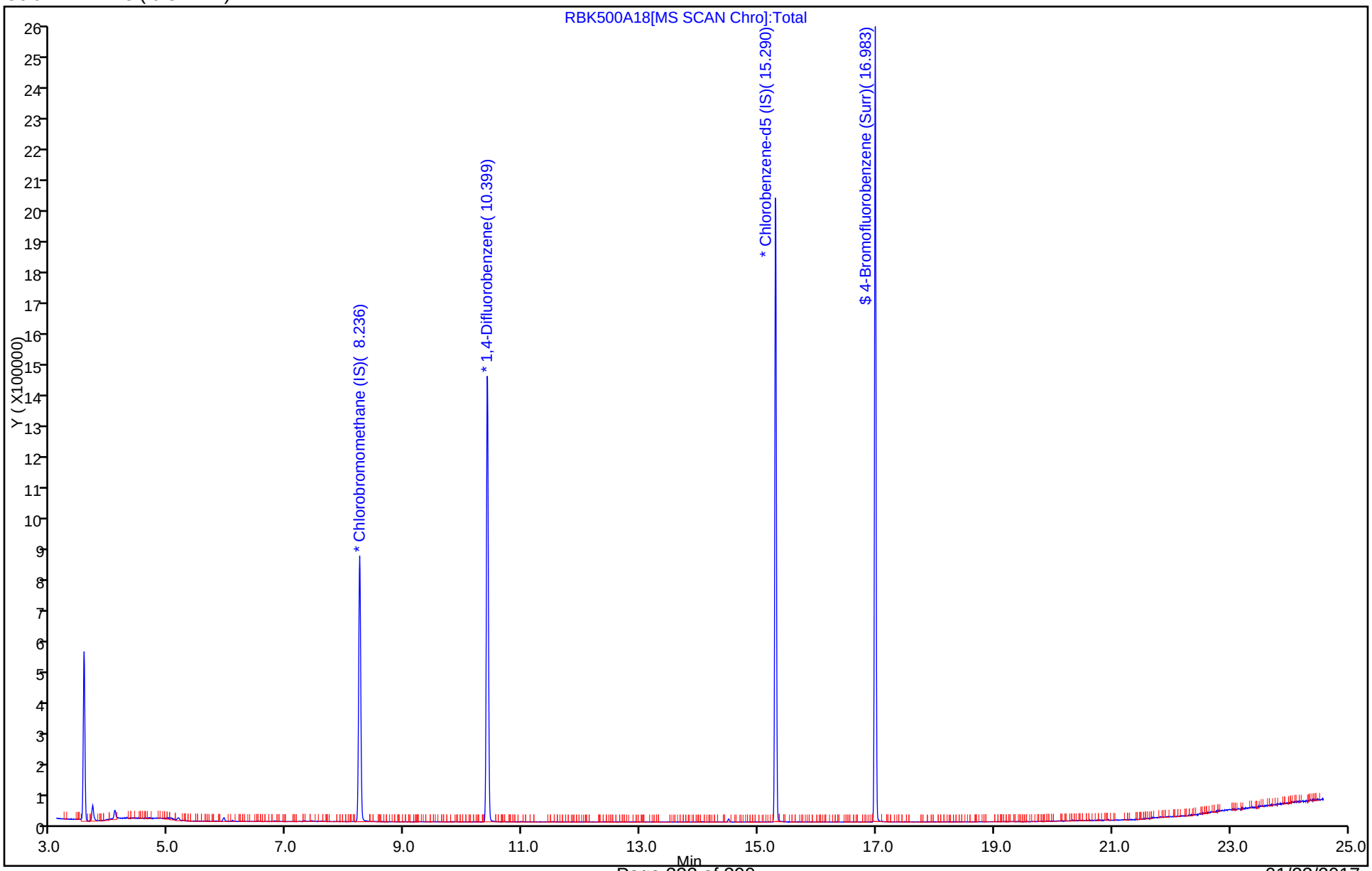
Report Date: 19-Jan-2017 10:27:10 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RBK500A18.D

Injection Date:	18-Jan-2017 15:17:30	Instrument ID:	MR	Operator ID:	
Lims ID:	mb			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RBK500A18.D				
Lims ID:	mb				
Client ID:					
Sample Type:	MB				
Inject. Date:	18-Jan-2017 15:17:30	ALS Bottle#:	11	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003860-006				
Misc. Info.:	500ML BLK				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	19-Jan-2017 10:27:03	Calib Date:	17-Jan-2017 10:29:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK012				
First Level Reviewer: tajh		Date:	18-Jan-2017 15:59:07		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.90	97.55

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 140-7893/1002

Matrix: Air Lab File ID: JCCVA19-LCS.d

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 01/19/2017 12:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7893 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.53		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	1.92		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	1.72		0.080	0.015
67-66-3	Chloroform	119.38	1.71		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.76		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	1.83		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.79		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	1.58		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	1.92		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.70		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.81		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.56		0.40	0.068
91-20-3	Naphthalene	128.17	2.62		0.040	0.040
127-18-4	Tetrachloroethene	165.83	1.81		0.080	0.016
108-88-3	Toluene	92.14	1.67		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.89		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	3.34		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	1.71		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.61		0.080	0.021
79-01-6	Trichloroethene	131.39	1.86		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	1.70		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.69		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.75		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.02		0.040	0.029
1330-20-7	Xylenes, Total	106.17	5.20		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	78		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JCCVA19-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 19-Jan-2017 12:03:30 ALS Bottle#: 15 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003854-002
Misc. Info.: P31
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Jan-2017 16:29:47 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: barlozhetskayaa Date: 19-Jan-2017 12:37:05

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	8.597	8.597	0.000	97	281267	4.00	4.00	
*	2 1,4-Difluorobenzene	114	10.803	10.803	0.000	95	1150447	4.00	4.00	
*	3 Chlorobenzene-d5 (IS)	117	15.574	15.574	0.000	88	982820	4.00	4.00	
$	4 4-Bromofluorobenzene (Surr	95	17.220	17.220	0.000	95	487019	4.00	3.13	
	6 Chlorodifluoromethane	67	3.562	3.562	0.000	97	43571	2.00	1.72	
	7 Propene	41	3.573	3.573	0.000	97	170013	2.00	1.94	
	8 Dichlorodifluoromethane	85	3.621	3.621	0.000	99	416421	2.00	1.83	
	9 Chloromethane	52	3.793	3.793	0.000	99	66343	2.00	2.04	
	10 1,2-Dichloro-1,1,2,2-tetra	135	3.804	3.804	0.000	90	281714	2.00	2.24	
	11 Acetaldehyde	44	3.944	3.944	0.000	97	250481	10.0	7.14	
	12 Vinyl chloride	62	3.960	3.960	0.000	99	197062	2.00	2.02	
	14 Butadiene	54	4.046	4.046	0.000	66	157232	2.00	2.01	
	13 Butane	43	4.046	4.046	0.000	86	330019	2.00	1.94	
	15 Bromomethane	94	4.353	4.353	0.000	99	174110	2.00	2.01	
	16 Chloroethane	64	4.487	4.487	0.000	89	91421	2.00	1.98	
	17 Ethanol	31	4.579	4.579	0.000	97	344201	10.0	9.27	
	18 Vinyl bromide	106	4.783	4.783	0.000	98	164786	2.00	1.94	
	19 2-Methylbutane	43	4.826	4.826	0.000	94	245897	2.00	1.98	
	20 Trichlorofluoromethane	101	5.041	5.041	0.000	99	446659	2.00	1.93	
	21 Acrolein	56	5.052	5.052	0.000	30	37534	2.00	1.38	
	22 Acetonitrile	40	5.122	5.122	0.000	98	54391	2.00	1.62	
	23 Acetone	58	5.170	5.170	0.000	99	141304	6.00	4.85	
	24 Isopropyl alcohol	45	5.240	5.240	0.000	95	690452	6.00	5.09	
	25 Pentane	72	5.256	5.256	0.000	95	24967	2.00	1.92	
	26 Ethyl ether	31	5.423	5.423	0.000	90	135161	2.00	1.42	
	27 1,1-Dichloroethene	96	5.735	5.735	0.000	94	162458	2.00	1.92	
	28 2-Methyl-2-propanol	59	5.827	5.827	0.000	95	261382	2.00	1.91	
	29 Acrylonitrile	53	5.837	5.837	0.000	96	84352	2.00	1.57	
	30 1,1,2-Trichloro-1,2,2-trif	101	5.907	5.907	0.000	97	361376	2.00	1.93	
	31 Methylene Chloride	84	6.079	6.079	0.000	94	150269	2.00	1.81	
	32 3-Chloro-1-propene	39	6.090	6.090	0.000	94	178359	2.00	1.83	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.235	6.235	0.000	100	489106	2.00	1.96	
34 trans-1,2-Dichloroethene	96	6.876	6.876	0.000	95	161067	2.00	1.89	
35 2-Methylpentane	43	6.892	6.892	0.000	97	428979	2.00	1.95	
36 Methyl tert-butyl ether	73	7.010	7.010	0.000	98	272162	2.00	1.56	
37 1,1-Dichloroethane	63	7.290	7.290	0.000	99	289410	2.00	1.79	
38 Vinyl acetate	43	7.397	7.397	0.000	100	298321	2.00	1.50	
39 2-Butanone (MEK)	72	7.849	7.849	0.000	95	42921	2.00	1.68	
40 Hexane	56	7.865	7.865	0.000	84	138397	2.00	1.85	
41 Isopropyl ether	45	8.032	8.032	0.000	97	468232	2.00	1.77	
42 cis-1,2-Dichloroethene	96	8.269	8.269	0.000	97	147476	2.00	1.76	
43 Ethyl acetate	43	8.468	8.468	0.000	98	245494	2.00	1.65	
44 Chloroform	83	8.613	8.613	0.000	95	301352	2.00	1.71	
45 Tert-butyl ethyl ether	59	8.710	8.710	0.000	97	359717	2.00	1.77	
46 Tetrahydrofuran	42	9.027	9.027	0.000	94	133653	2.00	1.61	
47 1,1,1-Trichloroethane	97	9.635	9.635	0.000	97	311054	2.00	1.71	
48 1,2-Dichloroethane	62	9.748	9.748	0.000	96	169254	2.00	1.58	
49 n-Butanol	31	10.211	10.211	0.000	90	72629	2.00	2.11	
51 Benzene	78	10.243	10.243	0.000	97	320381	2.00	1.53	
50 Cyclohexane	69	10.243	10.243	0.000	87	68825	2.00	1.81	
52 Carbon tetrachloride	117	10.265	10.265	0.000	96	353315	2.00	1.92	
53 2,3-Dimethylpentane	71	10.367	10.367	0.000	91	92138	2.00	1.92	
54 Thiophene	84	10.523	10.523	0.000	96	207466	2.00	1.74	
55 Tert-amyl methyl ether	73	10.738	10.738	0.000	95	296824	2.00	1.94	
56 Isooctane	57	11.018	11.018	0.000	98	797649	2.00	2.01	
57 n-Heptane	71	11.405	11.405	0.000	95	131374	2.00	1.79	
58 1,2-Dichloropropane	63	11.486	11.486	0.000	90	133044	2.00	1.57	
59 Trichloroethene	130	11.523	11.523	0.000	96	182948	2.00	1.86	
60 Dibromomethane	93	11.610	11.610	0.000	93	154620	2.00	1.66	
62 Dichlorobromomethane	83	11.755	11.755	0.000	97	283689	2.00	1.74	
61 1,4-Dioxane	88	11.782	11.782	0.000	97	50681	2.00	2.29	
63 Methyl methacrylate	41	11.857	11.857	0.000	93	140589	2.00	1.76	
64 Methylcyclohexane	83	12.298	12.298	0.000	91	304177	2.00	1.91	
65 4-Methyl-2-pentanone (MIBK	43	12.723	12.723	0.000	97	302900	2.00	1.91	
66 cis-1,3-Dichloropropene	75	12.766	12.766	0.000	97	166258	2.00	1.51	
67 trans-1,3-Dichloropropene	75	13.471	13.471	0.000	97	132587	2.00	1.57	
68 Toluene	91	13.589	13.589	0.000	92	353278	2.00	1.67	
69 1,1,2-Trichloroethane	83	13.670	13.670	0.000	98	106868	2.00	1.61	
70 2-Methylthiophene	97	13.745	13.745	0.000	98	297819	2.00	1.68	
71 3-Methylthiophene	97	13.950	13.950	0.000	100	282905	2.00	1.67	
72 2-Hexanone	58	14.068	14.068	0.000	91	134564	2.00	2.18	
73 n-Octane	85	14.288	14.288	0.000	98	121050	2.00	1.71	
74 Chlorodibromomethane	129	14.375	14.375	0.000	98	263484	2.00	1.70	
75 Ethylene Dibromide	107	14.665	14.665	0.000	97	184298	2.00	1.65	
76 Tetrachloroethene	129	14.740	14.740	0.000	94	167525	2.00	1.81	
78 Chlorobenzene	112	15.623	15.623	0.000	95	278784	2.00	1.68	
77 2,3-Dimethylheptane	43	15.644	15.644	0.000	93	436173	2.00	1.65	
79 Ethylbenzene	91	15.913	15.913	0.000	99	425948	2.00	1.70	
80 2-Ethylthiophene	97	16.015	16.015	0.000	99	319124	2.00	1.70	
81 m-Xylene & p-Xylene	91	16.074	16.074	0.000	99	645317	4.00	3.49	
82 n-Nonane	57	16.494	16.494	0.000	95	229863	2.00	1.45	
83 Bromoform	173	16.521	16.521	0.000	97	251977	2.00	1.71	
84 Styrene	104	16.537	16.537	0.000	98	222020	2.00	1.69	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	16.602	16.602	0.000	99	340174	2.00	1.71	
86 1,1,2,2-Tetrachloroethane	83	16.924	16.924	0.000	99	248109	2.00	1.71	
87 1,2,3-Trichloropropane	110	17.086	17.086	0.000	96	57384	2.00	1.72	
88 Isopropylbenzene	105	17.188	17.188	0.000	97	459314	2.00	1.70	
89 N-Propylbenzene	120	17.731	17.731	0.000	99	111076	2.00	1.75	
90 2-Chlorotoluene	126	17.774	17.774	0.000	97	116620	2.00	1.73	
91 4-Ethyltoluene	105	17.887	17.887	0.000	99	389078	2.00	1.72	
92 1,3,5-Trimethylbenzene	120	17.963	17.963	0.000	93	198965	2.00	1.75	
93 Alpha Methyl Styrene	118	18.194	18.194	0.000	87	150971	2.00	1.72	
94 n-Decane	57	18.253	18.253	0.000	87	258007	2.00	1.61	
95 tert-Butylbenzene	119	18.388	18.388	0.000	91	385053	2.00	1.68	
96 1,2,4-Trimethylbenzene	105	18.404	18.404	0.000	96	330930	2.00	1.69	
97 sec-Butylbenzene	105	18.662	18.662	0.000	98	498309	2.00	1.65	
98 1,3-Dichlorobenzene	146	18.678	18.678	0.000	96	202414	2.00	1.84	
99 Benzyl chloride	91	18.753	18.753	0.000	98	225561	2.00	2.37	
100 1,4-Dichlorobenzene	146	18.764	18.764	0.000	95	185733	2.00	2.17	
101 4-Isopropyltoluene	119	18.829	18.829	0.000	97	411652	2.00	1.75	
102 1,2,3-Trimethylbenzene	105	18.877	18.877	0.000	98	251052	2.00	1.70	
103 Butylcyclohexane	83	18.931	18.931	0.000	90	281157	2.00	1.48	
105 1,2-Dichlorobenzene	146	19.125	19.125	0.000	81	201649	2.00	1.81	
104 2,3-Dihydroindene	117	19.125	19.125	0.000	94	303892	2.00	1.77	
107 Indene	116	19.259	19.259	0.000	89	200278	2.00	1.88	
106 n-Butylbenzene	91	19.264	19.264	0.000	97	369395	2.00	1.88	
108 Undecane	57	19.576	19.576	0.000	92	311781	2.00	2.17	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.636	19.636	0.000	98	292118	2.00	2.02	
110 1,2-Dibromo-3-Chloropropan	157	19.732	19.732	0.000	94	93910	2.00	2.45	
111 1,2,4,5-Tetramethylbenzene	119	20.023	20.023	0.000	98	353185	2.00	2.08	
112 1,2,3,5-Tetramethylbenzene	119	20.077	20.077	0.000	96	219618	2.00	2.11	
113 1,2,3,4-Tetramethylbenzene	119	20.475	20.475	0.000	98	280260	2.00	2.13	
114 Dodecane	57	20.636	20.636	0.000	90	300799	2.00	2.53	
115 1,2,4-Trichlorobenzene	180	20.835	20.835	0.000	92	107074	2.00	3.34	
116 Naphthalene	128	20.975	20.975	0.000	99	224368	2.00	2.62	
117 Benzo(b)thiophene	134	21.083	21.083	0.000	99	104626	2.00	3.13	
118 Hexachlorobutadiene	225	21.190	21.190	0.000	94	243949	2.00	1.97	
119 1,2,3-Trichlorobenzene	180	21.266	21.266	0.000	95	120728	2.00	2.88	
120 2-Methylnaphthalene	142	21.949	21.949	0.000	97	75640	6.25	8.99	
121 1-Methylnaphthalene	142	22.073	22.073	0.000	99	73735	6.25	7.87	
A 124 Toluene Range	1	13.589	(13.559-13.619)		0	880518	2.00	1.59	
A 125 C8 Range	1	14.273	(14.250-14.297)		0	1392728	2.00	1.85	
S 126 Xylenes, Total	100				0		6.00	5.19	
S 127 1,2-Dichloroethene, Total	1				0		4.00	3.65	

Reagents:

40CV101P_00031	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

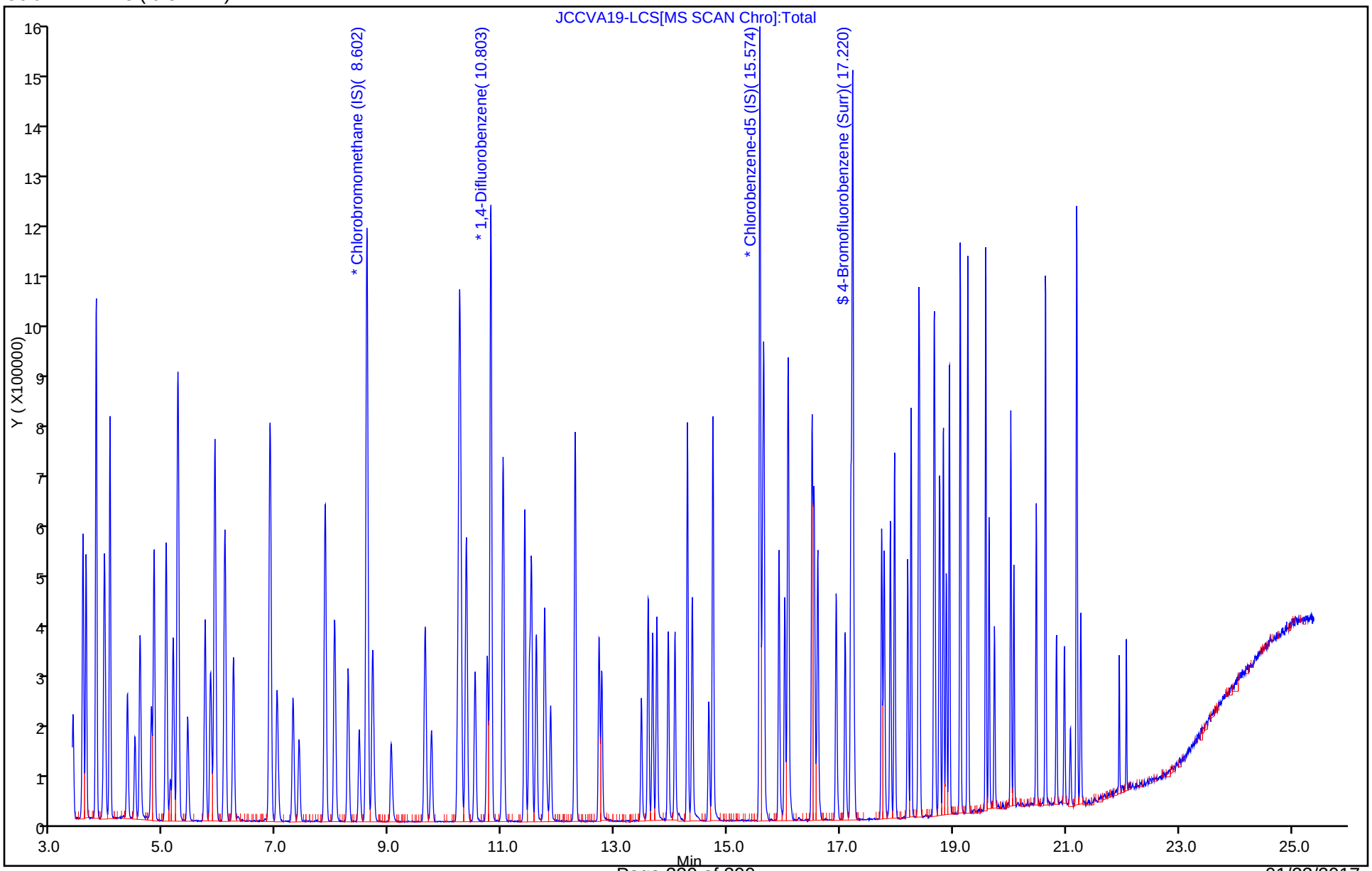
Report Date: 19-Jan-2017 16:29:50 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JCCVA19-LCS.d

Injection Date:	19-Jan-2017 12:03:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	LCS			Worklist Smp#:	1002
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\JCCVA19-LCS.d				
Lims ID:	LCS				
Client ID:					
Sample Type:	LCS				
Inject. Date:	19-Jan-2017 12:03:30	ALS Bottle#:	15	Worklist Smp#:	1002
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003854-002				
Misc. Info.:	P31				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20170117-3854.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	19-Jan-2017 16:29:47	Calib Date:	26-Nov-2016 01:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK012				
First Level Reviewer: barlozhetskayaa		Date:	19-Jan-2017 12:37:05		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.13	78.24

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 140-7907/1002

Matrix: Air Lab File ID: RA18CCV-LCS.d

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 01/18/2017 10:18

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7907 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.06		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.05		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.02		0.080	0.015
67-66-3	Chloroform	119.38	1.95		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.05		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.44		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.90		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	1.98		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	1.91		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.04		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.83		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.98		0.40	0.068
91-20-3	Naphthalene	128.17	1.66		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.04		0.080	0.016
108-88-3	Toluene	92.14	2.18		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.87		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.68		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	1.94		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.01		0.080	0.021
79-01-6	Trichloroethene	131.39	2.05		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.26		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.16		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	2.17		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.30		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.23		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18CCV-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 18-Jan-2017 10:18:30 ALS Bottle#: 15 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003860-002
Misc. Info.: S29
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Jan-2017 10:27:03 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: tajh Date: 18-Jan-2017 14:21:19

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.247	8.247	0.000	86	355315	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.410	10.410	0.000	93	1742464	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.295	15.295	0.000	84	1516979	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.983	16.983	0.000	95	969516	4.00	4.09	
6 Chlorodifluoromethane	67	3.723	3.723	0.000	97	39864	2.00	2.02	
7 Propene	41	3.729	3.729	0.000	97	178655	2.00	1.93	
8 Dichlorodifluoromethane	85	3.777	3.777	0.000	99	392125	2.00	2.44	
9 Chloromethane	52	3.928	3.928	0.000	100	62468	2.00	2.07	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.950	3.950	0.000	94	406644	2.00	2.23	
11 Acetaldehyde	44	4.068	4.068	0.000	98	316396	10.1	11.7	
12 Vinyl chloride	62	4.074	4.074	0.000	98	199603	2.00	2.30	
13 Butadiene	54	4.155	4.155	0.000	96	135530	2.00	2.21	
14 Butane	43	4.160	4.160	0.000	92	271773	2.00	2.47	
15 Bromomethane	94	4.419	4.419	0.000	97	163525	2.00	2.16	
16 Chloroethane	64	4.543	4.543	0.000	99	81407	2.00	2.38	
17 Ethanol	31	4.656	4.656	0.000	96	265436	10.1	11.7	
18 Vinyl bromide	106	4.802	4.802	0.000	98	161626	2.00	2.29	
19 2-Methylbutane	43	4.856	4.856	0.000	93	156008	2.00	2.34	
20 Acrolein	56	5.034	5.034	0.000	32	53146	2.00	2.08	
21 Trichlorofluoromethane	101	5.039	5.039	0.000	99	437315	2.00	1.98	
22 Acetonitrile	40	5.082	5.082	0.000	100	80622	2.00	2.10	
23 Acetone	58	5.125	5.125	0.000	97	236124	6.00	5.77	
24 Isopropyl alcohol	45	5.228	5.228	0.000	95	683386	6.00	5.68	
25 Pentane	72	5.238	5.238	0.000	95	34733	2.00	2.01	
26 Ethyl ether	31	5.373	5.373	0.000	94	205548	2.00	2.05	
27 1,1-Dichloroethene	96	5.643	5.643	0.000	96	187103	2.00	1.91	
28 Acrylonitrile	53	5.713	5.713	0.000	97	133089	2.00	2.12	
29 2-Methyl-2-propanol	59	5.740	5.740	0.000	96	239882	2.00	1.82	
30 1,1,2-Trichloro-1,2,2-trif	101	5.815	5.815	0.000	96	386289	2.00	2.06	
31 Methylene Chloride	84	5.934	5.934	0.000	94	168609	2.00	1.83	
32 3-Chloro-1-propene	39	5.956	5.956	0.000	93	138407	2.00	2.00	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.074	6.074	0.000	98	494507	2.00	1.96	
34 trans-1,2-Dichloroethene	96	6.667	6.667	0.000	95	194702	2.00	1.87	
35 2-Methylpentane	43	6.721	6.721	0.000	95	416801	2.02	2.18	
36 Methyl tert-butyl ether	73	6.791	6.791	0.000	97	434132	2.00	1.98	
37 1,1-Dichloroethane	63	7.040	7.040	0.000	99	311790	2.00	1.90	
38 Vinyl acetate	43	7.147	7.147	0.000	100	492549	2.00	2.12	
39 2-Butanone (MEK)	72	7.536	7.536	0.000	99	88003	2.00	2.05	
40 Hexane	56	7.622	7.622	0.000	91	136354	2.00	2.03	
41 Isopropyl ether	45	7.757	7.757	0.000	98	564695	2.00	1.84	
42 cis-1,2-Dichloroethene	96	7.945	7.945	0.000	88	221644	2.00	2.05	
43 Ethyl acetate	43	8.123	8.123	0.000	100	385940	2.00	1.97	
44 Chloroform	83	8.274	8.274	0.000	95	359873	2.00	1.95	
45 Tert-butyl ethyl ether	59	8.393	8.393	0.000	93	450571	2.00	2.01	
46 Tetrahydrofuran	42	8.630	8.630	0.000	95	214055	2.00	2.01	
47 1,1,1-Trichloroethane	97	9.261	9.261	0.000	94	357574	2.00	1.94	
48 1,2-Dichloroethane	62	9.331	9.331	0.000	95	207291	2.00	1.98	
49 n-Butanol	31	9.817	9.817	0.000	83	74155	2.00	2.10	
50 Benzene	78	9.844	9.844	0.000	94	625584	2.00	2.06	
51 Cyclohexane	69	9.865	9.865	0.000	92	92125	2.00	2.13	
52 Carbon tetrachloride	117	9.876	9.876	0.000	98	379636	2.00	2.05	
53 2,3-Dimethylpentane	71	10.022	10.022	0.000	93	127800	2.02	1.99	
54 Thiophene	84	10.108	10.108	0.000	91	355995	2.02	2.26	
55 Tert-amyl methyl ether	73	10.356	10.356	0.000	98	463187	2.00	2.00	
56 Isooctane	57	10.690	10.690	0.000	99	876662	2.00	2.12	
57 1,2-Dichloropropane	63	11.078	11.078	0.000	92	228401	2.00	2.18	
58 n-Heptane	71	11.089	11.089	0.000	90	212165	2.00	2.15	
59 Trichloroethene	130	11.143	11.143	0.000	90	281463	2.00	2.05	
60 Dibromomethane	93	11.186	11.186	0.000	87	228226	2.00	2.17	
62 1,4-Dioxane	88	11.353	11.353	0.000	39	83310	2.00	1.72	
61 Dichlorobromomethane	83	11.359	11.359	0.000	99	361175	2.00	2.06	
63 Methyl methacrylate	41	11.488	11.488	0.000	91	233934	2.00	2.14	
64 Methylcyclohexane	83	11.963	11.963	0.000	95	355076	2.02	1.76	
65 4-Methyl-2-pentanone (MIBK	43	12.351	12.351	0.000	97	436677	2.00	2.14	
66 cis-1,3-Dichloropropene	75	12.405	12.405	0.000	91	322478	2.00	2.13	
67 trans-1,3-Dichloropropene	75	13.128	13.128	0.000	98	272585	2.00	2.02	
68 Toluene	91	13.268	13.268	0.000	93	723210	2.00	2.18	
69 1,1,2-Trichloroethane	83	13.322	13.322	0.000	94	209534	2.00	2.01	
70 2-Methylthiophene	97	13.419	13.419	0.000	97	655232	2.02	2.27	
71 3-Methylthiophene	97	13.629	13.629	0.000	98	678959	2.02	2.39	
72 2-Hexanone	58	13.748	13.748	0.000	92	209087	2.00	2.14	
73 Chlorodibromomethane	129	14.044	14.044	0.000	97	419279	2.00	2.20	
74 n-Octane	85	14.060	14.060	0.000	94	228394	2.00	2.17	
75 Ethylene Dibromide	107	14.335	14.335	0.000	98	394406	2.00	2.16	
76 Tetrachloroethene	129	14.454	14.454	0.000	95	259229	2.00	2.04	
77 Chlorobenzene	112	15.344	15.344	0.000	97	590451	2.00	2.16	
78 2,3-Dimethylheptane	43	15.441	15.441	0.000	98	632771	2.02	2.21	
79 Ethylbenzene	91	15.662	15.662	0.000	97	910215	2.00	2.04	
80 2-Ethylthiophene	97	15.754	15.754	0.000	97	716503	2.02	2.19	
81 m-Xylene & p-Xylene	91	15.829	15.829	0.000	98	1407402	4.00	4.21	
82 Bromoform	173	16.234	16.234	0.000	98	525126	2.00	2.14	
83 Styrene	104	16.293	16.293	0.000	96	552982	2.00	2.33	
84 n-Nonane	57	16.320	16.320	0.000	95	432290	2.00	2.25	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	16.358	16.358	0.000	98	707972	2.00	2.02	
86 1,1,2,2-Tetrachloroethane	83	16.670	16.670	0.000	98	557738	2.00	2.10	
87 1,2,3-Trichloropropane	110	16.832	16.832	0.000	97	158875	2.00	2.12	
88 Isopropylbenzene	105	16.978	16.978	0.000	95	1100341	2.00	2.23	
89 N-Propylbenzene	120	17.549	17.549	0.000	100	314509	2.00	2.30	
90 2-Chlorotoluene	126	17.576	17.576	0.000	96	293557	2.00	2.28	
91 4-Ethyltoluene	105	17.716	17.716	0.000	99	1047442	2.00	2.12	
92 1,3,5-Trimethylbenzene	120	17.803	17.803	0.000	94	521279	2.00	2.17	
93 Alpha Methyl Styrene	118	18.040	18.040	0.000	92	440209	2.00	2.31	
94 n-Decane	57	18.164	18.164	0.000	90	563771	2.00	2.30	
95 tert-Butylbenzene	119	18.250	18.250	0.000	93	962854	2.00	2.28	
96 1,2,4-Trimethylbenzene	105	18.266	18.266	0.000	96	928857	2.00	2.16	
97 1,3-Dichlorobenzene	146	18.531	18.531	0.000	95	679769	2.00	2.23	
98 sec-Butylbenzene	105	18.541	18.541	0.000	99	1401542	2.00	2.32	
99 Benzyl chloride	91	18.606	18.606	0.000	100	769853	2.00	2.32	
100 1,4-Dichlorobenzene	146	18.622	18.622	0.000	96	687590	2.00	2.22	
101 4-Isopropyltoluene	119	18.719	18.719	0.000	97	1118813	2.00	2.27	
102 1,2,3-Trimethylbenzene	105	18.763	18.763	0.000	96	775812	2.02	2.26	
103 Butylcyclohexane	83	18.849	18.849	0.000	98	710230	2.02	2.22	
104 1,2-Dichlorobenzene	146	19.000	19.000	0.000	98	660100	2.00	2.22	
105 2,3-Dihydroindene	117	19.011	19.011	0.000	95	835871	2.02	2.19	
106 Indene	116	19.145	19.145	0.000	91	852379	2.02	2.40	
107 n-Butylbenzene	91	19.183	19.183	0.000	98	1094659	2.00	2.30	
108 Undecane	57	19.561	19.561	0.000	97	652973	2.00	2.36	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.571	19.571	0.000	98	1066176	2.02	2.50	
110 1,2-Dibromo-3-Chloropropan	157	19.631	19.631	0.000	89	280466	2.00	1.80	
111 1,2,4,5-Tetramethylbenzene	119	19.976	19.976	0.000	98	1034754	2.02	2.38	
112 1,2,3,5-Tetramethylbenzene	119	20.030	20.030	0.000	97	640924	2.02	2.35	
113 1,2,3,4-Tetramethylbenzene	119	20.440	20.440	0.000	98	795485	2.02	2.16	
114 Dodecane	57	20.661	20.661	0.000	95	502737	2.00	1.74	
115 1,2,4-Trichlorobenzene	180	20.790	20.790	0.000	92	593166	2.00	1.68	
116 Naphthalene	128	20.920	20.920	0.000	100	1085985	2.00	1.66	
117 Benzo(b)thiophene	134	21.022	21.022	0.000	100	640471	2.02	1.79	
118 Hexachlorobutadiene	225	21.173	21.173	0.000	94	549171	2.00	1.74	
119 1,2,3-Trichlorobenzene	180	21.216	21.216	0.000	95	525625	2.00	1.63	
120 2-Methylnaphthalene	142	21.933	21.933	0.000	97	151535	6.25	1.97	
121 1-Methylnaphthalene	142	22.057	22.057	0.000	98	131526	6.25	1.83	
A 122 C6 Range	1	7.623	(7.557-7.657)		0	1191886	2.00	2.01	
S 124 Xylenes, Total	100				0		6.00	6.23	
S 125 1,2-Dichloroethene, Total	1				0		4.00	3.92	

Reagents:

40CV101S_00029	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

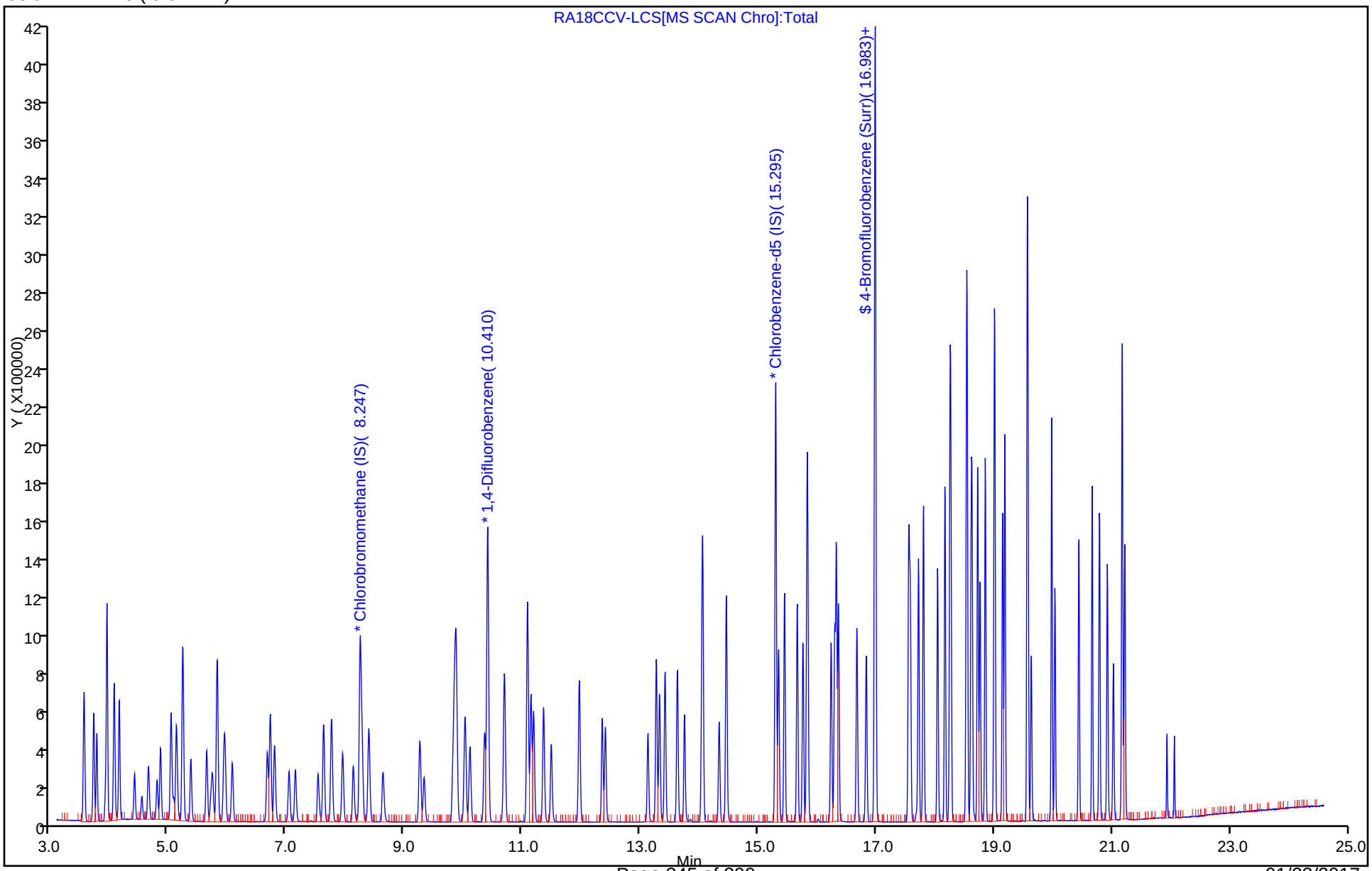
Report Date: 19-Jan-2017 10:27:06 Chrom Revision: 2.2 18-Jan-2017 10:40:14

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18CCV-LCS.d

Injection Date:	18-Jan-2017 10:18:30	Instrument ID:	MR	Operator ID:	
Lims ID:	LCS			Worklist Smp#:	1002
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\RA18CCV-LCS.d				
Lims ID:	LCS				
Client ID:					
Sample Type:	LCS				
Inject. Date:	18-Jan-2017 10:18:30	ALS Bottle#:	15	Worklist Smp#:	1002
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003860-002				
Misc. Info.:	S29				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170117-3860.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	19-Jan-2017 10:27:03	Calib Date:	17-Jan-2017 10:29:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK012				

First Level Reviewer: tajh Date: 18-Jan-2017 14:21:19

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.09	102.14

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Instrument ID: MJ Start Date: 11/25/2016 18:19

Analysis Batch Number: 7241 End Date: 11/26/2016 12:43

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-7241/1		11/25/2016 18:19	1	JBFBK25X.D	RTX-5 0.32(mm)
IC 140-7241/2		11/25/2016 18:47	1	JK25IC01X.D	RTX-5 0.32(mm)
140-6649-A-1 MDLV		11/25/2016 18:47	1		RTX-5 0.32(mm)
IC 140-7241/3		11/25/2016 19:41	1	JK25IC02X.D	RTX-5 0.32(mm)
140-6649-A-2 MDLV		11/25/2016 19:41	1		RTX-5 0.32(mm)
IC 140-7241/4		11/25/2016 20:34	1	JK25IC03X.D	RTX-5 0.32(mm)
140-6649-A-3 MDLV		11/25/2016 20:34	1		RTX-5 0.32(mm)
IC 140-7241/5		11/25/2016 21:29	1	JK25IC04X.D	RTX-5 0.32(mm)
140-6649-A-4 MDLV		11/25/2016 21:29	1		RTX-5 0.32(mm)
IC 140-7241/6		11/25/2016 22:23	1	JK25IC05X.D	RTX-5 0.32(mm)
140-6649-A-5 MDLV		11/25/2016 22:23	1		RTX-5 0.32(mm)
ICIS 140-7241/7		11/25/2016 23:17	1	JK25IC06X.D	RTX-5 0.32(mm)
IC 140-7241/8		11/26/2016 00:11	1	JK25IC07X.D	RTX-5 0.32(mm)
IC 140-7241/9		11/26/2016 01:05	1	JK25IC08X.D	RTX-5 0.32(mm)
IC 140-7241/10		11/26/2016 01:58	1	JK25IC09X.D	RTX-5 0.32(mm)
ZZZZZ		11/26/2016 05:05	1		RTX-5 0.32(mm)
ICV 140-7241/23		11/26/2016 12:43	1	JK25ICVX.D	RTX-5 0.32(mm)

161125

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 100 mL	28.1	11/25/2016	6:19:08 PM
IC01	1 - 100 mL	33.6	11/25/2016	6:47:30 PM
IC02	1 - 200 mL	33.3	11/25/2016	7:41:28 PM
IC03	2 - 200 mL	31.1	11/25/2016	8:34:52 PM
IC04	3 - 200 mL	31.1	11/25/2016	9:29:11 PM
IC05	4 - 201 mL	31.7	11/25/2016	10:23:29 PM
IC06	5 - 201 mL	32	11/25/2016	11:17:45 PM
IC07	6 - 201 mL	31.1	11/26/2016	12:11:34 AM
IC08	7 - 200 mL	26.6	11/26/2016	1:05:06 AM
IC09	8 - 202 mL	32.1	11/26/2016	1:58:52 AM
PRIME	9 - 100 mL	32.3	11/26/2016	2:53:07 AM
ICV	9 - 101 mL	31.4	11/26/2016	3:47:28 AM
DNU	16 - 101 mL	27.7	11/26/2016	4:35:30 AM
BLANK	16 - 501 mL	27.2	11/26/2016	5:05:42 AM
MDL	1 - 51 mL	32.9	11/26/2016	6:00:10 AM
LCS	10 - 100 mL	33.8	11/26/2016	6:53:55 AM
DNU	16 - 101 mL	27.2	11/26/2016	7:42:22 AM
6352-01	11 - 11 mL	12.1	11/26/2016	8:09:56 AM
6352-02	12 - 21 mL	9.5	11/26/2016	9:04:58 AM
6352-03	13 - 21 mL	11.6	11/26/2016	10:00:15 AM
6352-04	14 - 202 mL	2.1	11/26/2016	10:55:02 AM
6352-05	15 - 201 mL	1.9	11/26/2016	11:49:36 AM
ICV	7 - 101 mL	17.5	11/26/2016	12:43:04 PM

MJ ICAL WL 3656

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Analysis Date:	11/25/16	Instrument:	MJ	Chrom WL #:	3656	TALS Batch & Event #	TO14/15: 7241/ 790	AFCEE: 7285/ 793
							DOD: 7284 / 792	OHIO: 7283 / 791

Chrom/Worklist Review	1st	Comments	2nd
1. Re-read each Limit Group [method editor-limit groups]	✓		
2. Verify LODV in Chrom [method editor -> edit -> MDL]	✓		
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]	✓		✓
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]	✓		✓
5. Did BFB meet tune criteria? [F8]	✓		✓
6. Were all standards injected within 24 hr of BFB? [F7]	✓		✓
7. High point checked for saturation and point removed if so? [Chrom]	✓		✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]	✓	#55(a) lvl 2.	✓
9. RT for each IS ±20 sec avg. RT? [F6 IstdRec]	✓		✓
10. Area for each IS ± 40% avg. area? [F6 IstdRec]	✓		✓
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]	✓		✓
12. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4- and 1,2,3-trichlorobenzenes	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓		✓

ML G Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50% [F6 ∑]	✓	✓	✓	✓	naph hexa 2(6)	✓	✓	—	—
15. Were at least 5 levels of each compound analyzed? [F6]	✓	✓	✓	✓		✓	—	—	—
16. Is low level std at or <RL and are the remaining points consec.? [F6]	✓	✓	✓	✓		✓	—	—	—
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? Note: Ohio does not allow quad [F6]	M	→	→			NS	→	→	→
18. If curves were used, is correlation coefficient ≥0.990? [F6]	NC	→	→			NS	→	→	→
19. Is the intercept less than the RL for each curve? [F6]	NC	→	→			NS	→	→	→
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]	NC	→				NS	→		
21. Is the second source analysis within limits? [F8 - icv]	✓	✓	✓	✓		✓	✓	✓	✓
22. Analyst/Date: 11/28/16	2nd Level Reviewer/Date:								
Comments:									

TALS Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
23. Upload ICAL	✓								
24. Graphics uploaded? [Sample List Tab]	✓	✓	✓	✓		✓	✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events –'Fix ICAL linkage' if needed]	✓	✓	✓	✓		✓	✓	✓	✓
26. Runs linked to BFB? [QC Links]	✓	✓	✓	✓		✓	✓	✓	✓
27. If criteria not met, was a NCM generated?	NC	→	→			NS	→	→	→
28. After review in TALS, approve the method in TALS.									
29. After verifying TALS is correct, lock method in Chrom <resolve any error issues>									
30. Checklist & Entech report scanned, attached & assigned properly?									
Analyst: Date: 11/28/16	2nd Level Reviewer: Date: 11/28/16								
Comments:	Comments:								

MS017r41, 5/25/2016

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Instrument ID: MR Start Date: 01/16/2017 16:55

Analysis Batch Number: 7852 End Date: 01/17/2017 10:29

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-7852/2		01/16/2017 16:55	1	RBFBA16.D	RTX-5 0.32(mm)
IC 140-7852/4		01/16/2017 18:15	1	RA16IC02.D	RTX-5 0.32(mm)
IC 140-7852/5		01/16/2017 19:03	1	RA16IC03.D	RTX-5 0.32(mm)
IC 140-7852/6		01/16/2017 19:50	1	RA16IC04.D	RTX-5 0.32(mm)
IC 140-7852/7		01/16/2017 20:38	1	RA16IC05.D	RTX-5 0.32(mm)
ICIS 140-7852/8		01/16/2017 21:26	1	RA16IC06.D	RTX-5 0.32(mm)
IC 140-7852/9		01/16/2017 22:14	1	RA16IC07.D	RTX-5 0.32(mm)
IC 140-7852/10		01/16/2017 23:01	1	RA16IC08.D	RTX-5 0.32(mm)
IC 140-7852/11		01/16/2017 23:49	1	RA16IC09.D	RTX-5 0.32(mm)
ICV 140-7852/13		01/17/2017 01:21	1	RA16ICV.D	RTX-5 0.32(mm)
ZZZZZ		01/17/2017 08:00	1		RTX-5 0.32(mm)
ZZZZZ		01/17/2017 08:47	1		RTX-5 0.32(mm)
IC 140-7852/24		01/17/2017 10:29	1	RA16IC01R.D	RTX-5 0.32(mm)

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Analysis Date:	1/16/17	Instrument:	MR	Chrom WL #:	3844	TALS Batch & Event #	TO14/15: 7852/ 857	AFCEE: 7855/ 860
							DOD: 7854 / 859	OHIO: 7853 / 858

Chrom/Worklist Review	1st	Comments	2nd
1. Re-read each Limit Group [method editor-limit groups]	✓		
2. Verify LODV in Chrom [method editor -> edit -> MDL]	✓		
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]	✓	Bran Lv1 due to wrong volume checked on-screen	✓
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]	✓		✓
5. Did BFB meet tune criteria? [F8]	✓		✓
6. Were all standards injected within 24 hr of BFB? [F7]	✓		✓
7. High point checked for saturation and point removed if so? [Chrom]	✓		✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]	✓	#54 in Lv. 3 & 4	✓
9. RT for each IS ±20 sec avg. RT? [F6 IstdRec]	✓		✓
10. Area for each IS ± 40% avg. area? [F6 IstdRec]	✓		✓
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]	✓		✓
12. Elution order checked on isomeric pairs? [Chrom]			✓
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4- and 1,2,3-trichlorobenzenes	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓	CC only	✓

MLG Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50% [F6 Σ]	✓	✓	✓	✓		✓	✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]	✓	✓	✓	✓		✓	✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]	✓	✓	✓	✓		✓	✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? Note: Ohio does not allow quad [F6]	✓	✓	✓	✓		✓	✓	✓	✓
18. If curves were used, is correlation coefficient ≥0.990? [F6]	✓	✓	✓	✓		✓	✓	✓	✓
19. Is the intercept less than the RL for each curve? [F6]	✓	✓	✓	✓		✓	✓	✓	✓
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]	✓	✓	✓		#105 & 108	✓	✓	✓	
21. Is the second source analysis within limits? [F8 - icv]	✓	✓	✓	✓		✓	✓	✓	✓
22. **Analyst/Date:** JHS 1/17/17	**2nd Level Reviewer/Date:**							1/17/17	
Comments: DNU 1&2-methylnaphthalene									

TALS Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
23. Upload ICAL	✓								
24. Graphics uploaded? [Sample List Tab]	✓	✓	✓	✓		✓	✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events –'Fix ICAL linkage' if needed]	✓	✓	✓	✓		✓	✓	✓	✓
26. Runs linked to BFB? [QC Links]	✓	✓	✓	✓		✓	✓	✓	✓
27. If criteria not met, was a NCM generated?	N	→	→	→		NA	→	→	→
28. After review in TALS, approve the method in TALS.						✓	✓	✓	✓
29. After verifying TALS is correct, lock method in Chrom <resolve any error issues>								✓	
30. Checklist & Entech report scanned, attached & assigned properly?						✓	✓	✓	✓
Analyst:	**Date:** 1/17/17				**2nd Level Reviewer :**		**Date:** 1/17/17		
Comments:					**Comments:**				

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Instrument ID: MJ Start Date: 01/19/2017 11:35

Analysis Batch Number: 7893 End Date: 01/20/2017 04:16

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-7893/1		01/19/2017 11:35	1	JBFBA19.D	RTX-5 0.32(mm)
CCVIS 140-7893/2		01/19/2017 12:03	1	JCCVA19.D	RTX-5 0.32(mm)
LCS 140-7893/1002		01/19/2017 12:03	1	JCCVA19-LCS.d	RTX-5 0.32(mm)
MB 140-7893/4		01/19/2017 14:11	1	J500BA19.D	RTX-5 0.32(mm)
ZZZZZ		01/19/2017 14:57	1		RTX-5 0.32(mm)
ZZZZZ		01/19/2017 15:44	1		RTX-5 0.32(mm)
ZZZZZ		01/19/2017 17:18	1		RTX-5 0.32(mm)
ZZZZZ		01/19/2017 18:07	1		RTX-5 0.32(mm)
ZZZZZ		01/19/2017 18:54	1		RTX-5 0.32(mm)
ZZZZZ		01/19/2017 19:41	123.85		RTX-5 0.32(mm)
140-6811-2		01/19/2017 20:28	1	JA19P107.D	RTX-5 0.32(mm)
140-6811-3		01/19/2017 21:14	1	JA19P108.D	RTX-5 0.32(mm)
140-6811-5 DL		01/19/2017 22:00	1	JA19P109.D	RTX-5 0.32(mm)
140-6811-6		01/19/2017 22:47	2.5	JA19P110.D	RTX-5 0.32(mm)
140-6811-1		01/19/2017 23:34	1	JA19P103R.D	RTX-5 0.32(mm)
ZZZZZ		01/20/2017 00:21	1		RTX-5 0.32(mm)
ZZZZZ		01/20/2017 01:09	1		RTX-5 0.32(mm)
ZZZZZ		01/20/2017 01:56	1		RTX-5 0.32(mm)
ZZZZZ		01/20/2017 02:43	147.76		RTX-5 0.32(mm)
ZZZZZ		01/20/2017 03:29	1371.43		RTX-5 0.32(mm)
ZZZZZ		01/20/2017 04:16	2824.49		RTX-5 0.32(mm)

170119

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 100 mL	32.9	1/19/2017	11:35:26 AM
CCV	15 - 102 mL	32.7	1/19/2017	12:03:41 PM
dnuflush	16 - 101 mL	33.1	1/19/2017	1:42:43 PM
mb500	16 - 501 mL	32.3	1/19/2017	2:11:45 PM
6840-01	1 - 51 mL	6.6	1/19/2017	2:57:34 PM
6840-02	2 - 51 mL	5.9	1/19/2017	3:44:04 PM
6811-01	3 - 20 mL	7.8	1/19/2017	4:31:09 PM
6834-01	4 - 500 mL	2.8	1/19/2017	5:18:18 PM
6834-01	4 - 500 mL	2.3	1/19/2017	6:07:19 PM
6834-02	5 - 501 mL	2.7	1/19/2017	6:54:19 PM
6802-04	6 - 12 mL	11.5	1/19/2017	7:41:07 PM
6811-02	7 - 101 mL	5.6	1/19/2017	8:28:00 PM
6811-03	8 - 101 mL	4.2	1/19/2017	9:14:39 PM
6811-05	9 - 26 mL	9.2	1/19/2017	10:00:40 PM
6811-06	10 - 21 mL	9	1/19/2017	10:47:39 PM
6811-01R	3 - 100 mL	2.6	1/19/2017	11:34:46 PM
LOT6822	11 - 501 mL	23.4	1/20/2017	12:21:50 AM
LOT6824	12 - 500 mL	27.3	1/20/2017	1:09:22 AM
mb200	16 - 200 mL	32.8	1/20/2017	1:56:14 AM
6841-01	13 - 151 mL	14.1	1/20/2017	2:42:58 AM
6841-02	14 - 101 mL	10.5	1/20/2017	3:29:20 AM
6841-03	15 - 50 mL	14.1	1/20/2017	4:16:39 AM

MJ WL 3854

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Instrument/Date	MJ 4/19/17		Routine	AFCEE	DOD	OHIO
CCAL Chrom WL #	3894	CCAL Batch #	7893			
ICAL Chrom WL #	3656	ICAL Batch # / Event #	7241, 7240	NA	NA	NA

Chrom Review ✓	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		✓
2. Did BFB meet tune criteria? [F8]	✓		✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓	☐ [Failed TO-14A, but passes TO-15] (NCM#) ✓	✓
4. Is the %D ≤ 30% for all target analytes? acrolein ✓ [≤ 40% for AFCEE non-table analytes] naph 31 ✓ [≤ 50% for 1&2 methylnaphthalene] 1M 1 ✓ [Chrom-F8] [TALS-Sample Results Tab]	✓	☐ CCV - %D - LCS criteria met (NCM# 6021 (naph)) ☐ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM# 6021 (1M))	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	NJ		✓
7. Has the RT been updated to the method?	✓		NA
Analyst:	**Date:** 4/19/17	**2nd Level Reviewer :**	**Date:** 1/20/17
Comments:		**Comments:**	
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓		✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	☐ Method Blank – Report, ND (NCM#) ☐ Method Blank – Report, 10X (NCM#)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓	NJ 1/20/17	NA
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample / Reason / Sample / Reason	✓	☐ (1) Surrogate – Matrix (NCM#) ☐ (2) Surrogate – High, ND (NCM#) ☐ (3) ISTD – RA/RA Concurs (NCM#) ☐ (4) Surrogate –RX concur, Report both (NCM#) ☑ (5) ISTD – Matrix, DL required (NCM#)	✓
15. Samples outside calibration range scheduled for dilution? *Samples:*	✓	☐ ICAL – Range Exceeded; Minimum Dilution	NA
Chrom Review	**1st**	**If No, why is data reportable?**	**2nd**
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample / Reason / Sample / Reason	✓	☐ (1) Reporting Limit – Dilution, Matrix (NCM#) ☐ (2) Reporting Limit – Dilution, Non-Target (NCM#) ☐ (3) Issues with initial collection volume; see DRC. 6840 IL (LC)	✓
17. RIC inspected for proper integration for TPH?	NJ		
18. Obvious non-TPH peaks excluded?			NA NJ

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

19. Individual TPH peak area < octane high point area?			NA
TALS Review	**1st**	**If No, why is data reportable?**	**2nd**
20. Graphics uploaded? [Sample List Tab]	✓		✓
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	✓		
22. Sample special instructions verified?	✓		✓
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	✓	□ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) □ LCS/LCSD - %R High (NCM# 6022) 1,4 467 must be ND OK WL 3853 (DOD)	✓
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]	✓		✓
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	✓		✓
26. Analytes over calibration range set to secondary [Conditions Review Tab]	✓		NA
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	✓		✓
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*	✓		✓
29. Samples linked to proper blank (200 mL or 500 mL)? [QC Links]	✓	**500 mL blank ID:** (4) **200 mL blank ID:** (18)	✓
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	✓		✓
31. Correct ICV linked to each MB? [QC Links]	✓	Linked to all samples	✓
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	✓		✓
33. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
34. QC checker run and items addressed?			✓
35. Checklist & Entech report scanned, attached & assigned properly?			✓

Analyst: | **Date:** 1/20/17 1/20/17

Comments:

2nd Level Reviewer : | **Date:** 1/20/17

Comments:

Example Calculation: 6841-1 PC

On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF

4.2163 x 150 x 147.76 = 2076.67

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-6811-1

SDG No.:

Instrument ID: MR Start Date: 01/18/2017 09:47

Analysis Batch Number: 7907 End Date: 01/19/2017 05:05

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-7907/1		01/18/2017 09:47	1	RA18BFB.D	RTX-5 0.32(mm)
CCVIS 140-7907/2		01/18/2017 10:18	1	RA18CCV.D	RTX-5 0.32(mm)
LCS 140-7907/1002		01/18/2017 10:18	1	RA18CCV-LCS.d	RTX-5 0.32(mm)
ZZZZZ		01/18/2017 12:40	1		RTX-5 0.32(mm)
MB 140-7907/6		01/18/2017 15:17	1	RBK500A18.D	RTX-5 0.32(mm)
ZZZZZ		01/18/2017 16:05	1		RTX-5 0.32(mm)
ZZZZZ		01/18/2017 16:51	1		RTX-5 0.32(mm)
ZZZZZ		01/18/2017 17:39	3.37		RTX-5 0.32(mm)
ZZZZZ		01/18/2017 18:30	1420.41		RTX-5 0.32(mm)
ZZZZZ		01/18/2017 19:21	1461.22		RTX-5 0.32(mm)
ZZZZZ		01/18/2017 20:12	755.1		RTX-5 0.32(mm)
ZZZZZ		01/18/2017 20:59	1		RTX-5 0.32(mm)
ZZZZZ		01/18/2017 21:46	122.06		RTX-5 0.32(mm)
ZZZZZ		01/18/2017 22:33	10.76		RTX-5 0.32(mm)
ZZZZZ		01/18/2017 23:20	123.85		RTX-5 0.32(mm)
ZZZZZ		01/19/2017 00:11	1		RTX-5 0.32(mm)
ZZZZZ		01/19/2017 01:02	1		RTX-5 0.32(mm)
140-6811-4		01/19/2017 01:49	1	RA18P112.D	RTX-5 0.32(mm)
ZZZZZ		01/19/2017 02:36	1		RTX-5 0.32(mm)
ZZZZZ		01/19/2017 03:27	1		RTX-5 0.32(mm)
140-6811-5		01/19/2017 04:14	1	RA18P114.D	RTX-5 0.32(mm)
ZZZZZ		01/19/2017 05:05	1		RTX-5 0.32(mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Instrument/Date	MR 4/18/17	Routine	AFCEE	DOD	OHIO
CCAL Chrom WL #	3860 / CCAL Batch #	7907			
ICAL Chrom WL #	3844 / ICAL Batch # / Event #	7852 / 857	/	/	/

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		✓
2. Did BFB meet tune criteria? [F8]	✓	□ [Failed TO-14A, but passes TO-15] (NCM#_____)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
4. Is the %D ≤ 30% for all target analytes? [≤ 40% for AFCEE non-table analytes] [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	✓	□ CCV - %D - LCS criteria met (NCM#_____) □ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#_____)	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
6. "Range" analytes & internal standard/RIC ID'd correctly, inspected for interferences & proper integration?	N/		NA
7. Has the RT been updated to the method?	✓		✓
Analyst: Date: 4/18/17		2nd Level Reviewer: Date: 4/19/17	
Comments:		Comments:	
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓	Checked on scale	✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#_____) □ Method Blank – Report, 10X (NCM#_____)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample / Reason / Sample / Reason	✓	□ (1) Surrogate – Matrix (NCM#_____) □ (2) Surrogate – High, ND (NCM#_____) □ (3) ISTD – RA/RA Concurs (NCM#_____) □ (4) Surrogate –RX concur, Report both (NCM#_____) □ (5) ISTD – Matrix, DL required (NCM#_____)	✓
15. Samples outside calibration range scheduled for dilution? *Samples:*	✓	□ ICAL – Range Exceeded; Minimum Dilution	✓
Chrom Review	**1st**	**If No, why is data reportable?**	**2nd**
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample / Reason / Sample / Reason	✓	□ (1) Reporting Limit – Dilution, Matrix (NCM#_____) □ (2) Reporting Limit – Dilution, Non-Target (NCM#_____) □ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	N/		NA
18. Obvious non-TPH peaks excluded?	✓		✓

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

19. Individual TPH peak area < octane high point area?			
TALS Review	**1st**	**If No, why is data reportable?**	**2nd**
20. Graphics uploaded? [Sample List Tab]			
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?			
22. Sample special instructions verified?			
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.		☐ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) ☐ LCS/LCSD - %R High (NCM#_____)	
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]			
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]			
26. Analytes over calibration range set to secondary [Conditions Review Tab]			
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]			
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*			
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]		**500 mL blank ID:** 6 **200 mL blank ID:** 7	
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]			
31. Correct ICV linked to each MB? [QC Links]			
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]			
33. Runs set to 1st level review?		Runs set to 2nd level review?	
34. QC checker run and items addressed?			
35. Checklist & Entech report scanned, attached & assigned properly?			

Analyst:	**Date:** 1/19/17	**2nd Level Reviewer :**	**Date:** 1/19/17
Comments:		**Comments:**	

Example Calculation: 6802-2 lab

On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF

8.8464 x 25mL x 122.06 = 21595.83

Summa Canister Dilution Worksheet

Client: Tetra Tech GEO

Job No.: 140-6811-1

Lab Sample ID	Canister Volume (L)	Preadjusted Pressure ("Hg)	Preadjusted Pressure (atm)	Preadjusted Volume (L)	Adjusted Pressure (psig)	Adjusted Pressure (atm)	Adjusted Volume (L)	Initial Volume (mL)	Dilution Factor	Final Dilution Factor	Date	Analyst
140-6811-6	1	0.0	1.00	1.00	22.1	2.50	2.50		2.50	2.50	01/17/17 15:30	Barlozhetskaya, Anna F

Formulae:

Preadjusted Volume (L) = (Preadjusted Pressure ("Hg) + 29.92 "Hg * Vol L) / 29.92 "Hg

Adjusted Volume (L) = (Adjusted Pressure (psig) + 14.7 psig * Vol L) / 14.7 psig

Dilution Factor = Adjusted Volume (L) / Preadjusted Volume (L)

Where:

29.92 "Hg = Standard atmospheric pressure in inches of Mercury (“Hg)

14.7 psig = Standard atmospheric pressure in pounds per square inch gauge (psig)

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6430-1

SDG No.:

Client Sample ID: 10519 | Lab Sample ID: 140-6430-1

Matrix: Air | Lab File ID: 6430BK01.D

Analysis Method: TO-15 | Date Collected: 11/25/2016 14:30

Sample wt/vol: 200(mL) | Date Analyzed: 11/30/2016 14:49

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7288 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6430-1

SDG No.:

Client Sample ID: 10519 | Lab Sample ID: 140-6430-1

Matrix: Air | Lab File ID: 6430BK01.D

Analysis Method: TO-15 | Date Collected: 11/25/2016 14:30

Sample wt/vol: 200(mL) | Date Analyzed: 11/30/2016 14:49

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7288 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6430-1

SDG No.:

Client Sample ID: 10519 Lab Sample ID: 140-6430-1

Matrix: Air Lab File ID: 6430BK01.D

Analysis Method: TO-15 Date Collected: 11/25/2016 14:30

Sample wt/vol: 200(mL) Date Analyzed: 11/30/2016 14:49

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7288 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6430-1

SDG No.:

Client Sample ID: 10519 Lab Sample ID: 140-6430-1

Matrix: Air Lab File ID: 6430BK01.D

Analysis Method: TO-15 Date Collected: 11/25/2016 14:30

Sample wt/vol: 200(mL) Date Analyzed: 11/30/2016 14:49

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7288 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161128-3667.b\6430BK01.D				
Lims ID:	140-6430-A-1				
Client ID:	10519				
Sample Type:	Client				
Inject. Date:	30-Nov-2016 14:49:30	ALS Bottle#:	2	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003667-009				
Misc. Info.:	10519				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20161128-3667.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	01-Dec-2016 12:16:31	Calib Date:	17-Oct-2016 15:42:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20161014-3537.b\GJ17EO04.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK033				
First Level Reviewer: barlozhetskayaa		Date:	01-Dec-2016 11:31:02		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.417	8.422	-0.005	82	423232	4.00	
* 2 1,4-Difluorobenzene	114	10.574	10.579	-0.005	95	1981947	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.357	15.362	-0.005	89	1969433	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.018	17.018	0.000	91	1355643	3.88	
31 Methylene Chloride	84	6.033	6.039	-0.006	90	7204	0.0727	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

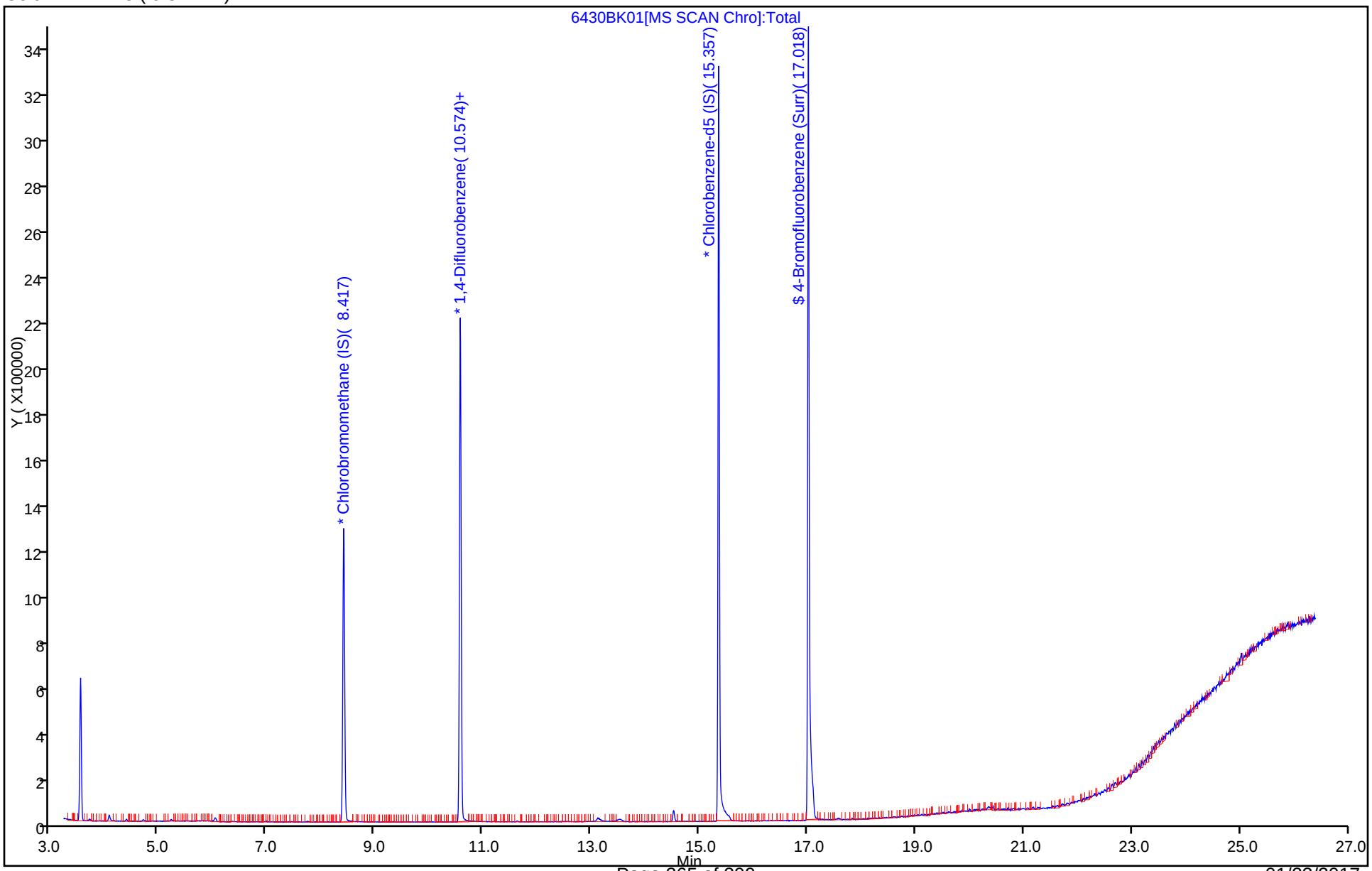
Report Date: 01-Dec-2016 12:17:30 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161128-3667.b\6430BK01.D

Injection Date:	30-Nov-2016 14:49:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-6430-A-1	Lab Sample ID:	140-6430-1	Worklist Smp#:	9
Client ID:	10519				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6430-1

SDG No.:

Client Sample ID: 11280 | Lab Sample ID: 140-6430-2

Matrix: Air | Lab File ID: 6430BK02.D

Analysis Method: TO-15 | Date Collected: 11/25/2016 14:30

Sample wt/vol: 200(mL) | Date Analyzed: 11/30/2016 15:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7288 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6430-1

SDG No.:

Client Sample ID: 11280 | Lab Sample ID: 140-6430-2

Matrix: Air | Lab File ID: 6430BK02.D

Analysis Method: TO-15 | Date Collected: 11/25/2016 14:30

Sample wt/vol: 200(mL) | Date Analyzed: 11/30/2016 15:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7288 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6430-1

SDG No.:

Client Sample ID: 11280 | Lab Sample ID: 140-6430-2

Matrix: Air | Lab File ID: 6430BK02.D

Analysis Method: TO-15 | Date Collected: 11/25/2016 14:30

Sample wt/vol: 200(mL) | Date Analyzed: 11/30/2016 15:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7288 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6430-1

SDG No.:

Client Sample ID: 11280 Lab Sample ID: 140-6430-2

Matrix: Air Lab File ID: 6430BK02.D

Analysis Method: TO-15 Date Collected: 11/25/2016 14:30

Sample wt/vol: 200(mL) Date Analyzed: 11/30/2016 15:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7288 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161128-3667.b\6430BK02.D				
Lims ID:	140-6430-A-2				
Client ID:	11280				
Sample Type:	Client				
Inject. Date:	30-Nov-2016 15:31:30	ALS Bottle#:	3	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003667-010				
Misc. Info.:	11280				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20161128-3667.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	01-Dec-2016 12:16:31	Calib Date:	17-Oct-2016 15:42:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20161014-3537.b\GJ17EO04.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK033				
First Level Reviewer: barlozhetskayaa		Date:	01-Dec-2016 11:31:30		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.411	8.422	-0.011	83	399506	4.00	
* 2 1,4-Difluorobenzene	114	10.568	10.579	-0.011	95	1832521	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.357	15.362	-0.005	89	1834741	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.012	17.018	-0.006	90	1291234	3.97	
31 Methylene Chloride	84	6.033	6.039	-0.006	85	6674	0.0714	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

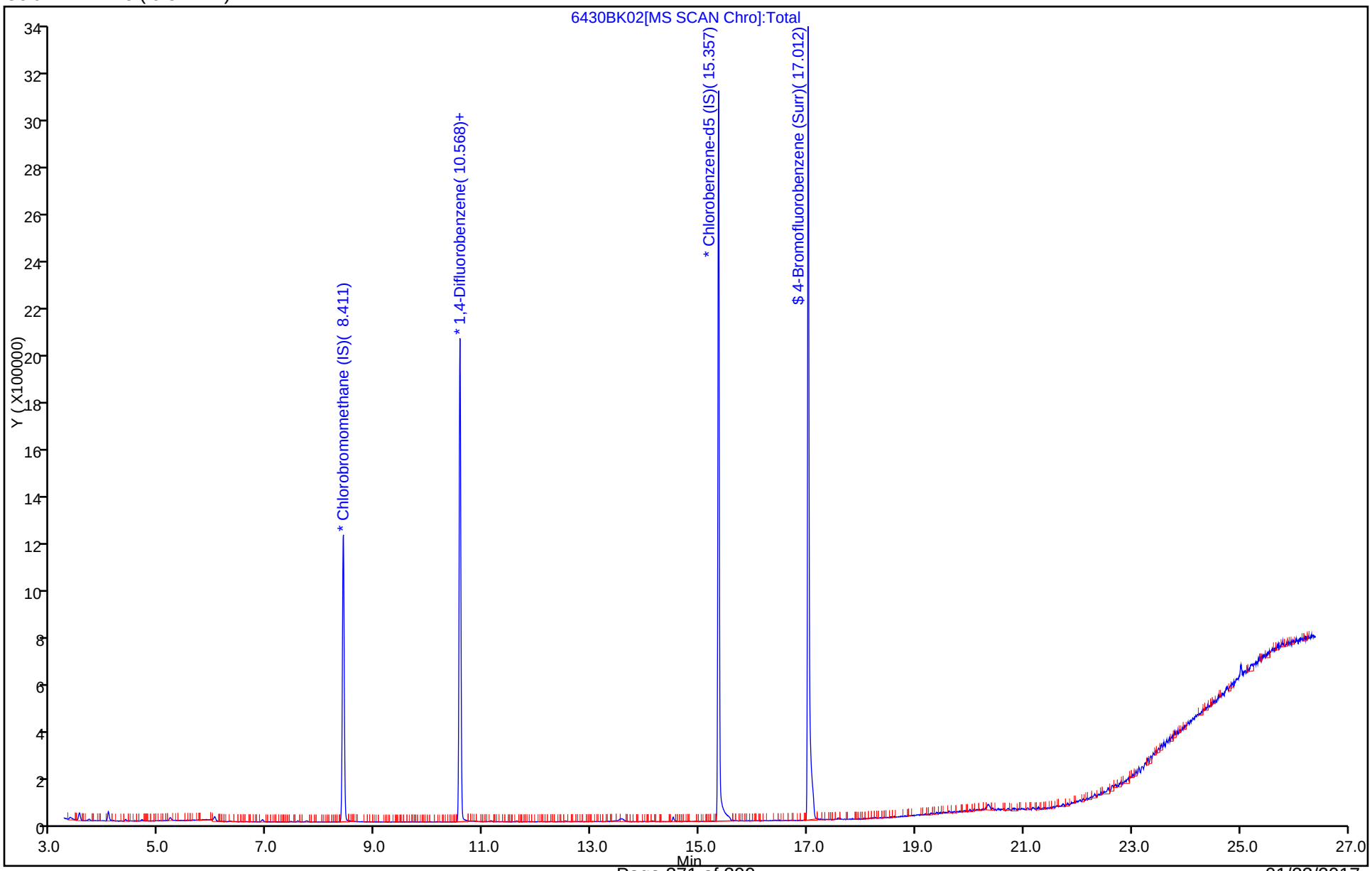
Report Date: 01-Dec-2016 12:17:32 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161128-3667.b\6430BK02.D

Injection Date:	30-Nov-2016 15:31:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-6430-A-2	Lab Sample ID:	140-6430-2	Worklist Smp#:	10
Client ID:	11280				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6430-1

SDG No.:

Client Sample ID: 11285 | Lab Sample ID: 140-6430-4

Matrix: Air | Lab File ID: 6430BK04.D

Analysis Method: TO-15 | Date Collected: 11/25/2016 14:30

Sample wt/vol: 200(mL) | Date Analyzed: 11/30/2016 16:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7288 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6430-1

SDG No.:

Client Sample ID: 11285 | Lab Sample ID: 140-6430-4

Matrix: Air | Lab File ID: 6430BK04.D

Analysis Method: TO-15 | Date Collected: 11/25/2016 14:30

Sample wt/vol: 200(mL) | Date Analyzed: 11/30/2016 16:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7288 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6430-1

SDG No.:

Client Sample ID: 11285 | Lab Sample ID: 140-6430-4

Matrix: Air | Lab File ID: 6430BK04.D

Analysis Method: TO-15 | Date Collected: 11/25/2016 14:30

Sample wt/vol: 200(mL) | Date Analyzed: 11/30/2016 16:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7288 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6430-1

SDG No.:

Client Sample ID: 11285 Lab Sample ID: 140-6430-4

Matrix: Air Lab File ID: 6430BK04.D

Analysis Method: TO-15 Date Collected: 11/25/2016 14:30

Sample wt/vol: 200(mL) Date Analyzed: 11/30/2016 16:56

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7288 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161128-3667.b\6430BK04.D				
Lims ID:	140-6430-A-4				
Client ID:	11285				
Sample Type:	Client				
Inject. Date:	30-Nov-2016 16:56:30	ALS Bottle#:	5	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003667-012				
Misc. Info.:	11285				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20161128-3667.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	01-Dec-2016 12:16:31	Calib Date:	17-Oct-2016 15:42:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20161014-3537.b\GJ17EO04.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK033				
First Level Reviewer: barlozhetskayaa		Date:	01-Dec-2016 11:32:26		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.411	8.422	-0.011	82	422189	4.00	
* 2 1,4-Difluorobenzene	114	10.574	10.579	-0.005	95	1832492	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.357	15.362	-0.005	89	1792439	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.012	17.018	-0.006	91	1226033	3.85	
31 Methylene Chloride	84	6.039	6.039	0.000	89	6549	0.0663	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

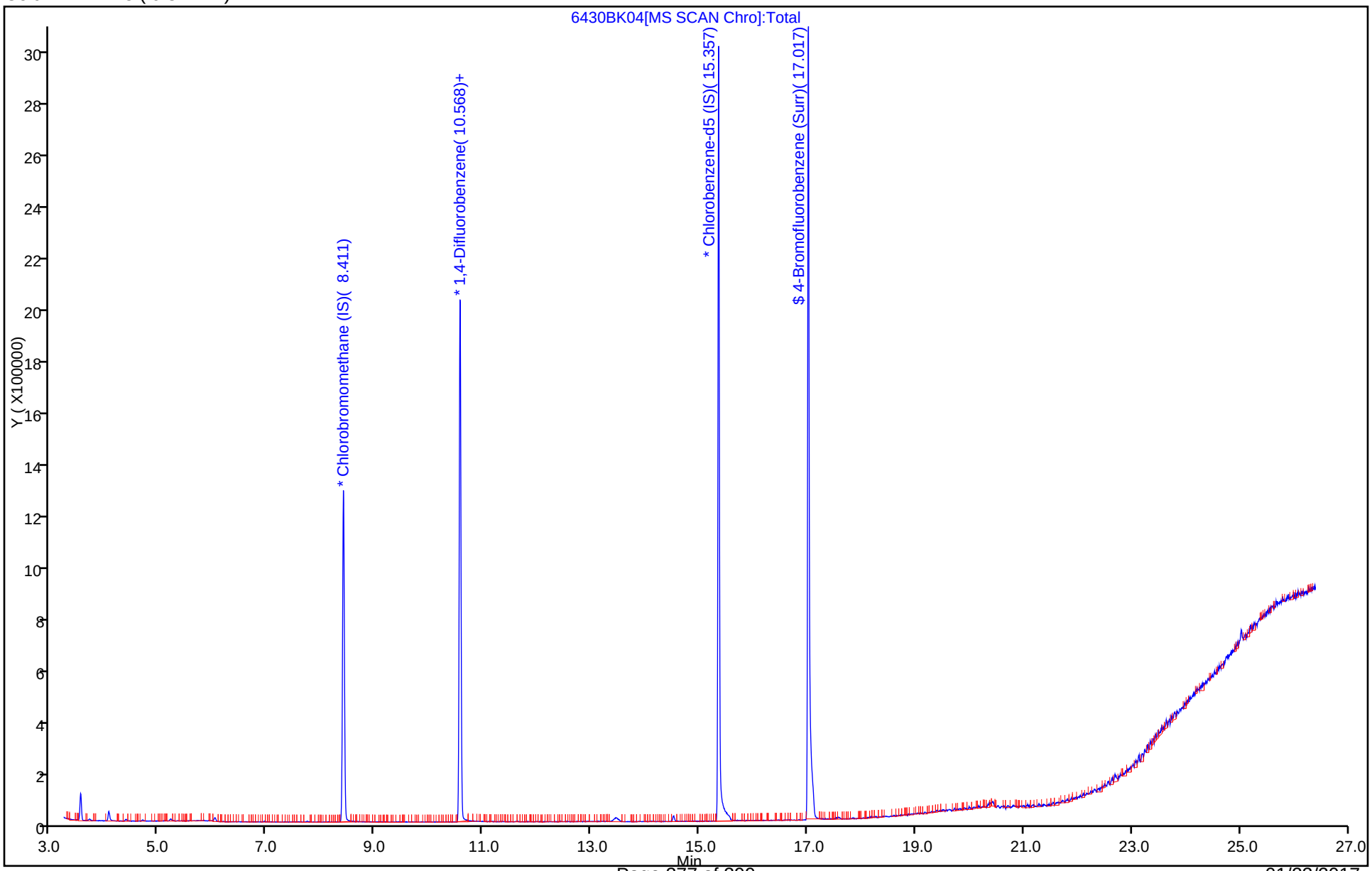
Report Date: 01-Dec-2016 12:17:36 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161128-3667.b\6430BK04.D

Injection Date:	30-Nov-2016 16:56:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-6430-A-4	Lab Sample ID:	140-6430-4	Worklist Smp#:	12
Client ID:	11285				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6430-1

SDG No.:

Client Sample ID: 09795 | Lab Sample ID: 140-6430-5

Matrix: Air | Lab File ID: 6430BK05.D

Analysis Method: TO-15 | Date Collected: 11/25/2016 14:30

Sample wt/vol: 200(mL) | Date Analyzed: 11/30/2016 17:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7288 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6430-1

SDG No.:

Client Sample ID: 09795 | Lab Sample ID: 140-6430-5

Matrix: Air | Lab File ID: 6430BK05.D

Analysis Method: TO-15 | Date Collected: 11/25/2016 14:30

Sample wt/vol: 200(mL) | Date Analyzed: 11/30/2016 17:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7288 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6430-1

SDG No.:

Client Sample ID: 09795 | Lab Sample ID: 140-6430-5

Matrix: Air | Lab File ID: 6430BK05.D

Analysis Method: TO-15 | Date Collected: 11/25/2016 14:30

Sample wt/vol: 200(mL) | Date Analyzed: 11/30/2016 17:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7288 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6430-1

SDG No.:

Client Sample ID: 09795 Lab Sample ID: 140-6430-5

Matrix: Air Lab File ID: 6430BK05.D

Analysis Method: TO-15 Date Collected: 11/25/2016 14:30

Sample wt/vol: 200(mL) Date Analyzed: 11/30/2016 17:37

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7288 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20161128-3667.b\6430BK05.D				
Lims ID:	140-6430-A-5				
Client ID:	09795				
Sample Type:	Client				
Inject. Date:	30-Nov-2016 17:37:30	ALS Bottle#:	6	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003667-013				
Misc. Info.:	09795				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20161128-3667.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	01-Dec-2016 12:16:31	Calib Date:	17-Oct-2016 15:42:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20161014-3537.b\GJ17EO04.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK033				
First Level Reviewer: barlozhetskayaa		Date:	30-Nov-2016 19:02:33		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.411	8.422	-0.011	83	418682	4.00	
* 2 1,4-Difluorobenzene	114	10.573	10.579	-0.006	95	1823723	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.356	15.362	-0.006	89	1803897	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.012	17.018	-0.006	91	1277053	3.99	
31 Methylene Chloride	84	6.038	6.039	-0.001	86	7968	0.0813	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

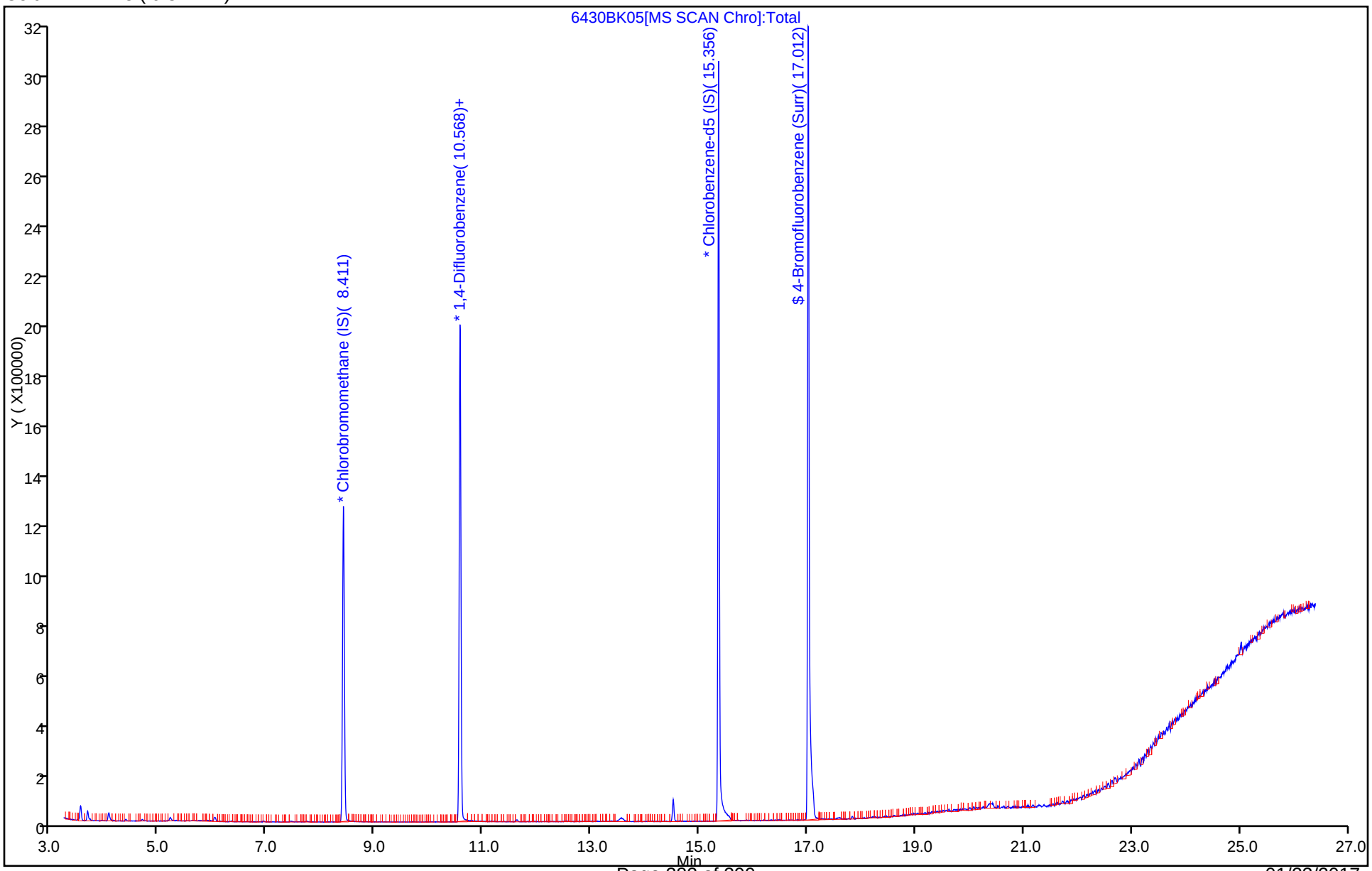
Report Date: 01-Dec-2016 12:17:38 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20161128-3667.b\6430BK05.D

Injection Date:	30-Nov-2016 17:37:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-6430-A-5	Lab Sample ID:	140-6430-5	Worklist Smp#:	13
Client ID:	09795				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6438-1

SDG No.:

Client Sample ID: 11270 Lab Sample ID: 140-6438-1

Matrix: Air Lab File ID: LOT6438.D

Analysis Method: TO-15 Date Collected: 11/29/2016 11:40

Sample wt/vol: 200(mL) Date Analyzed: 11/30/2016 13:48

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7296 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND	*	2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6438-1

SDG No.:

Client Sample ID: 11270 | Lab Sample ID: 140-6438-1

Matrix: Air | Lab File ID: LOT6438.D

Analysis Method: TO-15 | Date Collected: 11/29/2016 11:40

Sample wt/vol: 200(mL) | Date Analyzed: 11/30/2016 13:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7296 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND	*	0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6438-1

SDG No.:

Client Sample ID: 11270 | Lab Sample ID: 140-6438-1

Matrix: Air | Lab File ID: LOT6438.D

Analysis Method: TO-15 | Date Collected: 11/29/2016 11:40

Sample wt/vol: 200(mL) | Date Analyzed: 11/30/2016 13:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7296 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND	*	0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND	*	1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6438-1

SDG No.:

Client Sample ID: 11270 Lab Sample ID: 140-6438-1

Matrix: Air Lab File ID: LOT6438.D

Analysis Method: TO-15 Date Collected: 11/29/2016 11:40

Sample wt/vol: 200(mL) Date Analyzed: 11/30/2016 13:48

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7296 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20161129-3673.b\LOT6438.D				
Lims ID:	140-6438-A-1				
Client ID:	11270				
Sample Type:	Client				
Inject. Date:	30-Nov-2016 13:48:30	ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003673-006				
Misc. Info.:	11270				
Operator ID:	007126	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20161129-3673.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	01-Dec-2016 10:06:26	Calib Date:	25-Nov-2016 19:57:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20161123-3661.b\EK25IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK033				
First Level Reviewer: tajh		Date:	30-Nov-2016 14:22:51		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.551	7.557	-0.006	93	226490	4.00	
* 2 1,4-Difluorobenzene	114	9.773	9.773	0.000	96	985358	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.772	14.777	-0.005	94	841087	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.454	16.454	0.000	86	660498	3.74	
31 Methylene Chloride	84	5.130	5.136	-0.006	97	10014	0.1205	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

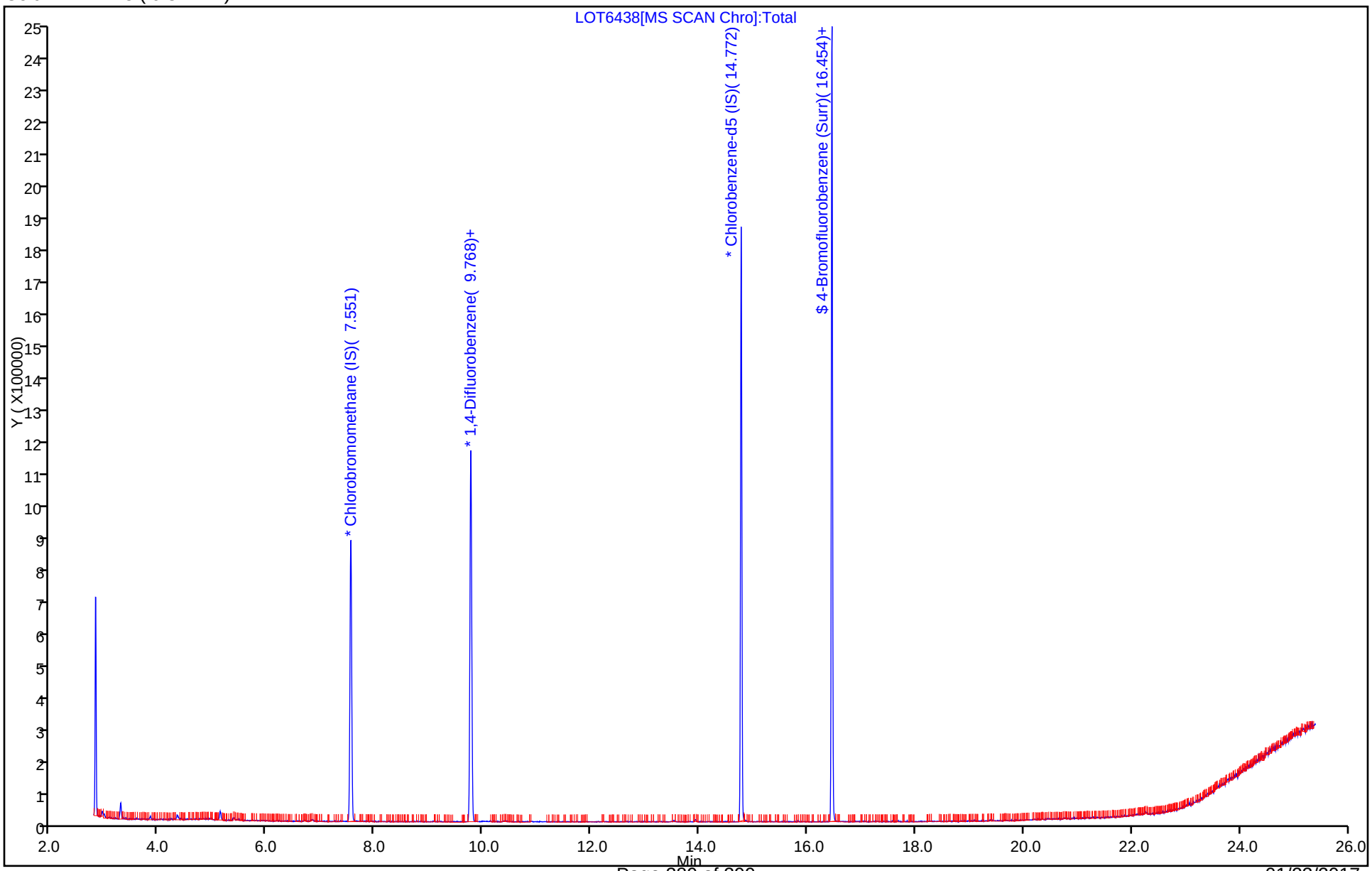
Report Date: 01-Dec-2016 10:06:45 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20161129-3673.b\LOT6438.D

Injection Date:	30-Nov-2016 13:48:30	Instrument ID:	ME	Operator ID:	007126
Lims ID:	140-6438-A-1	Lab Sample ID:	140-6438-1	Worklist Smp#:	6
Client ID:	11270				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6454-1

SDG No.:

Client Sample ID: 10339 Lab Sample ID: 140-6454-16

Matrix: Air Lab File ID: LOT6454.D

Analysis Method: TO-15 Date Collected: 12/01/2016 07:15

Sample wt/vol: 200(mL) Date Analyzed: 12/02/2016 13:50

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7306 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6454-1

SDG No.:

Client Sample ID: 10339 | Lab Sample ID: 140-6454-16

Matrix: Air | Lab File ID: LOT6454.D

Analysis Method: TO-15 | Date Collected: 12/01/2016 07:15

Sample wt/vol: 200(mL) | Date Analyzed: 12/02/2016 13:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7306 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6454-1

SDG No.:

Client Sample ID: 10339 | Lab Sample ID: 140-6454-16

Matrix: Air | Lab File ID: LOT6454.D

Analysis Method: TO-15 | Date Collected: 12/01/2016 07:15

Sample wt/vol: 200(mL) | Date Analyzed: 12/02/2016 13:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7306 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6454-1

SDG No.:

Client Sample ID: 10339 Lab Sample ID: 140-6454-16

Matrix: Air Lab File ID: LOT6454.D

Analysis Method: TO-15 Date Collected: 12/01/2016 07:15

Sample wt/vol: 200(mL) Date Analyzed: 12/02/2016 13:50

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7306 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161130-3679.b\LOT6454.D
Lims ID: 140-6454-A-16
Client ID: 10339
Sample Type: Client
Inject. Date: 02-Dec-2016 13:50:30 ALS Bottle#: 2 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003679-009
Misc. Info.: 10339
Operator ID: 7126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20161130-3679.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 02-Dec-2016 15:05:20 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK029

First Level Reviewer: tajh Date: 02-Dec-2016 14:32:00

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.627	8.630	-0.003	98	288684	4.00	
* 2 1,4-Difluorobenzene	114	10.833	10.835	-0.002	96	1262632	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.599	15.601	-0.002	90	1012022	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.245	17.248	-0.003	95	610874	3.81	
31 Methylene Chloride	84	6.094	6.096	-0.002	95	5966	0.0701	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

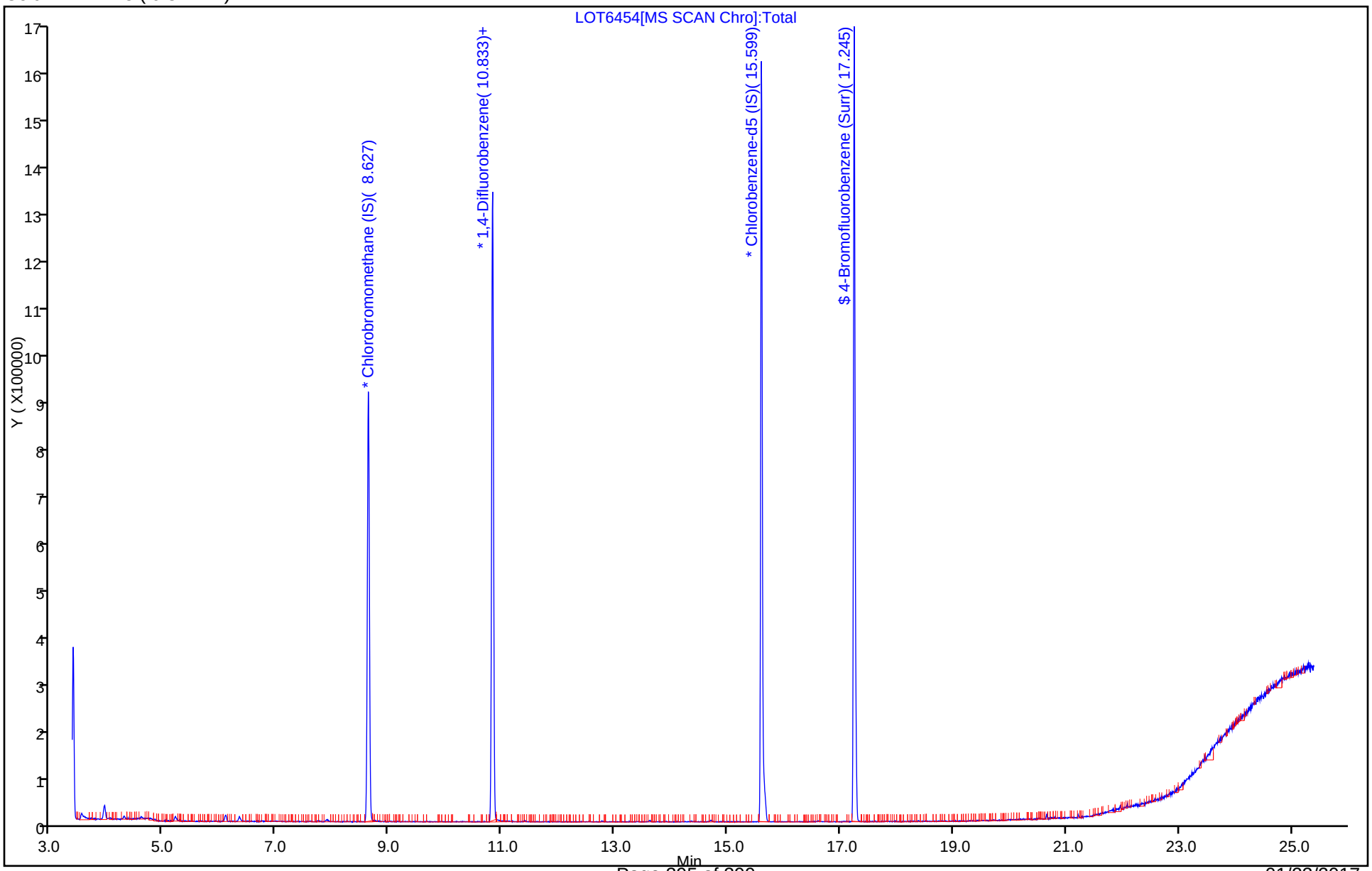
Report Date: 02-Dec-2016 15:05:35 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161130-3679.b\LOT6454.D

Injection Date:	02-Dec-2016 13:50:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-6454-A-16	Lab Sample ID:	140-6454-16	Worklist Smp#:	9
Client ID:	10339				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



Shipping and Receiving Documents

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

180325

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

BALTIMORE

Client Contact Information
Company: Tetra Tech Inc
Address: 51 Franklin St
City/State/Zip Annapolis / MD / 21401
Phone: 410-990-4607
FAX:
Project Name: Lockheed Martin MRC
Site/location: MRC / Building - C
PO # 117-05121241

Project Manager: Peter Rich
Phone: 410-990-4607 x104
Site Contact:
TAL Contact:

Analysis Turnaround Time
Standard (Specify)
Rush (Specify)

Sampled By: J.M. Wilks

1 of 1 COCs

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
BLDG-C EFFLUENT	1-12-17	1255	1256	30	1	09958	10519	✓											
BLDG-C MID-GAC	1-12-17	1258	1259	29.5	0	10930	09635	✓											
BLDG-C INFLUENT	1-12-17	1301	1302	29	0	10911	10339	✓											
BLDG-A EFFLUENT	1-13-17	1340	1341	29	0	10901	11285	✓											
BLDG-A MIDGAC	1-13-17	1344	1346	29	0.5	10104	11270	✓											
BLDG-A INFLUENT	1-13-17	1350	1351	30	0	09569	11517	✓											

Sampled by :

140-6811 Chain of Custody

Temperature (Fahrenheit)

	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)

	Interior	Ambient	
Start			
Stop			

CUSTODY SEALS INTACT
RECEIVED AT AMBIENT TEMP
BKD 1-16-17

1 COOLER FED X # 7781 7576 8242
6 CANS / 6 FLOWS (R)

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by: M. Wilks / Wilks	Date/Time: 1-13-17 / 1535	Received by: [signature]
Relinquished by: [signature]	Date/Time: 1/13/17 1737	Received by: [signature] 1-16-17 13:10

01/23/2017

Loc: 140
6811

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	✓			☐ **Containers, Broken**	
2. Were ambient air containers received intact?			✓	☑ Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	✓			☐ Yes ☐ NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			✓	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**	
5. Were all of the sample containers received intact?	✓			☐ **Containers, Broken**	
6. Were samples received in appropriate containers?	✓			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**	
7. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**	
8. Were all of the samples listed on the COC received?	✓			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**	
9. Is the date/time of sample collection noted?	✓			☐ **COC; No Date/Time; Client Contacted**	
10. Was the sampler identified on the COC?	✓			☐ **Sampler Not Listed on COC**	
11. Is the client and project name/# identified?	✓			☐ **COC Incorrect/Incomplete**	
12. Are tests/parameters listed for each sample?	✓			☐ **COC No tests on COC**	
13. Is the matrix of the samples noted?	✓			☐ **COC Incorrect/Incomplete**	
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **COC Incorrect/Incomplete**	
15. Were samples received within holding time?	✓			☐ **Holding Time - Receipt**	
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**	
17. Were VOA samples received without headspace?			✓	☐ **Headspace (VOA only)**	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			✓	☐ **Residual Chlorine**	
19. For 1613B water samples is pH<9?			✓	☐ If no, lab will adjust	
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info	

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: 1400292 1 PM Instructions: _____

Sample Receiving Associate: _____ Date: 1-16-17

QA026R30.doc, 080916

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 1/16/2017

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
AFB	140-6811-a-1	10519	6430	B	1	0	1540	
AFB	140-6811-a-2	09635	6454	B	1	0	1541	
AFB	140-6811-a-3	10339	6454	B	1	0	1542	
AFB	140-6811-a-4	11285	6430	B	1	+0.5	1543	
AFB	140-6811-a-5	11270	6438	B	1	+1.0	1544	
AFB	140-6811-a-6	11517	6454	B	1	+0.7	1545	

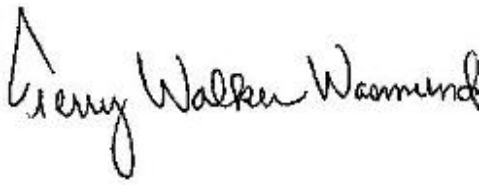
ANALYTICAL REPORT

Job Number: 140-7052-1

Job Description: LM MRC - Bldg-A - Middle River

For:
Tetra Tech GEO
51 Franklin Street
Suite 400
Annapolis, MD 21401

Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
2/16/2017 4:50 PM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
02/16/2017

cc: Belssi Chang
Amy Thomson
Michael Wilks

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Table of Contents

Cover Title Page 1

Data Summaries 4

Definitions 4

Case Narrative 5

Detection Summary 6

Client Sample Results 8

Default Detection Limits 14

Surrogate Summary 15

QC Sample Results 16

QC Association 22

Chronicle 23

Method Summary 25

Sample Summary 26

Organic Sample Data 27

Air - GC/MS VOA 27

Method TO15 Low Level 27

Method TO15 Low Level QC Summary 28

Method TO15 Low Level Sample Data 45

Standards Data 110

Method TO15 Low Level ICAL Data 110

Method TO15 Low Level CCAL Data 237

Raw QC Data 272

Method TO15 Low Level Tune Data 272

Method TO15 Low Level Blank Data 294

Method TO15 Low Level LCS/LCSD Data 309

Method TO15 Low Level Run Logs 327

Table of Contents

Clean Canister Certification 342
Clean Canister Data 342
Shipping and Receiving Documents 348
Client Chain of Custody 349
Sample Receipt Checklist 351

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-7052-1

Receipt
The samples were received on 2/9/2017 at 9:45 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA
Methods D1946, TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

Methods TO 15 LL, TO-15: The continuing calibration verification (CCV) associated with batch 140-8433 exhibited % difference of > 30% for 1,2,4-trichlorobenzene; however, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments
No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LM MRC - Bldg-A - Middle River

TestAmerica Job ID: 140-7052-1

Client Sample ID: BLDG-A INFLUENT — Lab Sample ID: 140-7052-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	10		1.0	0.29	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	1.2		1.0	0.19	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	28		1.0	0.30	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.75	J	1.0	0.34	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	4.6		1.0	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	25		1.0	0.18	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.54	J	1.0	0.25	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	120		1.0	0.15	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	210	E	0.50	0.18	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.4	J	2.0	0.30	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene - DL	210		1.0	0.35	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	33		3.2	0.92	ug/m3	1		TO 15 LL	Total/NA
Chloroform	6.0		4.9	0.92	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	110		4.0	1.2	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	3.7	J	4.9	1.7	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	19		4.0	0.51	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	100		4.0	0.69	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	2.1	J	4.0	0.99	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	660		5.5	0.82	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1100	E	2.7	0.94	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	5.9	J	8.7	1.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene - DL	1100		5.4	1.9	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A MIDGAC — Lab Sample ID: 140-7052-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	43		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.32	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.15	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	9.0		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.20	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	2.2		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	10		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	1.3		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.14	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	3.4		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.17	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	35		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.57		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.58		0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.4		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.49		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	6.4		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	140		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.71	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	36		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.98	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-A MIDGAC (Continued) — Lab Sample ID: 140-7052-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	8.8		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	41		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	5.6		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.96	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	13		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.69	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	190		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	3.1		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	2.9		2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	6.8		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	2.4		2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	28		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A EFFLUENT — Lab Sample ID: 140-7052-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.12	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.40		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.086	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	9.2		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.70		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	1.8		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.15	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.75	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.67		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	14		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	3.3		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.21	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.73	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.39	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.4		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.42	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	37		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	2.8		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	7.0		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.67	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.6	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.5		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	75		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	18		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.0	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.2	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-7052-1

Date Collected: 02/08/17 14:43
Matrix: Air
Date Received: 02/09/17 09:45
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**10**		1.0	0.29	ppb v/v			02/14/17 07:22	1
Carbon tetrachloride	ND		1.0	0.19	ppb v/v			02/14/17 07:22	1
Chlorodifluoromethane	ND		1.0	0.19	ppb v/v			02/14/17 07:22	1
Chloroform	**1.2**		1.0	0.19	ppb v/v			02/14/17 07:22	1
cis-1,2-Dichloroethene	**28**		1.0	0.30	ppb v/v			02/14/17 07:22	1
Dichlorodifluoromethane	**0.75**	**J**	1.0	0.34	ppb v/v			02/14/17 07:22	1
1,1-Dichloroethane	**4.6**		1.0	0.13	ppb v/v			02/14/17 07:22	1
1,2-Dichloroethane	ND		1.0	0.24	ppb v/v			02/14/17 07:22	1
1,1-Dichloroethene	**25**		1.0	0.18	ppb v/v			02/14/17 07:22	1
Ethylbenzene	ND		1.0	0.34	ppb v/v			02/14/17 07:22	1
Methylene Chloride	ND		2.5	1.6	ppb v/v			02/14/17 07:22	1
Methyl tert-butyl ether	ND		5.0	0.85	ppb v/v			02/14/17 07:22	1
Naphthalene	ND		0.50	0.50	ppb v/v			02/14/17 07:22	1
Tetrachloroethene	ND		1.0	0.20	ppb v/v			02/14/17 07:22	1
Toluene	ND		1.5	1.5	ppb v/v			02/14/17 07:22	1
trans-1,2-Dichloroethene	**0.54**	**J**	1.0	0.25	ppb v/v			02/14/17 07:22	1
1,2,4-Trichlorobenzene	ND		1.0	0.49	ppb v/v			02/14/17 07:22	1
1,1,1-Trichloroethane	**120**		1.0	0.15	ppb v/v			02/14/17 07:22	1
1,1,2-Trichloroethane	ND		1.0	0.26	ppb v/v			02/14/17 07:22	1
Trichloroethene	**210**	**E**	0.50	0.18	ppb v/v			02/14/17 07:22	1
1,2,3-Trimethylbenzene	ND		1.0	0.43	ppb v/v			02/14/17 07:22	1
1,2,4-Trimethylbenzene	ND		1.0	0.31	ppb v/v			02/14/17 07:22	1
1,3,5-Trimethylbenzene	ND		1.0	0.33	ppb v/v			02/14/17 07:22	1
Vinyl chloride	ND		0.50	0.36	ppb v/v			02/14/17 07:22	1
Xylenes, Total	**1.4**	**J**	2.0	0.30	ppb v/v			02/14/17 07:22	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**33**		3.2	0.92	ug/m3			02/14/17 07:22	1
Carbon tetrachloride	ND		6.3	1.2	ug/m3			02/14/17 07:22	1
Chlorodifluoromethane	ND		3.5	0.66	ug/m3			02/14/17 07:22	1
Chloroform	**6.0**		4.9	0.92	ug/m3			02/14/17 07:22	1
cis-1,2-Dichloroethene	**110**		4.0	1.2	ug/m3			02/14/17 07:22	1
Dichlorodifluoromethane	**3.7**	**J**	4.9	1.7	ug/m3			02/14/17 07:22	1
1,1-Dichloroethane	**19**		4.0	0.51	ug/m3			02/14/17 07:22	1
1,2-Dichloroethane	ND		4.0	0.96	ug/m3			02/14/17 07:22	1
1,1-Dichloroethene	**100**		4.0	0.69	ug/m3			02/14/17 07:22	1
Ethylbenzene	ND		4.3	1.5	ug/m3			02/14/17 07:22	1
Methylene Chloride	ND		8.7	5.6	ug/m3			02/14/17 07:22	1
Methyl tert-butyl ether	ND		18	3.1	ug/m3			02/14/17 07:22	1
Naphthalene	ND		2.6	2.6	ug/m3			02/14/17 07:22	1
Tetrachloroethene	ND		6.8	1.4	ug/m3			02/14/17 07:22	1
Toluene	ND		5.7	5.7	ug/m3			02/14/17 07:22	1
trans-1,2-Dichloroethene	**2.1**	**J**	4.0	0.99	ug/m3			02/14/17 07:22	1
1,2,4-Trichlorobenzene	ND		7.4	3.6	ug/m3			02/14/17 07:22	1
1,1,1-Trichloroethane	**660**		5.5	0.82	ug/m3			02/14/17 07:22	1
1,1,2-Trichloroethane	ND		5.5	1.4	ug/m3			02/14/17 07:22	1
Trichloroethene	**1100**	**E**	2.7	0.94	ug/m3			02/14/17 07:22	1
1,2,3-Trimethylbenzene	ND		4.9	2.1	ug/m3			02/14/17 07:22	1
1,2,4-Trimethylbenzene	ND		4.9	1.5	ug/m3			02/14/17 07:22	1

Client Sample ID: BLDG-A INFLUENT
Lab Sample ID: 140-7052-1

Date Collected: 02/08/17 14:43
Matrix: Air
Date Received: 02/09/17 09:45
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		4.9	1.6	ug/m3			02/14/17 07:22	1
Vinyl chloride	ND		1.3	0.93	ug/m3			02/14/17 07:22	1
Xylenes, Total	**5.9**	**J**	8.7	1.3	ug/m3			02/14/17 07:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*60 - 140*		*02/14/17 07:22*	*1*

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	**210**		1.0	0.35	ppb v/v			02/15/17 02:55	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	**1100**		5.4	1.9	ug/m3			02/15/17 02:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*60 - 140*		*02/15/17 02:55*	*1*

Client Sample ID: BLDG-A MIDGAC

Date Collected: 02/08/17 14:39
Date Received: 02/09/17 09:45
Sample Container: Summa Canister 1L

Lab Sample ID: 140-7052-2

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**43**		0.40	0.12	ppb v/v			02/10/17 22:01	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/10/17 22:01	1
Chlorodifluoromethane	**0.32**	**J**	0.40	0.075	ppb v/v			02/10/17 22:01	1
Chloroform	**0.15**	**J**	0.40	0.075	ppb v/v			02/10/17 22:01	1
cis-1,2-Dichloroethene	**9.0**		0.40	0.12	ppb v/v			02/10/17 22:01	1
Dichlorodifluoromethane	**0.20**	**J**	0.40	0.14	ppb v/v			02/10/17 22:01	1
1,1-Dichloroethane	**2.2**		0.40	0.050	ppb v/v			02/10/17 22:01	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/10/17 22:01	1
1,1-Dichloroethene	**10**		0.40	0.070	ppb v/v			02/10/17 22:01	1
Ethylbenzene	**1.3**		0.40	0.14	ppb v/v			02/10/17 22:01	1
Methylene Chloride	ND		1.0	0.65	ppb v/v			02/10/17 22:01	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/10/17 22:01	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/10/17 22:01	1
Tetrachloroethene	**0.14**	**J**	0.40	0.080	ppb v/v			02/10/17 22:01	1
Toluene	**3.4**		0.60	0.60	ppb v/v			02/10/17 22:01	1
trans-1,2-Dichloroethene	**0.17**	**J**	0.40	0.10	ppb v/v			02/10/17 22:01	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/10/17 22:01	1
1,1,1-Trichloroethane	**35**		0.40	0.060	ppb v/v			02/10/17 22:01	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/10/17 22:01	1
Trichloroethene	**0.57**		0.20	0.070	ppb v/v			02/10/17 22:01	1
1,2,3-Trimethylbenzene	**0.58**		0.40	0.17	ppb v/v			02/10/17 22:01	1
1,2,4-Trimethylbenzene	**1.4**		0.40	0.13	ppb v/v			02/10/17 22:01	1
1,3,5-Trimethylbenzene	**0.49**		0.40	0.13	ppb v/v			02/10/17 22:01	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/10/17 22:01	1
Xylenes, Total	**6.4**		0.80	0.12	ppb v/v			02/10/17 22:01	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**140**		1.3	0.37	ug/m3			02/10/17 22:01	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/10/17 22:01	1
Chlorodifluoromethane	**1.1**	**J**	1.4	0.27	ug/m3			02/10/17 22:01	1
Chloroform	**0.71**	**J**	2.0	0.37	ug/m3			02/10/17 22:01	1
cis-1,2-Dichloroethene	**36**		1.6	0.48	ug/m3			02/10/17 22:01	1
Dichlorodifluoromethane	**0.98**	**J**	2.0	0.67	ug/m3			02/10/17 22:01	1
1,1-Dichloroethane	**8.8**		1.6	0.20	ug/m3			02/10/17 22:01	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/10/17 22:01	1
1,1-Dichloroethene	**41**		1.6	0.28	ug/m3			02/10/17 22:01	1
Ethylbenzene	**5.6**		1.7	0.59	ug/m3			02/10/17 22:01	1
Methylene Chloride	ND		3.5	2.3	ug/m3			02/10/17 22:01	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/10/17 22:01	1
Naphthalene	ND		1.0	1.0	ug/m3			02/10/17 22:01	1
Tetrachloroethene	**0.96**	**J**	2.7	0.54	ug/m3			02/10/17 22:01	1
Toluene	**13**		2.3	2.3	ug/m3			02/10/17 22:01	1
trans-1,2-Dichloroethene	**0.69**	**J**	1.6	0.40	ug/m3			02/10/17 22:01	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/10/17 22:01	1
1,1,1-Trichloroethane	**190**		2.2	0.33	ug/m3			02/10/17 22:01	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/10/17 22:01	1
Trichloroethene	**3.1**		1.1	0.38	ug/m3			02/10/17 22:01	1
1,2,3-Trimethylbenzene	**2.9**		2.0	0.84	ug/m3			02/10/17 22:01	1
1,2,4-Trimethylbenzene	**6.8**		2.0	0.61	ug/m3			02/10/17 22:01	1

Client Sample ID: BLDG-A MIDGAC

Date Collected: 02/08/17 14:39
Date Received: 02/09/17 09:45
Sample Container: Summa Canister 1L

Lab Sample ID: 140-7052-2

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	**2.4**		2.0	0.64	ug/m3			02/10/17 22:01	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/10/17 22:01	1
Xylenes, Total	**28**		3.5	0.52	ug/m3			02/10/17 22:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*60 - 140*		*02/10/17 22:01*	*1*

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-7052-3

Date Collected: 02/08/17 14:33

Matrix: Air

Date Received: 02/09/17 09:45

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.12**	**J**	0.40	0.12	ppb v/v			02/10/17 22:47	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/10/17 22:47	1
Chlorodifluoromethane	**0.40**		0.40	0.075	ppb v/v			02/10/17 22:47	1
Chloroform	**0.086**	**J**	0.40	0.075	ppb v/v			02/10/17 22:47	1
cis-1,2-Dichloroethene	**9.2**		0.40	0.12	ppb v/v			02/10/17 22:47	1
Dichlorodifluoromethane	ND		0.40	0.14	ppb v/v			02/10/17 22:47	1
1,1-Dichloroethane	**0.70**		0.40	0.050	ppb v/v			02/10/17 22:47	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/10/17 22:47	1
1,1-Dichloroethene	**1.8**		0.40	0.070	ppb v/v			02/10/17 22:47	1
Ethylbenzene	**0.15**	**J**	0.40	0.14	ppb v/v			02/10/17 22:47	1
Methylene Chloride	**0.75**	**J**	1.0	0.65	ppb v/v			02/10/17 22:47	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/10/17 22:47	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/10/17 22:47	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/10/17 22:47	1
Toluene	**0.67**		0.60	0.60	ppb v/v			02/10/17 22:47	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/10/17 22:47	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/10/17 22:47	1
1,1,1-Trichloroethane	**14**		0.40	0.060	ppb v/v			02/10/17 22:47	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/10/17 22:47	1
Trichloroethene	**3.3**		0.20	0.070	ppb v/v			02/10/17 22:47	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/10/17 22:47	1
1,2,4-Trimethylbenzene	**0.21**	**J**	0.40	0.13	ppb v/v			02/10/17 22:47	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/10/17 22:47	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/10/17 22:47	1
Xylenes, Total	**0.73**	**J**	0.80	0.12	ppb v/v			02/10/17 22:47	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.39**	**J**	1.3	0.37	ug/m3			02/10/17 22:47	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/10/17 22:47	1
Chlorodifluoromethane	**1.4**		1.4	0.27	ug/m3			02/10/17 22:47	1
Chloroform	**0.42**	**J**	2.0	0.37	ug/m3			02/10/17 22:47	1
cis-1,2-Dichloroethene	**37**		1.6	0.48	ug/m3			02/10/17 22:47	1
Dichlorodifluoromethane	ND		2.0	0.67	ug/m3			02/10/17 22:47	1
1,1-Dichloroethane	**2.8**		1.6	0.20	ug/m3			02/10/17 22:47	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/10/17 22:47	1
1,1-Dichloroethene	**7.0**		1.6	0.28	ug/m3			02/10/17 22:47	1
Ethylbenzene	**0.67**	**J**	1.7	0.59	ug/m3			02/10/17 22:47	1
Methylene Chloride	**2.6**	**J**	3.5	2.3	ug/m3			02/10/17 22:47	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/10/17 22:47	1
Naphthalene	ND		1.0	1.0	ug/m3			02/10/17 22:47	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/10/17 22:47	1
Toluene	**2.5**		2.3	2.3	ug/m3			02/10/17 22:47	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/10/17 22:47	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/10/17 22:47	1
1,1,1-Trichloroethane	**75**		2.2	0.33	ug/m3			02/10/17 22:47	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/10/17 22:47	1
Trichloroethene	**18**		1.1	0.38	ug/m3			02/10/17 22:47	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/10/17 22:47	1
1,2,4-Trimethylbenzene	**1.0**	**J**	2.0	0.61	ug/m3			02/10/17 22:47	1

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-7052-3

Date Collected: 02/08/17 14:33

Matrix: Air

Date Received: 02/09/17 09:45

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/10/17 22:47	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/10/17 22:47	1
Xylenes, Total	**3.2**	**J**	3.5	0.52	ug/m3			02/10/17 22:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*60 - 140*		*02/10/17 22:47*	*1*

Default Detection Limits

Client: Tetra Tech GEO
Project/Site: LM MRC - Bldg-A - Middle River

TestAmerica Job ID: 140-7052-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.20	0.13	ppb v/v	TO 15 LL
Methylene Chloride	0.69	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: LM MRC - Bldg-A - Middle River

TestAmerica Job ID: 140-7052-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)								
		BFB								
Lab Sample ID	Client Sample ID	(60-140)								
140-7052-1	BLDG-A INFLUENT	99								
140-7052-1 - DL	BLDG-A INFLUENT	100								
140-7052-2	BLDG-A MIDGAC	93								
140-7052-3	BLDG-A EFFLUENT	82								
LCS 140-8433/1002	Lab Control Sample	91								
LCS 140-8477/1006	Lab Control Sample	92								
LCS 140-8578/1002	Lab Control Sample	95								
MB 140-8433/4	Method Blank	85								
MB 140-8477/13	Method Blank	94								
MB 140-8578/6	Method Blank	95								

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-8433/4
Matrix: Air
Analysis Batch: 8433

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			02/10/17 10:45	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/10/17 10:45	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/10/17 10:45	1
Chloroform	ND		0.080	0.015	ppb v/v			02/10/17 10:45	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/10/17 10:45	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/10/17 10:45	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/10/17 10:45	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/10/17 10:45	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/10/17 10:45	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/10/17 10:45	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			02/10/17 10:45	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/10/17 10:45	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/10/17 10:45	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/10/17 10:45	1
Toluene	ND		0.12	0.12	ppb v/v			02/10/17 10:45	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/10/17 10:45	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			02/10/17 10:45	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/10/17 10:45	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/10/17 10:45	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/10/17 10:45	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/10/17 10:45	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/10/17 10:45	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/10/17 10:45	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/10/17 10:45	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/10/17 10:45	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			02/10/17 10:45	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/10/17 10:45	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/10/17 10:45	1
Chloroform	ND		0.39	0.073	ug/m3			02/10/17 10:45	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/10/17 10:45	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/10/17 10:45	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/10/17 10:45	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/10/17 10:45	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/10/17 10:45	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/10/17 10:45	1
Methylene Chloride	ND		0.69	0.45	ug/m3			02/10/17 10:45	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/10/17 10:45	1
Naphthalene	ND		0.21	0.21	ug/m3			02/10/17 10:45	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/10/17 10:45	1
Toluene	ND		0.45	0.45	ug/m3			02/10/17 10:45	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/10/17 10:45	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			02/10/17 10:45	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/10/17 10:45	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/10/17 10:45	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/10/17 10:45	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/10/17 10:45	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-8433/4
Matrix: Air
Analysis Batch: 8433

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/10/17 10:45	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/10/17 10:45	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/10/17 10:45	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/10/17 10:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*60 - 140*		*02/10/17 10:45*	*1*

Lab Sample ID: LCS 140-8433/1002
Matrix: Air
Analysis Batch: 8433

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	1.65		ppb v/v		83	70 - 130
Carbon tetrachloride	2.00	1.86		ppb v/v		93	70 - 130
Chlorodifluoromethane	2.00	1.55		ppb v/v		78	60 - 140
Chloroform	2.00	1.66		ppb v/v		83	70 - 130
cis-1,2-Dichloroethene	2.00	1.76		ppb v/v		88	70 - 130
Dichlorodifluoromethane	2.00	1.79		ppb v/v		89	60 - 140
1,1-Dichloroethane	2.00	1.75		ppb v/v		87	70 - 130
1,2-Dichloroethane	2.00	1.61		ppb v/v		80	70 - 130
1,1-Dichloroethene	2.00	1.89		ppb v/v		94	70 - 130
Ethylbenzene	2.00	1.69		ppb v/v		85	70 - 130
Methylene Chloride	2.00	1.74		ppb v/v		87	70 - 130
Methyl tert-butyl ether	2.00	1.57		ppb v/v		79	60 - 140
Naphthalene	2.00	2.01		ppb v/v		100	60 - 140
Tetrachloroethene	2.00	1.78		ppb v/v		89	70 - 130
Toluene	2.00	1.74		ppb v/v		87	70 - 130
trans-1,2-Dichloroethene	2.00	1.87		ppb v/v		94	70 - 130
1,2,4-Trichlorobenzene	2.00	2.69		ppb v/v		134	60 - 140
1,1,1-Trichloroethane	2.00	1.71		ppb v/v		85	70 - 130
1,1,2-Trichloroethane	2.00	1.66		ppb v/v		83	70 - 130
Trichloroethene	2.00	1.81		ppb v/v		91	70 - 130
1,2,3-Trimethylbenzene	2.00	1.78		ppb v/v		89	70 - 130
1,2,4-Trimethylbenzene	2.00	1.76		ppb v/v		88	70 - 130
1,3,5-Trimethylbenzene	2.00	1.85		ppb v/v		92	70 - 130
Vinyl chloride	2.00	1.85		ppb v/v		93	70 - 130
Xylenes, Total	6.00	5.09		ppb v/v		85	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	5.27		ug/m3		83	70 - 130
Carbon tetrachloride	13	11.7		ug/m3		93	70 - 130
Chlorodifluoromethane	7.1	5.50		ug/m3		78	60 - 140
Chloroform	9.8	8.08		ug/m3		83	70 - 130
cis-1,2-Dichloroethene	7.9	6.99		ug/m3		88	70 - 130
Dichlorodifluoromethane	9.9	8.84		ug/m3		89	60 - 140
1,1-Dichloroethane	8.1	7.08		ug/m3		87	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-8433/1002
Matrix: Air
Analysis Batch: 8433

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	8.1	6.51		ug/m3		80	70 - 130
1,1-Dichloroethene	7.9	7.48		ug/m3		94	70 - 130
Ethylbenzene	8.7	7.35		ug/m3		85	70 - 130
Methylene Chloride	6.9	6.03		ug/m3		87	70 - 130
Methyl tert-butyl ether	7.2	5.67		ug/m3		79	60 - 140
Naphthalene	10	10.5		ug/m3		100	60 - 140
Tetrachloroethene	14	12.1		ug/m3		89	70 - 130
Toluene	7.5	6.55		ug/m3		87	70 - 130
trans-1,2-Dichloroethene	7.9	7.43		ug/m3		94	70 - 130
1,2,4-Trichlorobenzene	15	20.0		ug/m3		134	60 - 140
1,1,1-Trichloroethane	11	9.31		ug/m3		85	70 - 130
1,1,2-Trichloroethane	11	9.06		ug/m3		83	70 - 130
Trichloroethene	11	9.73		ug/m3		91	70 - 130
1,2,3-Trimethylbenzene	9.8	8.74		ug/m3		89	70 - 130
1,2,4-Trimethylbenzene	9.8	8.66		ug/m3		88	70 - 130
1,3,5-Trimethylbenzene	9.8	9.08		ug/m3		92	70 - 130
Vinyl chloride	5.1	4.73		ug/m3		93	70 - 130
Xylenes, Total	26	22.1		ug/m3		85	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*60 - 140*

Lab Sample ID: MB 140-8477/13
Matrix: Air
Analysis Batch: 8477

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			02/14/17 01:00	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/14/17 01:00	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/14/17 01:00	1
Chloroform	ND		0.080	0.015	ppb v/v			02/14/17 01:00	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/14/17 01:00	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/14/17 01:00	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/14/17 01:00	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/14/17 01:00	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/14/17 01:00	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/14/17 01:00	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			02/14/17 01:00	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/14/17 01:00	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/14/17 01:00	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/14/17 01:00	1
Toluene	ND		0.12	0.12	ppb v/v			02/14/17 01:00	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/14/17 01:00	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			02/14/17 01:00	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/14/17 01:00	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/14/17 01:00	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/14/17 01:00	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-8477/13
Matrix: Air
Analysis Batch: 8477

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/14/17 01:00	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/14/17 01:00	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/14/17 01:00	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/14/17 01:00	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/14/17 01:00	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			02/14/17 01:00	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/14/17 01:00	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/14/17 01:00	1
Chloroform	ND		0.39	0.073	ug/m3			02/14/17 01:00	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/14/17 01:00	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/14/17 01:00	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/14/17 01:00	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/14/17 01:00	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/14/17 01:00	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/14/17 01:00	1
Methylene Chloride	ND		0.69	0.45	ug/m3			02/14/17 01:00	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/14/17 01:00	1
Naphthalene	ND		0.21	0.21	ug/m3			02/14/17 01:00	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/14/17 01:00	1
Toluene	ND		0.45	0.45	ug/m3			02/14/17 01:00	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/14/17 01:00	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			02/14/17 01:00	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/14/17 01:00	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/14/17 01:00	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/14/17 01:00	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/14/17 01:00	1
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/14/17 01:00	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/14/17 01:00	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/14/17 01:00	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/14/17 01:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*60 - 140*		*02/14/17 01:00*	*1*

Lab Sample ID: LCS 140-8477/1006
Matrix: Air
Analysis Batch: 8477

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	1.94		ppb v/v		97	70 - 130
Carbon tetrachloride	2.00	2.41		ppb v/v		120	70 - 130
Chlorodifluoromethane	2.00	2.45		ppb v/v		122	60 - 140
Chloroform	2.00	2.10		ppb v/v		105	70 - 130
cis-1,2-Dichloroethene	2.00	2.00		ppb v/v		100	70 - 130
Dichlorodifluoromethane	2.00	2.12		ppb v/v		106	60 - 140

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-8477/1006
Matrix: Air
Analysis Batch: 8477

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	2.00	1.97		ppb v/v		99	70 - 130
1,2-Dichloroethane	2.00	2.23		ppb v/v		111	70 - 130
1,1-Dichloroethene	2.00	2.04		ppb v/v		102	70 - 130
Ethylbenzene	2.00	2.04		ppb v/v		102	70 - 130
Methylene Chloride	2.00	1.87		ppb v/v		93	70 - 130
Methyl tert-butyl ether	2.00	2.18		ppb v/v		109	60 - 140
Naphthalene	2.00	2.23		ppb v/v		111	60 - 140
Tetrachloroethene	2.00	2.26		ppb v/v		113	70 - 130
Toluene	2.00	2.23		ppb v/v		111	70 - 130
trans-1,2-Dichloroethene	2.00	2.02		ppb v/v		101	70 - 130
1,2,4-Trichlorobenzene	2.00	2.18		ppb v/v		109	60 - 140
1,1,1-Trichloroethane	2.00	2.29		ppb v/v		114	70 - 130
1,1,2-Trichloroethane	2.00	2.10		ppb v/v		105	70 - 130
Trichloroethene	2.00	2.02		ppb v/v		101	70 - 130
1,2,3-Trimethylbenzene	2.00	2.18		ppb v/v		109	70 - 130
1,2,4-Trimethylbenzene	2.00	2.26		ppb v/v		113	70 - 130
1,3,5-Trimethylbenzene	2.00	2.11		ppb v/v		105	70 - 130
Vinyl chloride	2.00	2.03		ppb v/v		102	70 - 130
Xylenes, Total	6.00	6.24		ppb v/v		104	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	6.18		ug/m3		97	70 - 130
Carbon tetrachloride	13	15.1		ug/m3		120	70 - 130
Chlorodifluoromethane	7.1	8.66		ug/m3		122	60 - 140
Chloroform	9.8	10.3		ug/m3		105	70 - 130
cis-1,2-Dichloroethene	7.9	7.95		ug/m3		100	70 - 130
Dichlorodifluoromethane	9.9	10.5		ug/m3		106	60 - 140
1,1-Dichloroethane	8.1	7.97		ug/m3		99	70 - 130
1,2-Dichloroethane	8.1	9.01		ug/m3		111	70 - 130
1,1-Dichloroethene	7.9	8.08		ug/m3		102	70 - 130
Ethylbenzene	8.7	8.86		ug/m3		102	70 - 130
Methylene Chloride	6.9	6.48		ug/m3		93	70 - 130
Methyl tert-butyl ether	7.2	7.84		ug/m3		109	60 - 140
Naphthalene	10	11.7		ug/m3		111	60 - 140
Tetrachloroethene	14	15.4		ug/m3		113	70 - 130
Toluene	7.5	8.39		ug/m3		111	70 - 130
trans-1,2-Dichloroethene	7.9	8.01		ug/m3		101	70 - 130
1,2,4-Trichlorobenzene	15	16.2		ug/m3		109	60 - 140
1,1,1-Trichloroethane	11	12.5		ug/m3		114	70 - 130
1,1,2-Trichloroethane	11	11.5		ug/m3		105	70 - 130
Trichloroethene	11	10.9		ug/m3		101	70 - 130
1,2,3-Trimethylbenzene	9.8	10.7		ug/m3		109	70 - 130
1,2,4-Trimethylbenzene	9.8	11.1		ug/m3		113	70 - 130
1,3,5-Trimethylbenzene	9.8	10.4		ug/m3		105	70 - 130
Vinyl chloride	5.1	5.19		ug/m3		102	70 - 130
Xylenes, Total	26	27.1		ug/m3		104	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-8477/1006
Matrix: Air
Analysis Batch: 8477

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*60 - 140*

Lab Sample ID: MB 140-8578/6
Matrix: Air
Analysis Batch: 8578

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		0.040	0.014	ppb v/v			02/14/17 15:46	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		0.21	0.075	ug/m3			02/14/17 15:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*60 - 140*		*02/14/17 15:46*	*1*

Lab Sample ID: LCS 140-8578/1002
Matrix: Air
Analysis Batch: 8578

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Trichloroethene			2.00	2.12		ppb v/v		106	70 - 130		

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Trichloroethene			11	11.4		ug/m3		106	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*60 - 140*

Air - GC/MS VOA

Analysis Batch: 8433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-7052-2	BLDG-A MIDGAC	Total/NA	Air	TO 15 LL	
140-7052-3	BLDG-A EFFLUENT	Total/NA	Air	TO 15 LL	
MB 140-8433/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-8433/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 8477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-7052-1	BLDG-A INFLUENT	Total/NA	Air	TO 15 LL	
MB 140-8477/13	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-8477/1006	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 8578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-7052-1 - DL	BLDG-A INFLUENT	Total/NA	Air	TO 15 LL	
MB 140-8578/6	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-8578/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Client Sample ID: BLDG-A INFLUENT
Lab Sample ID: 140-7052-1
Date Collected: 02/08/17 14:43
Matrix: Air
Date Received: 02/09/17 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	40 mL	500 mL	8477	02/14/17 07:22	HMT	TAL KNX
	Instrument ID: MR									
Total/NA	Analysis	TO 15 LL	DL	1	20 mL	500 mL	8578	02/15/17 02:55	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: BLDG-A MIDGAC
Lab Sample ID: 140-7052-2
Date Collected: 02/08/17 14:39
Matrix: Air
Date Received: 02/09/17 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	8433	02/10/17 22:01	AFB	TAL KNX
	Instrument ID: MJ									

Client Sample ID: BLDG-A EFFLUENT
Lab Sample ID: 140-7052-3
Date Collected: 02/08/17 14:33
Matrix: Air
Date Received: 02/09/17 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	8433	02/10/17 22:47	AFB	TAL KNX
	Instrument ID: MJ									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-8433/4
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	8433	02/10/17 10:45	AFB	TAL KNX
	Instrument ID: MJ									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-8477/13
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	8477	02/14/17 01:00	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-8578/6

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	8578	02/14/17 15:46	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-8433/1002

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	8433	02/10/17 08:27	AFB	TAL KNX
	Instrument ID: MJ									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-8477/1006

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	8477	02/13/17 12:44	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-8578/1002

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	8578	02/14/17 12:02	HMT	TAL KNX
	Instrument ID: MR									

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: LM MRC - Bldg-A - Middle River

TestAmerica Job ID: 140-7052-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: LM MRC - Bldg-A - Middle River

TestAmerica Job ID: 140-7052-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-7052-1	BLDG-A INFLUENT	Air	02/08/17 14:43	02/09/17 09:45
140-7052-2	BLDG-A MIDGAC	Air	02/08/17 14:39	02/09/17 09:45
140-7052-3	BLDG-A EFFLUENT	Air	02/08/17 14:33	02/09/17 09:45

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
BLDG-A INFLUENT	140-7052-1	99
BLDG-A INFLUENT DL	140-7052-1 DL	100
BLDG-A MIDGAC	140-7052-2	93
BLDG-A EFFLUENT	140-7052-3	82
	MB 140-8433/4	85
	MB 140-8477/13	94
	MB 140-8578/6	95
	LCS 140-8433/1002	91
	LCS 140-8477/1006	92
	LCS 140-8578/1002	95

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Matrix: Air Level: Low Lab File ID: JCCVB10Z-LCS.d

Lab ID: LCS 140-8433/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.65	83	70-130	
Carbon tetrachloride	2.00	1.86	93	70-130	
Chlorodifluoromethane	2.00	1.55	78	60-140	
Chloroform	2.00	1.66	83	70-130	
cis-1,2-Dichloroethene	2.00	1.76	88	70-130	
Dichlorodifluoromethane	2.00	1.79	89	60-140	
1,1-Dichloroethane	2.00	1.75	87	70-130	
1,2-Dichloroethane	2.00	1.61	80	70-130	
1,1-Dichloroethene	2.00	1.89	94	70-130	
Ethylbenzene	2.00	1.69	85	70-130	
Methylene Chloride	2.00	1.74	87	70-130	
Methyl tert-butyl ether	2.00	1.57	79	60-140	
Naphthalene	2.00	2.01	100	60-140	
Tetrachloroethene	2.00	1.78	89	70-130	
Toluene	2.00	1.74	87	70-130	
trans-1,2-Dichloroethene	2.00	1.87	94	70-130	
1,2,4-Trichlorobenzene	2.00	2.69	134	60-140	
1,1,1-Trichloroethane	2.00	1.71	85	70-130	
1,1,2-Trichloroethane	2.00	1.66	83	70-130	
Trichloroethene	2.00	1.81	91	70-130	
1,2,3-Trimethylbenzene	2.00	1.78	89	70-130	
1,2,4-Trimethylbenzene	2.00	1.76	88	70-130	
1,3,5-Trimethylbenzene	2.00	1.85	92	70-130	
Vinyl chloride	2.00	1.85	93	70-130	
Xylenes, Total	6.00	5.09	85	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Matrix: Air Level: Low Lab File ID: RB13CCVa-LCS.d

Lab ID: LCS 140-8477/1006 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.94	97	70-130	
Carbon tetrachloride	2.00	2.41	120	70-130	
Chlorodifluoromethane	2.00	2.45	122	60-140	
Chloroform	2.00	2.10	105	70-130	
cis-1,2-Dichloroethene	2.00	2.00	100	70-130	
Dichlorodifluoromethane	2.00	2.12	106	60-140	
1,1-Dichloroethane	2.00	1.97	99	70-130	
1,2-Dichloroethane	2.00	2.23	111	70-130	
1,1-Dichloroethene	2.00	2.04	102	70-130	
Ethylbenzene	2.00	2.04	102	70-130	
Methylene Chloride	2.00	1.87	93	70-130	
Methyl tert-butyl ether	2.00	2.18	109	60-140	
Naphthalene	2.00	2.23	111	60-140	
Tetrachloroethene	2.00	2.26	113	70-130	
Toluene	2.00	2.23	111	70-130	
trans-1,2-Dichloroethene	2.00	2.02	101	70-130	
1,2,4-Trichlorobenzene	2.00	2.18	109	60-140	
1,1,1-Trichloroethane	2.00	2.29	114	70-130	
1,1,2-Trichloroethane	2.00	2.10	105	70-130	
Trichloroethene	2.00	2.02	101	70-130	
1,2,3-Trimethylbenzene	2.00	2.18	109	70-130	
1,2,4-Trimethylbenzene	2.00	2.26	113	70-130	
1,3,5-Trimethylbenzene	2.00	2.11	105	70-130	
Vinyl chloride	2.00	2.03	102	70-130	
Xylenes, Total	6.00	6.24	104	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Matrix: Air Level: Low Lab File ID: RB14CCVa-LCS.d

Lab ID: LCS 140-8578/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Trichloroethene	2.00	2.12	106	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Lab File ID: J500BB10.D Lab Sample ID: MB 140-8433/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MJ Date Analyzed: 02/10/2017 10:45

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-8433/1002	JCCVB10Z-LCS.d	02/10/2017 08:27
BLDG-A MIDGAC	140-7052-2	JB10P111.D	02/10/2017 22:01

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Lab File ID: RB13mb500R.D Lab Sample ID: MB 140-8477/13

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MR Date Analyzed: 02/14/2017 01:00

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
BLDG-A INFLUENT	140-7052-1	RB13p115.D	02/14/2017 07:22

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Lab File ID: RB14MB500.D Lab Sample ID: MB 140-8578/6

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MR Date Analyzed: 02/14/2017 15:46

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-8578/1002	RB14CCVa-LCS.d	02/14/2017 12:02
BLDG-A INFLUENT DL	140-7052-1 DL	RB14P113.D	02/15/2017 02:55

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Lab File ID: JBFBK25X.D BFB Injection Date: 11/25/2016

Instrument ID: MJ BFB Injection Time: 18:19

Analysis Batch No.: 7241

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	23.8	
75	30.0 - 60.0 % of mass 95	45.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	98.9	
175	5.0 - 9.0 % of mass 174	7.8	(7.9) 1
176	95.0 - 101.0 % of mass 174	97.9	(99.0) 1
177	5.0 - 9.0 % of mass 176	6.5	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-7241/2	JK25IC01X.D	11/25/2016	18:47
	IC 140-7241/3	JK25IC02X.D	11/25/2016	19:41
	IC 140-7241/4	JK25IC03X.D	11/25/2016	20:34
	IC 140-7241/5	JK25IC04X.D	11/25/2016	21:29
	IC 140-7241/6	JK25IC05X.D	11/25/2016	22:23
	ICIS 140-7241/7	JK25IC06X.D	11/25/2016	23:17
	IC 140-7241/8	JK25IC07X.D	11/26/2016	00:11
	IC 140-7241/9	JK25IC08X.D	11/26/2016	01:05
	IC 140-7241/10	JK25IC09X.D	11/26/2016	01:58
	ICV 140-7241/23	JK25ICVX.D	11/26/2016	12:43

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Lab File ID: JBFBB10Z.D BFB Injection Date: 02/10/2017

Instrument ID: MJ BFB Injection Time: 08:01

Analysis Batch No.: 8433

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	26.2	
75	30.0 - 60.0 % of mass 95	48.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	98.9	
175	5.0 - 9.0 % of mass 174	7.7	(7.7) 1
176	95.0 - 101.0 % of mass 174	97.6	(98.7) 1
177	5.0 - 9.0 % of mass 176	6.7	(6.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-8433/2	JCCVB10Z.D	02/10/2017	08:27
	LCS 140-8433/1002	JCCVB10Z-LCS .d	02/10/2017	08:27
	MB 140-8433/4	J500BB10.D	02/10/2017	10:45
BLDG-A MIDGAC	140-7052-2	JB10P111.D	02/10/2017	22:01
BLDG-A EFFLUENT	140-7052-3	JB10P112.D	02/10/2017	22:47

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Lab File ID: RBFBA16.D BFB Injection Date: 01/16/2017

Instrument ID: MR BFB Injection Time: 16:55

Analysis Batch No.: 7852

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.1	
75	30.0 - 60.0 % of mass 95	45.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.4	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	105.5	
175	5.0 - 9.0 % of mass 174	7.7	(7.3) 1
176	95.0 - 101.0 % of mass 174	102.4	(97.0) 1
177	5.0 - 9.0 % of mass 176	6.5	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-7852/4	RA16IC02.D	01/16/2017	18:15
	IC 140-7852/5	RA16IC03.D	01/16/2017	19:03
	IC 140-7852/6	RA16IC04.D	01/16/2017	19:50
	IC 140-7852/7	RA16IC05.D	01/16/2017	20:38
	ICIS 140-7852/8	RA16IC06.D	01/16/2017	21:26
	IC 140-7852/9	RA16IC07.D	01/16/2017	22:14
	IC 140-7852/10	RA16IC08.D	01/16/2017	23:01
	IC 140-7852/11	RA16IC09.D	01/16/2017	23:49
	ICV 140-7852/13	RA16ICV.D	01/17/2017	01:21
	IC 140-7852/24	RA16IC01R.D	01/17/2017	10:29

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Lab File ID: RB13BFBa.D BFB Injection Date: 02/13/2017

Instrument ID: MR BFB Injection Time: 12:12

Analysis Batch No.: 8477

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.2	
75	30.0 - 60.0 % of mass 95	50.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.8	
173	Less than 2.0 % of mass 174	0.6	(0.5) 1
174	50.0 - 120.00 % of mass 95	109.8	
175	5.0 - 9.0 % of mass 174	7.7	(7.1) 1
176	95.0 - 101.0 % of mass 174	106.5	(97.1) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.0) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-8477/6	RB13CCVa.D	02/13/2017	12:44
	LCS 140-8477/1006	RB13CCVa-LCS .d	02/13/2017	12:44
	MB 140-8477/13	RB13mb500R.D	02/14/2017	01:00
BLDG-A INFLUENT	140-7052-1	RB13p115.D	02/14/2017	07:22

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Lab File ID: RB14BFBa.D BFB Injection Date: 02/14/2017

Instrument ID: MR BFB Injection Time: 11:30

Analysis Batch No.: 8578

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.8	
75	30.0 - 60.0 % of mass 95	51.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.5	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	106.5	
175	5.0 - 9.0 % of mass 174	7.1	(6.6) 1
176	95.0 - 101.0 % of mass 174	102.6	(96.3) 1
177	5.0 - 9.0 % of mass 176	6.7	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-8578/2	RB14CCVa.D	02/14/2017	12:02
	LCS 140-8578/1002	RB14CCVa-LCS .d	02/14/2017	12:02
	MB 140-8578/6	RB14MB500.D	02/14/2017	15:46
BLDG-A INFLUENT DL	140-7052-1 DL	RB14P113.D	02/15/2017	02:55

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Sample No.: ICIS 140-7241/7 Date Analyzed: 11/25/2016 23:17

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JK25IC06X.D Heated Purge: (Y/N) N

Calibration ID: 790

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		356777	8.64	1567971	10.84	1332891	15.61
UPPER LIMIT		499488	8.97	2195159	11.17	1866047	15.94
LOWER LIMIT		214066	8.31	940783	10.51	799735	15.28
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-7241/23		319485	8.63	1407958	10.83	1180826	15.61

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Sample No.: CCVIS 140-8433/2 Date Analyzed: 02/10/2017 08:27

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JCCVB10Z.D Heated Purge: (Y/N) N

Calibration ID: 790

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		384593	8.58	1646942	10.78	1340454	15.56
UPPER LIMIT		538430	8.91	2305719	11.11	1876636	15.89
LOWER LIMIT		230756	8.25	988165	10.45	804272	15.23
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-8433/1002		384593	8.58	1646942	10.78	1340454	15.56
MB 140-8433/4		410296	8.58	1712407	10.78	1395760	15.56
140-7052-2	BLDG-A MIDGAC	315022	8.59	1383190	10.78	1133191	15.56
140-7052-3	BLDG-A EFFLUENT	355441	8.58	1449830	10.78	1117042	15.56

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Sample No.: ICIS 140-7852/8 Date Analyzed: 01/16/2017 21:26

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RA16IC06.D Heated Purge: (Y/N) N

Calibration ID: 857

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		414061	8.24	2023869	10.41	1725846	15.30
UPPER LIMIT		579685	8.57	2833417	10.74	2416184	15.63
LOWER LIMIT		248437	7.91	1214321	10.08	1035508	14.97
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-7852/13		453735	8.24	2225824	10.41	1915858	15.30

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Sample No.: CCVIS 140-8477/6 Date Analyzed: 02/13/2017 12:44

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RB13CCVa.D Heated Purge: (Y/N) N

Calibration ID: 857

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		358308	8.23	1763771	10.39	1420577	15.28
UPPER LIMIT		501631	8.56	2469279	10.72	1988808	15.61
LOWER LIMIT		214985	7.90	1058263	10.06	852346	14.95
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-8477/1006		358308	8.23	1763771	10.39	1420577	15.28
MB 140-8477/13		283446	8.22	1424221	10.38	1140886	15.28
140-7052-1	BLDG-A INFLUENT	286917	8.22	1403474	10.39	1154934	15.28

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Sample No.: CCVIS 140-8578/2 Date Analyzed: 02/14/2017 12:02

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RB14CCVa.D Heated Purge: (Y/N) N

Calibration ID: 857

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		319976	8.23	1604826	10.39	1311982	15.28
UPPER LIMIT		447966	8.56	2246756	10.72	1836775	15.61
LOWER LIMIT		191986	7.90	962896	10.06	787189	14.95
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-8578/1002		319976	8.23	1604826	10.39	1311982	15.28
MB 140-8578/6		335708	8.22	1636694	10.38	1303396	15.28
140-7052-1 DL	BLDG-A INFLUENT DL	293052	8.23	1446546	10.39	1201224	15.28

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7052-1

SDG No.:

Client Sample ID: BLDG-A INFLUENT | Lab Sample ID: 140-7052-1

Matrix: Air | Lab File ID: RB13p115.D

Analysis Method: TO 15 LL | Date Collected: 02/08/2017 14:43

Sample wt/vol: 40(mL) | Date Analyzed: 02/14/2017 07:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8477 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	10		1.0	0.29
56-23-5	Carbon tetrachloride	153.81	ND		1.0	0.19
75-45-6	Chlorodifluoromethane	86.47	ND		1.0	0.19
67-66-3	Chloroform	119.38	1.2		1.0	0.19
156-59-2	cis-1,2-Dichloroethene	96.94	28		1.0	0.30
75-71-8	Dichlorodifluoromethane	120.91	0.75	J	1.0	0.34
75-34-3	1,1-Dichloroethane	98.96	4.6		1.0	0.13
107-06-2	1,2-Dichloroethane	98.96	ND		1.0	0.24
75-35-4	1,1-Dichloroethene	96.94	25		1.0	0.18
100-41-4	Ethylbenzene	106.17	ND		1.0	0.34
75-09-2	Methylene Chloride	84.93	ND		2.5	1.6
1634-04-4	Methyl tert-butyl ether	88.15	ND		5.0	0.85
91-20-3	Naphthalene	128.17	ND		0.50	0.50
127-18-4	Tetrachloroethene	165.83	ND		1.0	0.20
108-88-3	Toluene	92.14	ND		1.5	1.5
156-60-5	trans-1,2-Dichloroethene	96.94	0.54	J	1.0	0.25
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		1.0	0.49
71-55-6	1,1,1-Trichloroethane	133.41	120		1.0	0.15
79-00-5	1,1,2-Trichloroethane	133.41	ND		1.0	0.26
79-01-6	*Trichloroethene*	*131.39*	*210*	*E*	*0.50*	*0.18*
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		1.0	0.43
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		1.0	0.31
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		1.0	0.33
75-01-4	Vinyl chloride	62.50	ND		0.50	0.36
1330-20-7	Xylenes, Total	106.17	1.4	J	2.0	0.30

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Client Sample ID: BLDG-A INFLUENT Lab Sample ID: 140-7052-1

Matrix: Air Lab File ID: RB13p115.D

Analysis Method: TO 15 LL Date Collected: 02/08/2017 14:43

Sample wt/vol: 40(mL) Date Analyzed: 02/14/2017 07:22

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8477 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	33		3.2	0.92
56-23-5	Carbon tetrachloride	153.81	ND		6.3	1.2
75-45-6	Chlorodifluoromethane	86.47	ND		3.5	0.66
67-66-3	Chloroform	119.38	6.0		4.9	0.92
156-59-2	cis-1,2-Dichloroethene	96.94	110		4.0	1.2
75-71-8	Dichlorodifluoromethane	120.91	3.7	J	4.9	1.7
75-34-3	1,1-Dichloroethane	98.96	19		4.0	0.51
107-06-2	1,2-Dichloroethane	98.96	ND		4.0	0.96
75-35-4	1,1-Dichloroethene	96.94	100		4.0	0.69
100-41-4	Ethylbenzene	106.17	ND		4.3	1.5
75-09-2	Methylene Chloride	84.93	ND		8.7	5.6
1634-04-4	Methyl tert-butyl ether	88.15	ND		18	3.1
91-20-3	Naphthalene	128.17	ND		2.6	2.6
127-18-4	Tetrachloroethene	165.83	ND		6.8	1.4
108-88-3	Toluene	92.14	ND		5.7	5.7
156-60-5	trans-1,2-Dichloroethene	96.94	2.1	J	4.0	0.99
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		7.4	3.6
71-55-6	1,1,1-Trichloroethane	133.41	660		5.5	0.82
79-00-5	1,1,2-Trichloroethane	133.41	ND		5.5	1.4
79-01-6	*Trichloroethene*	*131.39*	*1100*	*E*	*2.7*	*0.94*
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		4.9	2.1
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		4.9	1.5
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		4.9	1.6
75-01-4	Vinyl chloride	62.50	ND		1.3	0.93
1330-20-7	Xylenes, Total	106.17	5.9	J	8.7	1.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13p115.D				
Lims ID:	140-7052-A-1				
Client ID:	BLDG-A INFLUENT				
Sample Type:	Client				
Inject. Date:	14-Feb-2017 07:22:30	ALS Bottle#:	15	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004028-021				
Misc. Info.:	140-7052-a-1				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	14-Feb-2017 13:20:26	Calib Date:	17-Jan-2017 10:29:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK008				
First Level Reviewer: barlozhetskayaa		Date:	14-Feb-2017 09:37:07		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.220	8.231	-0.011	90	286917	4.00	
* 2 1,4-Difluorobenzene	114	10.388	10.393	-0.005	93	1403474	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.279	15.284	-0.005	85	1154934	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.967	16.972	-0.005	95	718727	3.98	
8 Dichlorodifluoromethane	85	3.756	3.777	-0.021	98	7760	0.0598	
27 1,1-Dichloroethene	96	5.616	5.632	-0.016	97	159566	2.02	
31 Methylene Chloride	84	5.918	5.923	-0.005	97	9064	0.1219	
34 trans-1,2-Dichloroethene	96	6.646	6.662	-0.016	93	3624	0.0432	
37 1,1-Dichloroethane	63	7.018	7.029	-0.011	100	48802	0.3689	
42 cis-1,2-Dichloroethene	96	7.924	7.935	-0.010	90	192592	2.20	
44 Chloroform	83	8.253	8.263	-0.010	97	14561	0.0975	
47 1,1,1-Trichloroethane	97	9.234	9.245	-0.011	95	1435263	9.63	
50 Benzene	78	9.822	9.827	-0.005	95	201790	0.8268	
59 Trichloroethene	130	11.122	11.132	-0.010	97	1860902	16.9	E
68 Toluene	91	13.257	13.257	0.000	94	23995	0.0951	
81 m-Xylene & p-Xylene	91	15.818	15.818	0.000	98	20868	0.0820	
85 o-Xylene	91	16.341	16.347	-0.006	97	7731	0.0290	
S 124 Xylenes, Total	100				0		0.1110	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

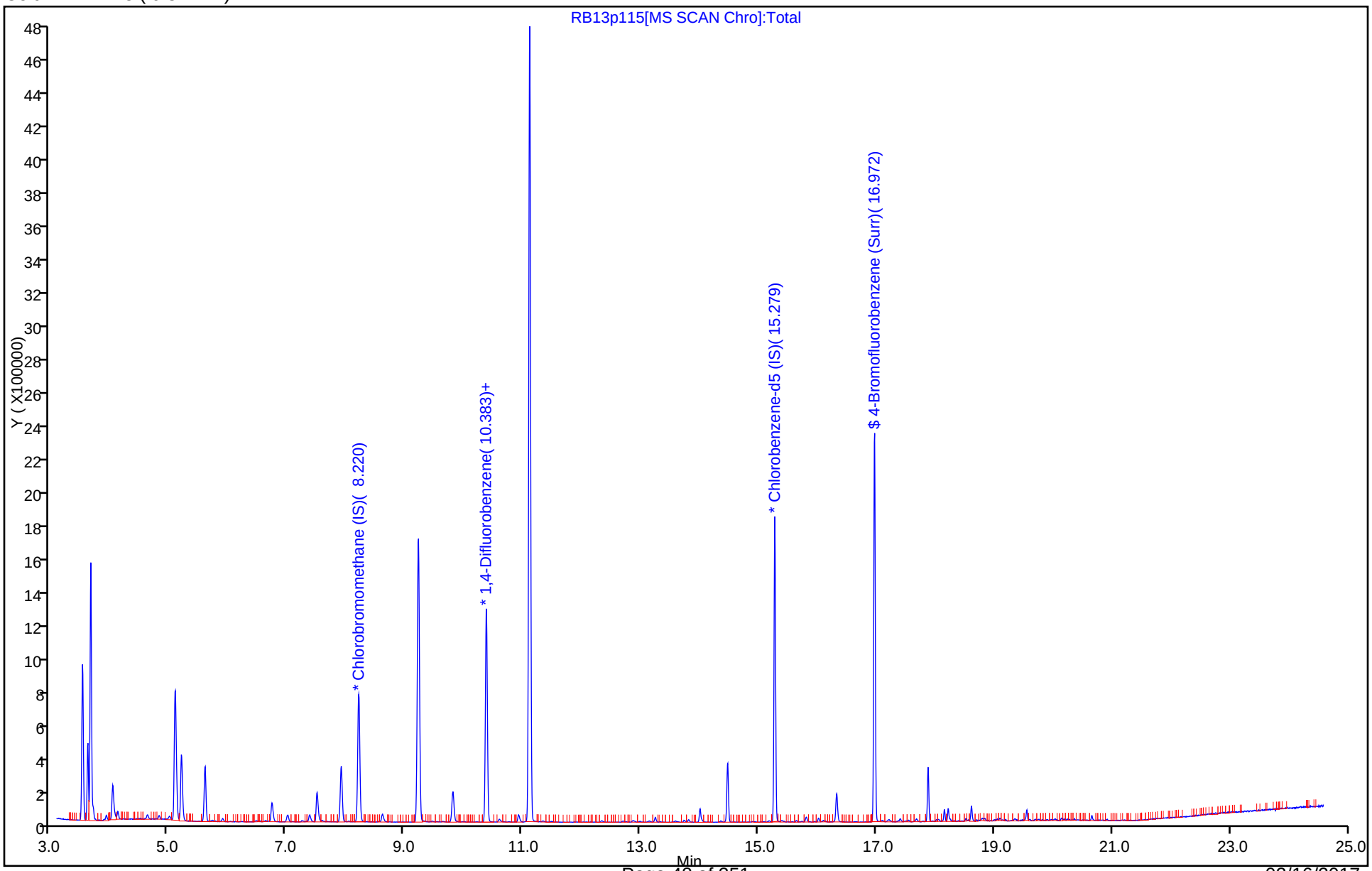
Report Date: 14-Feb-2017 13:21:07 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13p115.D

Injection Date:	14-Feb-2017 07:22:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-7052-A-1	Lab Sample ID:	140-7052-1	Worklist Smp#:	21
Client ID:	BLDG-A INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

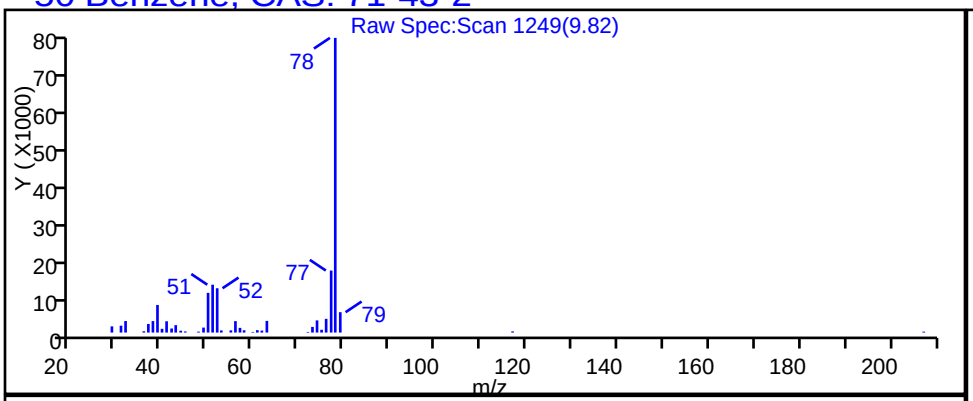
Data File:	\\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13p115.D				
Lims ID:	140-7052-A-1				
Client ID:	BLDG-A INFLUENT				
Sample Type:	Client				
Inject. Date:	14-Feb-2017 07:22:30	ALS Bottle#:	15	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004028-021				
Misc. Info.:	140-7052-a-1				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	14-Feb-2017 13:20:26	Calib Date:	17-Jan-2017 10:29:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK008				
First Level Reviewer: barlozhetskayaa		Date:	14-Feb-2017 09:37:07		

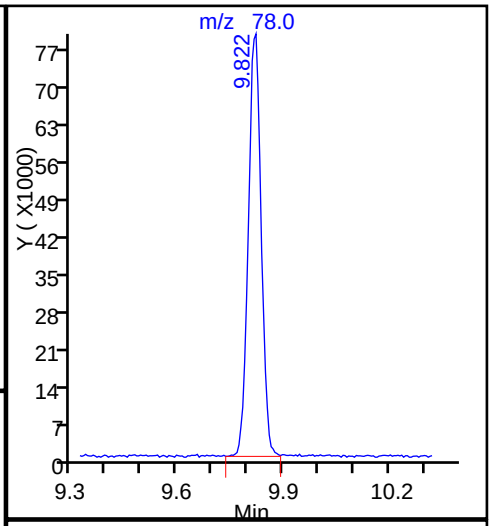
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.98	99.46

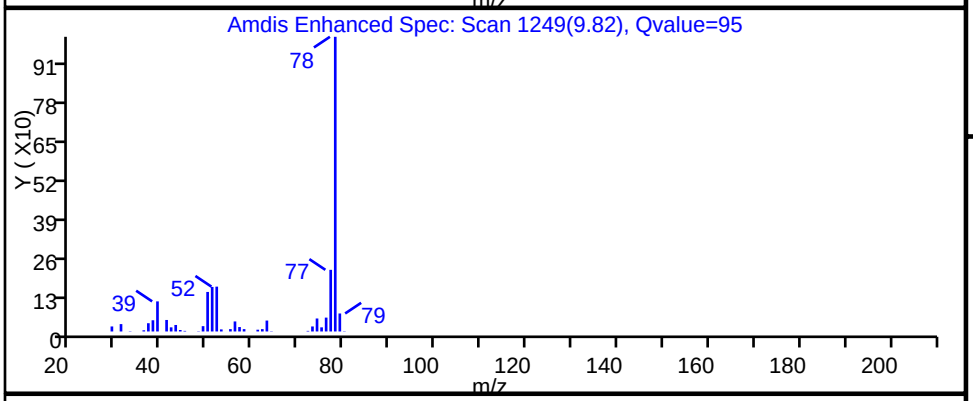
TestAmerica Knoxville

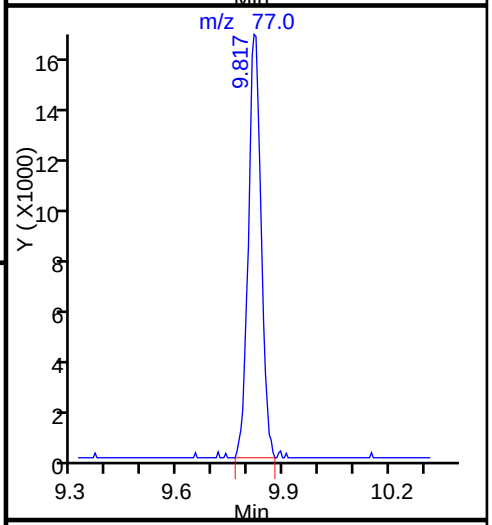
Data File:	\\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13p115.D		
Injection Date:	14-Feb-2017 07:22:30	Instrument ID:	MR
Lims ID:	140-7052-A-1	Lab Sample ID:	140-7052-1
Client ID:	BLDG-A INFLUENT		
Operator ID:		ALS Bottle#:	15 Worklist Smp#: 21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

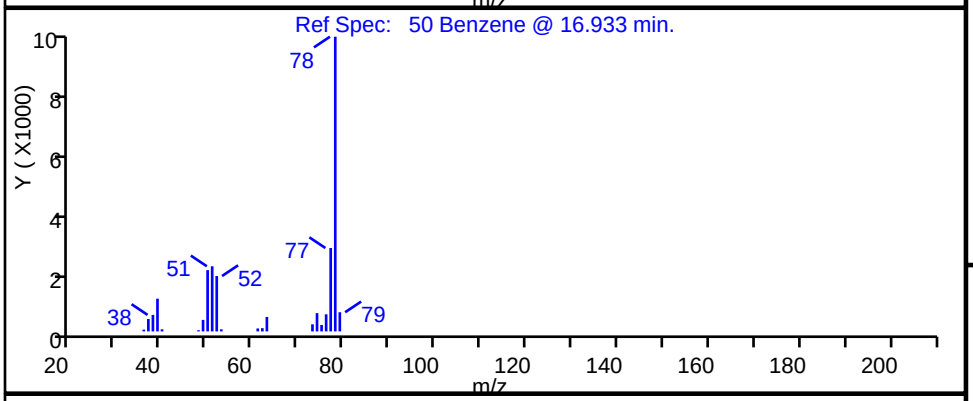
50 Benzene, CAS: 71-43-2

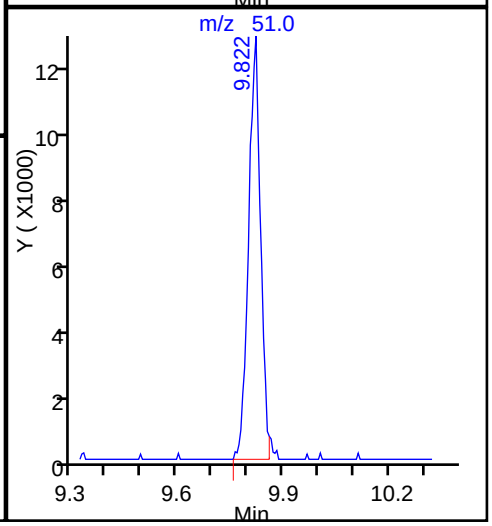


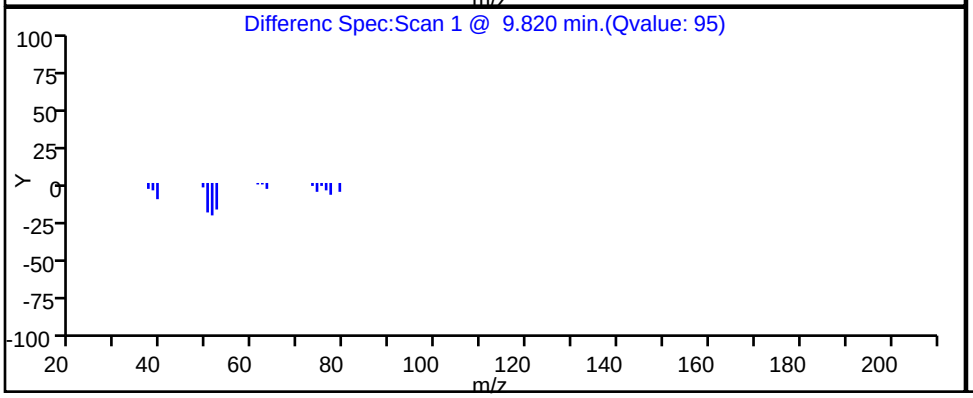








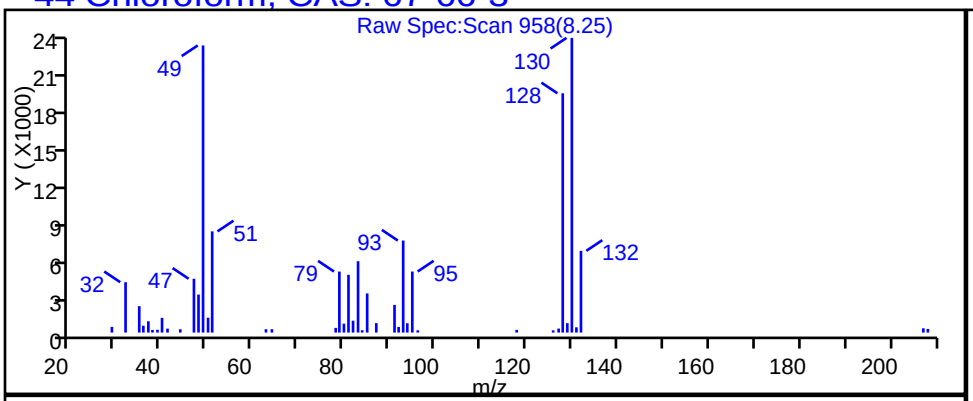


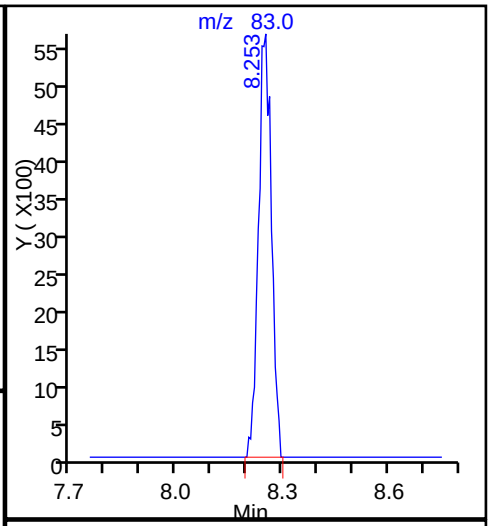


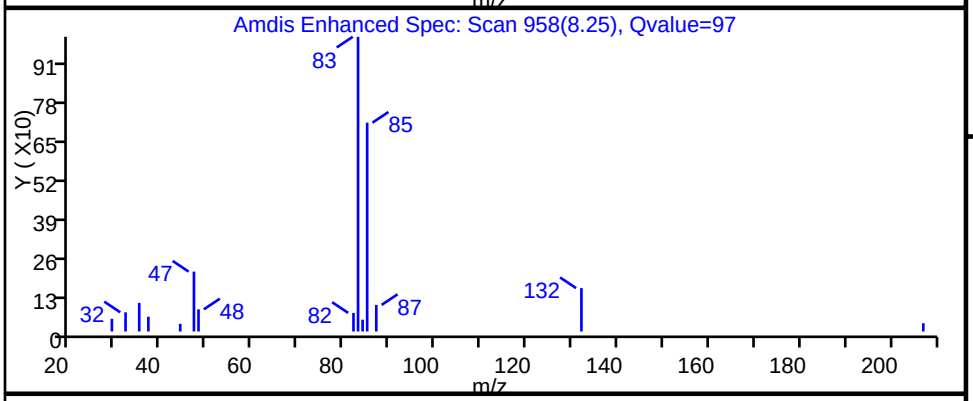
TestAmerica Knoxville

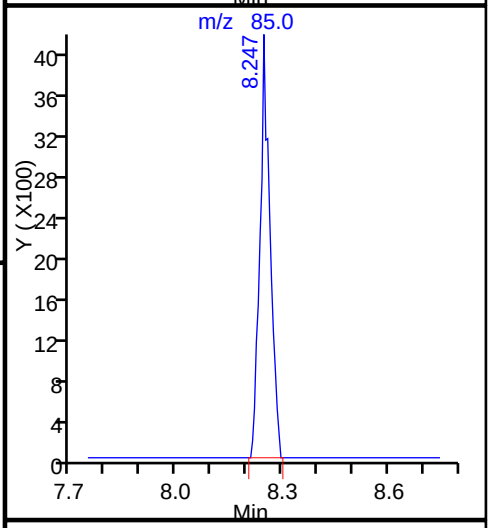
Data File:	\\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13p115.D		
Injection Date:	14-Feb-2017 07:22:30	Instrument ID:	MR
Lims ID:	140-7052-A-1	Lab Sample ID:	140-7052-1
Client ID:	BLDG-A INFLUENT		
Operator ID:		ALS Bottle#:	15 Worklist Smp#: 21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

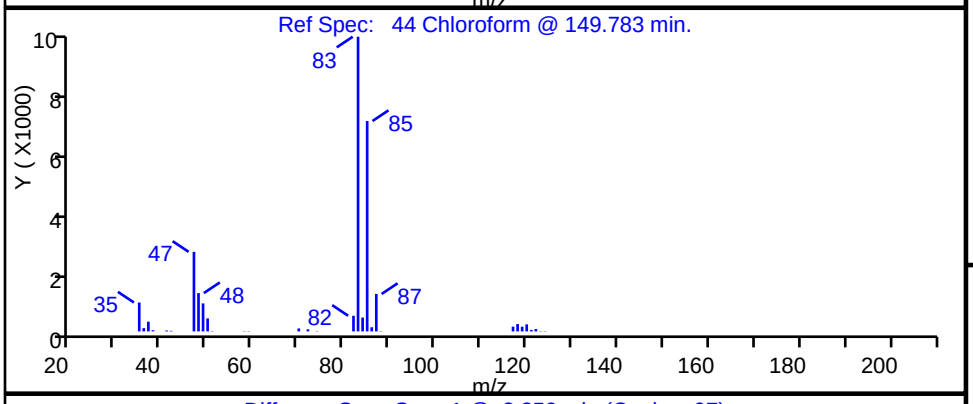
44 Chloroform, CAS: 67-66-3

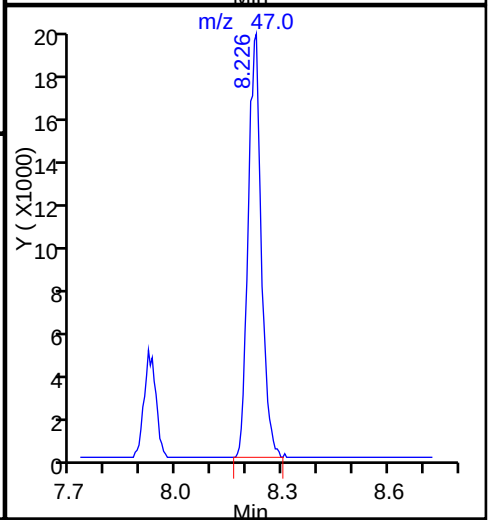


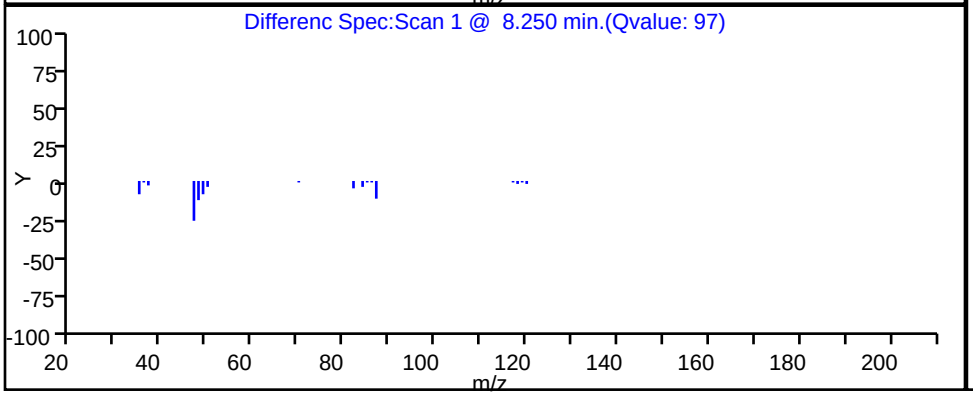












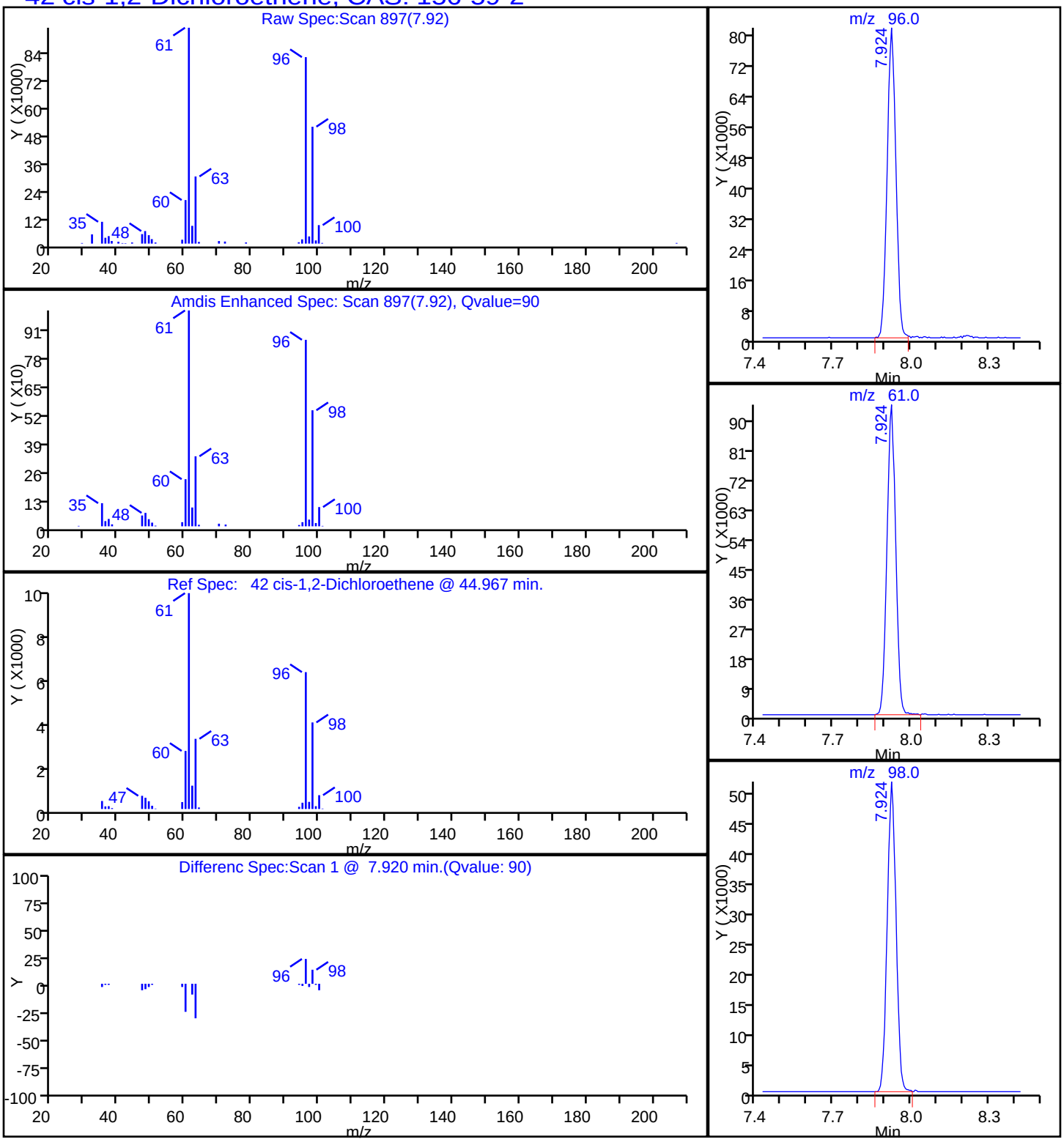
Report Date: 14-Feb-2017 13:21:07 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13p115.D

Injection Date:	14-Feb-2017 07:22:30	Instrument ID:	MR
Lims ID:	140-7052-A-1	Lab Sample ID:	140-7052-1
Client ID:	BLDG-A INFLUENT		
Operator ID:		ALS Bottle#:	15 Worklist Smp#: 21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

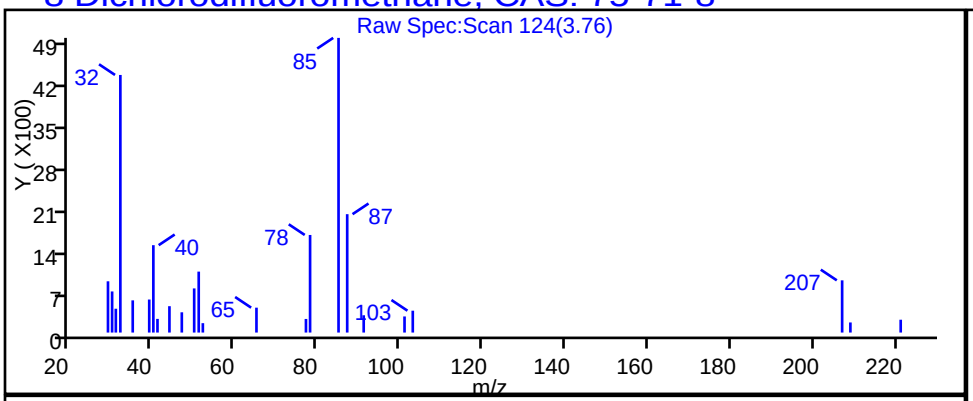
42 cis-1,2-Dichloroethene, CAS: 156-59-2

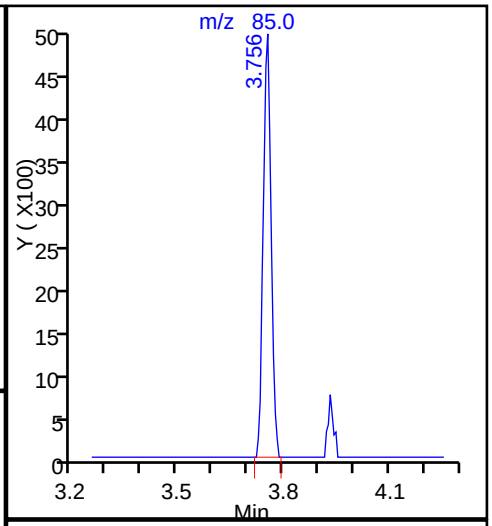


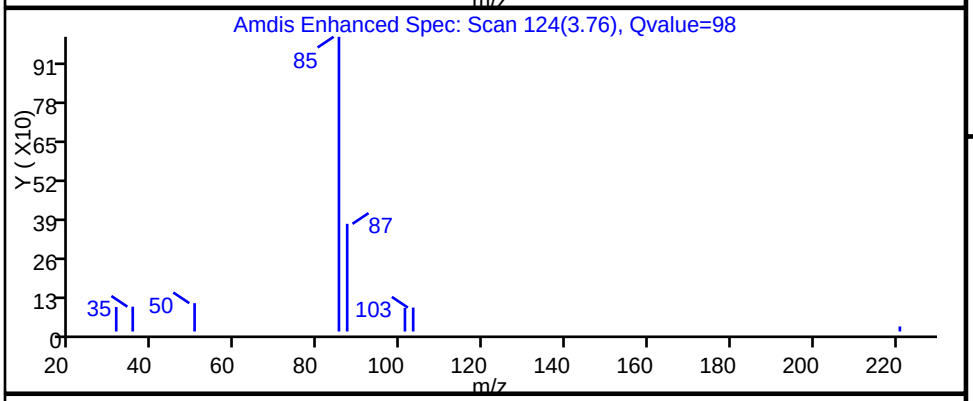
TestAmerica Knoxville

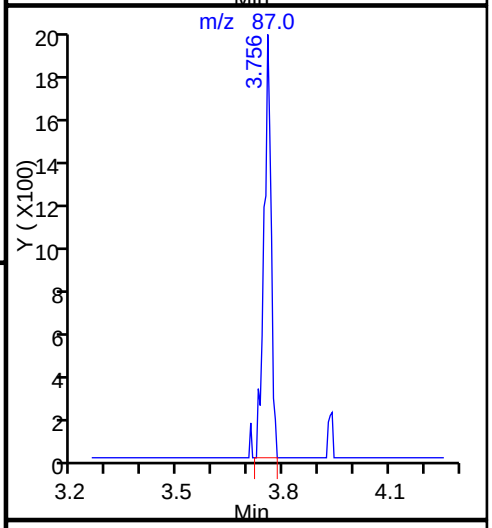
Data File:	\\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13p115.D		
Injection Date:	14-Feb-2017 07:22:30	Instrument ID:	MR
Lims ID:	140-7052-A-1	Lab Sample ID:	140-7052-1
Client ID:	BLDG-A INFLUENT		
Operator ID:		ALS Bottle#:	15 Worklist Smp#: 21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

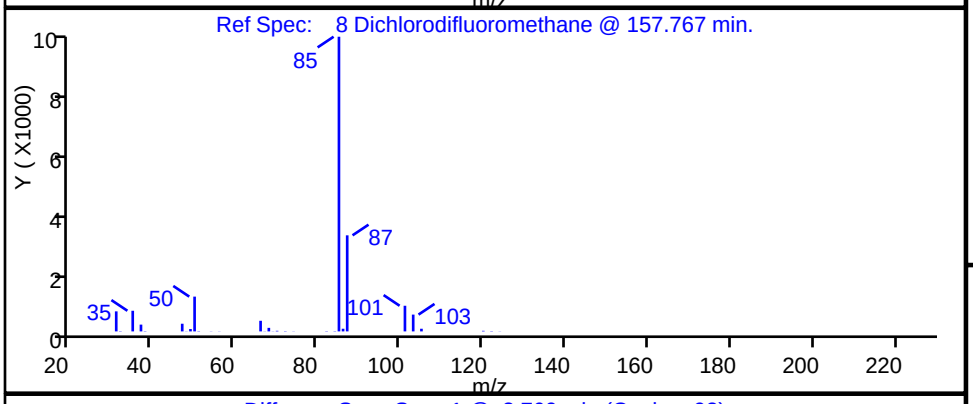
8 Dichlorodifluoromethane, CAS: 75-71-8

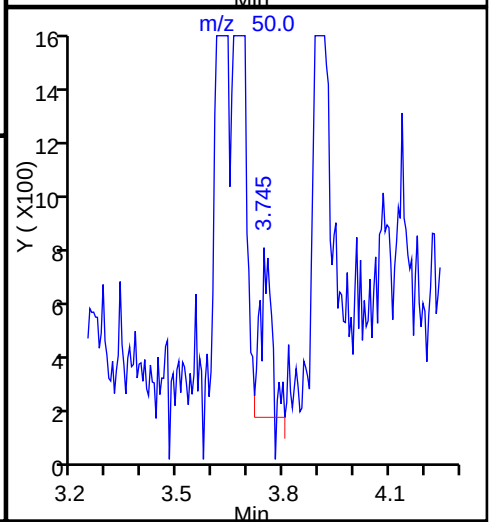


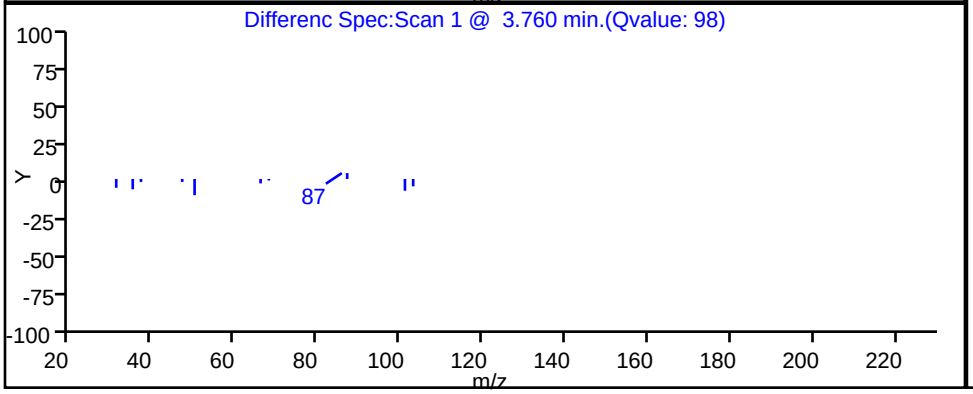












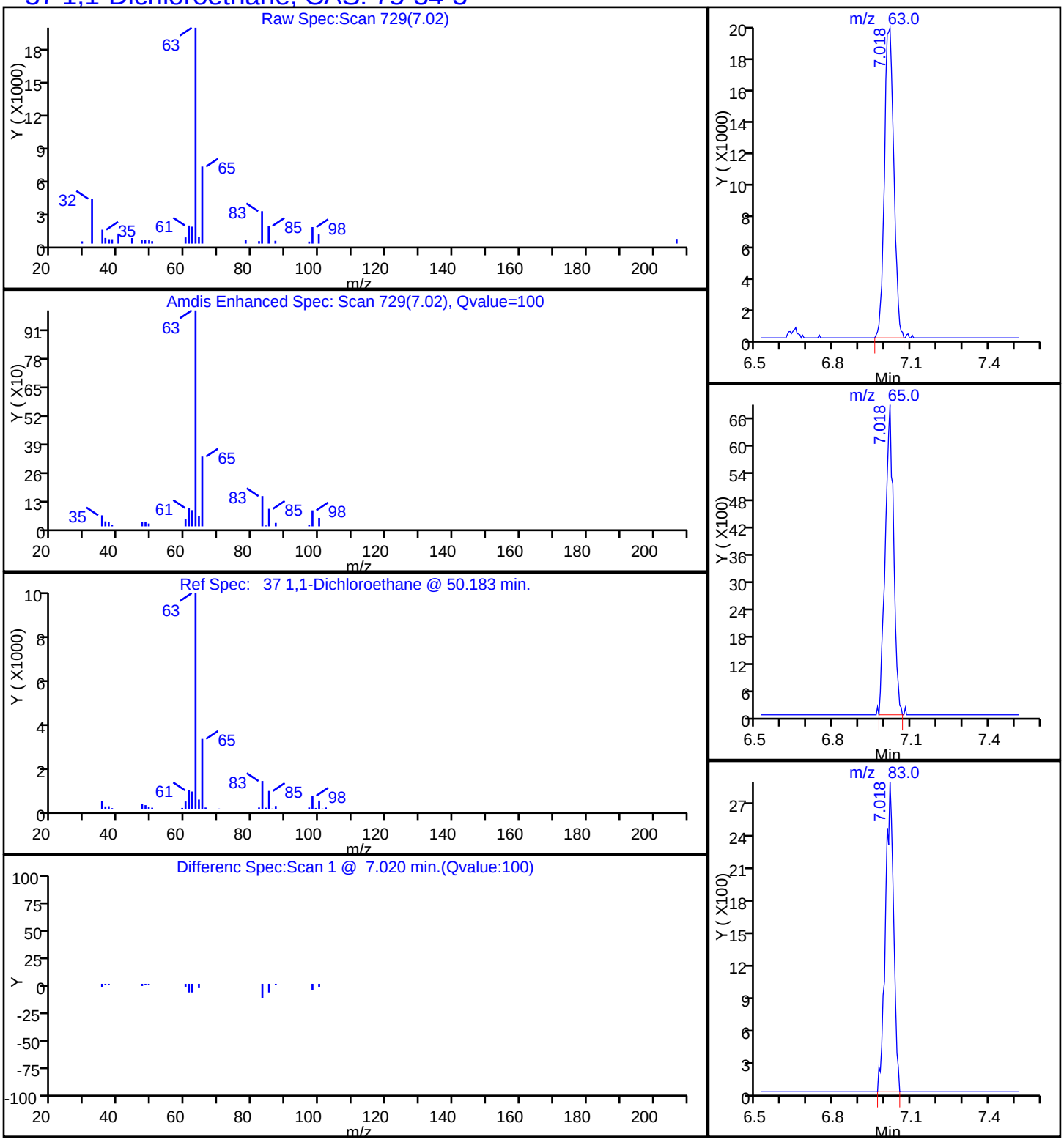
Report Date: 14-Feb-2017 13:21:07 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13p115.D

Injection Date:	14-Feb-2017 07:22:30	Instrument ID:	MR
Lims ID:	140-7052-A-1	Lab Sample ID:	140-7052-1
Client ID:	BLDG-A INFLUENT		
Operator ID:		ALS Bottle#:	15 Worklist Smp#: 21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3

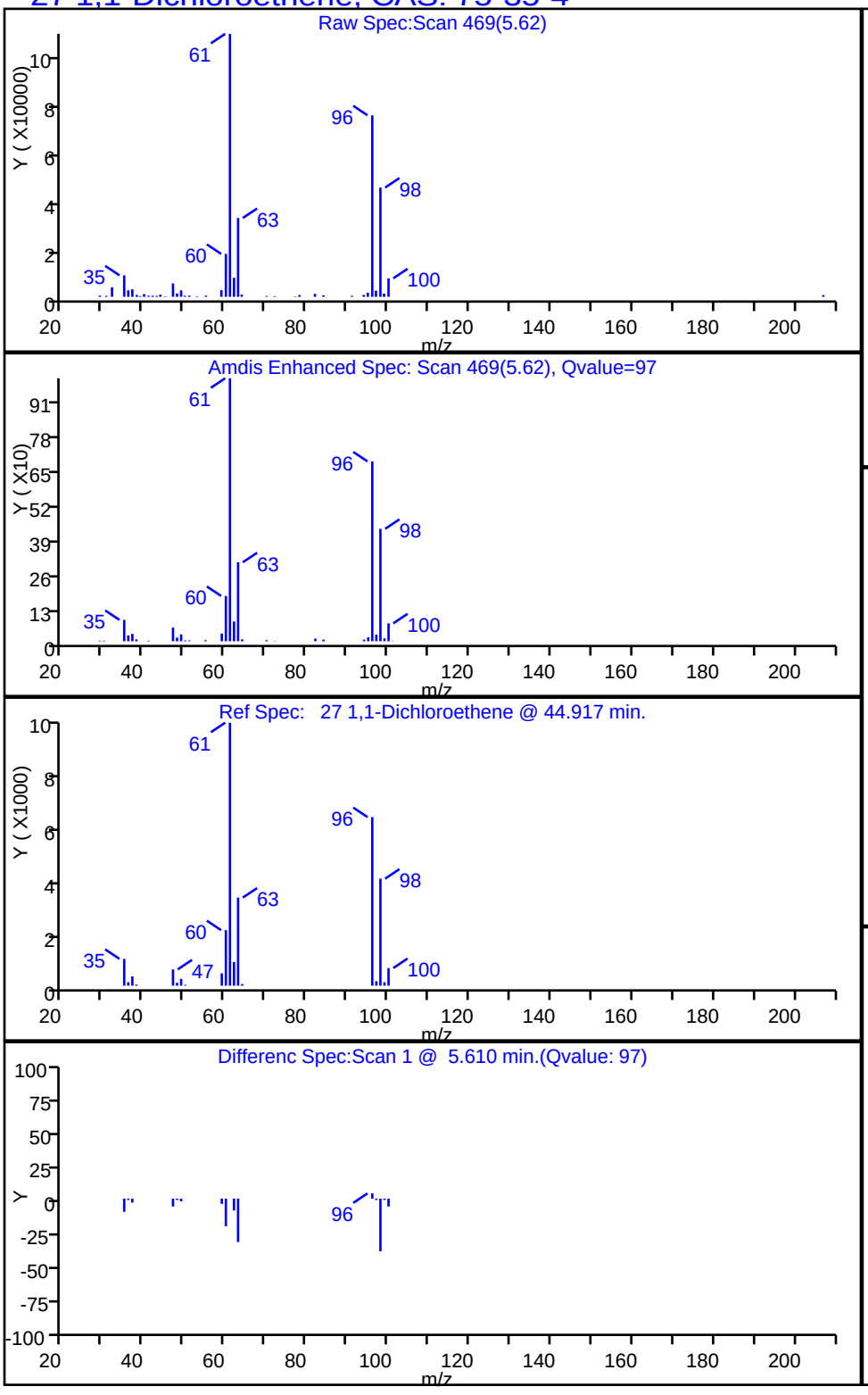


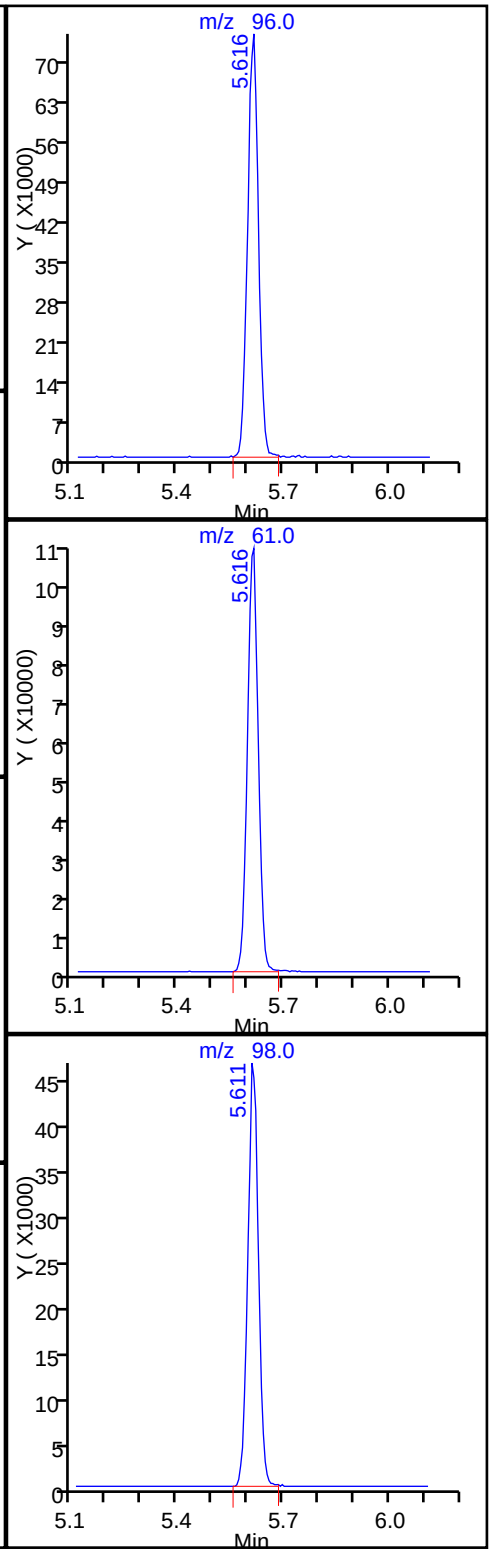
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13p115.D

Injection Date:	14-Feb-2017 07:22:30	Instrument ID:	MR
Lims ID:	140-7052-A-1	Lab Sample ID:	140-7052-1
Client ID:	BLDG-A INFLUENT		
Operator ID:		ALS Bottle#:	15 Worklist Smp#: 21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4





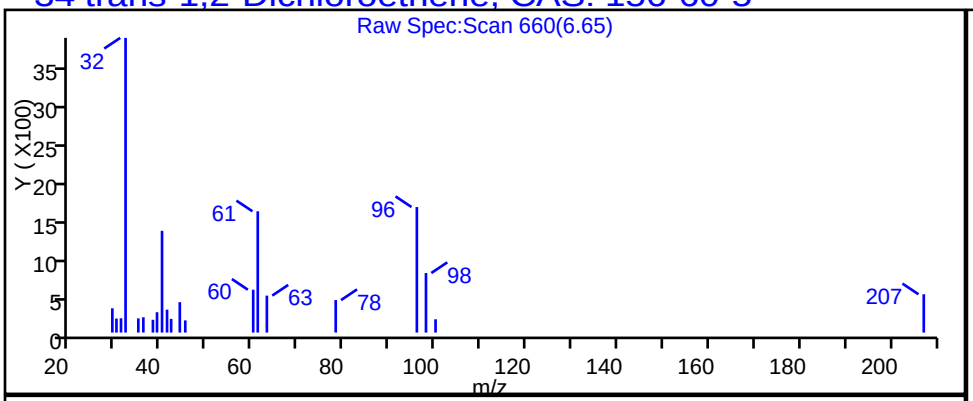
Report Date: 14-Feb-2017 13:21:07 Chrom Revision: 2.2 03-Feb-2017 15:35:04

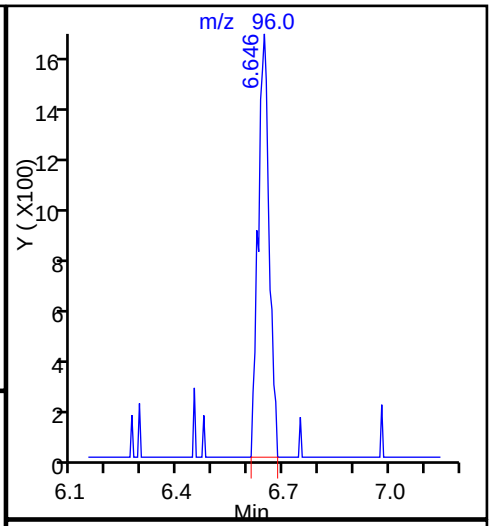
TestAmerica Knoxville

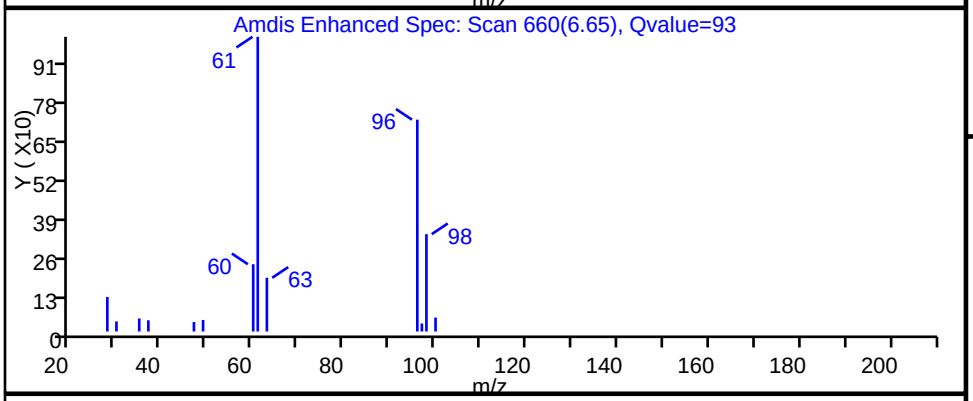
Data File: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13p115.D

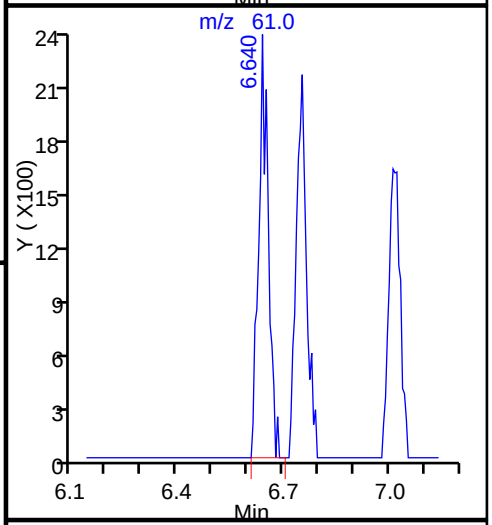
Injection Date:	14-Feb-2017 07:22:30	Instrument ID:	MR
Lims ID:	140-7052-A-1	Lab Sample ID:	140-7052-1
Client ID:	BLDG-A INFLUENT		
Operator ID:		ALS Bottle#:	15 Worklist Smp#: 21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

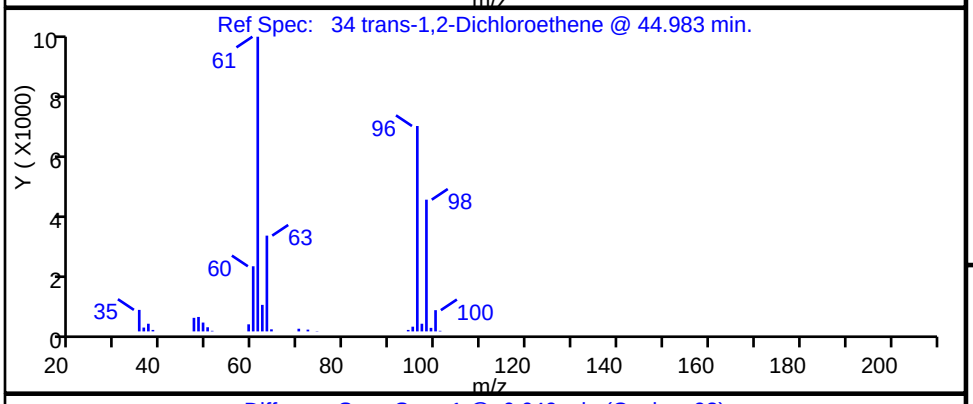
34 trans-1,2-Dichloroethene, CAS: 156-60-5

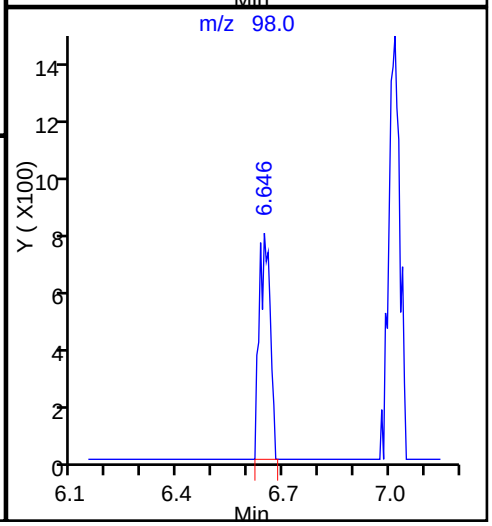


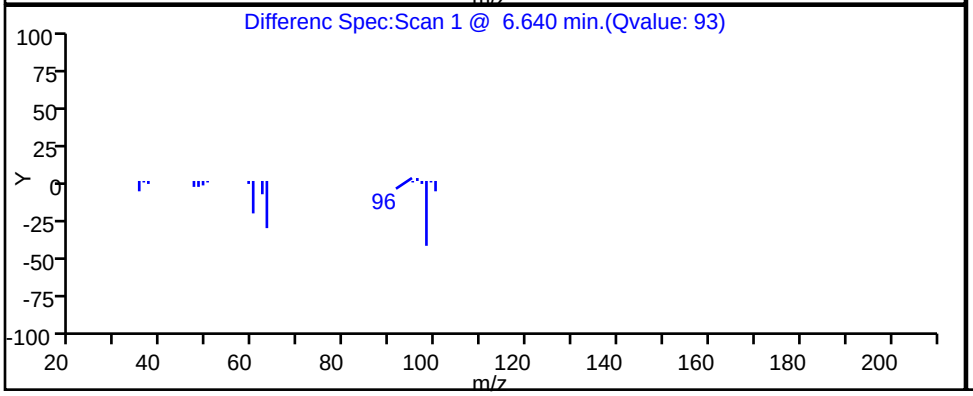








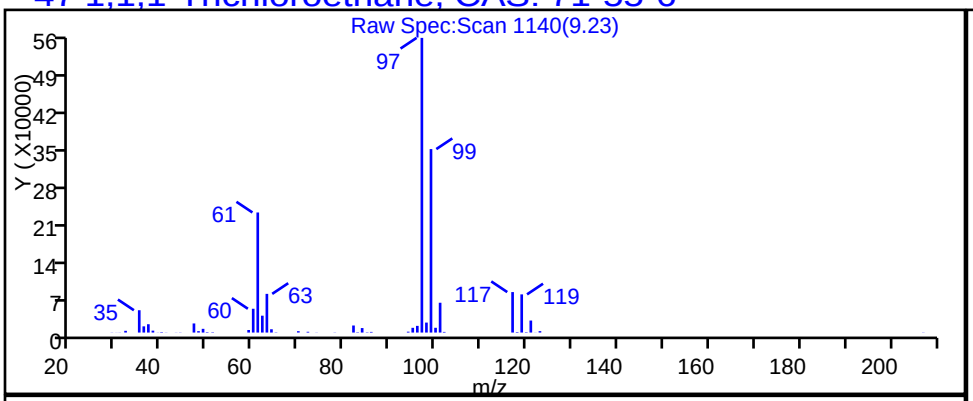


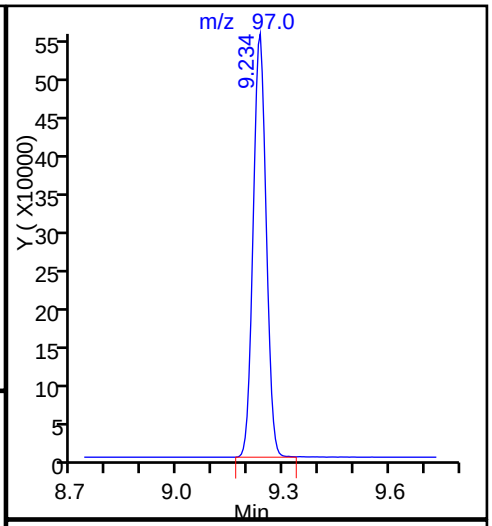


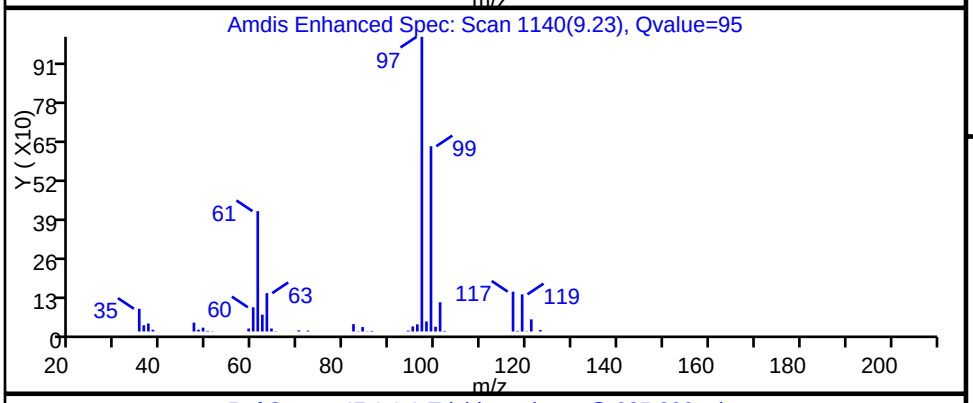
TestAmerica Knoxville

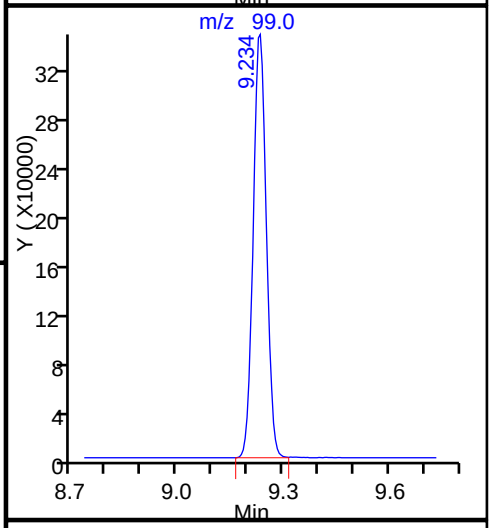
Data File:	\\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13p115.D		
Injection Date:	14-Feb-2017 07:22:30	Instrument ID:	MR
Lims ID:	140-7052-A-1	Lab Sample ID:	140-7052-1
Client ID:	BLDG-A INFLUENT		
Operator ID:		ALS Bottle#:	15 Worklist Smp#: 21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

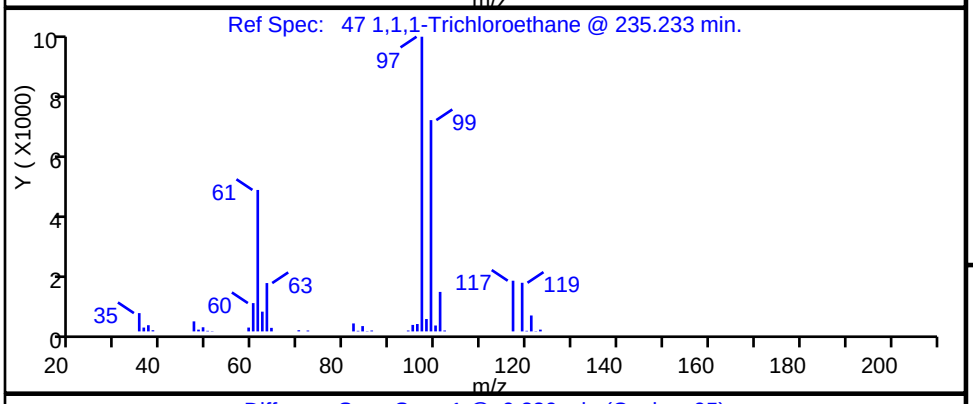
47 1,1,1-Trichloroethane, CAS: 71-55-6

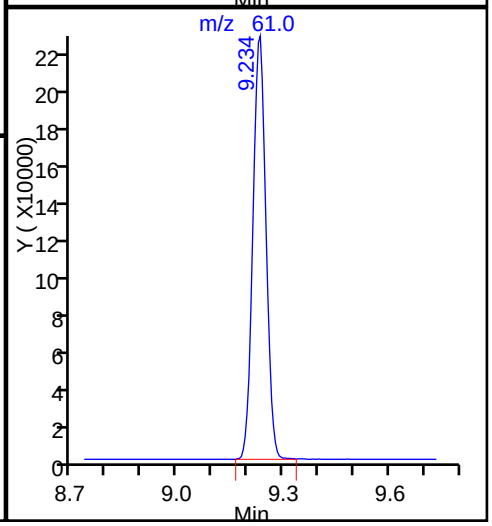


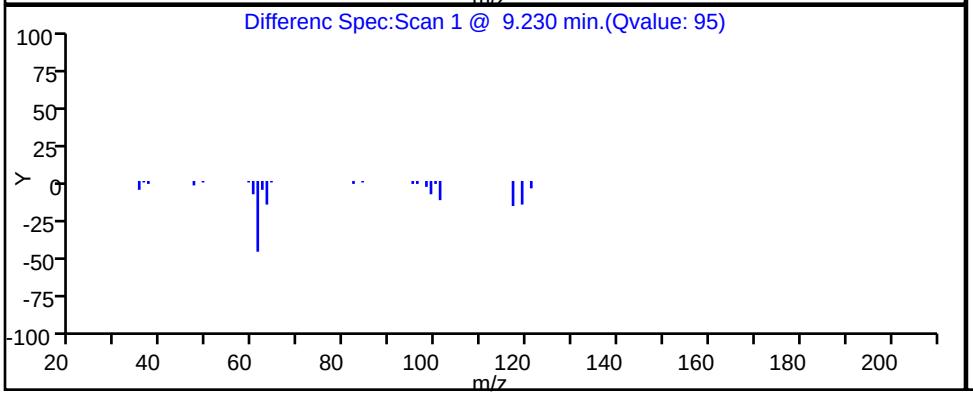










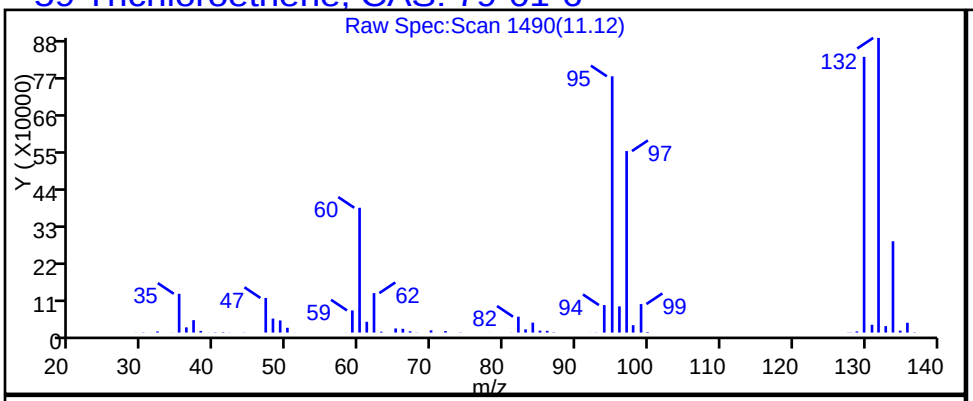


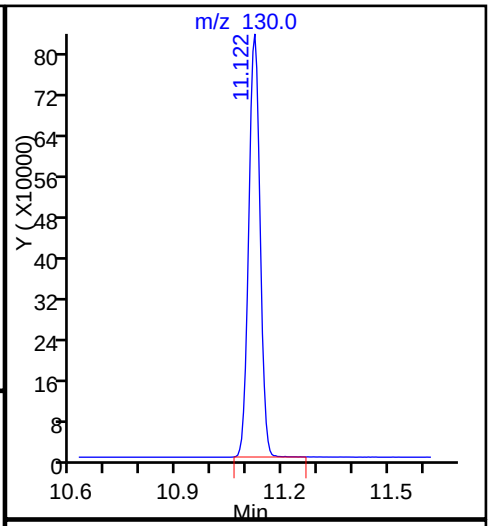
TestAmerica Knoxville

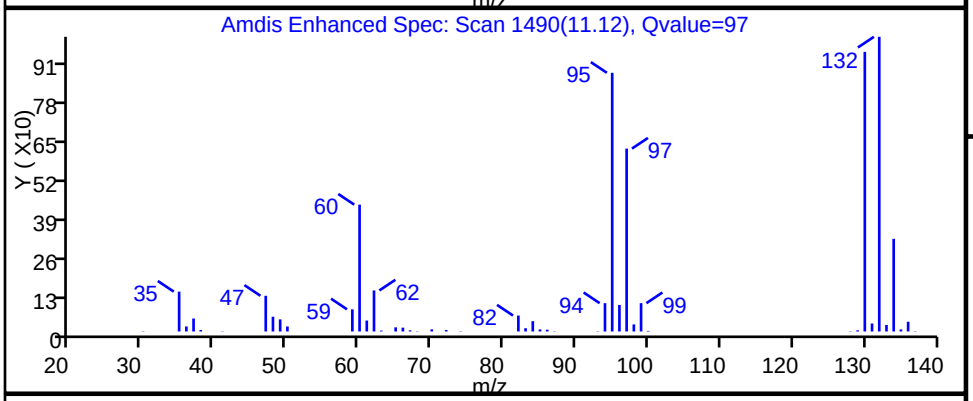
Data File: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13p115.D

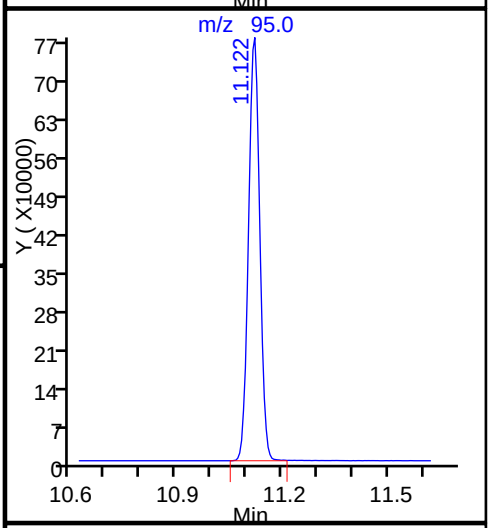
Injection Date:	14-Feb-2017 07:22:30	Instrument ID:	MR
Lims ID:	140-7052-A-1	Lab Sample ID:	140-7052-1
Client ID:	BLDG-A INFLUENT		
Operator ID:		ALS Bottle#:	15 Worklist Smp#: 21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

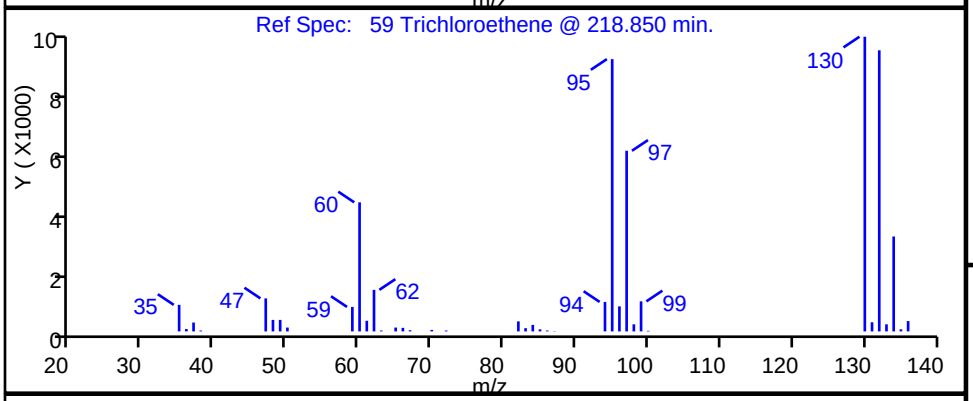
59 Trichloroethene, CAS: 79-01-6

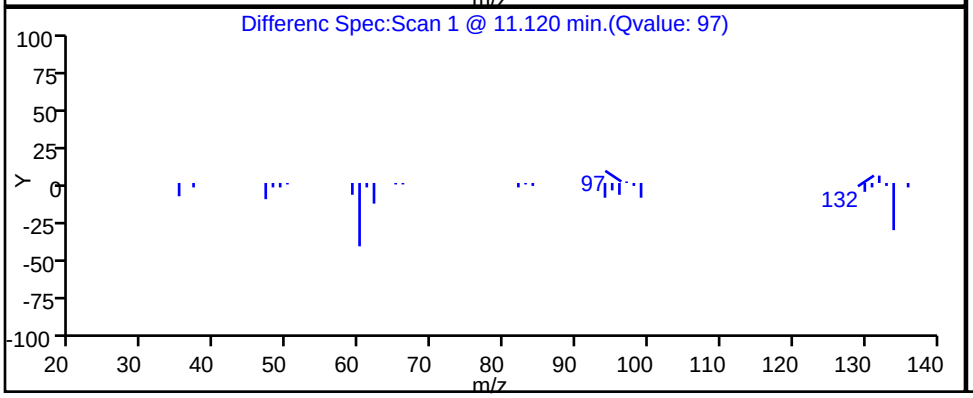


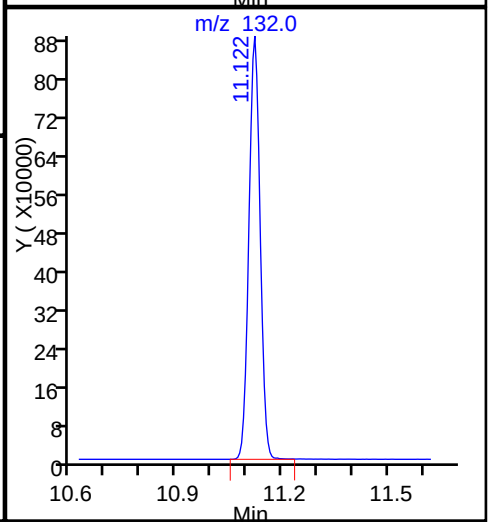








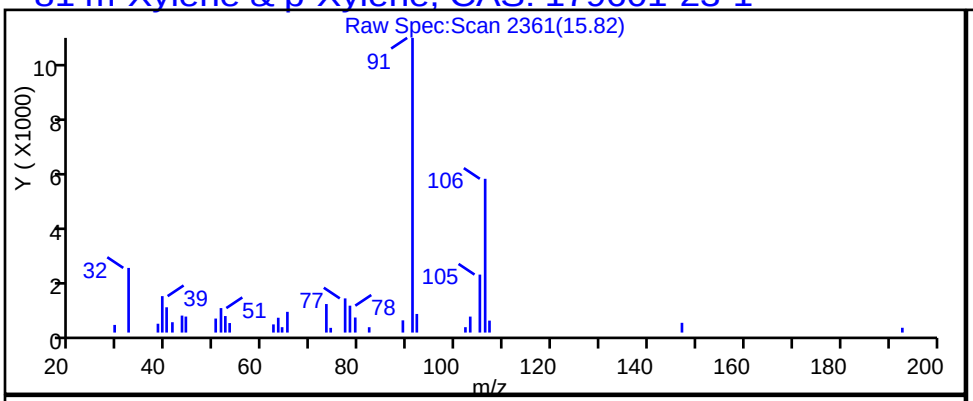


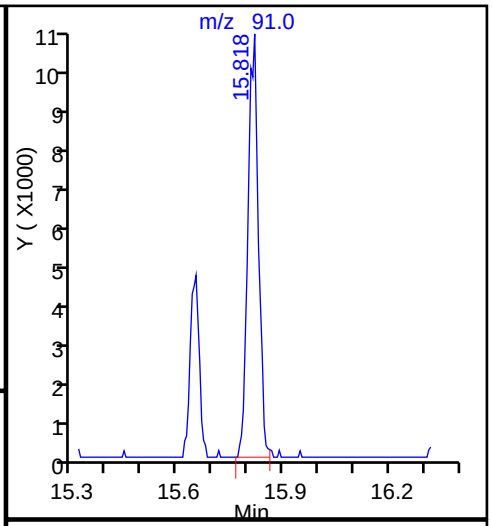


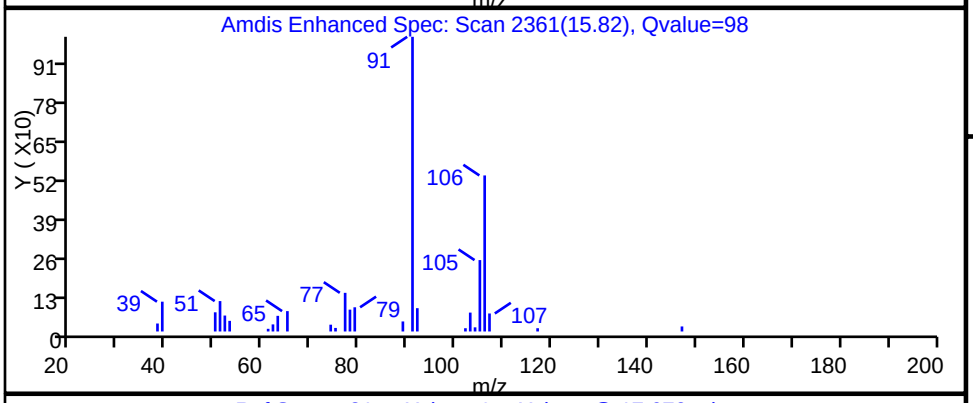
TestAmerica Knoxville

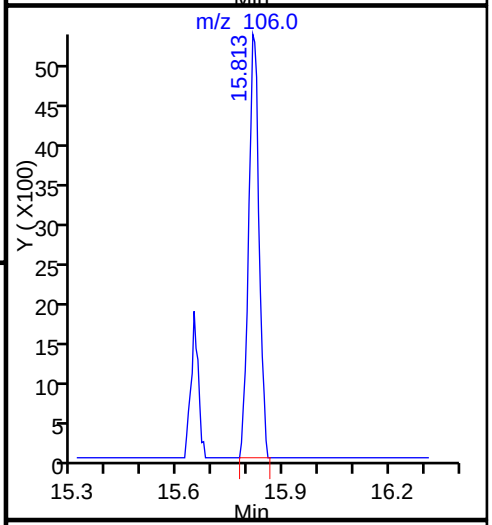
Data File:	\\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13p115.D		
Injection Date:	14-Feb-2017 07:22:30	Instrument ID:	MR
Lims ID:	140-7052-A-1	Lab Sample ID:	140-7052-1
Client ID:	BLDG-A INFLUENT		
Operator ID:		ALS Bottle#:	15 Worklist Smp#: 21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

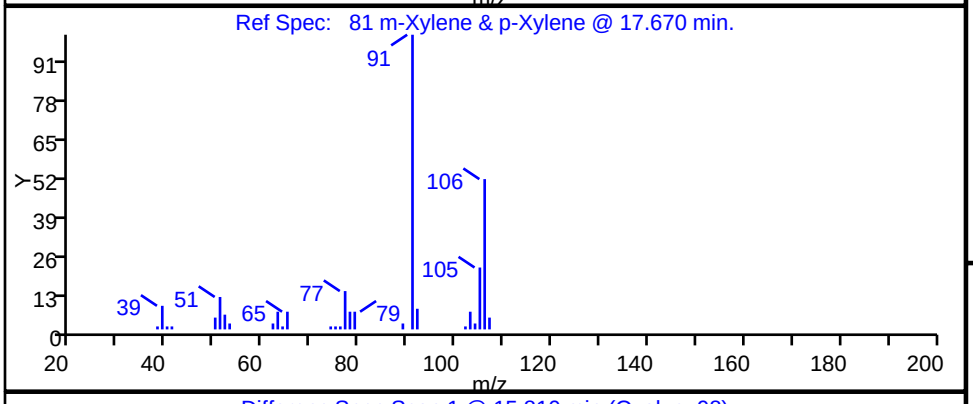
81 m-Xylene & p-Xylene, CAS: 179601-23-1

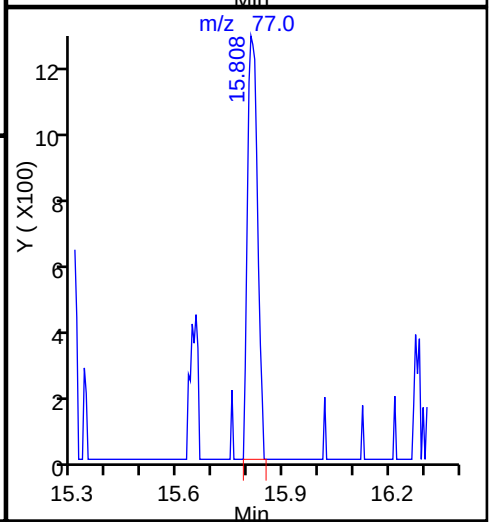


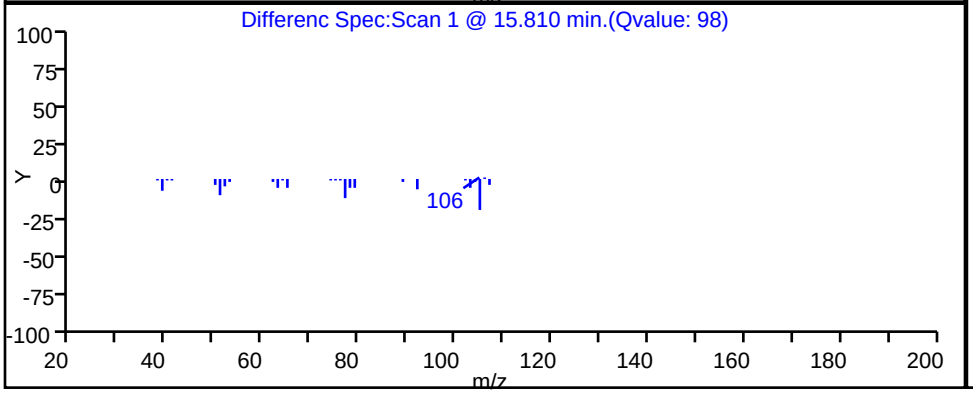












TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13p115.D

Injection Date: 14-Feb-2017 07:22:30 Instrument ID: MR

Lims ID: 140-7052-A-1 Lab Sample ID: 140-7052-1

Client ID: BLDG-A INFLUENT

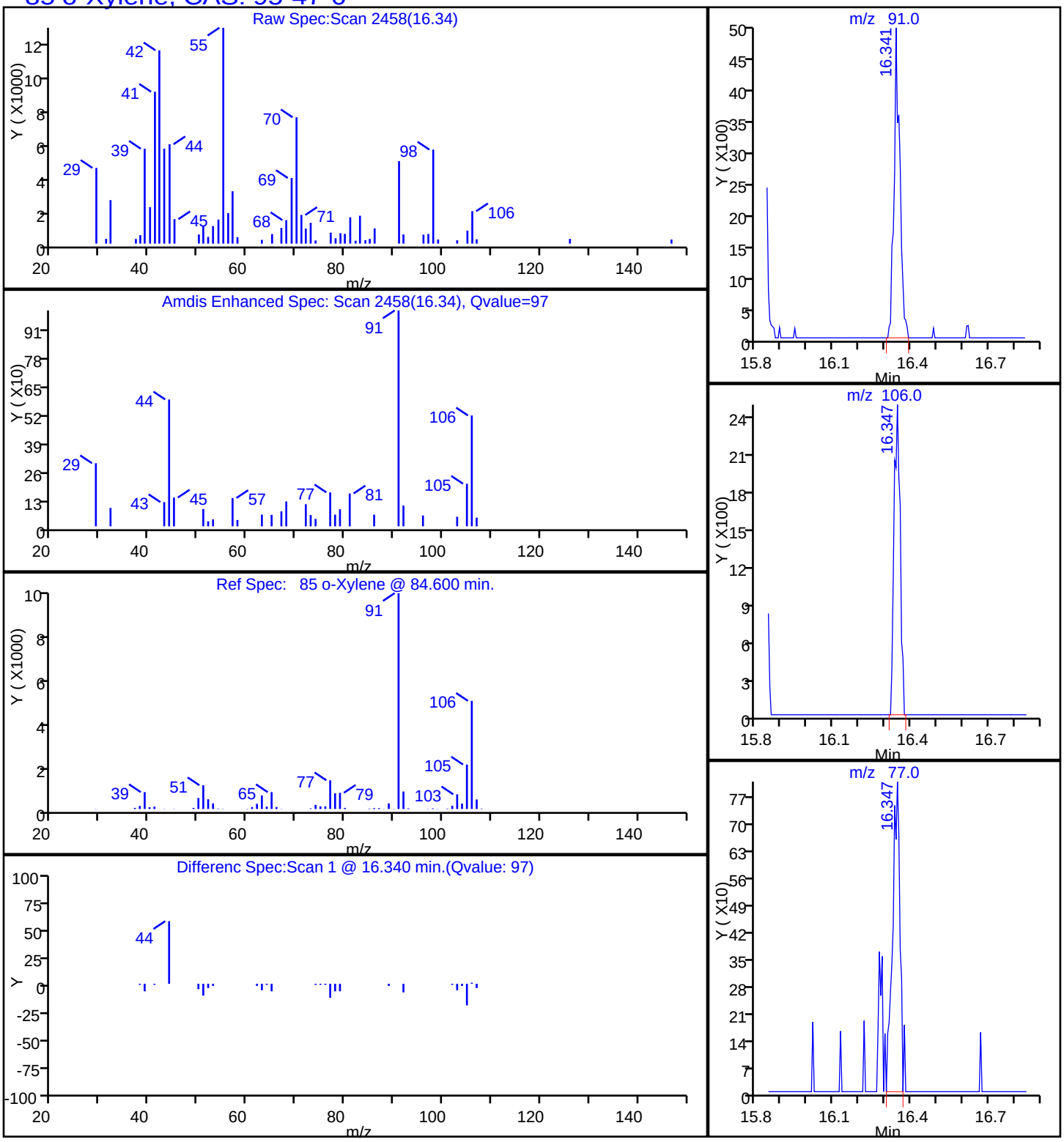
Operator ID: ALS Bottle#: 15 Worklist Smp#: 21

Purge Vol: 500.000 mL Dil. Factor: 1.0000

Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm) Detector MS SCAN

85 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Client Sample ID: BLDG-A INFLUENT DL Lab Sample ID: 140-7052-1 DL

Matrix: Air Lab File ID: RB14P113.D

Analysis Method: TO 15 LL Date Collected: 02/08/2017 14:43

Sample wt/vol: 20(mL) Date Analyzed: 02/15/2017 02:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8578 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	210		1.0	0.35

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Client Sample ID: BLDG-A INFLUENT DL Lab Sample ID: 140-7052-1 DL

Matrix: Air Lab File ID: RB14P113.D

Analysis Method: TO 15 LL Date Collected: 02/08/2017 14:43

Sample wt/vol: 20(mL) Date Analyzed: 02/15/2017 02:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8578 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	1100		5.4	1.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\RB14P113.D				
Lims ID:	140-7052-A-1				
Client ID:	BLDG-A INFLUENT				
Sample Type:	Client				
Inject. Date:	15-Feb-2017 02:55:30	ALS Bottle#:	13	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004043-021				
Misc. Info.:	140-7052-A-1				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	15-Feb-2017 10:57:54	Calib Date:	17-Jan-2017 10:29:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK006				
First Level Reviewer: tajh		Date:	15-Feb-2017 10:52:48		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.226	8.231	-0.005	94	293052	4.00	
* 2 1,4-Difluorobenzene	114	10.388	10.393	-0.005	93	1446546	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.279	15.284	-0.005	85	1201224	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.972	16.972	0.000	94	753500	4.01	
8 Dichlorodifluoromethane	85	3.766	3.772	-0.006	97	4908	0.0370	
27 1,1-Dichloroethene	96	5.621	5.632	-0.011	97	77456	0.9600	
31 Methylene Chloride	84	5.918	5.923	-0.005	92	7447	0.0981	
34 trans-1,2-Dichloroethene	96	6.651	6.662	-0.011	42	1866	0.0218	
37 1,1-Dichloroethane	63	7.018	7.029	-0.011	98	25051	0.1854	
42 cis-1,2-Dichloroethene	96	7.924	7.940	-0.016	89	97783	1.10	
44 Chloroform	83	8.253	8.264	-0.011	88	7062	0.0463	
47 1,1,1-Trichloroethane	97	9.234	9.245	-0.011	94	725855	4.77	
50 Benzene	78	9.816	9.827	-0.011	95	100655	0.4002	
59 Trichloroethene	130	11.121	11.127	-0.006	97	939661	8.26	
76 Tetrachloroethene	129	14.448	14.443	0.005	91	7521	0.0746	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

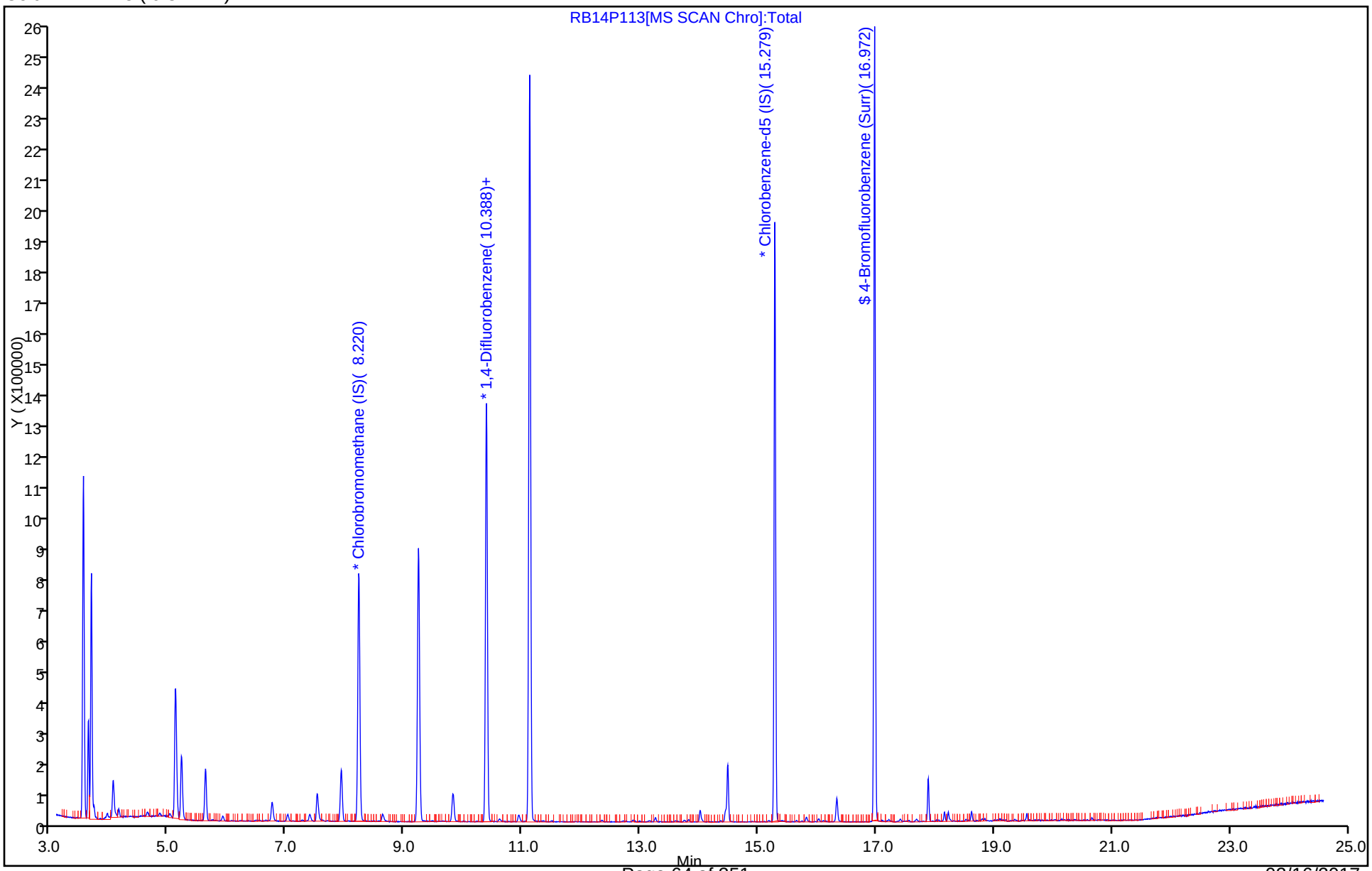
Report Date: 15-Feb-2017 11:25:13 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\RB14P113.D

Injection Date:	15-Feb-2017 02:55:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-7052-A-1	Lab Sample ID:	140-7052-1	Worklist Smp#:	21
Client ID:	BLDG-A INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\RB14P113.D				
Lims ID:	140-7052-A-1				
Client ID:	BLDG-A INFLUENT				
Sample Type:	Client				
Inject. Date:	15-Feb-2017 02:55:30	ALS Bottle#:	13	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004043-021				
Misc. Info.:	140-7052-A-1				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	15-Feb-2017 10:57:54	Calib Date:	17-Jan-2017 10:29:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK006				
First Level Reviewer: tajh		Date:	15-Feb-2017 10:52:48		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.01	100.25

Report Date: 15-Feb-2017 11:25:13 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\RB14P113.D

Injection Date: 15-Feb-2017 02:55:30 Instrument ID: MR

Lims ID: 140-7052-A-1 Lab Sample ID: 140-7052-1

Client ID: BLDG-A INFLUENT

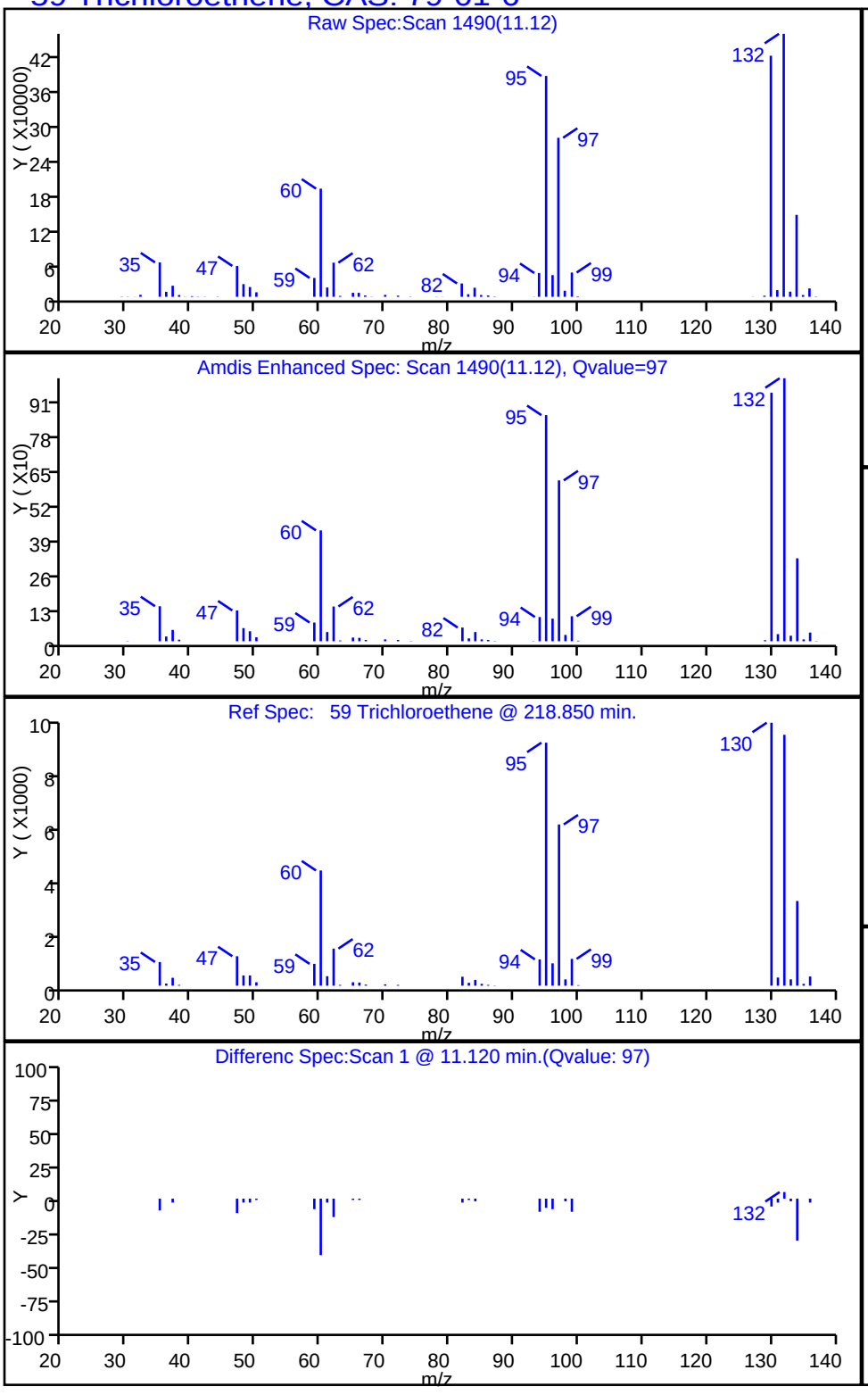
Operator ID: ALS Bottle#: 13 Worklist Smp#: 21

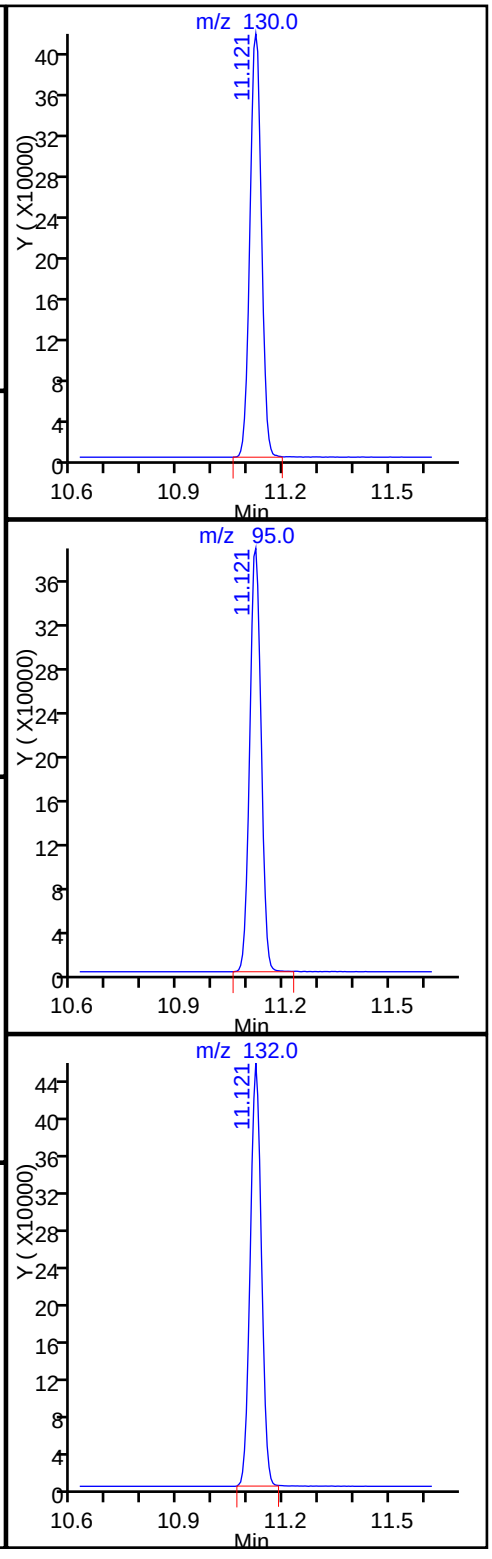
Purge Vol: 500.000 mL Dil. Factor: 1.0000

Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm) Detector MS SCAN

59 Trichloroethene, CAS: 79-01-6





FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Client Sample ID: BLDG-A MIDGAC Lab Sample ID: 140-7052-2

Matrix: Air Lab File ID: JB10P111.D

Analysis Method: TO 15 LL Date Collected: 02/08/2017 14:39

Sample wt/vol: 100(mL) Date Analyzed: 02/10/2017 22:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8433 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	43		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.32	J	0.40	0.075
67-66-3	Chloroform	119.38	0.15	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	9.0		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.20	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	2.2		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	10		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.3		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.14	J	0.40	0.080
108-88-3	Toluene	92.14	3.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.17	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	35		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.57		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.58		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	1.4		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.49		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	6.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	93		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7052-1

SDG No.:

Client Sample ID: BLDG-A MIDGAC | Lab Sample ID: 140-7052-2

Matrix: Air | Lab File ID: JB10P111.D

Analysis Method: TO 15 LL | Date Collected: 02/08/2017 14:39

Sample wt/vol: 100(mL) | Date Analyzed: 02/10/2017 22:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8433 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	140		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	0.71	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	36		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	0.98	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	8.8		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	41		1.6	0.28
100-41-4	Ethylbenzene	106.17	5.6		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.96	J	2.7	0.54
108-88-3	Toluene	92.14	13		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.69	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	190		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	3.1		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	2.9		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	6.8		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	2.4		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	28		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	93		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P111.D
Lims ID: 140-7052-A-2
Client ID: BLDG-A MIDGAC
Sample Type: Client
Inject. Date: 10-Feb-2017 22:01:30 ALS Bottle#: 11 Worklist Smp#: 19
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004010-019
Misc. Info.: 140-7052-a-2
Operator ID: 7126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Feb-2017 12:31:14 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: barlozhetskayaa Date: 11-Feb-2017 14:39:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.585	8.579	0.006	99	315022	4.00	
* 2 1,4-Difluorobenzene	114	10.780	10.779	0.001	95	1383190	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.557	15.556	0.001	87	1133191	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.203	17.202	0.001	96	667178	3.72	
6 Chlorodifluoromethane	67	3.566	3.560	0.006	1	1806	0.0636	
8 Dichlorodifluoromethane	85	3.620	3.619	0.001	99	10090	0.0396	
27 1,1-Dichloroethene	96	5.723	5.722	0.001	95	195811	2.07	
31 Methylene Chloride	84	6.067	6.067	0.001	97	11576	0.1247	
34 trans-1,2-Dichloroethene	96	6.863	6.863	0.000	80	3311	0.0347	
37 1,1-Dichloroethane	63	7.283	7.282	0.001	99	78540	0.4335	
42 cis-1,2-Dichloroethene	96	8.257	8.256	0.001	97	168870	1.80	
44 Chloroform	83	8.601	8.595	0.006	67	5746	0.0291	
47 1,1,1-Trichloroethane	97	9.618	9.617	0.001	97	1428679	7.01	
51 Benzene	78	10.220	10.225	-0.005	98	2167461	8.63	
59 Trichloroethene	130	11.500	11.500	0.000	96	13585	0.1149	
68 Toluene	91	13.572	13.571	0.001	92	166522	0.6834	
76 Tetrachloroethene	129	14.728	14.722	0.006	63	3010	0.0282	
79 Ethylbenzene	91	15.895	15.895	0.000	97	74972	0.2594	
81 m-Xylene & p-Xylene	91	16.057	16.056	0.001	99	203107	0.9525	
85 o-Xylene	91	16.584	16.583	0.001	99	72194	0.3139	
92 1,3,5-Trimethylbenzene	120	17.945	17.950	-0.005	92	12963	0.0988	
96 1,2,4-Trimethylbenzene	105	18.392	18.391	0.001	98	62943	0.2781	
102 1,2,3-Trimethylbenzene	105	18.865	18.864	0.001	94	19869	0.1168	
S 126 Xylenes, Total	100				0		1.27	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

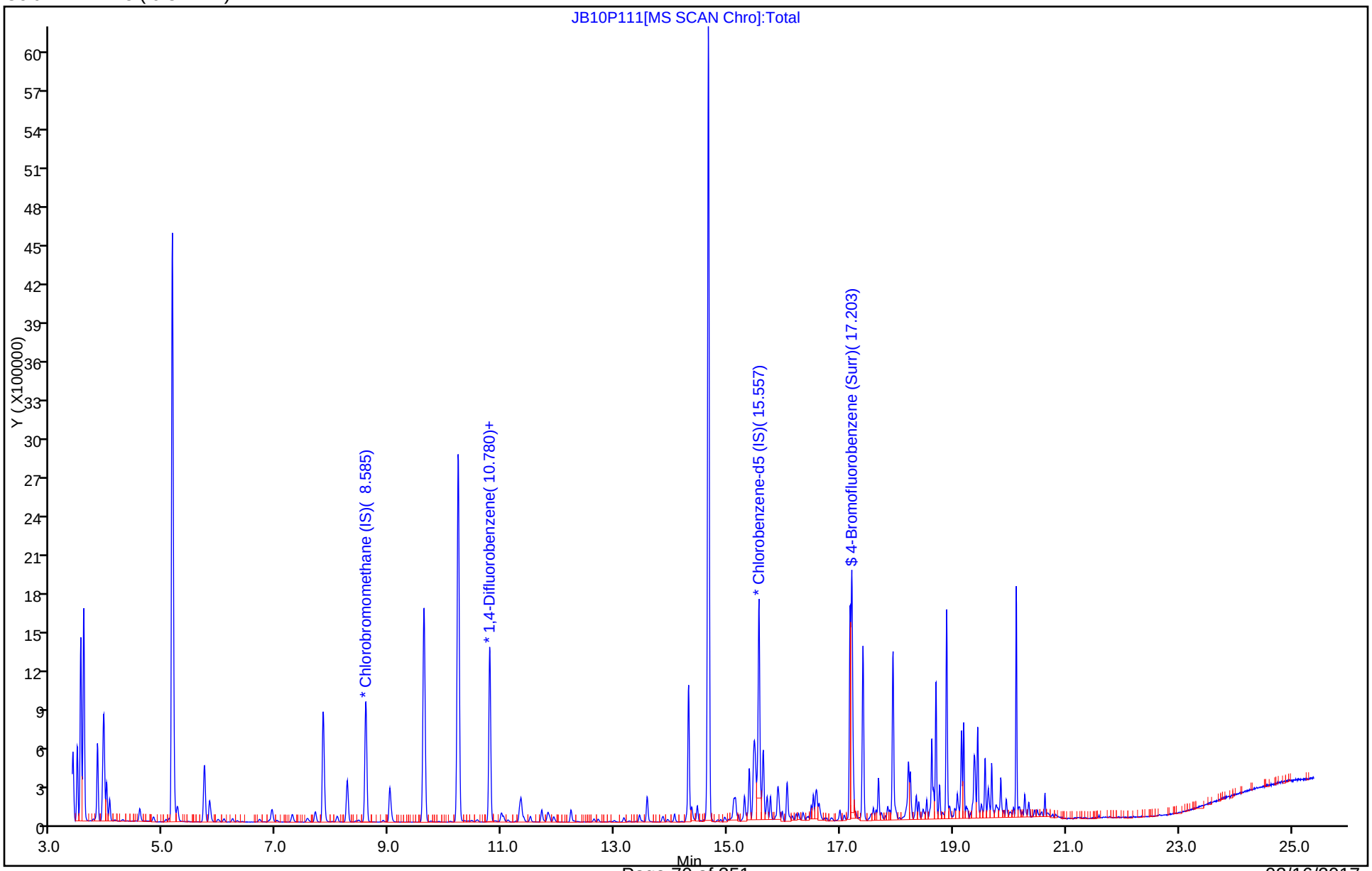
Report Date: 13-Feb-2017 12:31:47 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P111.D

Injection Date:	10-Feb-2017 22:01:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-7052-A-2	Lab Sample ID:	140-7052-2	Worklist Smp#:	19
Client ID:	BLDG-A MIDGAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P111.D				
Lims ID:	140-7052-A-2				
Client ID:	BLDG-A MIDGAC				
Sample Type:	Client				
Inject. Date:	10-Feb-2017 22:01:30	ALS Bottle#:	11	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004010-019				
Misc. Info.:	140-7052-a-2				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Feb-2017 12:31:14	Calib Date:	26-Nov-2016 01:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK025				

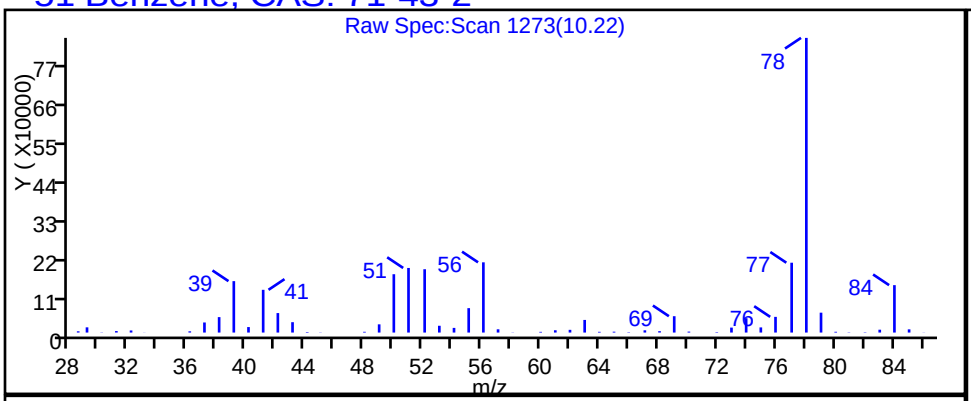
First Level Reviewer: barlozhetskayaa Date: 11-Feb-2017 14:39:54

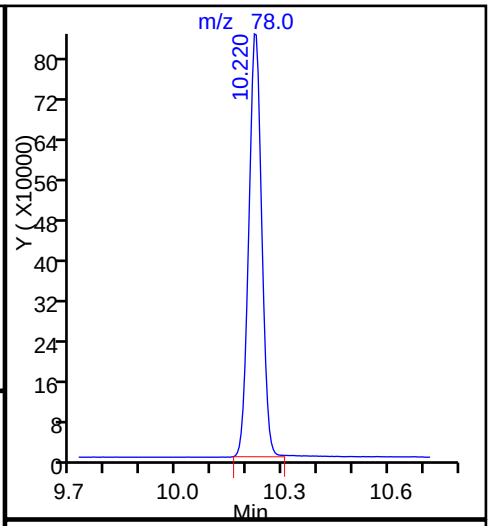
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.72	92.96

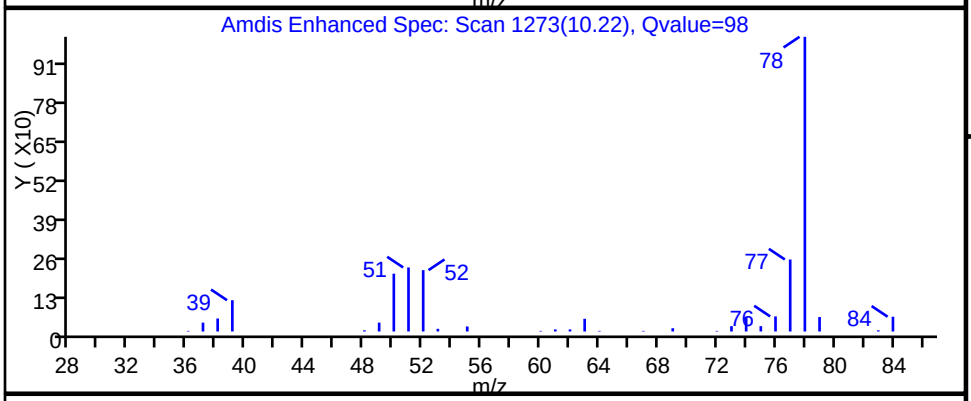
TestAmerica Knoxville

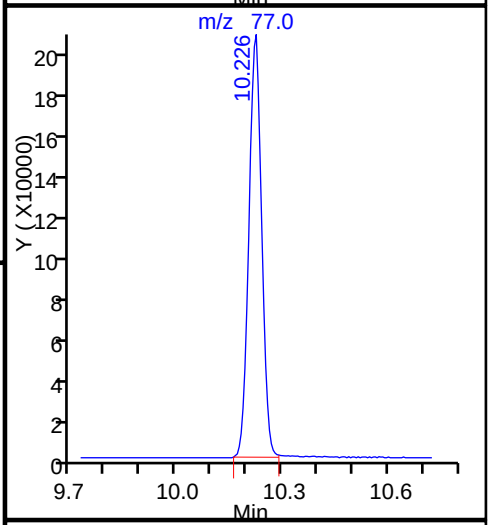
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P111.D		
Injection Date:	10-Feb-2017 22:01:30	Instrument ID:	MJ
Lims ID:	140-7052-A-2	Lab Sample ID:	140-7052-2
Client ID:	BLDG-A MIDGAC		
Operator ID:	7126	ALS Bottle#:	11 Worklist Smp#: 19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

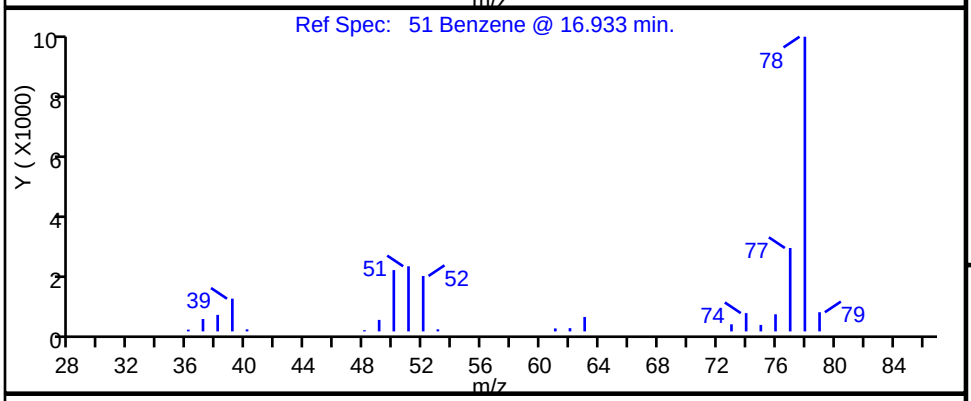
51 Benzene, CAS: 71-43-2

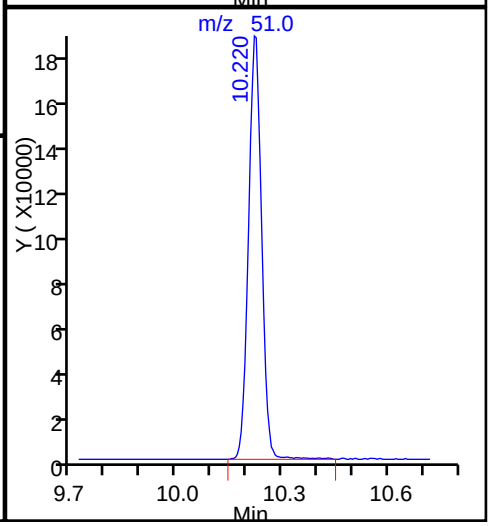


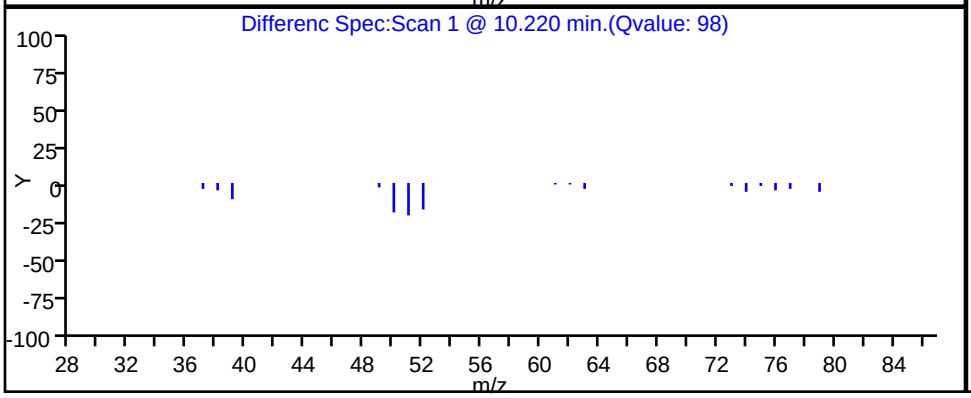








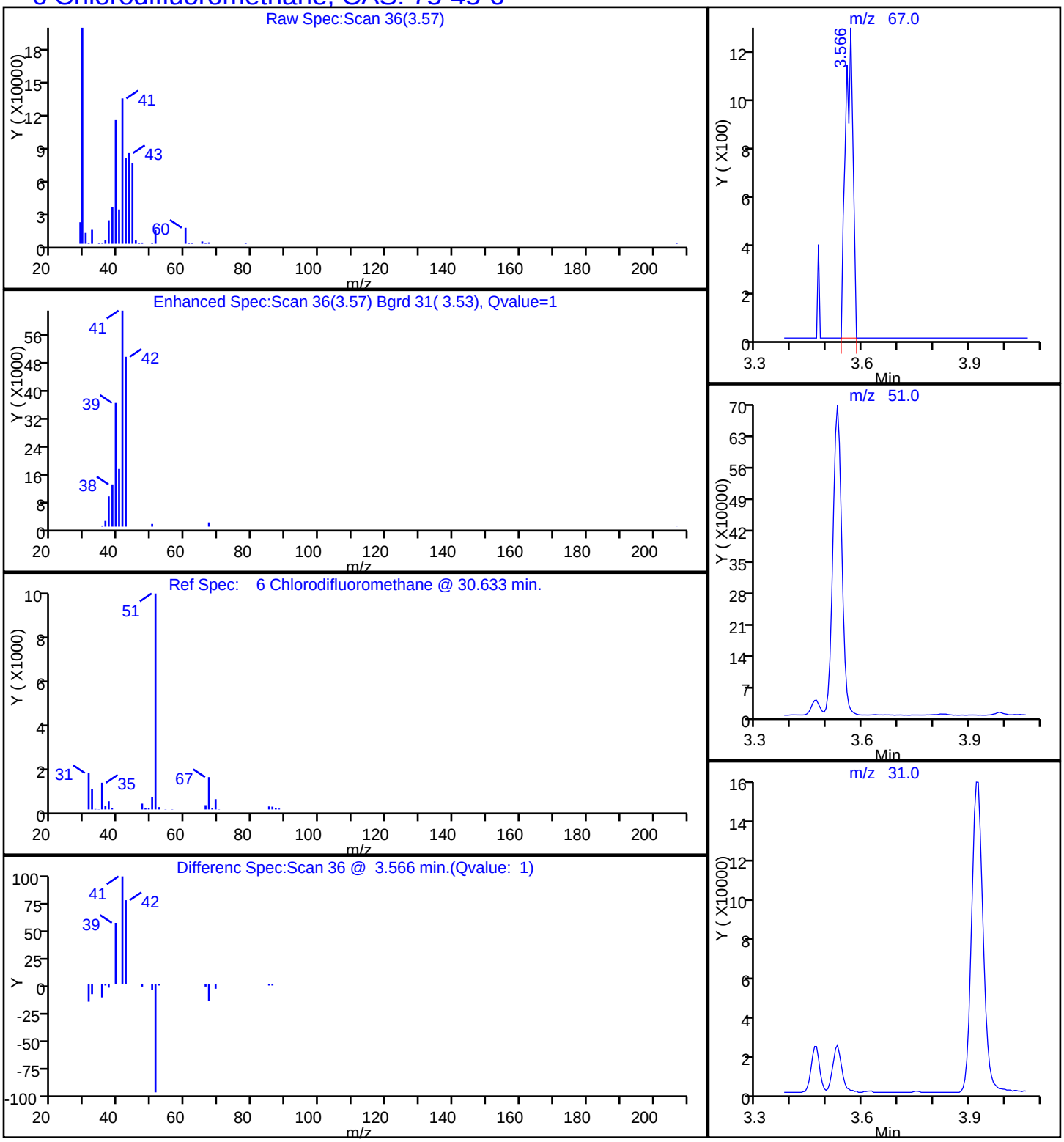




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P111.D		
Injection Date:	10-Feb-2017 22:01:30	Instrument ID:	MJ
Lims ID:	140-7052-A-2	Lab Sample ID:	140-7052-2
Client ID:	BLDG-A MIDGAC		
Operator ID:	7126	ALS Bottle#:	11 Worklist Smp#: 19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

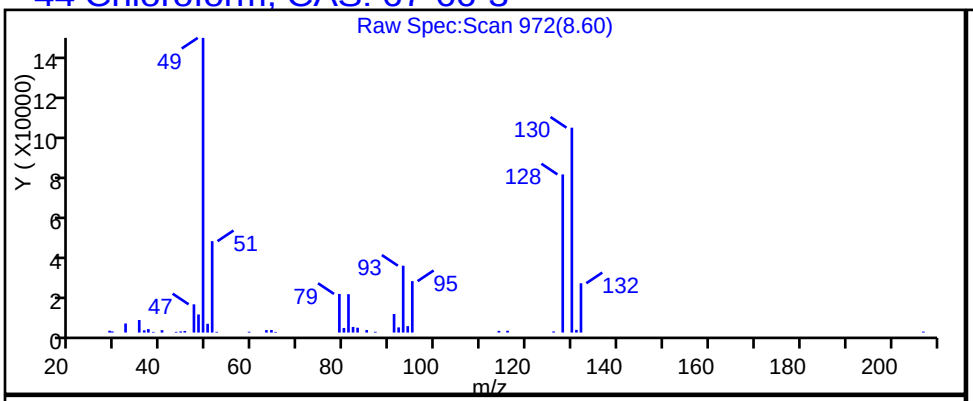
6 Chlorodifluoromethane, CAS: 75-45-6

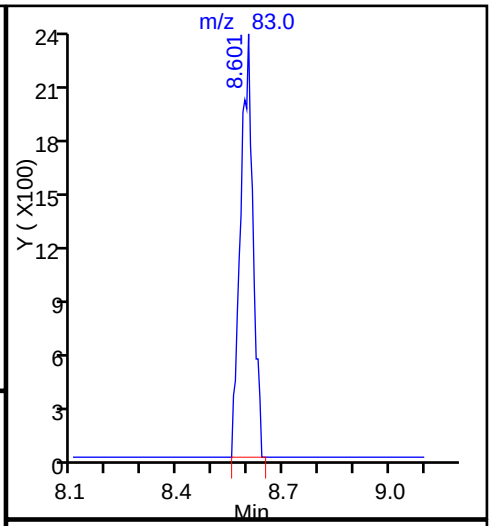


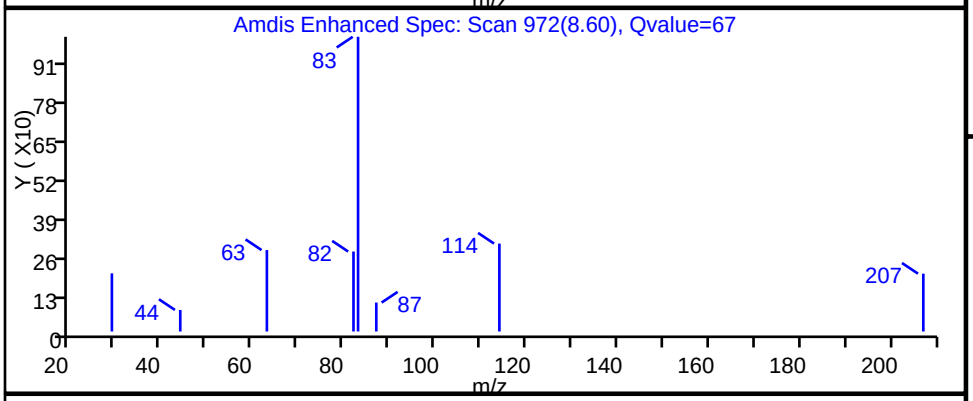
TestAmerica Knoxville

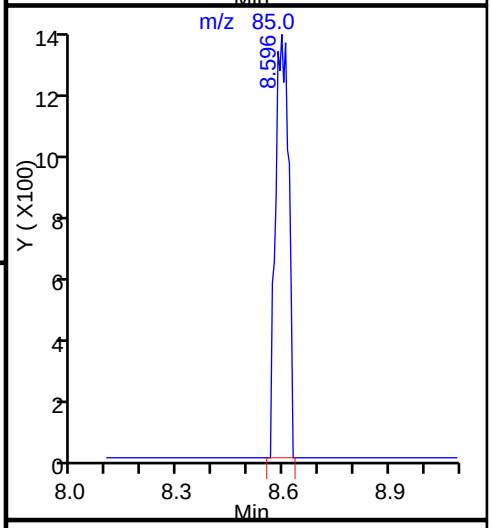
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P111.D		
Injection Date:	10-Feb-2017 22:01:30	Instrument ID:	MJ
Lims ID:	140-7052-A-2	Lab Sample ID:	140-7052-2
Client ID:	BLDG-A MIDGAC		
Operator ID:	7126	ALS Bottle#:	11 Worklist Smp#: 19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

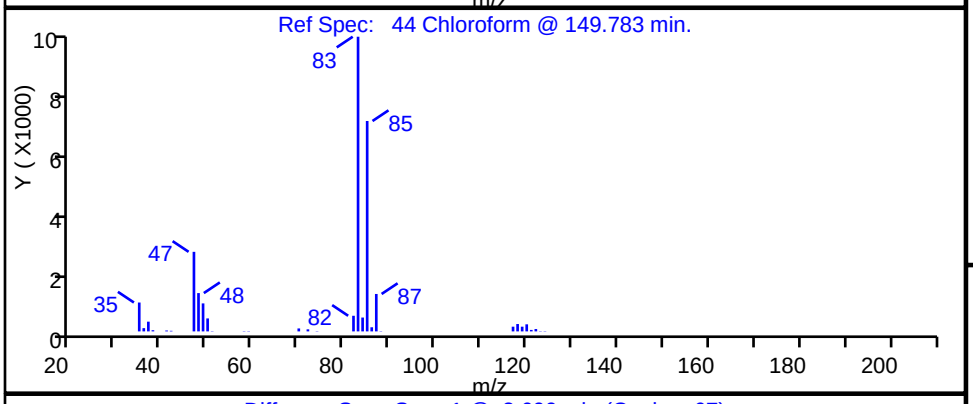
44 Chloroform, CAS: 67-66-3

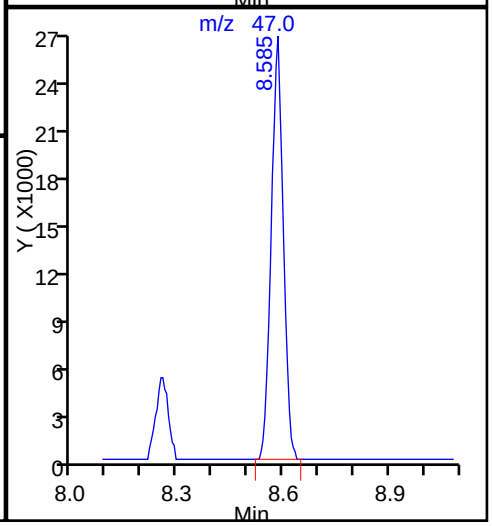


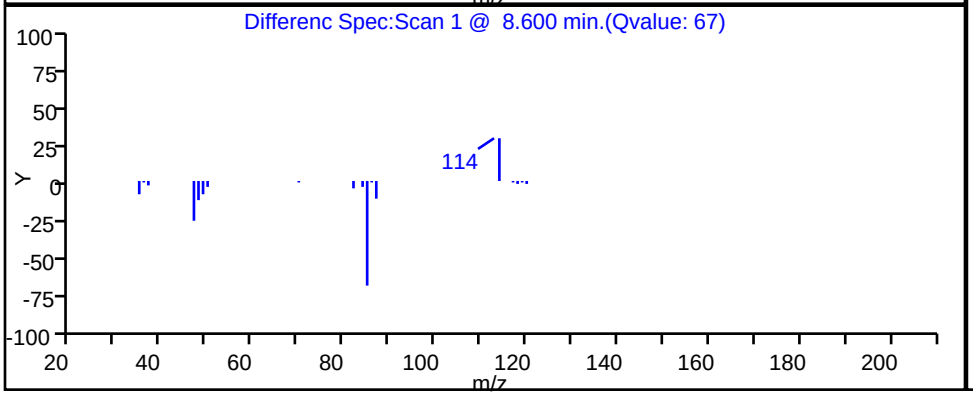








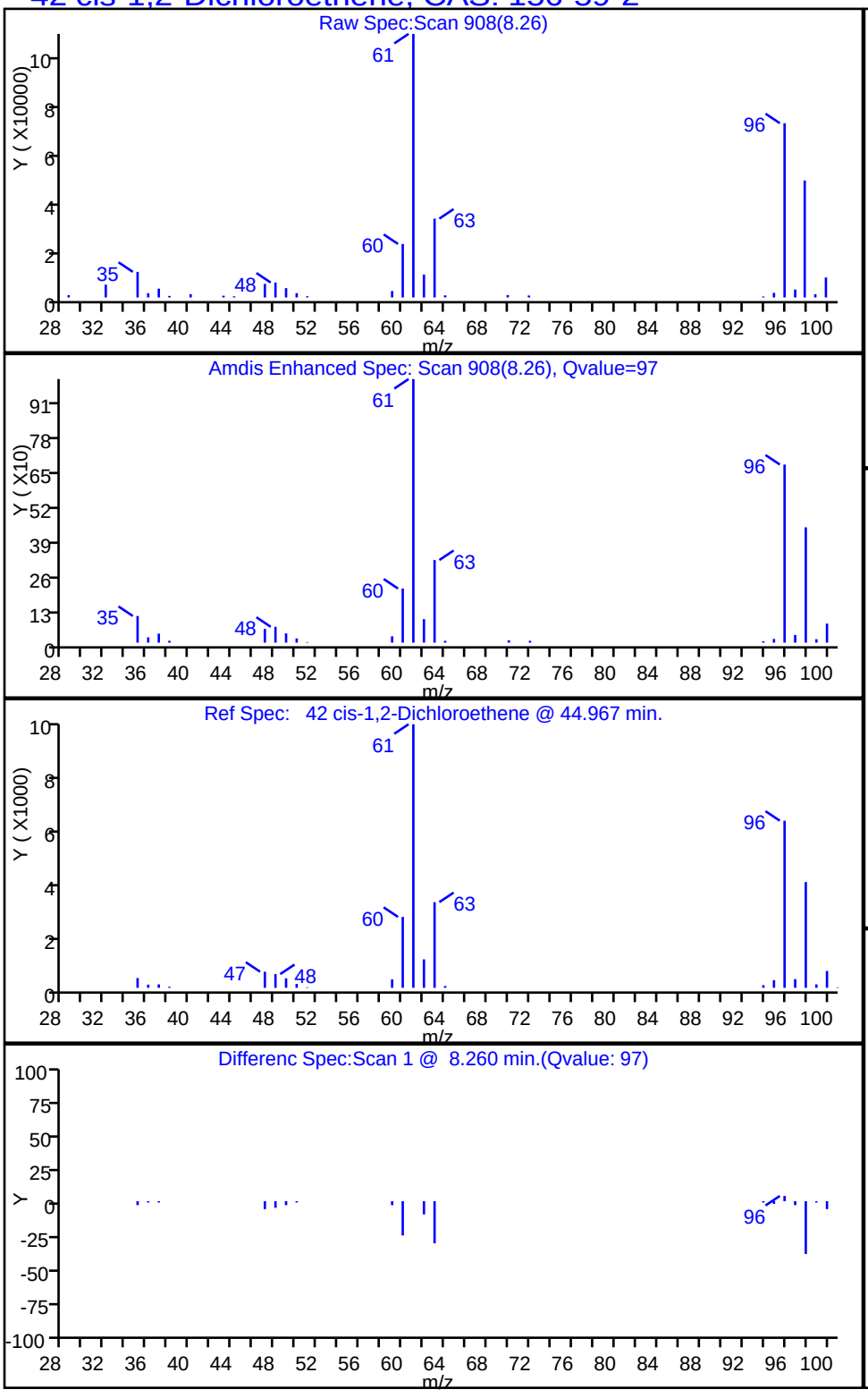


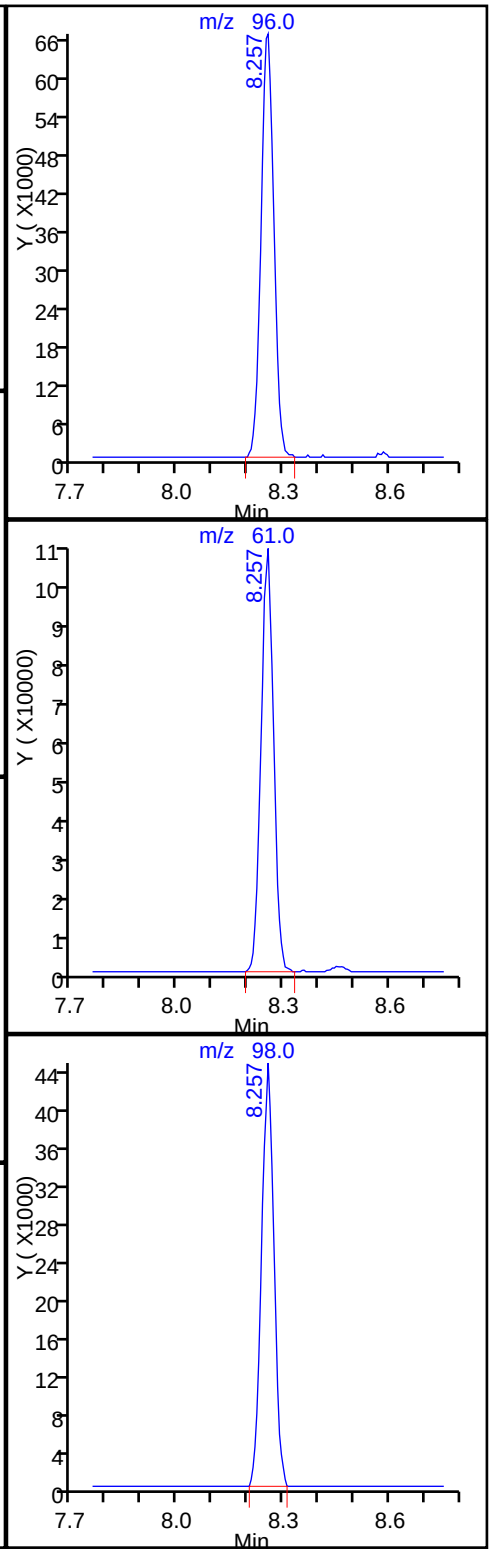


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P111.D		
Injection Date:	10-Feb-2017 22:01:30	Instrument ID:	MJ
Lims ID:	140-7052-A-2	Lab Sample ID:	140-7052-2
Client ID:	BLDG-A MIDGAC		
Operator ID:	7126	ALS Bottle#:	11 Worklist Smp#: 19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

42 cis-1,2-Dichloroethene, CAS: 156-59-2

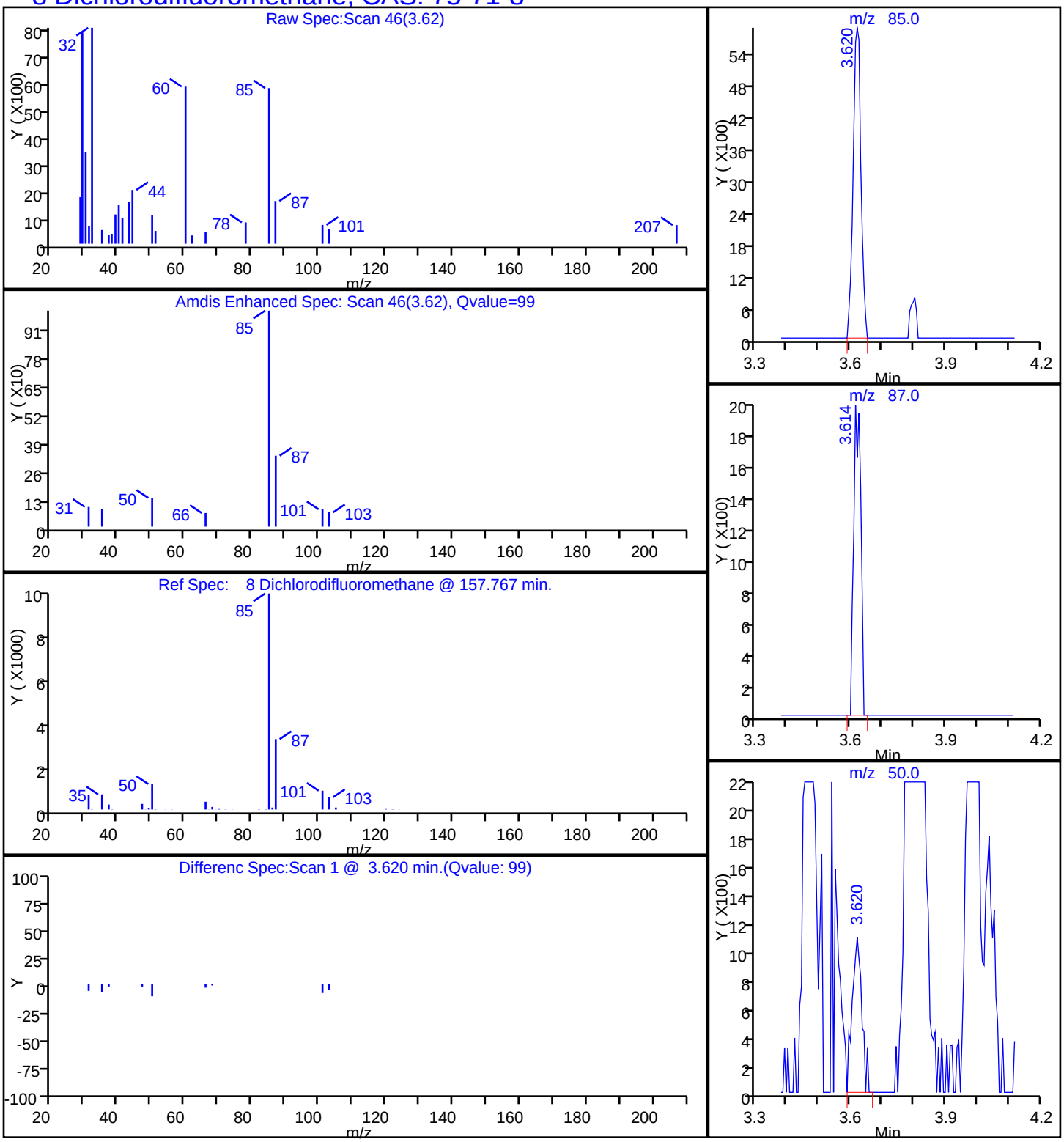




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P111.D		
Injection Date:	10-Feb-2017 22:01:30	Instrument ID:	MJ
Lims ID:	140-7052-A-2	Lab Sample ID:	140-7052-2
Client ID:	BLDG-A MIDGAC		
Operator ID:	7126	ALS Bottle#:	11 Worklist Smp#: 19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

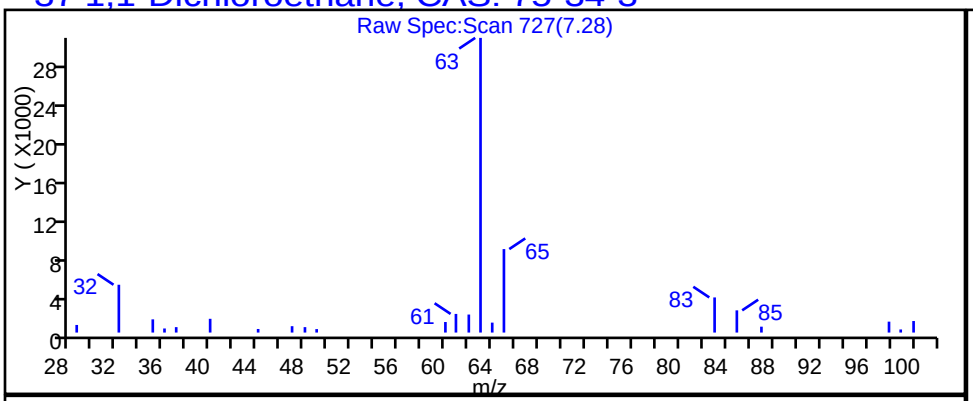
8 Dichlorodifluoromethane, CAS: 75-71-8

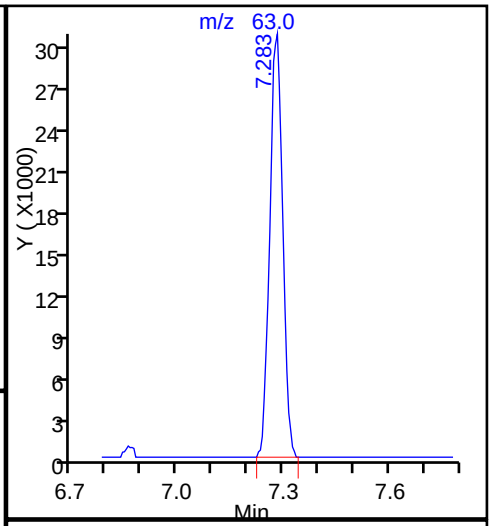


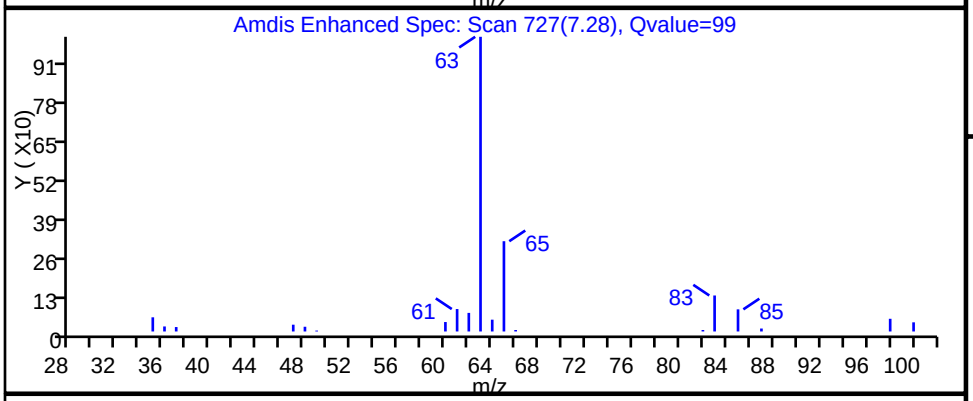
TestAmerica Knoxville

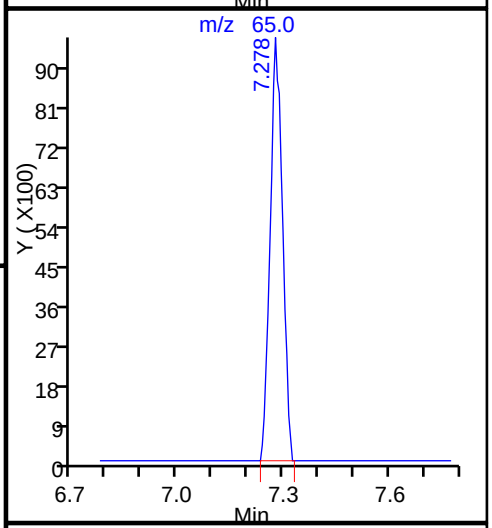
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P111.D		
Injection Date:	10-Feb-2017 22:01:30	Instrument ID:	MJ
Lims ID:	140-7052-A-2	Lab Sample ID:	140-7052-2
Client ID:	BLDG-A MIDGAC		
Operator ID:	7126	ALS Bottle#:	11 Worklist Smp#: 19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

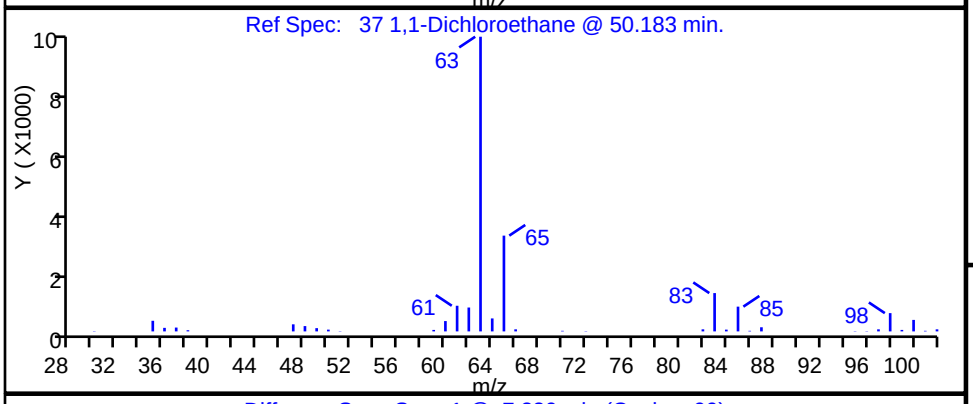
37 1,1-Dichloroethane, CAS: 75-34-3

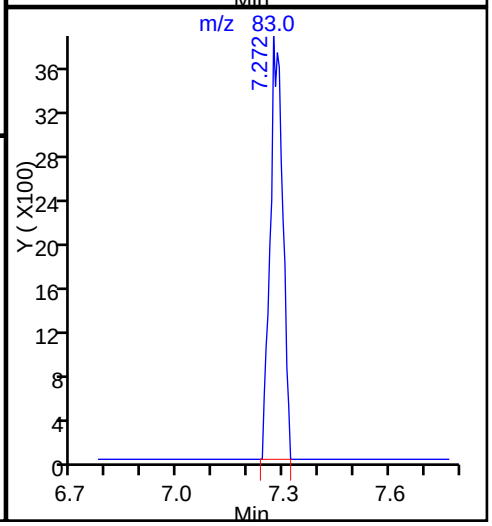


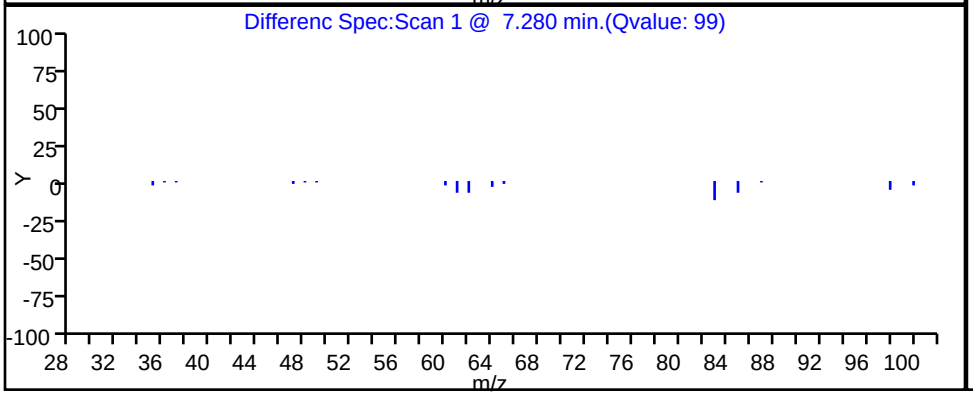








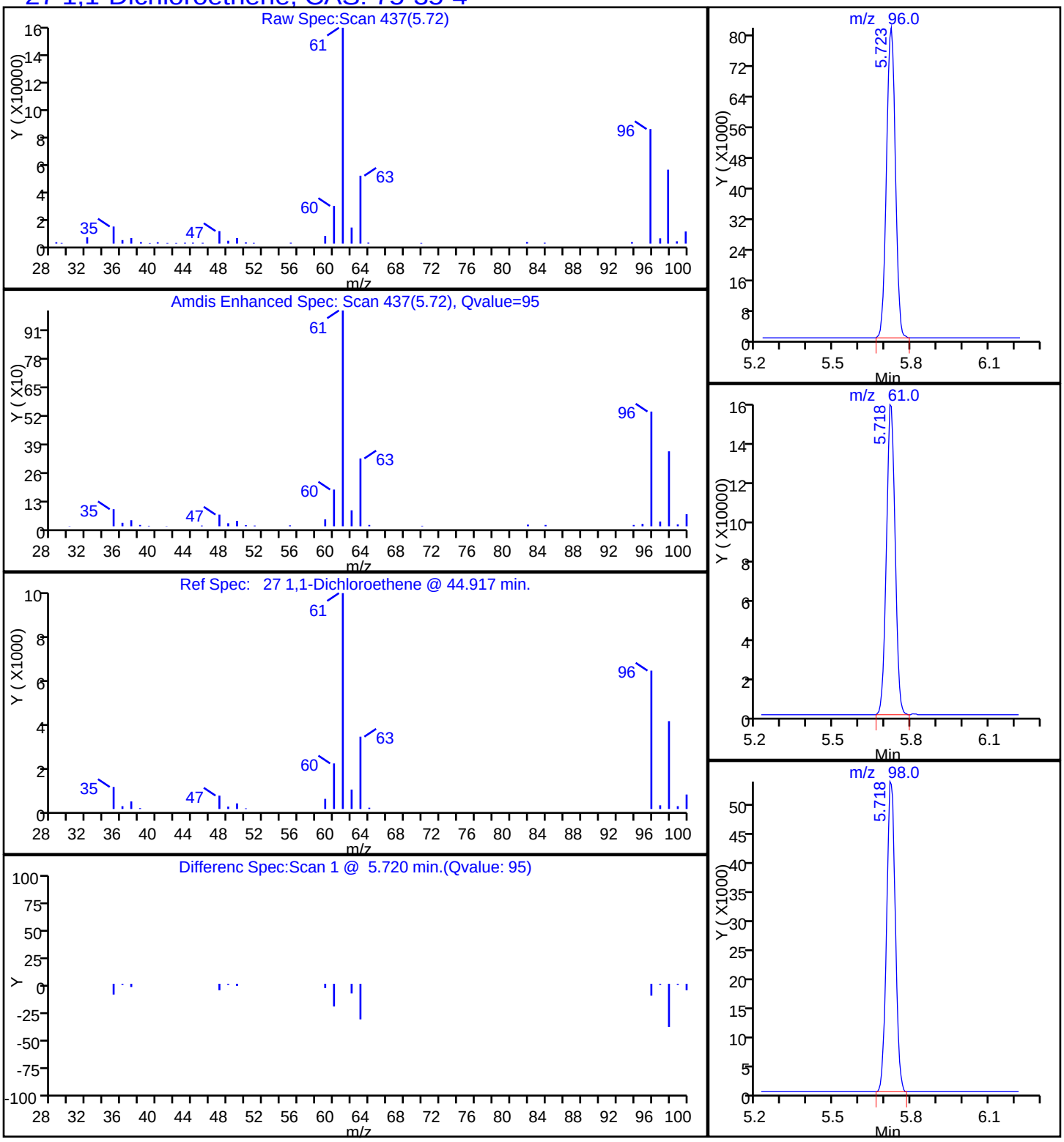




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P111.D		
Injection Date:	10-Feb-2017 22:01:30	Instrument ID:	MJ
Lims ID:	140-7052-A-2	Lab Sample ID:	140-7052-2
Client ID:	BLDG-A MIDGAC		
Operator ID:	7126	ALS Bottle#:	11 Worklist Smp#: 19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

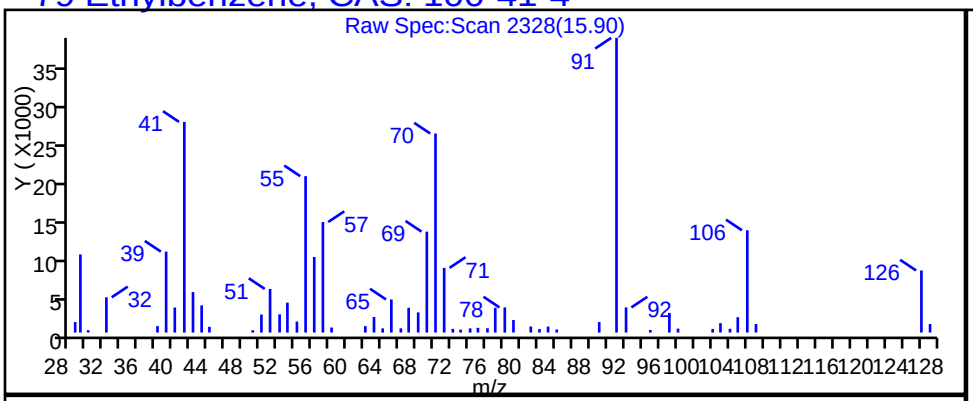
27 1,1-Dichloroethene, CAS: 75-35-4

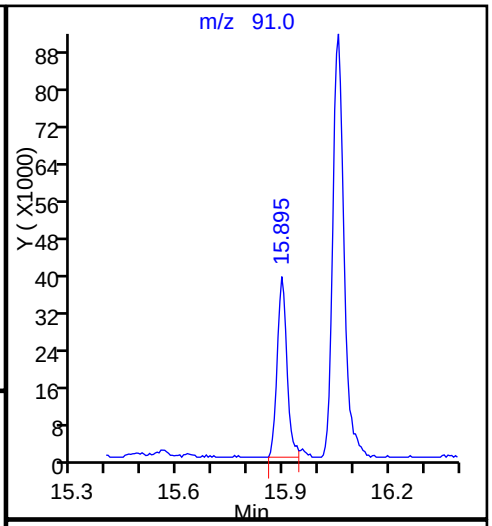


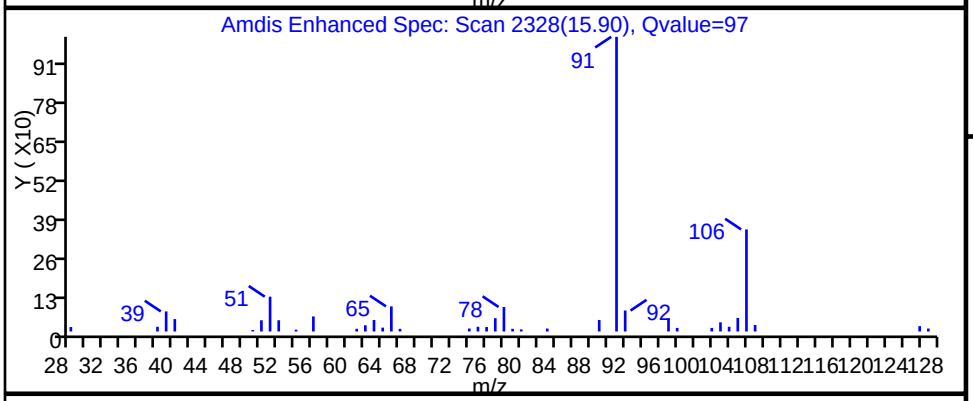
TestAmerica Knoxville

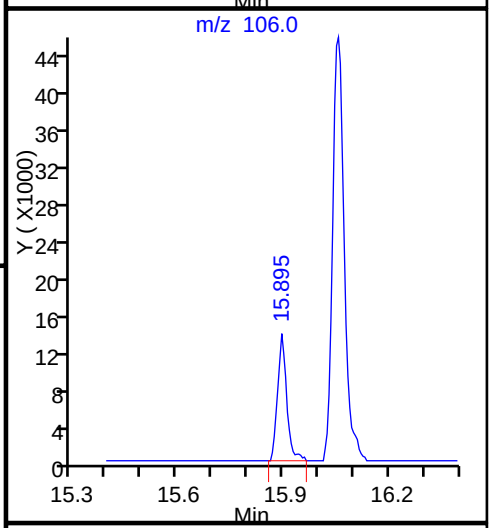
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P111.D				
Injection Date:	10-Feb-2017 22:01:30	Instrument ID:	MJ		
Lims ID:	140-7052-A-2	Lab Sample ID:	140-7052-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

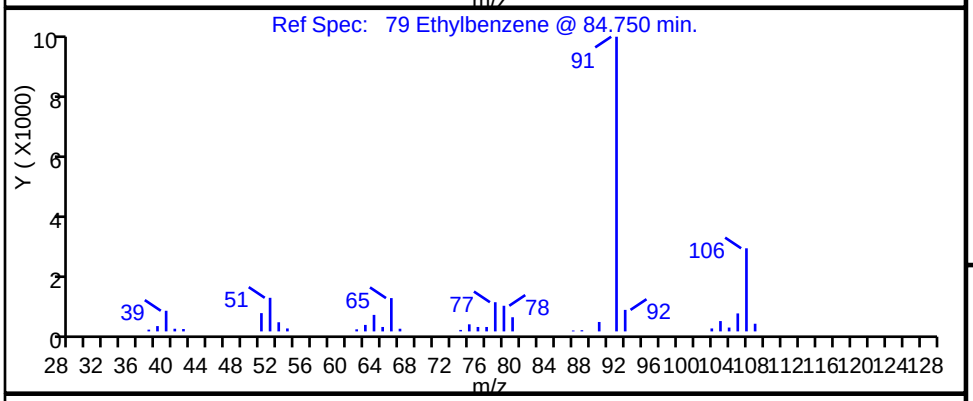
79 Ethylbenzene, CAS: 100-41-4

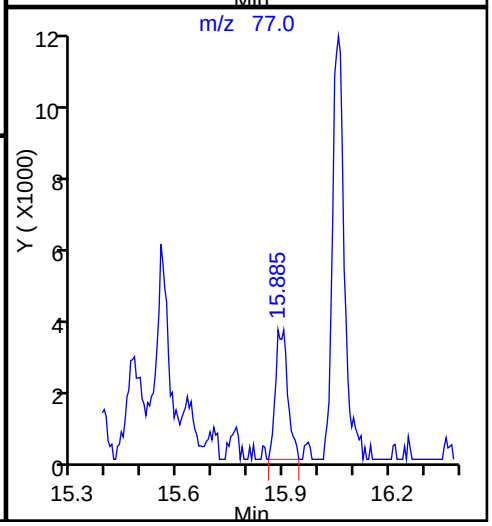


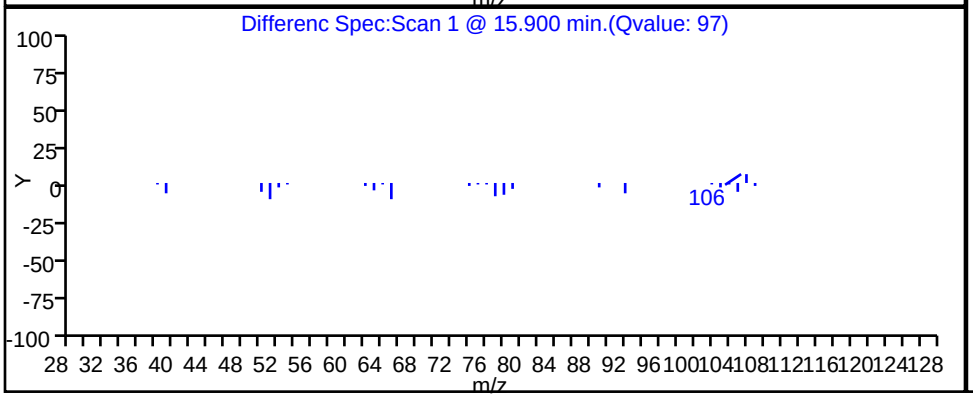








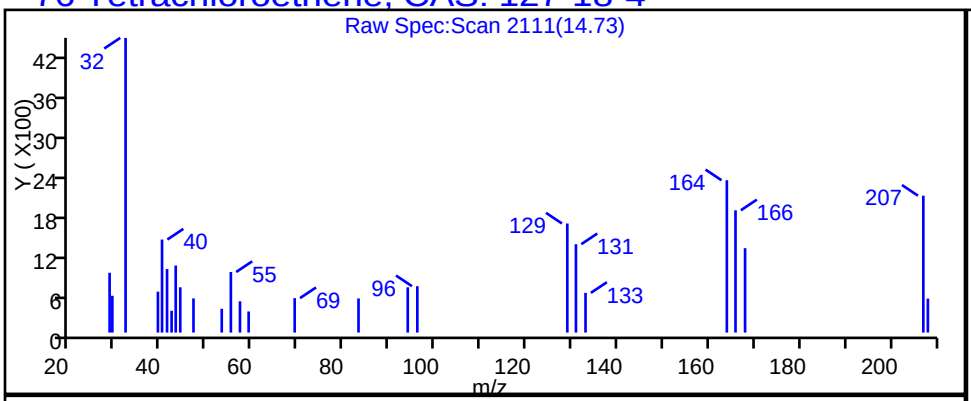


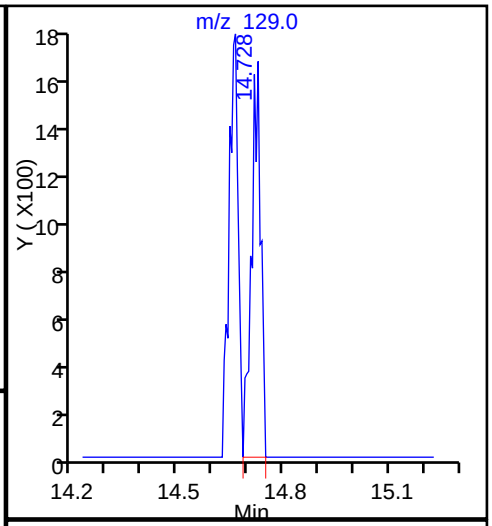


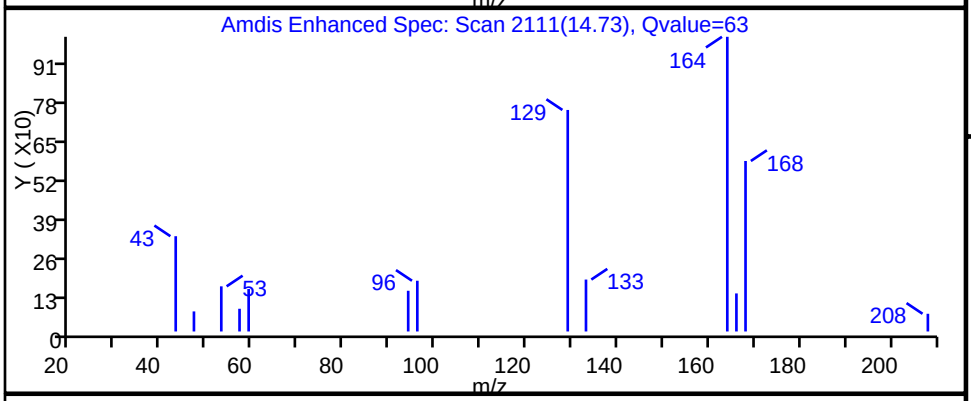
TestAmerica Knoxville

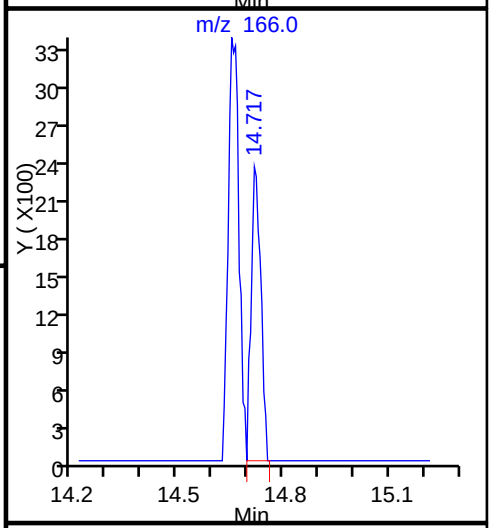
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P111.D				
Injection Date:	10-Feb-2017 22:01:30	Instrument ID:	MJ		
Lims ID:	140-7052-A-2	Lab Sample ID:	140-7052-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

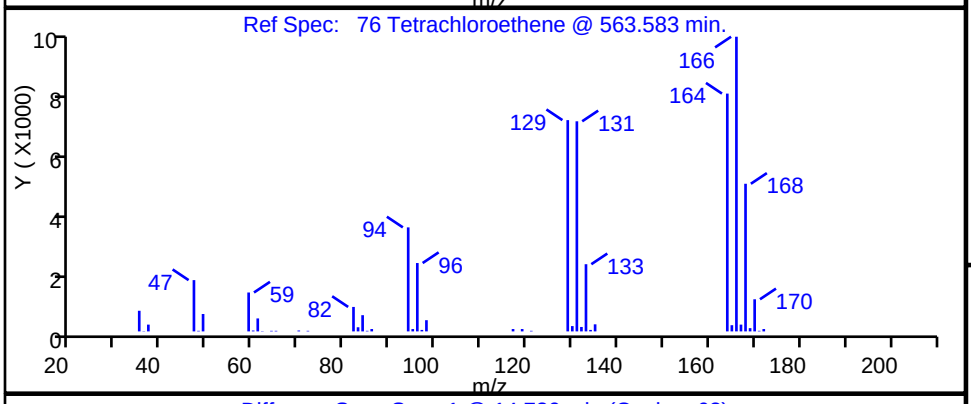
76 Tetrachloroethene, CAS: 127-18-4

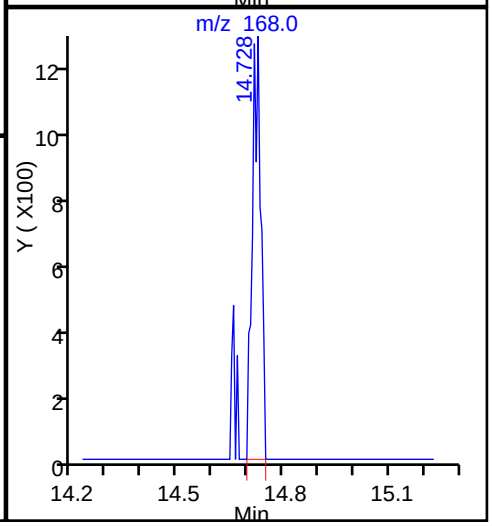


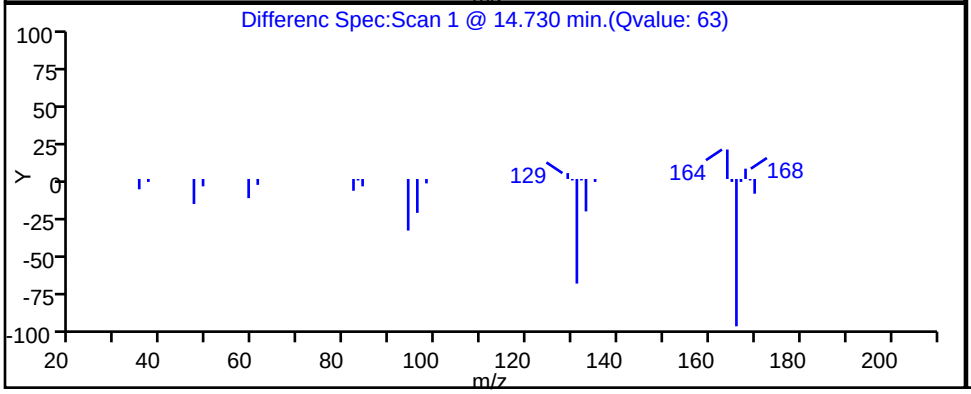








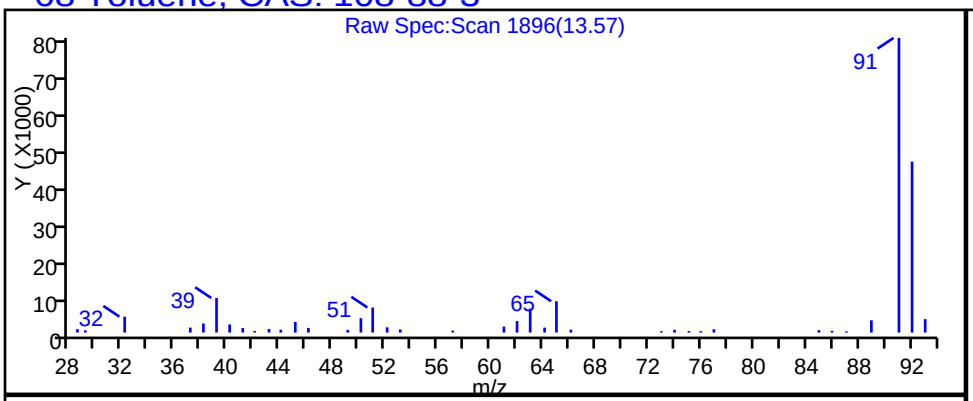


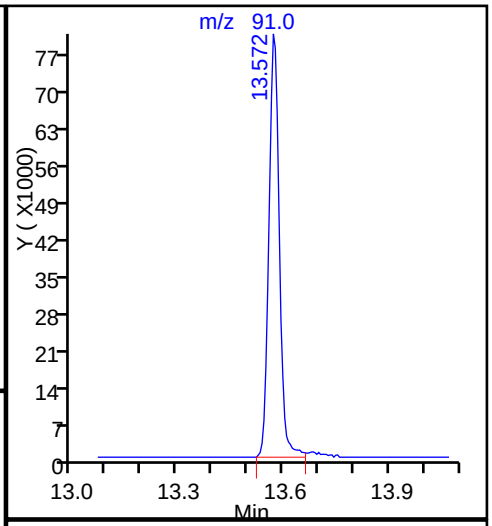


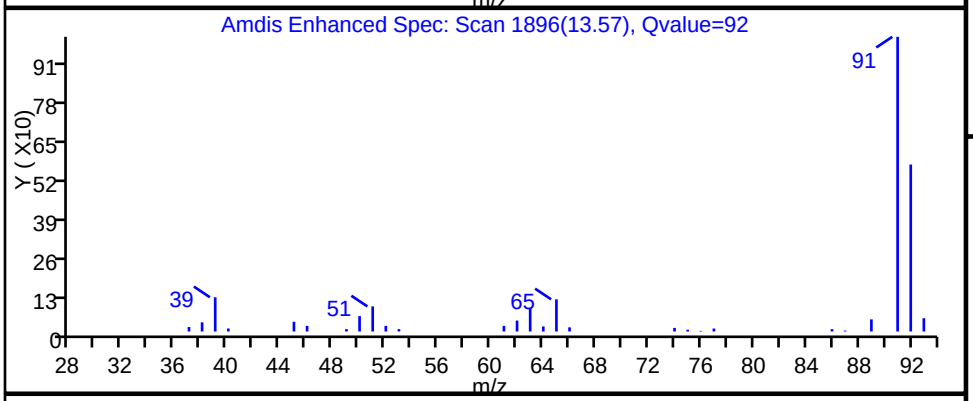
TestAmerica Knoxville

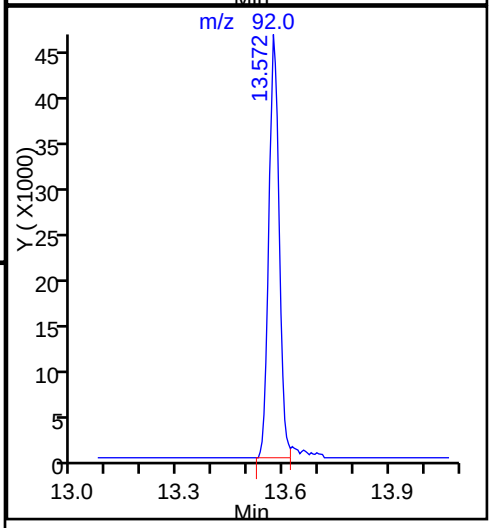
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P111.D		
Injection Date:	10-Feb-2017 22:01:30	Instrument ID:	MJ
Lims ID:	140-7052-A-2	Lab Sample ID:	140-7052-2
Client ID:	BLDG-A MIDGAC		
Operator ID:	7126	ALS Bottle#:	11 Worklist Smp#: 19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

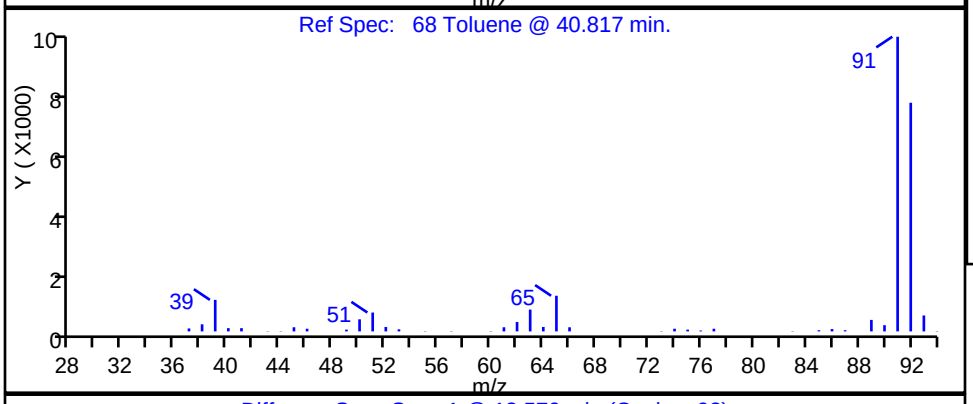
68 Toluene, CAS: 108-88-3

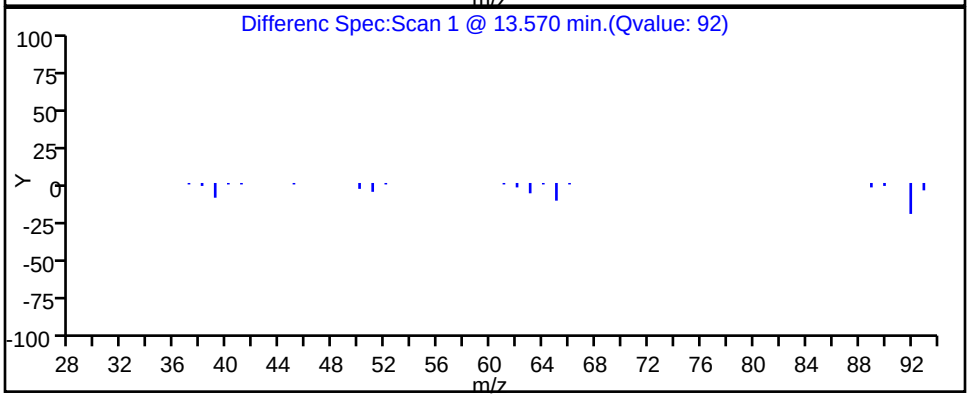








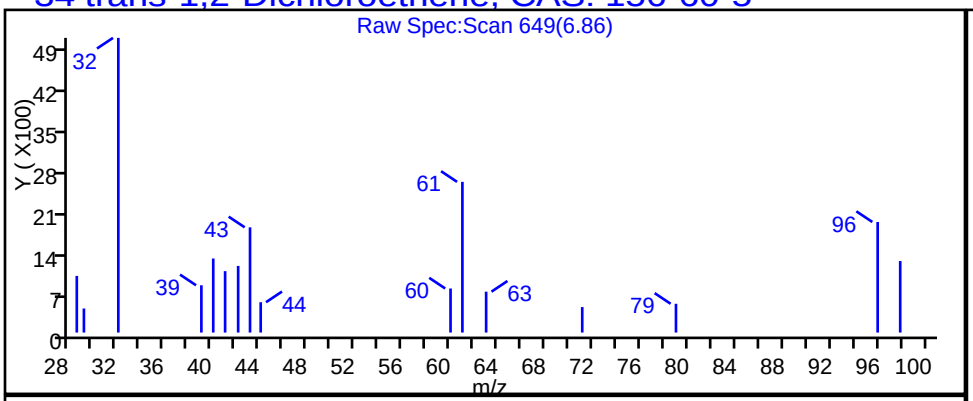


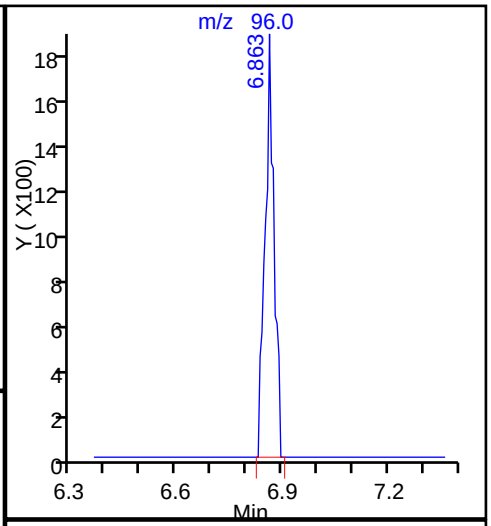


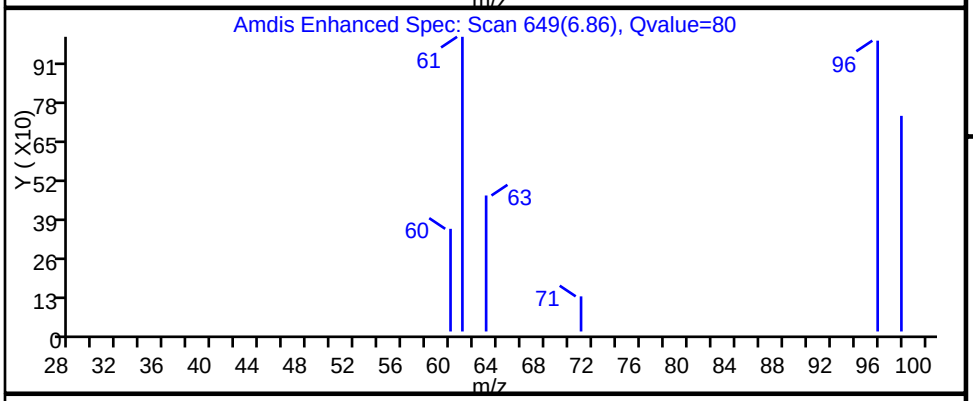
TestAmerica Knoxville

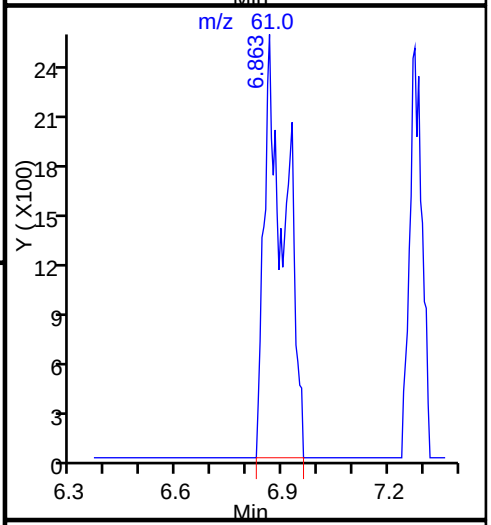
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P111.D				
Injection Date:	10-Feb-2017 22:01:30	Instrument ID:	MJ		
Lims ID:	140-7052-A-2	Lab Sample ID:	140-7052-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

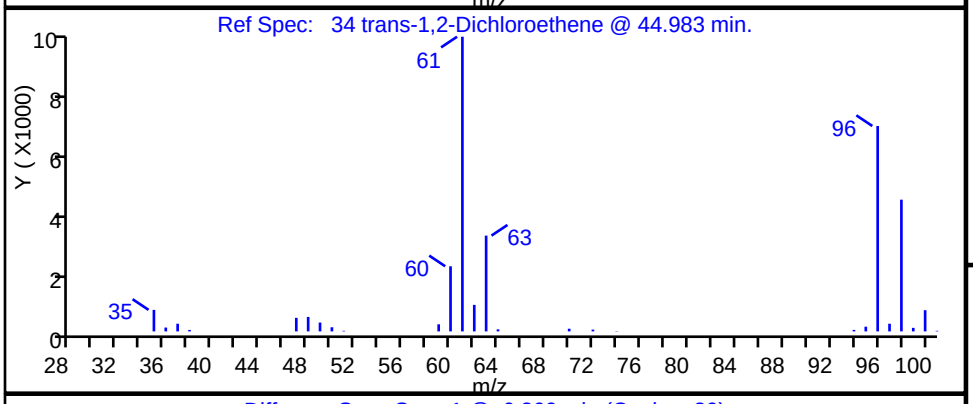
34 trans-1,2-Dichloroethene, CAS: 156-60-5

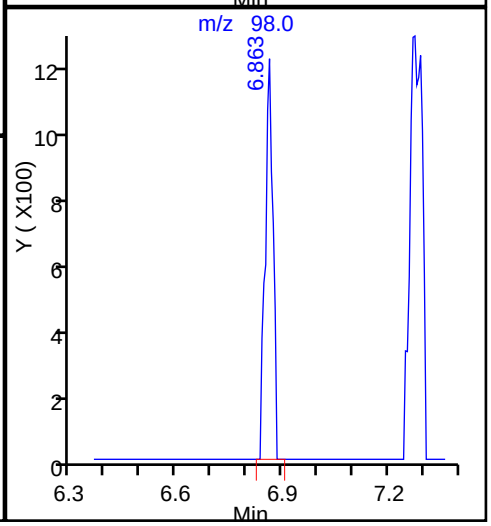


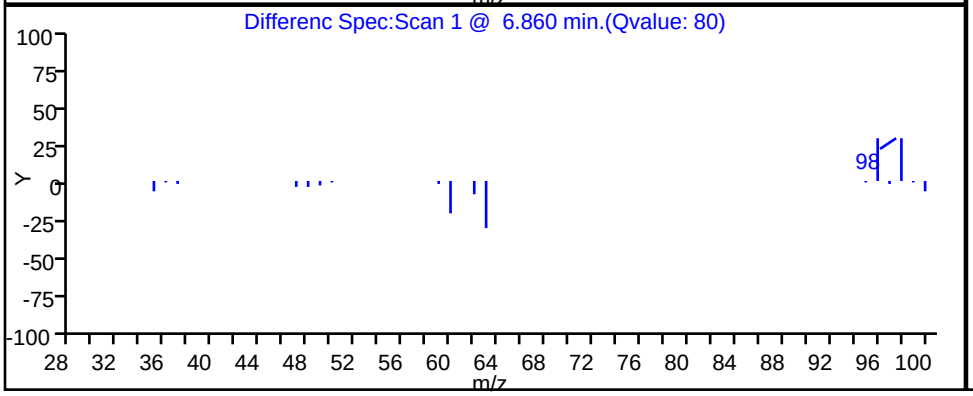








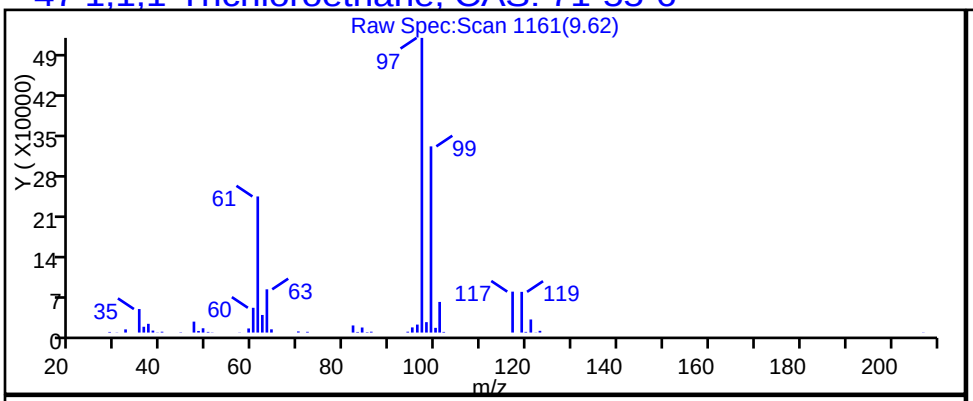


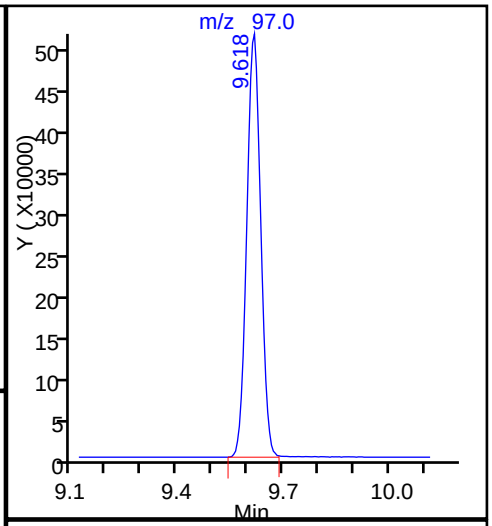


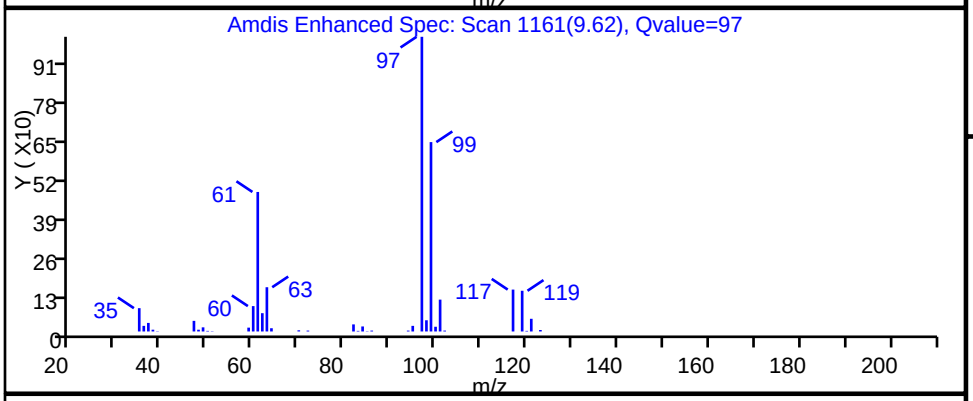
TestAmerica Knoxville

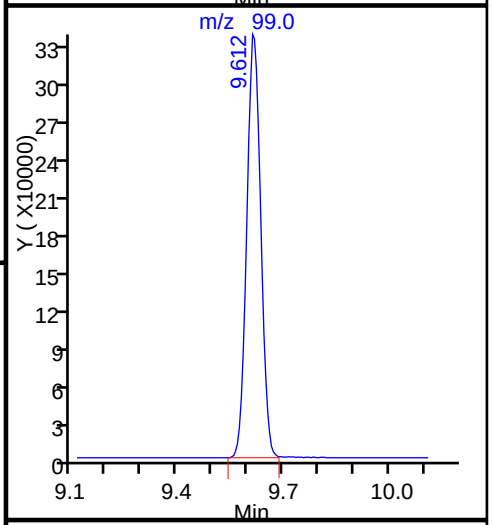
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P111.D				
Injection Date:	10-Feb-2017 22:01:30	Instrument ID:	MJ		
Lims ID:	140-7052-A-2	Lab Sample ID:	140-7052-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

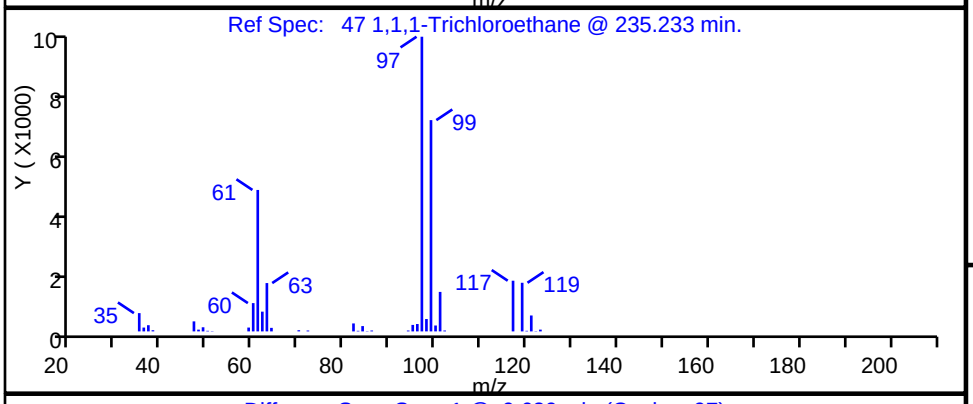
47 1,1,1-Trichloroethane, CAS: 71-55-6

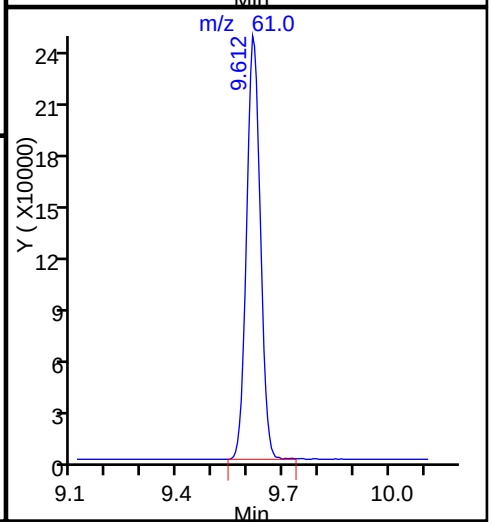


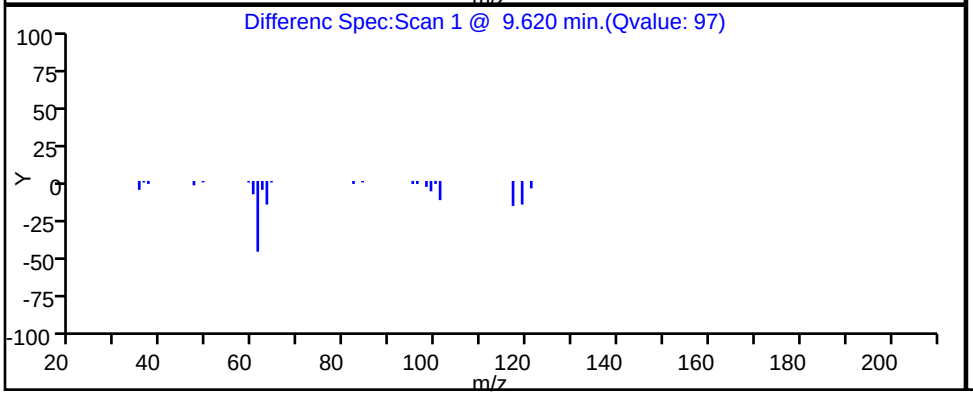








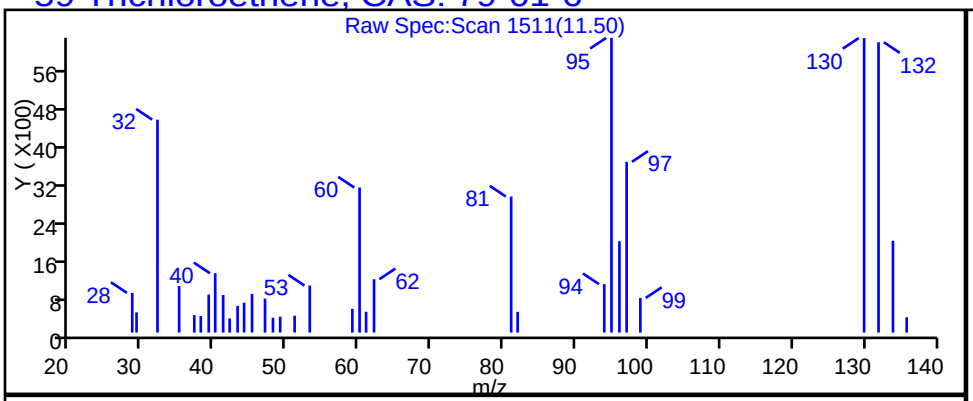


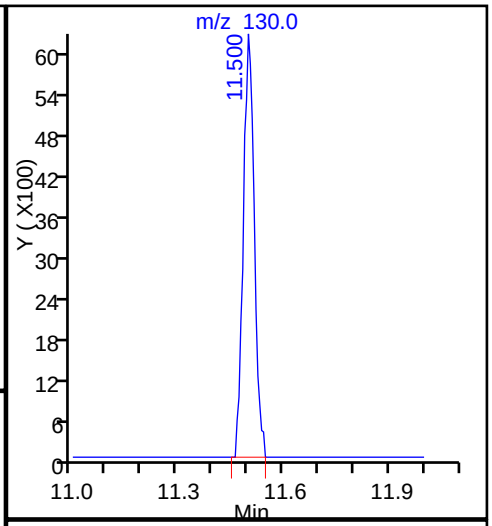


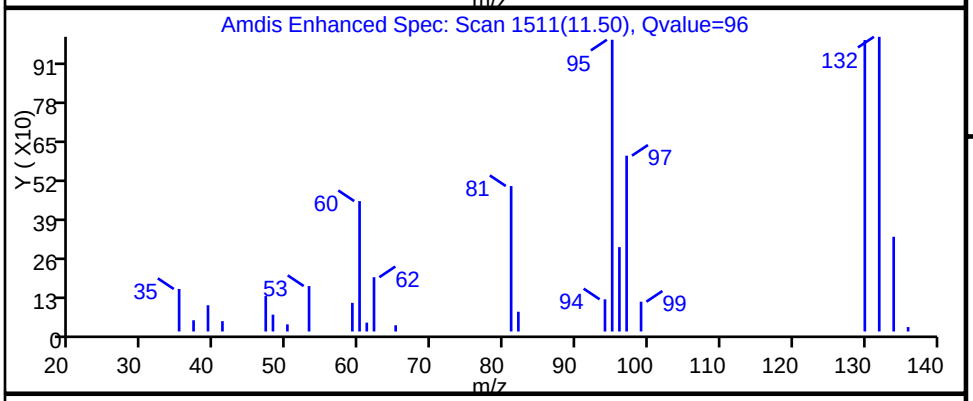
TestAmerica Knoxville

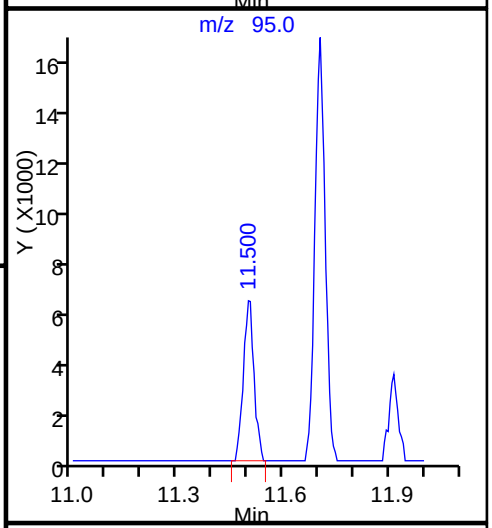
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P111.D		
Injection Date:	10-Feb-2017 22:01:30	Instrument ID:	MJ
Lims ID:	140-7052-A-2	Lab Sample ID:	140-7052-2
Client ID:	BLDG-A MIDGAC		
Operator ID:	7126	ALS Bottle#:	11 Worklist Smp#: 19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

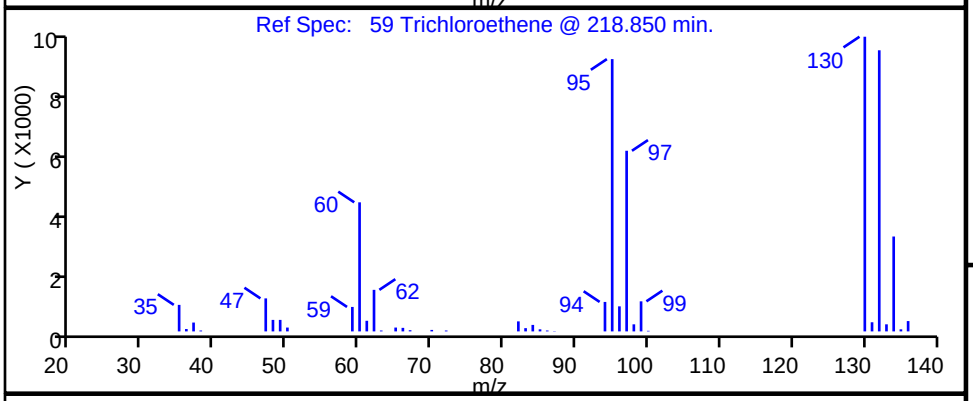
59 Trichloroethene, CAS: 79-01-6

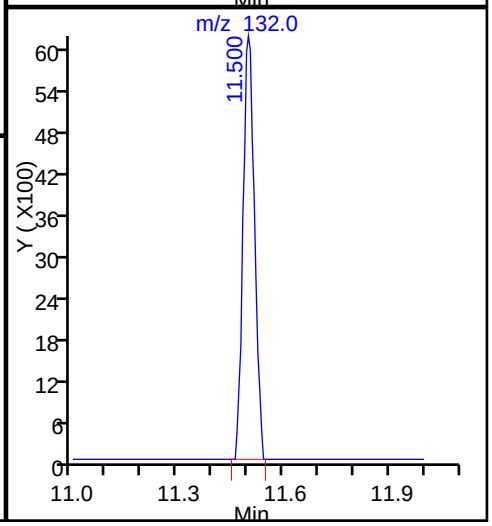


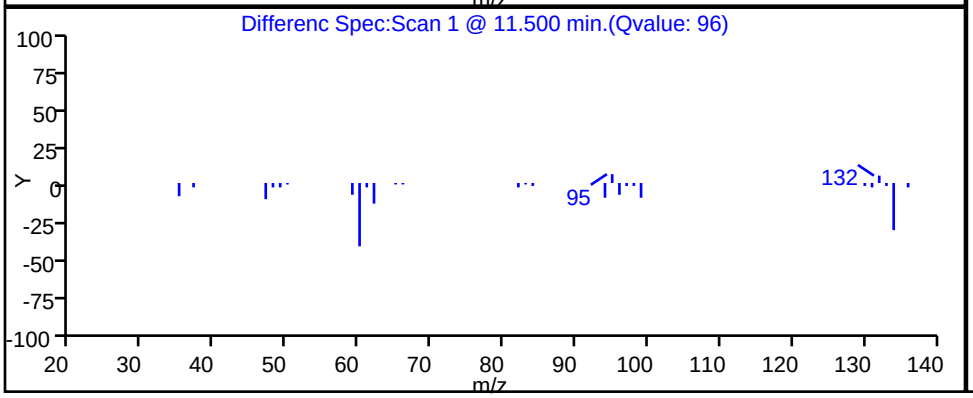








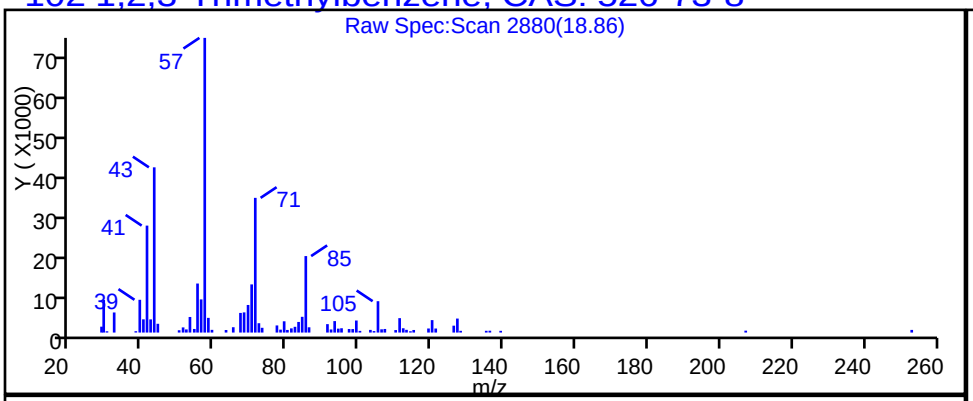


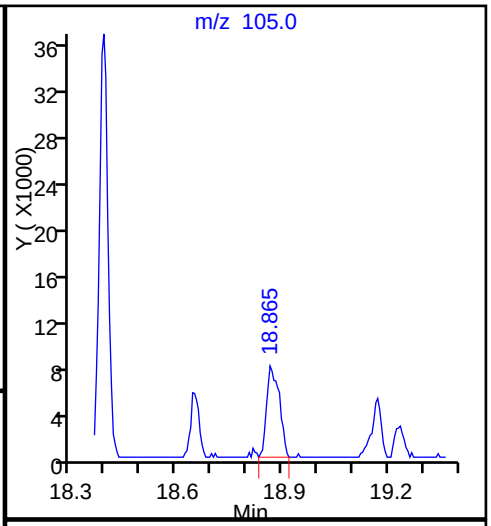


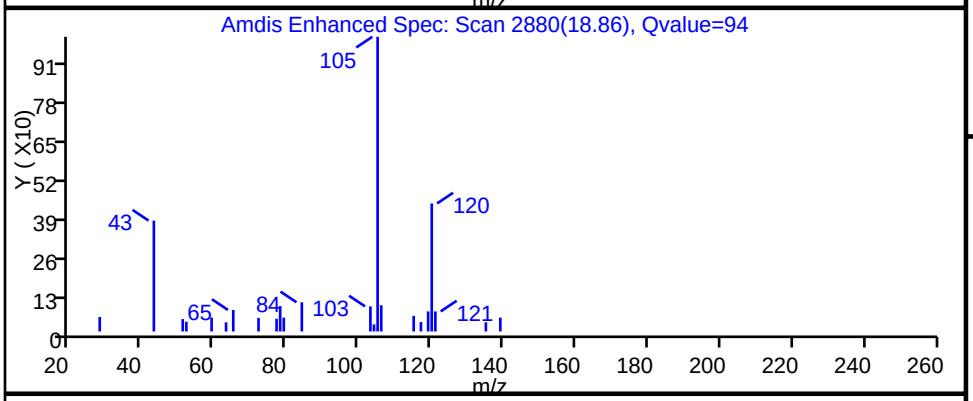
TestAmerica Knoxville

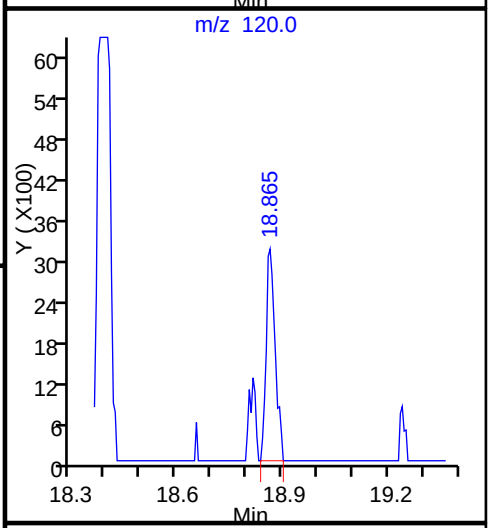
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P111.D		
Injection Date:	10-Feb-2017 22:01:30	Instrument ID:	MJ
Lims ID:	140-7052-A-2	Lab Sample ID:	140-7052-2
Client ID:	BLDG-A MIDGAC		
Operator ID:	7126	ALS Bottle#:	11 Worklist Smp#: 19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

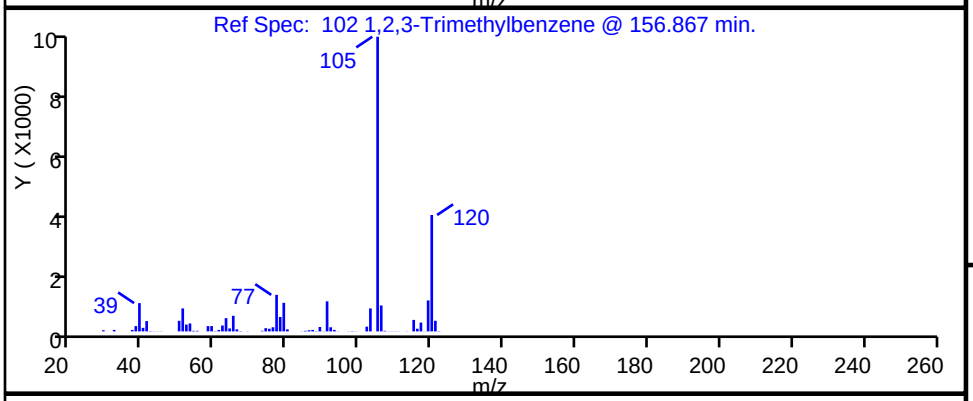
102 1,2,3-Trimethylbenzene, CAS: 526-73-8

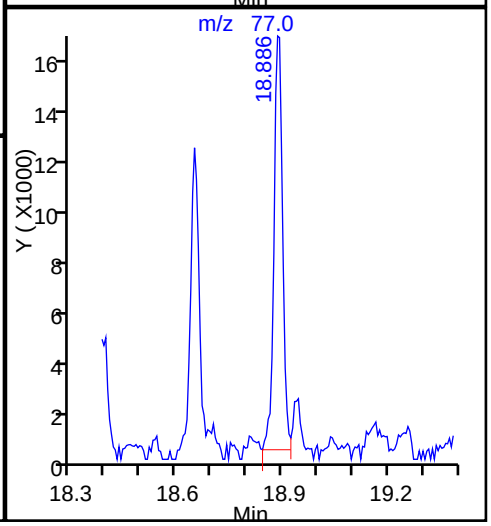


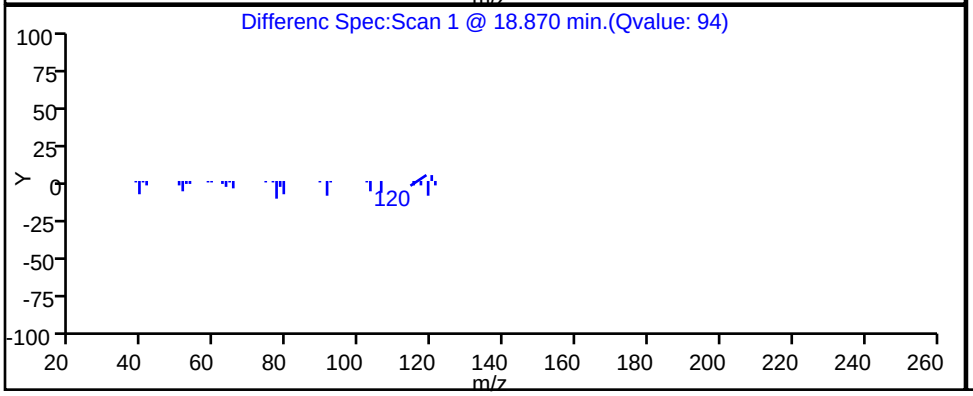








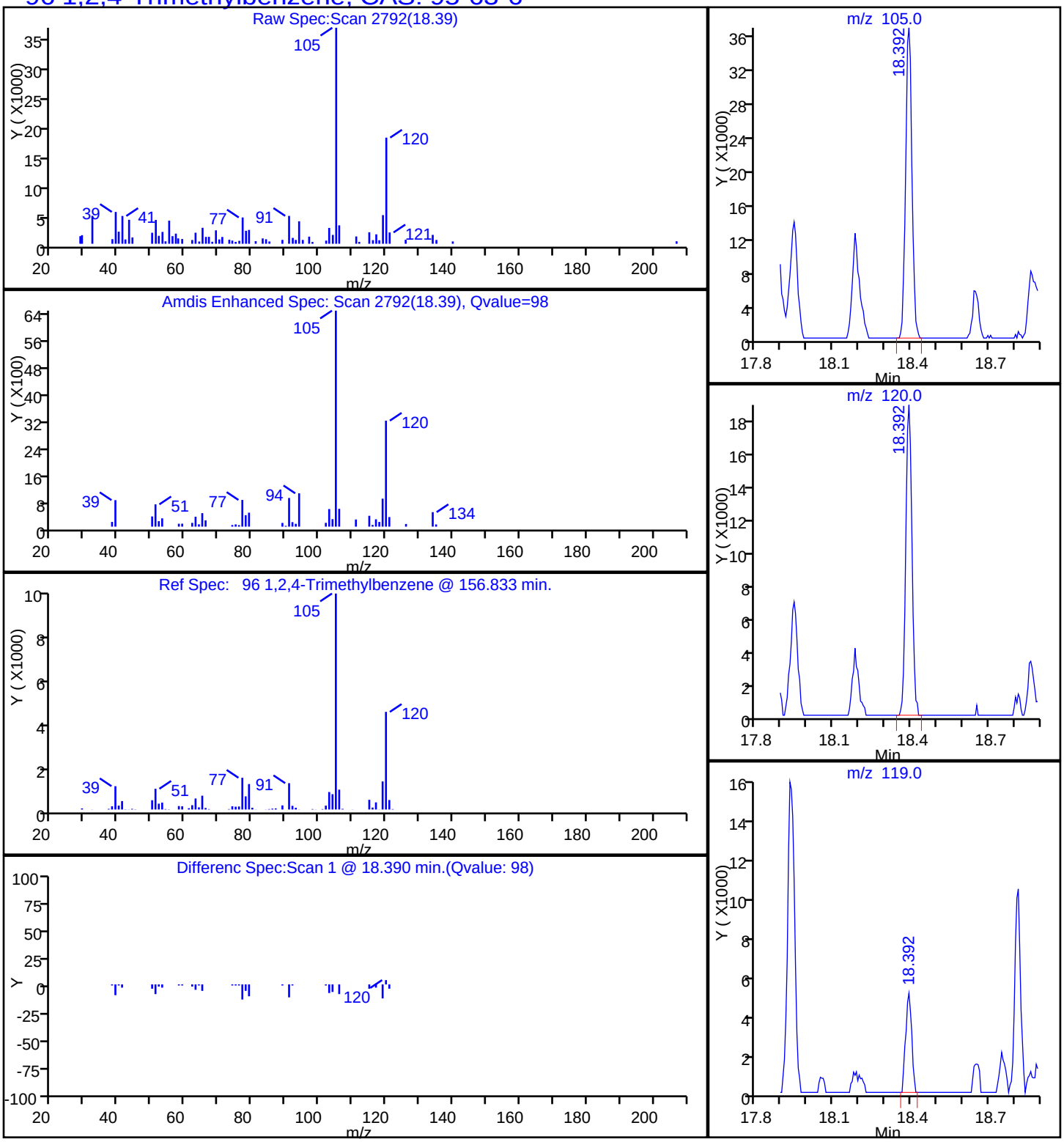




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P111.D				
Injection Date:	10-Feb-2017 22:01:30	Instrument ID:	MJ		
Lims ID:	140-7052-A-2	Lab Sample ID:	140-7052-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

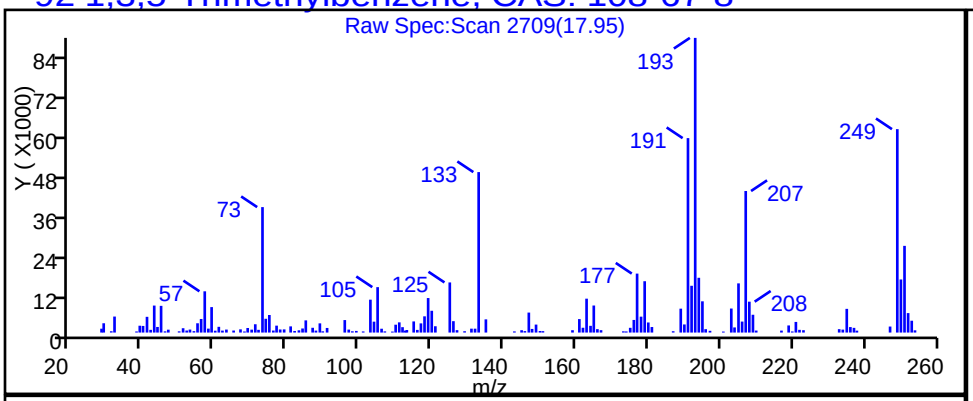
96 1,2,4-Trimethylbenzene, CAS: 95-63-6

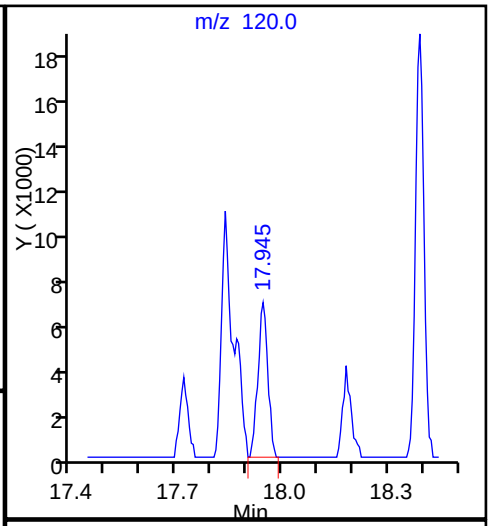


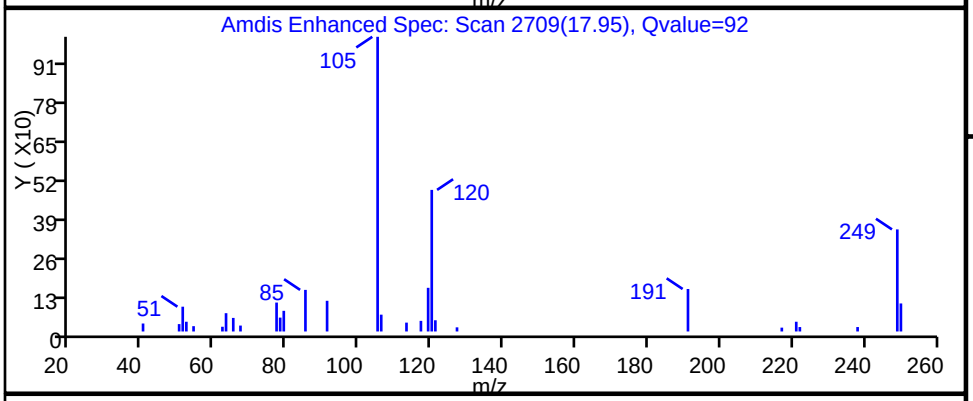
TestAmerica Knoxville

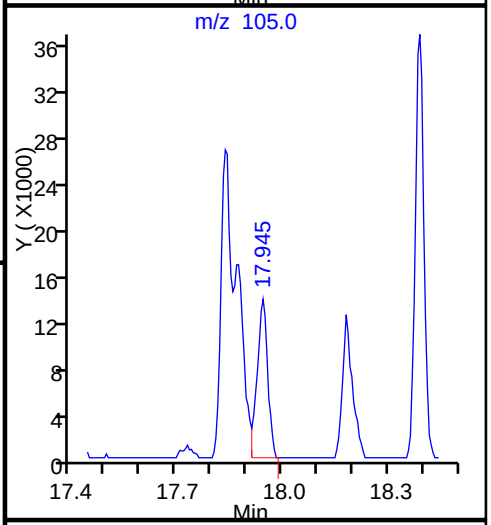
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P111.D		
Injection Date:	10-Feb-2017 22:01:30	Instrument ID:	MJ
Lims ID:	140-7052-A-2	Lab Sample ID:	140-7052-2
Client ID:	BLDG-A MIDGAC		
Operator ID:	7126	ALS Bottle#:	11 Worklist Smp#: 19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

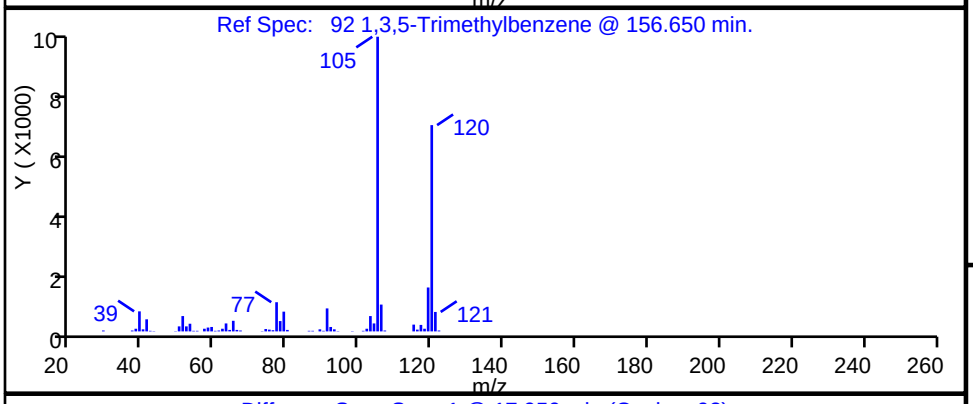
92 1,3,5-Trimethylbenzene, CAS: 108-67-8

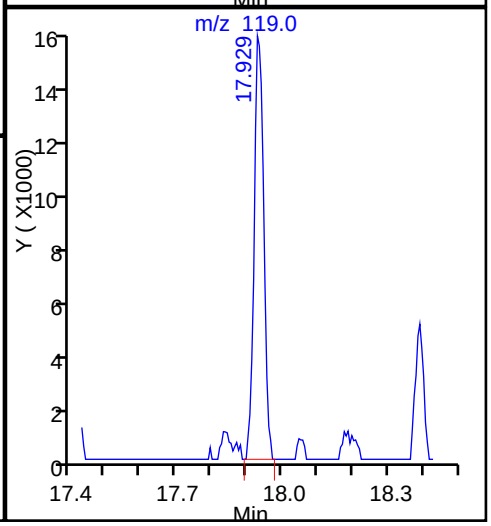


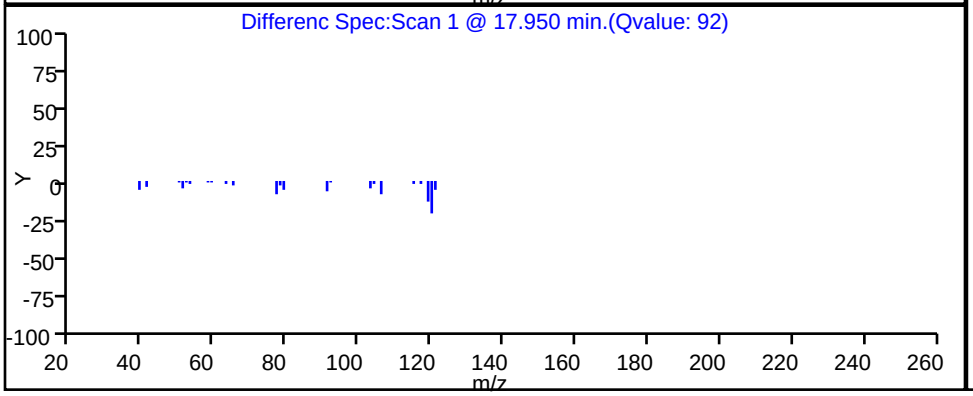








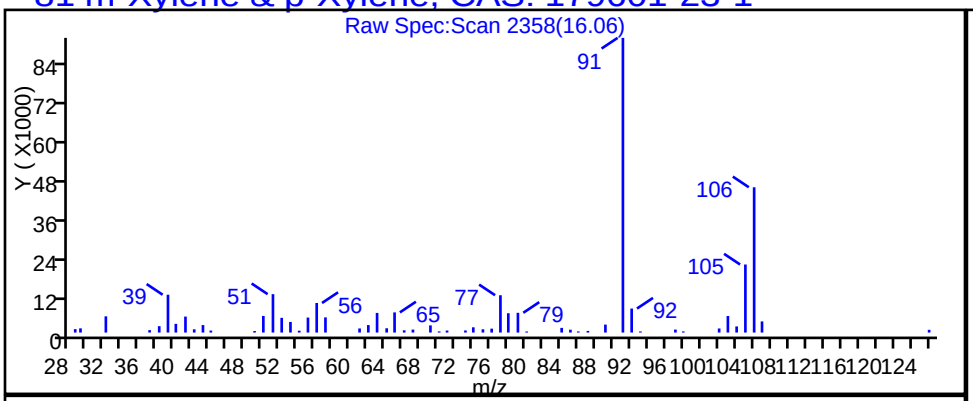


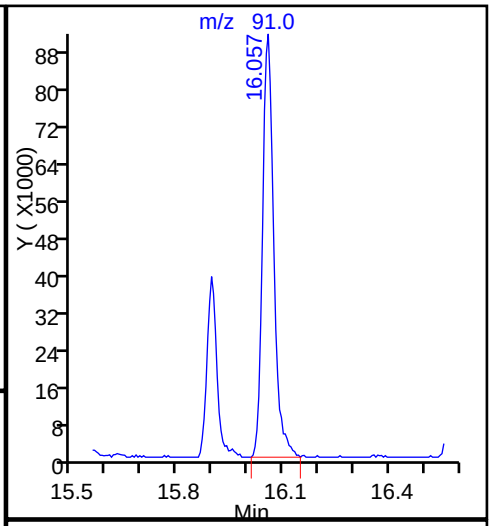


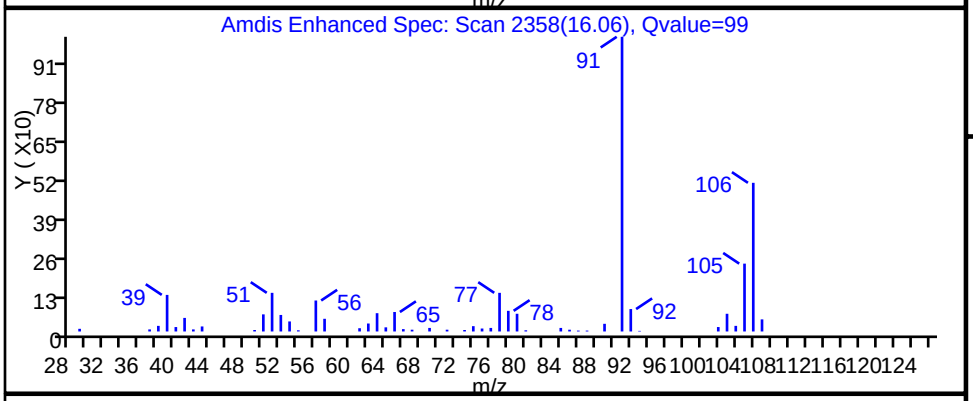
TestAmerica Knoxville

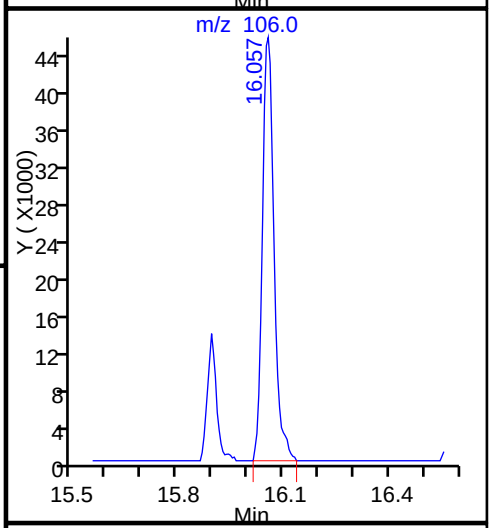
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P111.D				
Injection Date:	10-Feb-2017 22:01:30	Instrument ID:	MJ		
Lims ID:	140-7052-A-2	Lab Sample ID:	140-7052-2		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

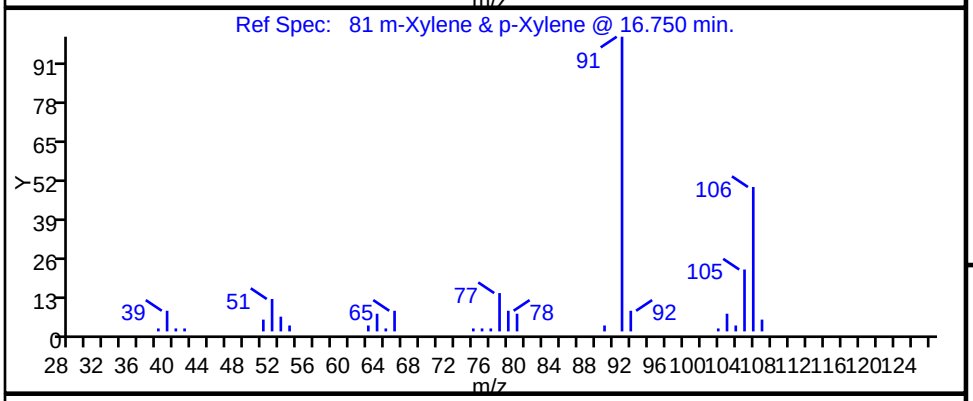
81 m-Xylene & p-Xylene, CAS: 179601-23-1

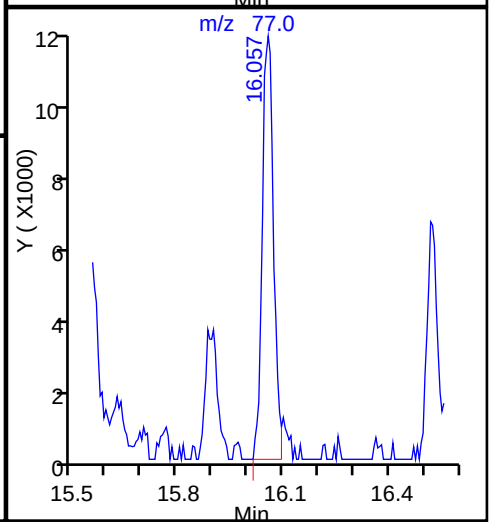


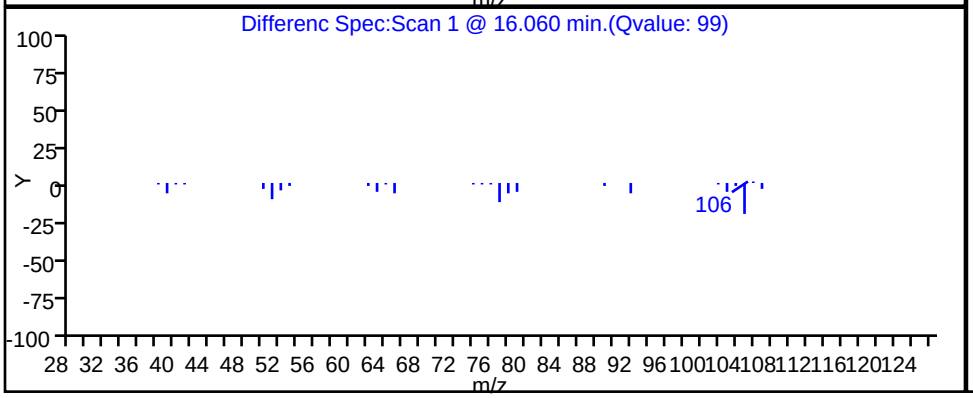








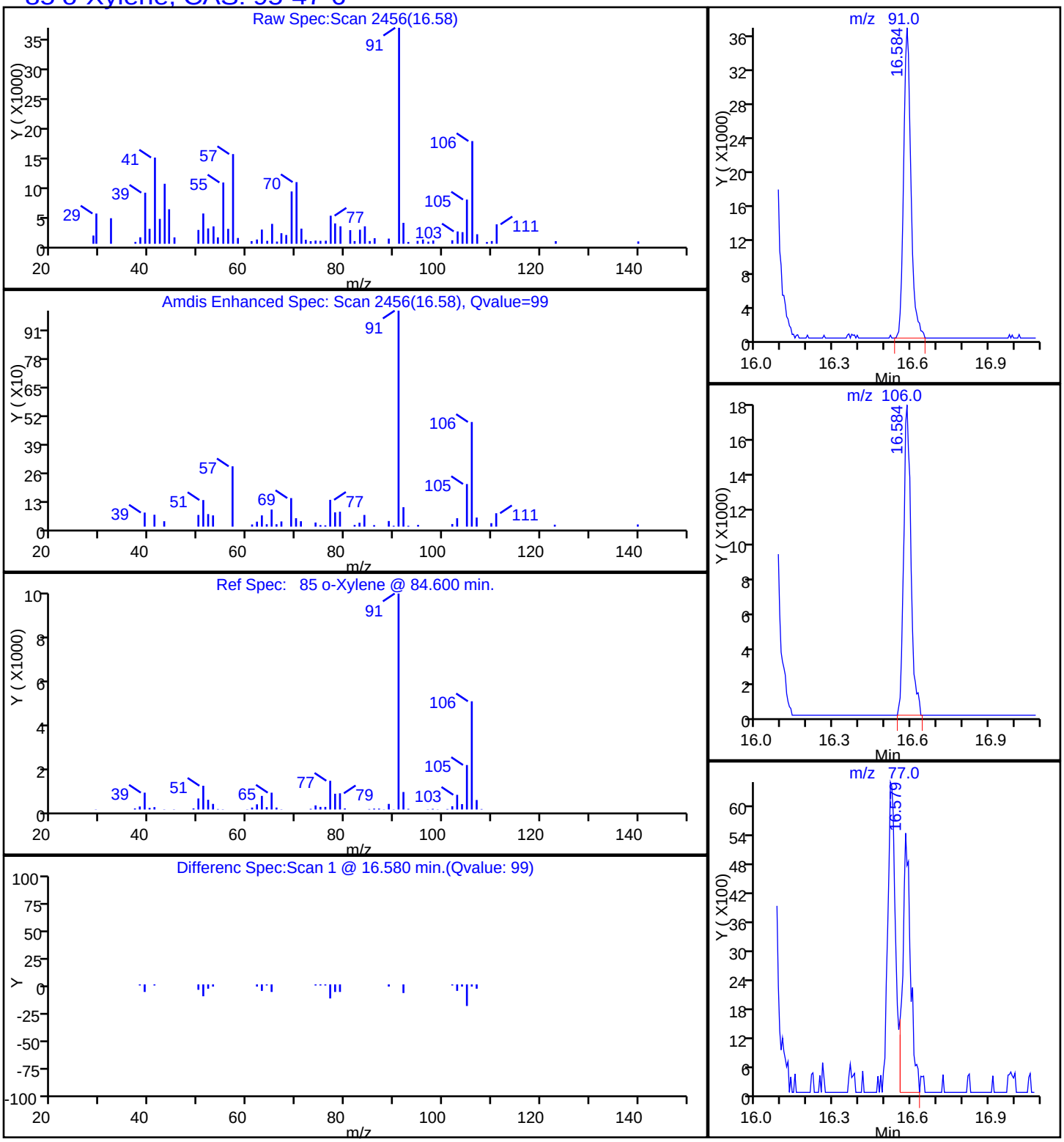




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P111.D		
Injection Date:	10-Feb-2017 22:01:30	Instrument ID:	MJ
Lims ID:	140-7052-A-2	Lab Sample ID:	140-7052-2
Client ID:	BLDG-A MIDGAC		
Operator ID:	7126	ALS Bottle#:	11 Worklist Smp#: 19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

85 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Client Sample ID: BLDG-A EFFLUENT Lab Sample ID: 140-7052-3

Matrix: Air Lab File ID: JB10P112.D

Analysis Method: TO 15 LL Date Collected: 02/08/2017 14:33

Sample wt/vol: 100(mL) Date Analyzed: 02/10/2017 22:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8433 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.40		0.40	0.075
67-66-3	Chloroform	119.38	0.086	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	9.2		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.70		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	1.8		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.75	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.67		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	14		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	3.3		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.21	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.73	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Client Sample ID: BLDG-A EFFLUENT Lab Sample ID: 140-7052-3

Matrix: Air Lab File ID: JB10P112.D

Analysis Method: TO 15 LL Date Collected: 02/08/2017 14:33

Sample wt/vol: 100(mL) Date Analyzed: 02/10/2017 22:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8433 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.39	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4		1.4	0.27
67-66-3	Chloroform	119.38	0.42	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	37		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	ND		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	2.8		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	7.0		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.67	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.6	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	75		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	18		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.0	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P112.D				
Lims ID:	140-7052-A-3				
Client ID:	BLDG-A EFFLUENT				
Sample Type:	Client				
Inject. Date:	10-Feb-2017 22:47:30	ALS Bottle#:	12	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004010-020				
Misc. Info.:	140-7052-a-3				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	15-Feb-2017 18:28:29	Calib Date:	26-Nov-2016 01:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK020				
First Level Reviewer: barlozhetskayaa		Date:	15-Feb-2017 18:28:29		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.580	8.579	0.001	98	355441	4.00	
* 2 1,4-Difluorobenzene	114	10.780	10.779	0.001	95	1449830	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.557	15.556	0.001	87	1117042	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.203	17.202	0.001	96	583515	3.30	
6 Chlorodifluoromethane	67	3.571	3.560	0.011	96	2585	0.0806	
27 1,1-Dichloroethene	96	5.723	5.722	0.001	97	37781	0.3531	
31 Methylene Chloride	84	6.062	6.067	-0.004	96	15662	0.1495	
37 1,1-Dichloroethane	63	7.278	7.282	-0.004	99	28569	0.1398	
42 cis-1,2-Dichloroethene	96	8.246	8.256	-0.010	97	196022	1.85	
44 Chloroform	83	8.596	8.595	0.001	35	3828	0.0172	
47 1,1,1-Trichloroethane	97	9.612	9.617	-0.005	97	629293	2.73	
51 Benzene	78	10.220	10.225	-0.005	79	6482	0.0246	
59 Trichloroethene	130	11.506	11.500	0.006	99	80818	0.6520	
68 Toluene	91	13.572	13.571	0.001	92	32193	0.1340	
79 Ethylbenzene	91	15.896	15.895	0.001	96	8735	0.0307	
81 m-Xylene & p-Xylene	91	16.052	16.056	-0.004	81	22967	0.1093	M
85 o-Xylene	91	16.590	16.583	0.007	94	8164	0.0360	
96 1,2,4-Trimethylbenzene	105	18.386	18.391	-0.005	97	9353	0.0419	
S 126 Xylenes, Total	100				0		0.1453	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

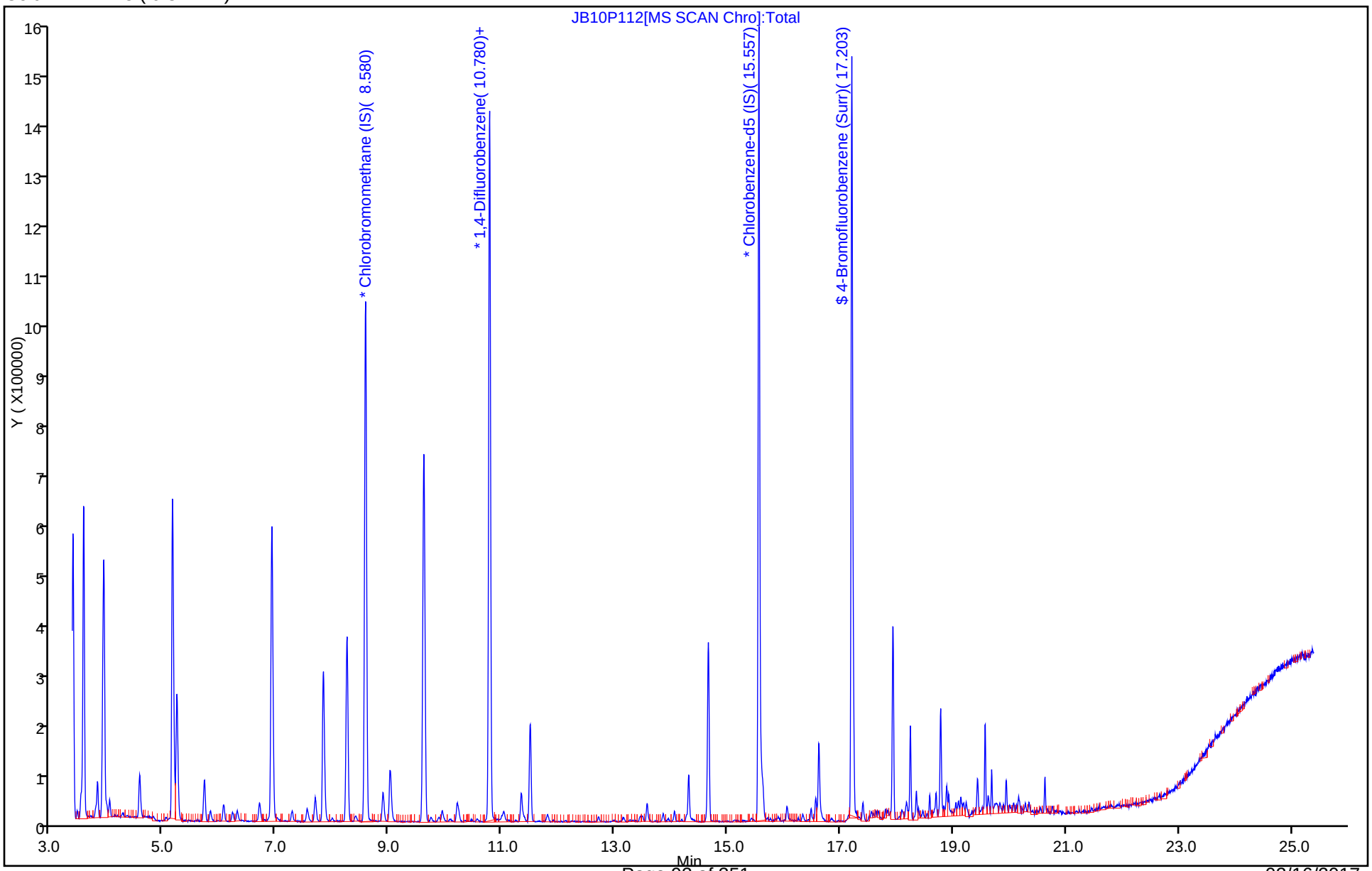
Report Date: 15-Feb-2017 18:29:16 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P112.D

Injection Date:	10-Feb-2017 22:47:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-7052-A-3	Lab Sample ID:	140-7052-3	Worklist Smp#:	20
Client ID:	BLDG-A EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P112.D				
Lims ID:	140-7052-A-3				
Client ID:	BLDG-A EFFLUENT				
Sample Type:	Client				
Inject. Date:	10-Feb-2017 22:47:30	ALS Bottle#:	12	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004010-020				
Misc. Info.:	140-7052-a-3				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	15-Feb-2017 18:28:29	Calib Date:	26-Nov-2016 01:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK020				

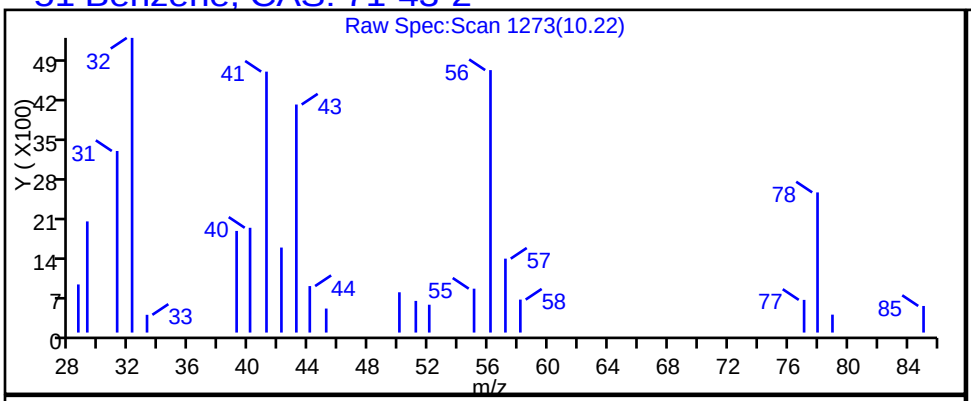
First Level Reviewer: barlozhetskayaa Date: 15-Feb-2017 18:28:29

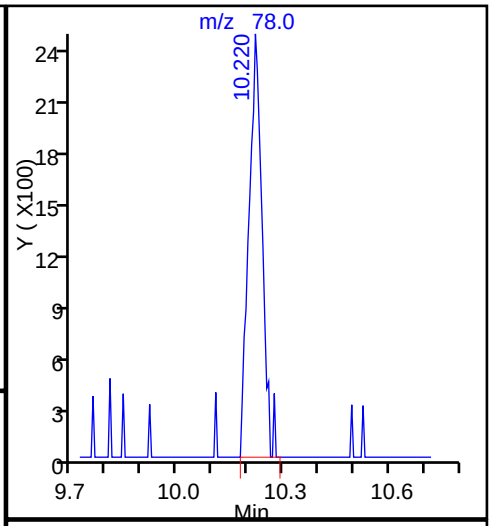
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.30	82.47

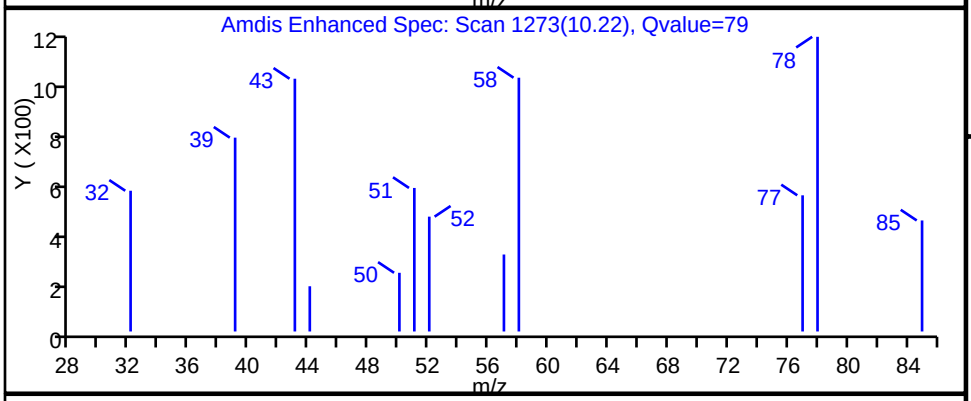
TestAmerica Knoxville

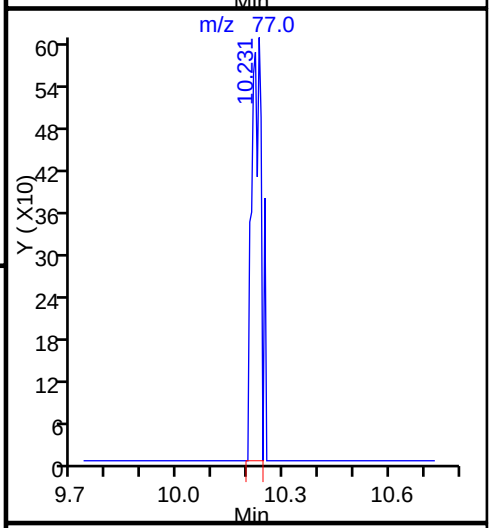
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P112.D		
Injection Date:	10-Feb-2017 22:47:30	Instrument ID:	MJ
Lims ID:	140-7052-A-3	Lab Sample ID:	140-7052-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	12 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

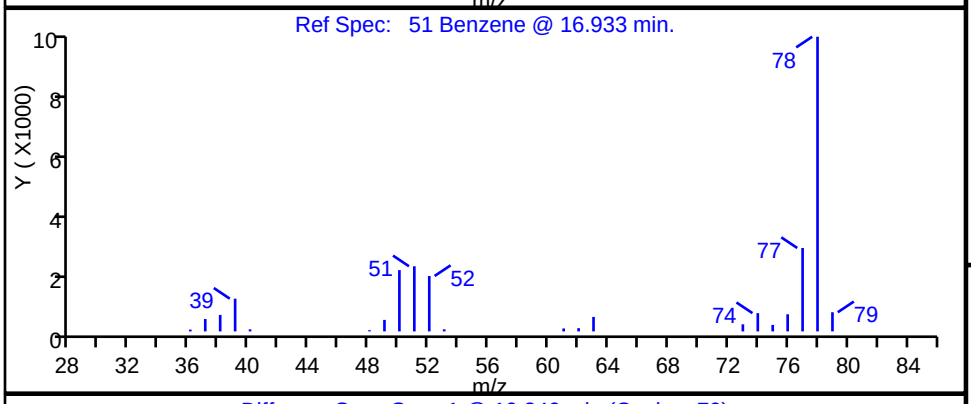
51 Benzene, CAS: 71-43-2

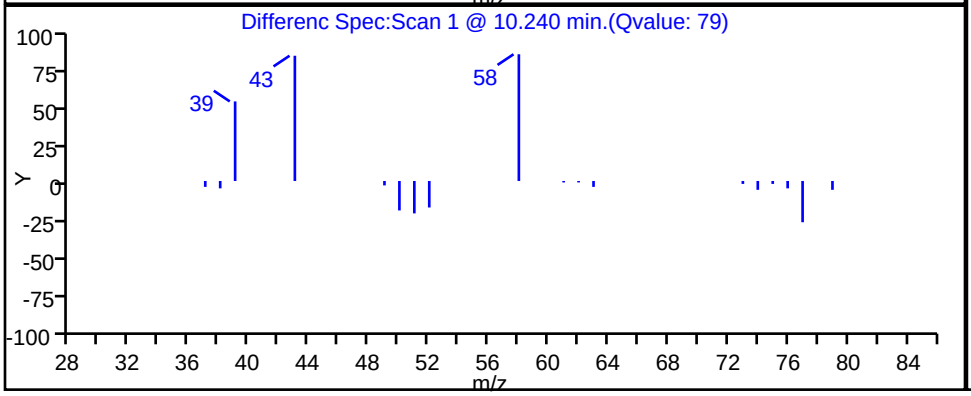


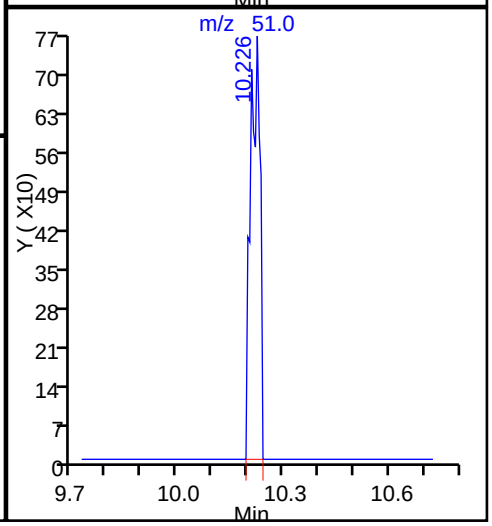












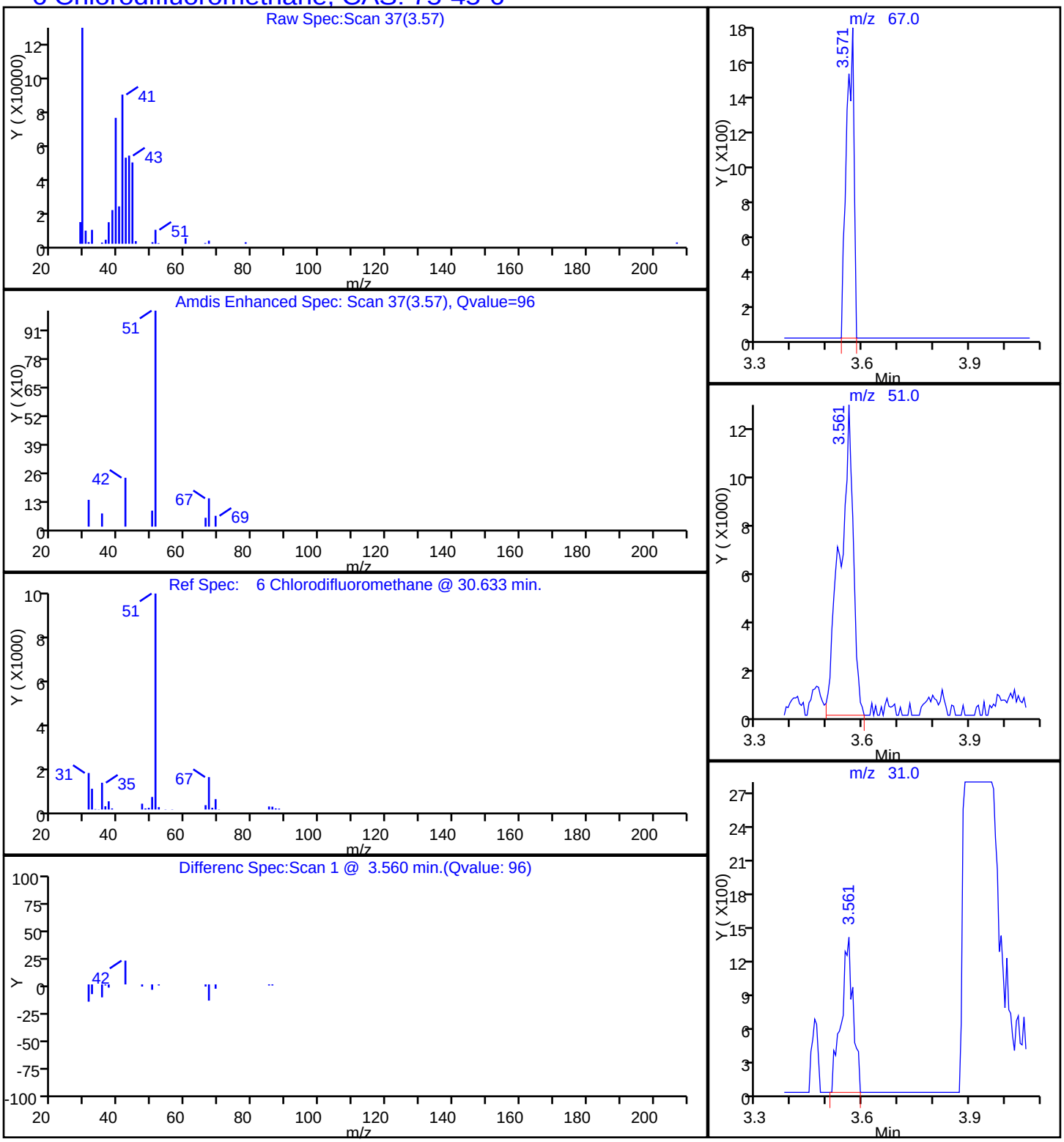
Report Date: 15-Feb-2017 18:29:16 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P112.D

Injection Date:	10-Feb-2017 22:47:30	Instrument ID:	MJ		
Lims ID:	140-7052-A-3	Lab Sample ID:	140-7052-3		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	12	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

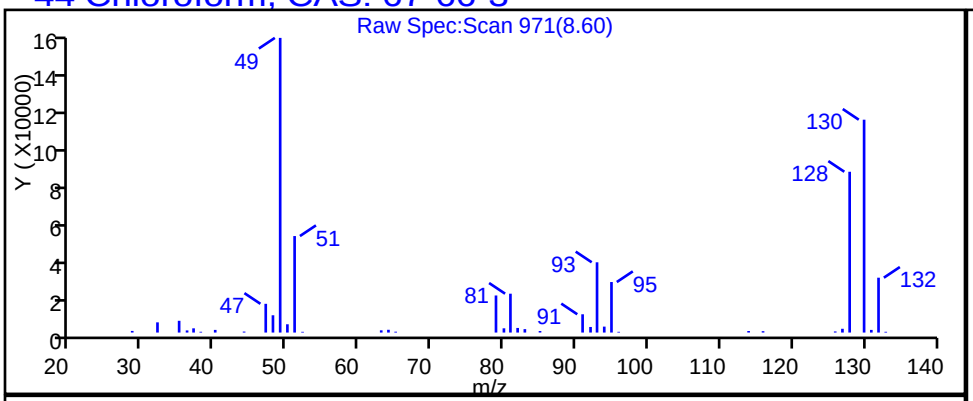
6 Chlorodifluoromethane, CAS: 75-45-6

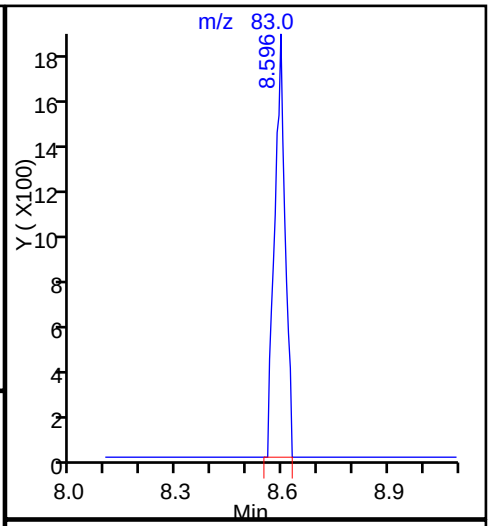


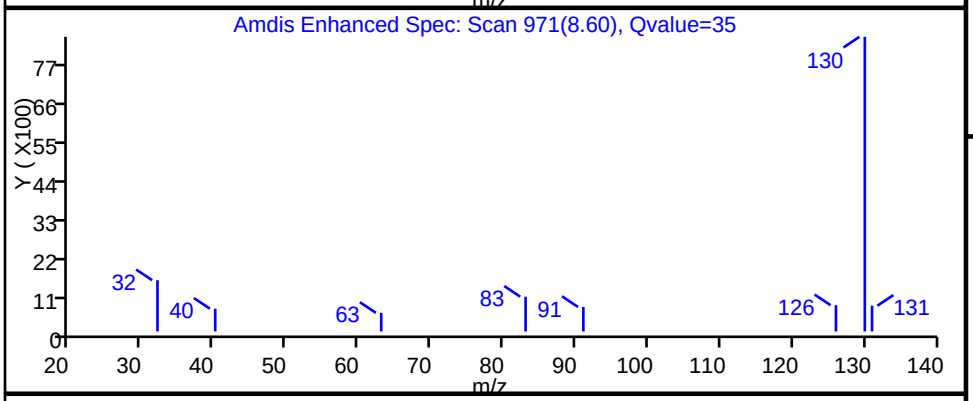
TestAmerica Knoxville

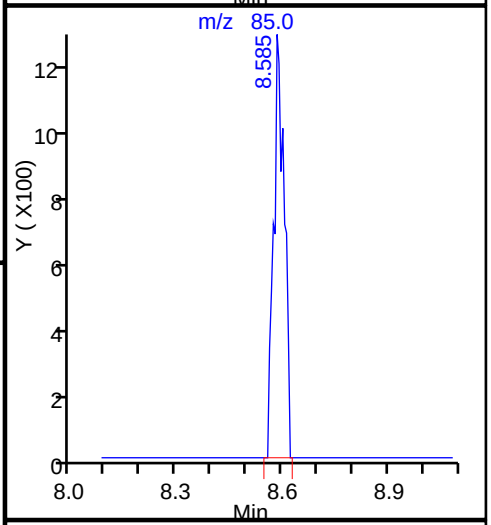
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P112.D		
Injection Date:	10-Feb-2017 22:47:30	Instrument ID:	MJ
Lims ID:	140-7052-A-3	Lab Sample ID:	140-7052-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	12 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

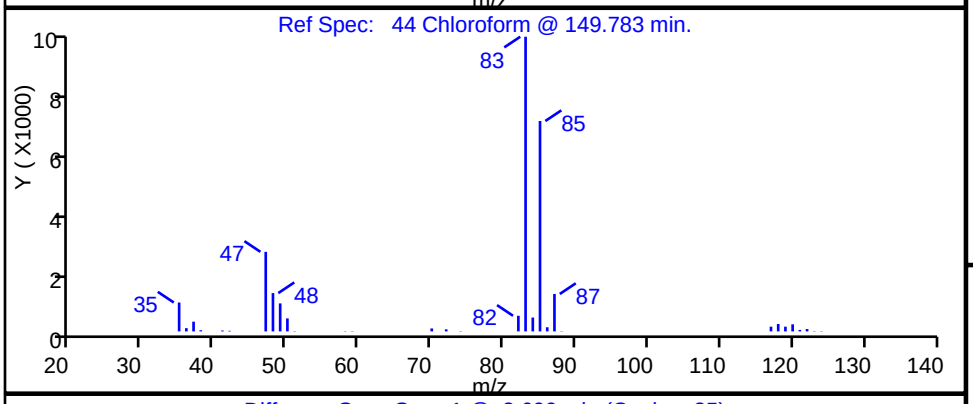
44 Chloroform, CAS: 67-66-3

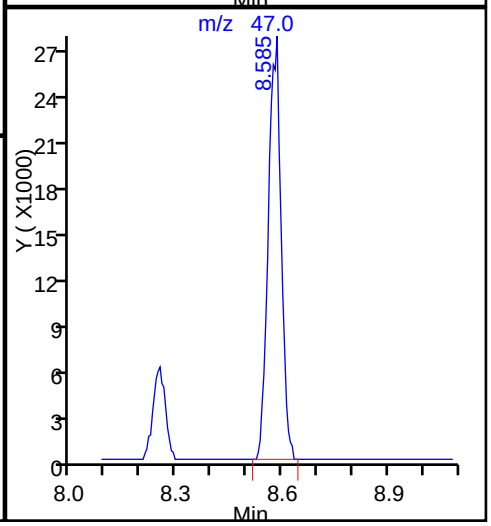


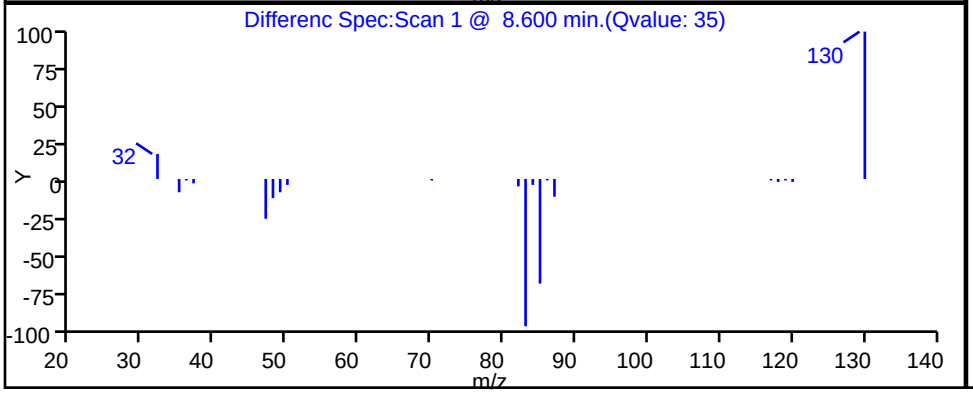








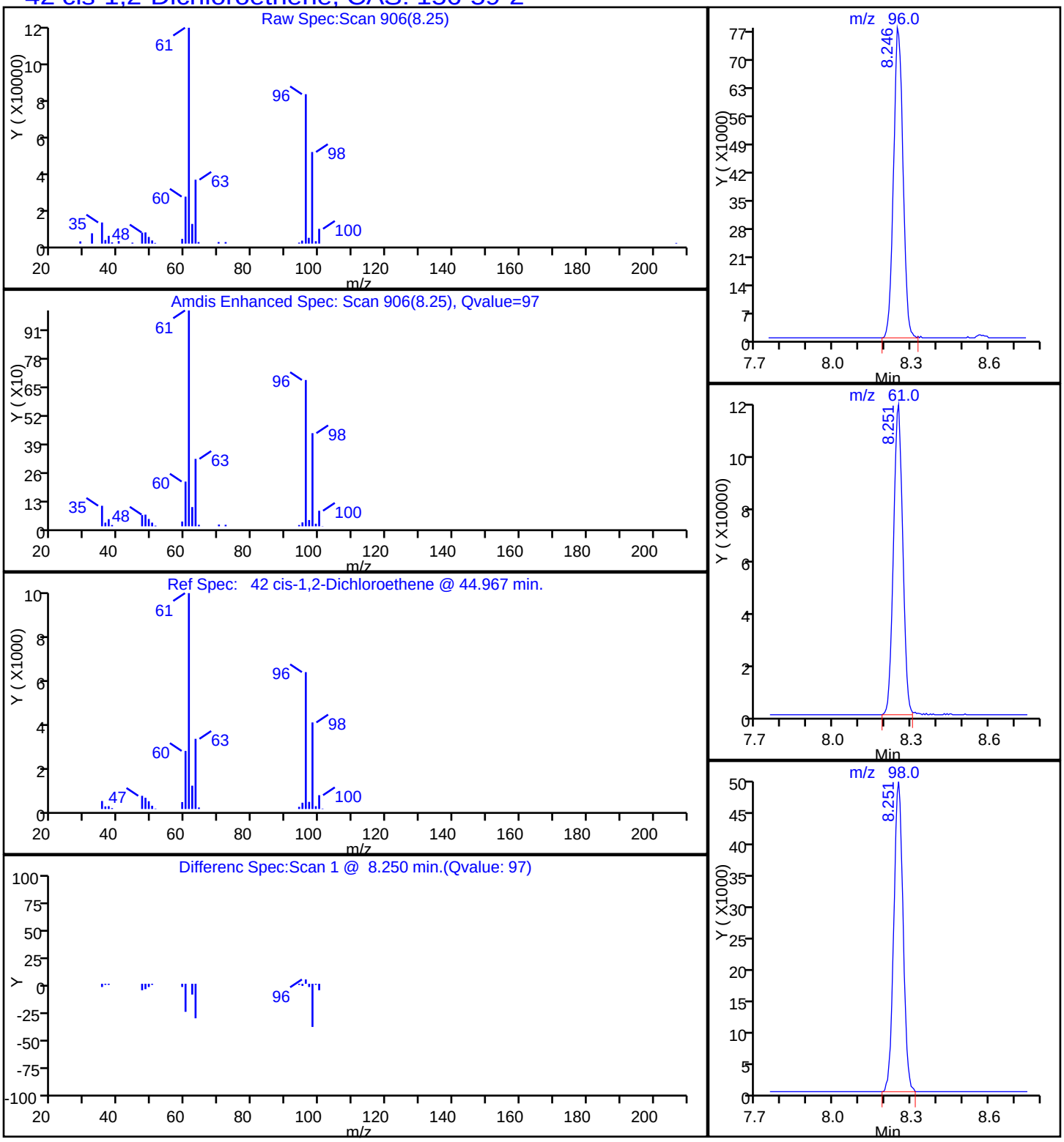




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P112.D		
Injection Date:	10-Feb-2017 22:47:30	Instrument ID:	MJ
Lims ID:	140-7052-A-3	Lab Sample ID:	140-7052-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	12 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

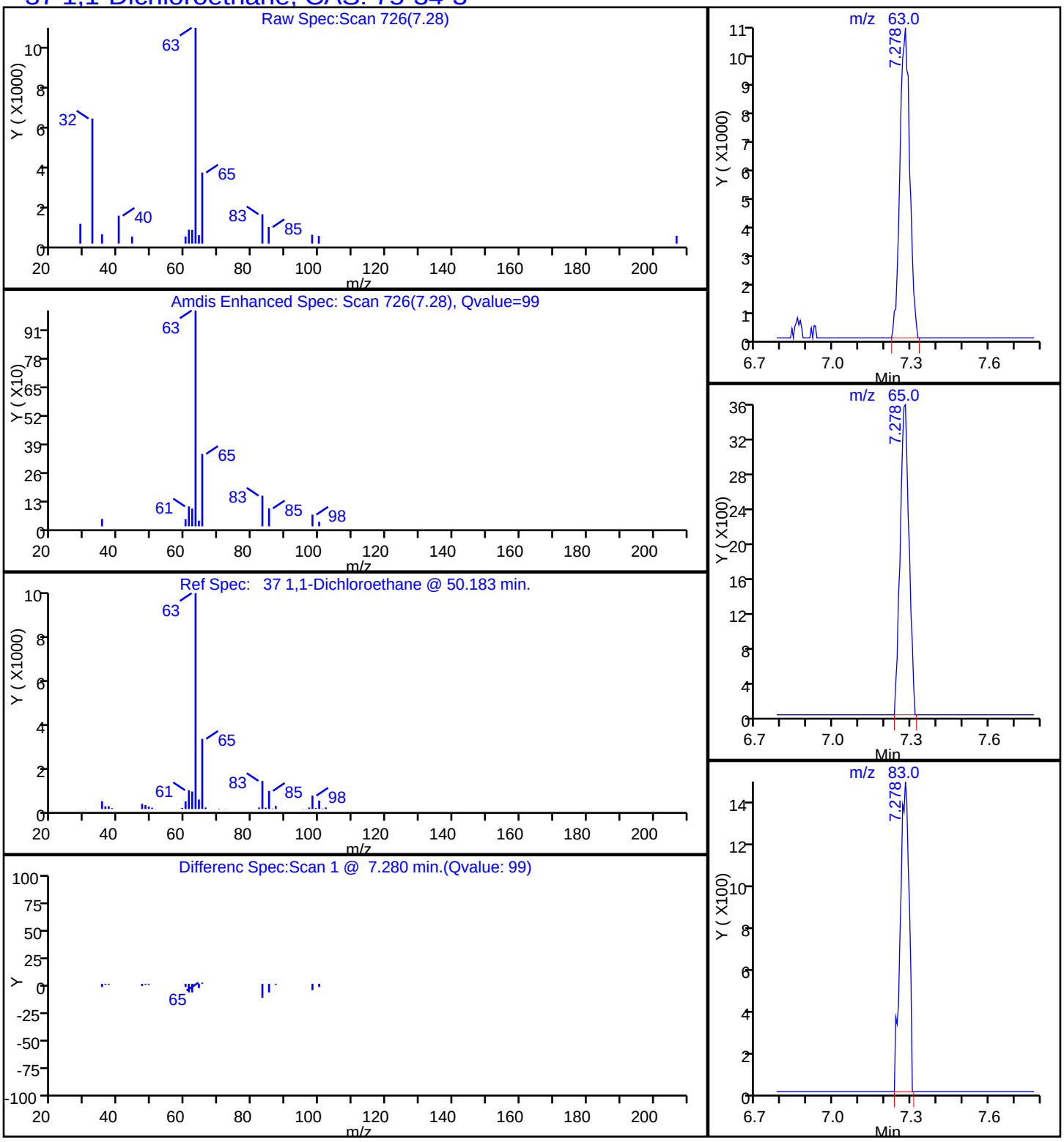
42 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P112.D		
Injection Date:	10-Feb-2017 22:47:30	Instrument ID:	MJ
Lims ID:	140-7052-A-3	Lab Sample ID:	140-7052-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	12 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

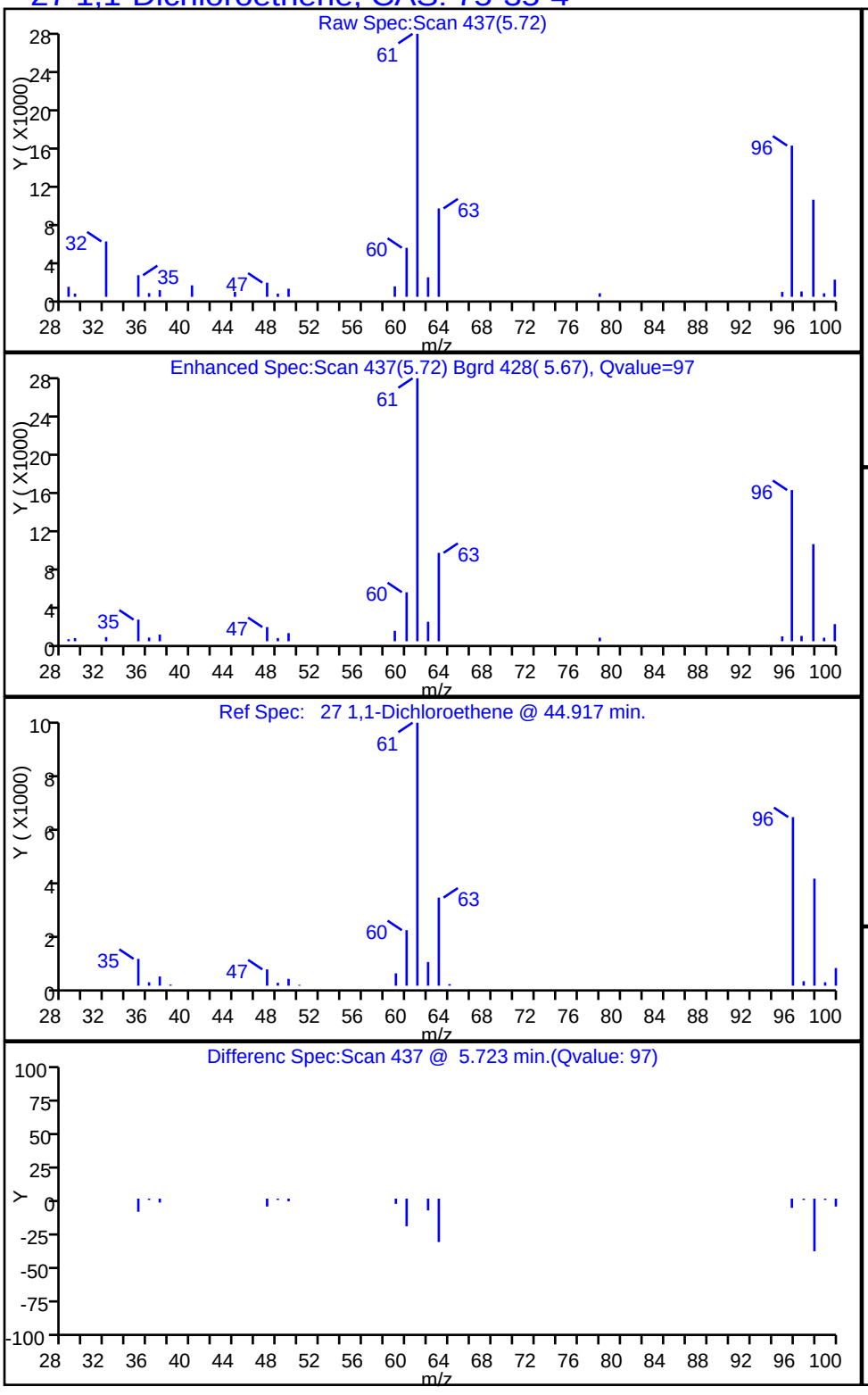
37 1,1-Dichloroethane, CAS: 75-34-3

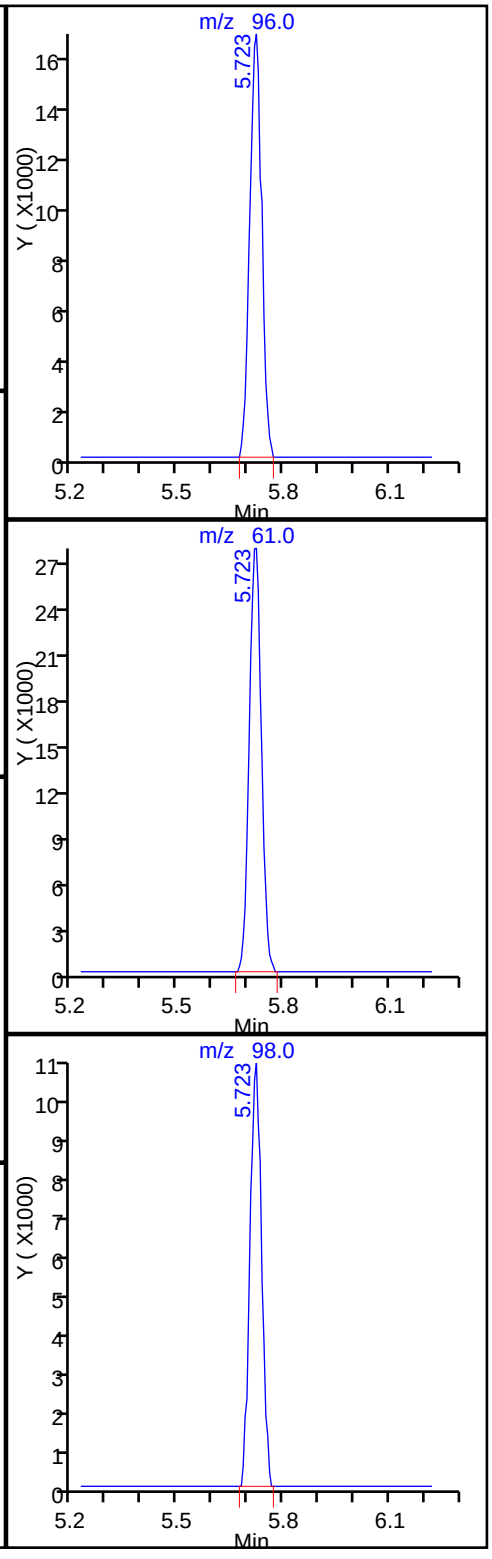


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P112.D		
Injection Date:	10-Feb-2017 22:47:30	Instrument ID:	MJ
Lims ID:	140-7052-A-3	Lab Sample ID:	140-7052-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	12 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4

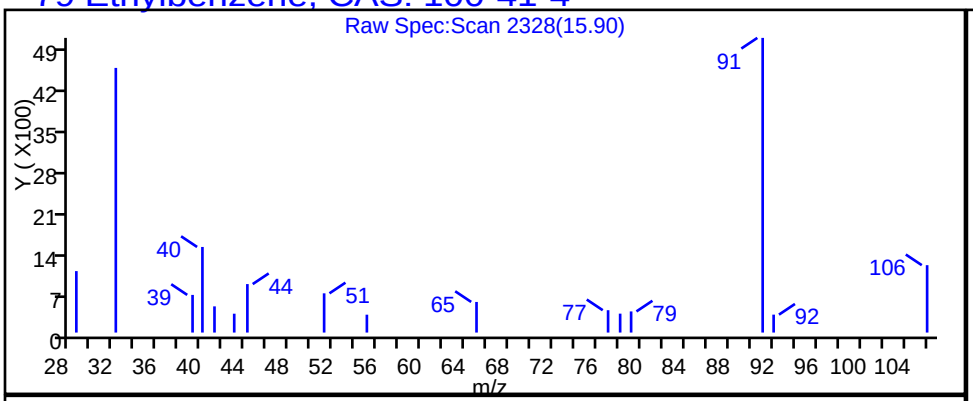


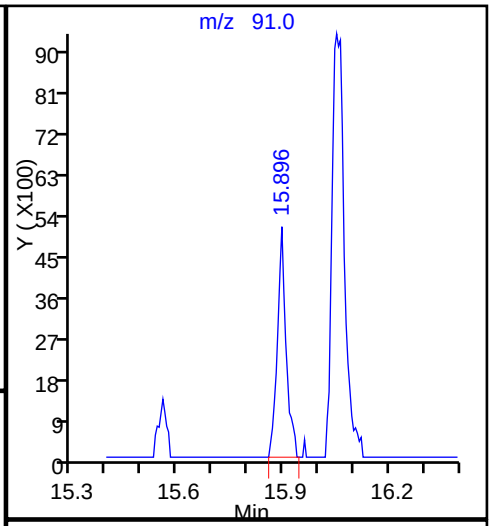


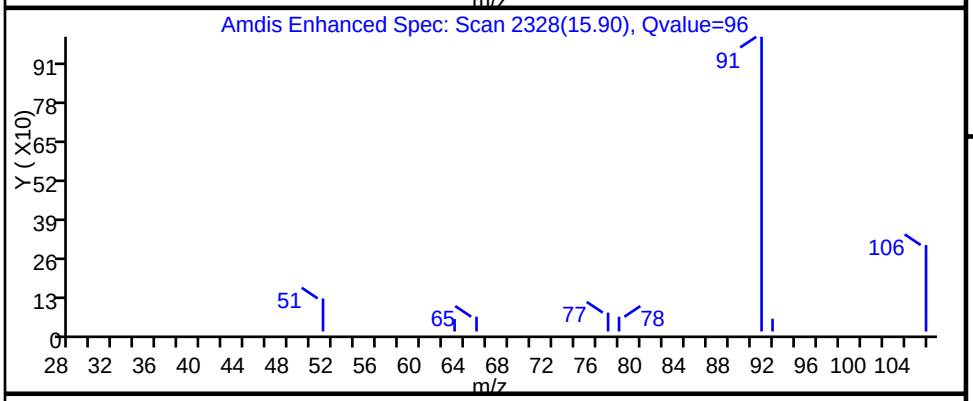
TestAmerica Knoxville

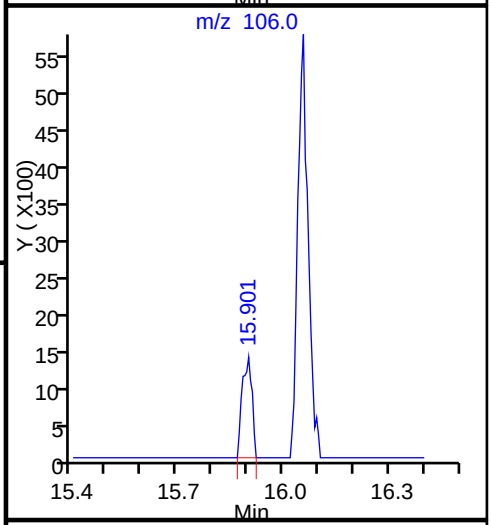
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P112.D		
Injection Date:	10-Feb-2017 22:47:30	Instrument ID:	MJ
Lims ID:	140-7052-A-3	Lab Sample ID:	140-7052-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	12 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

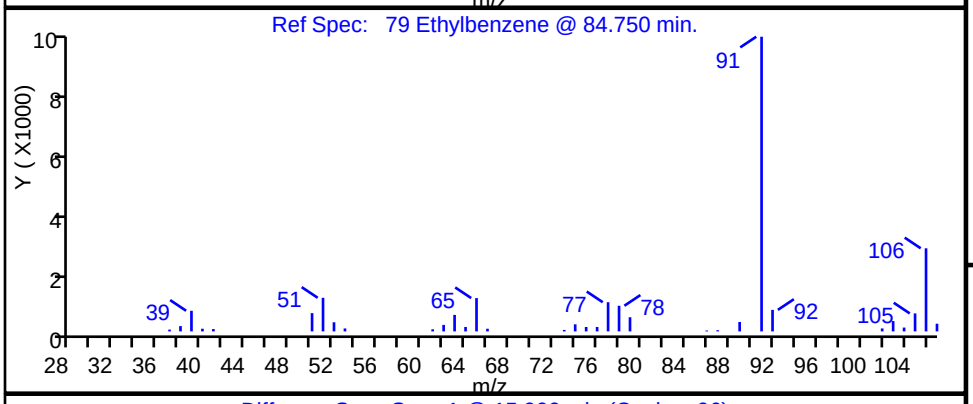
79 Ethylbenzene, CAS: 100-41-4

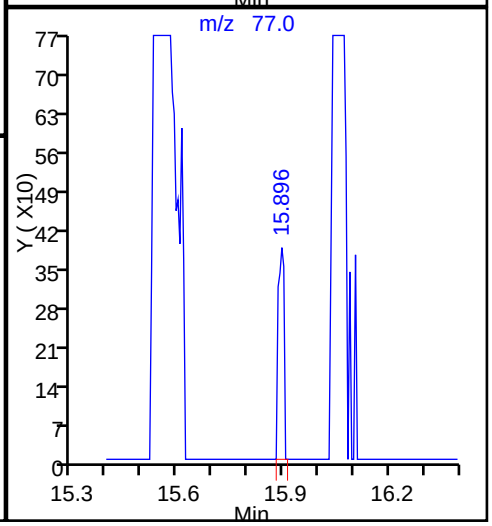


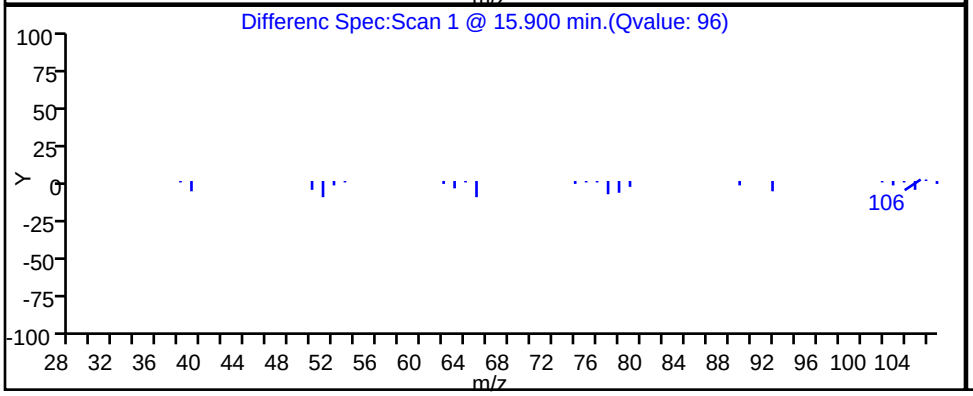








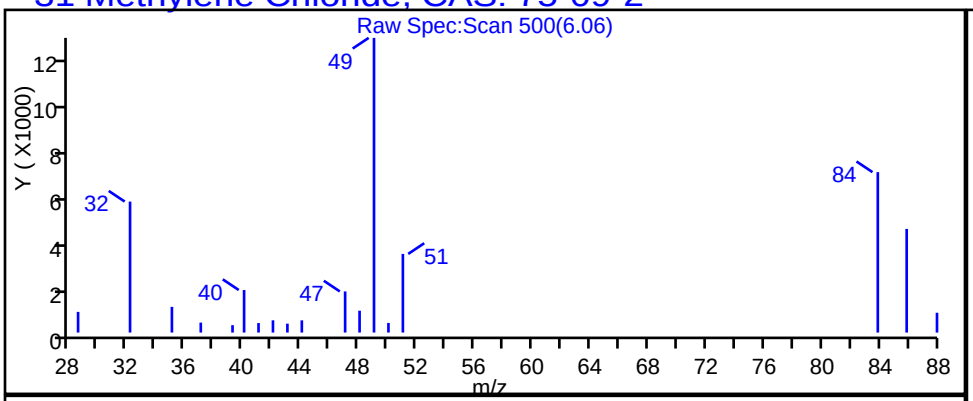


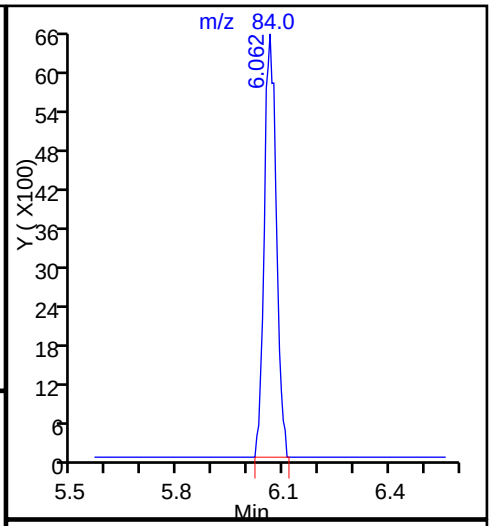


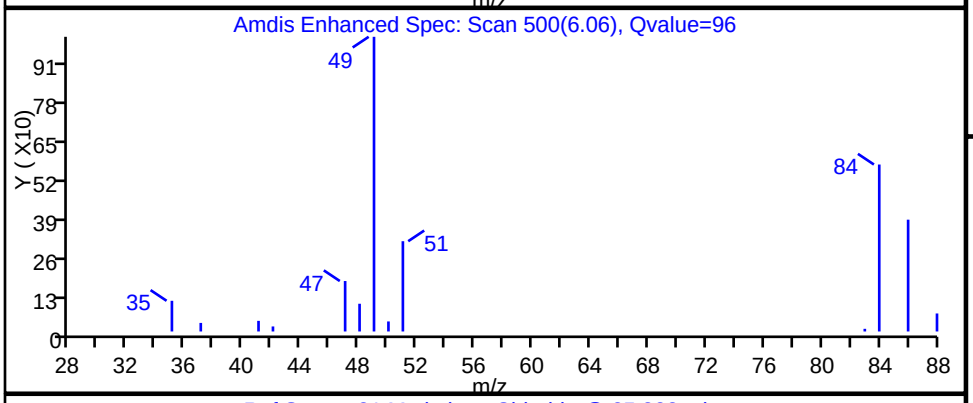
TestAmerica Knoxville

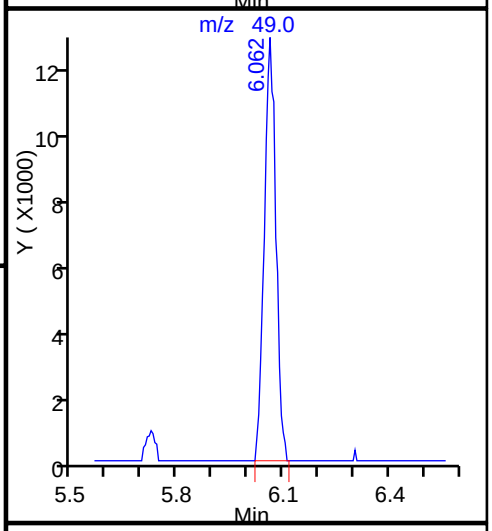
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P112.D		
Injection Date:	10-Feb-2017 22:47:30	Instrument ID:	MJ
Lims ID:	140-7052-A-3	Lab Sample ID:	140-7052-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	12 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

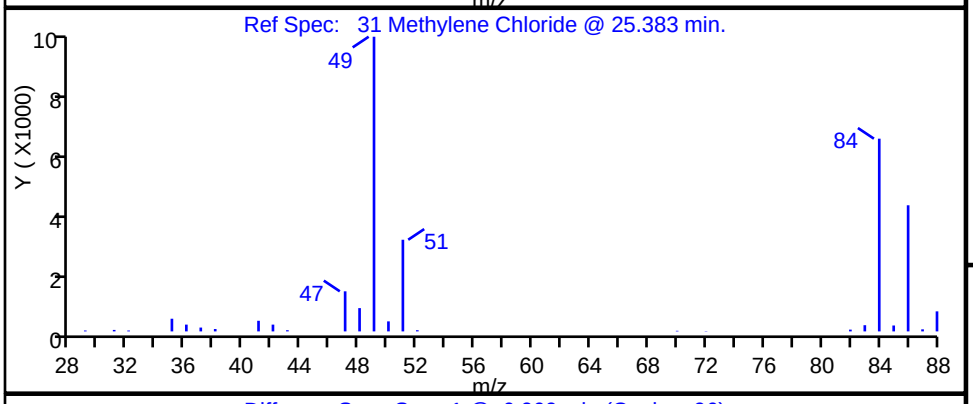
31 Methylene Chloride, CAS: 75-09-2

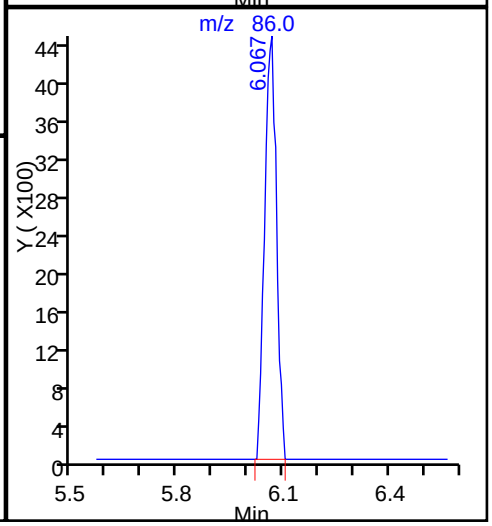


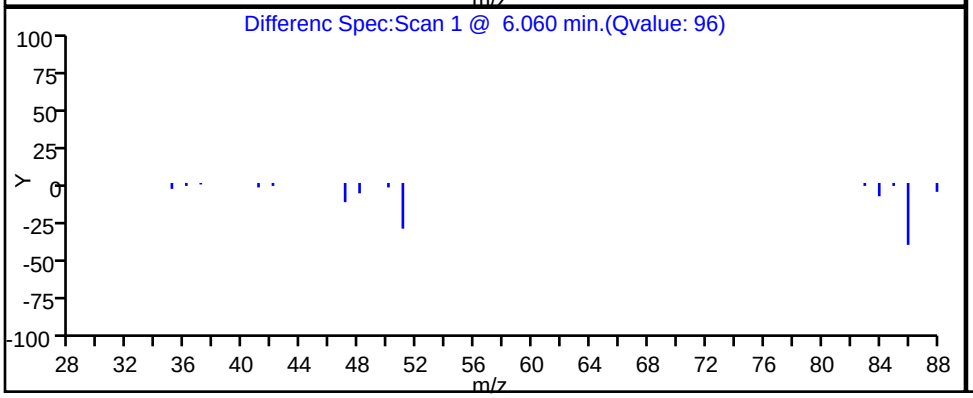








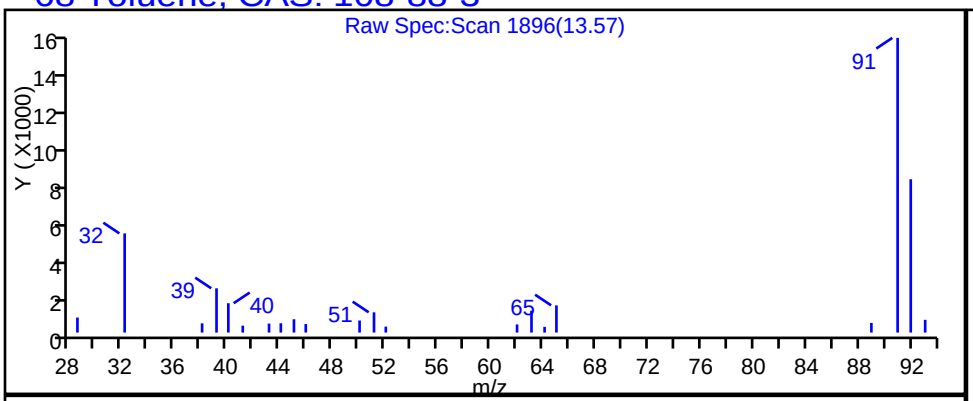


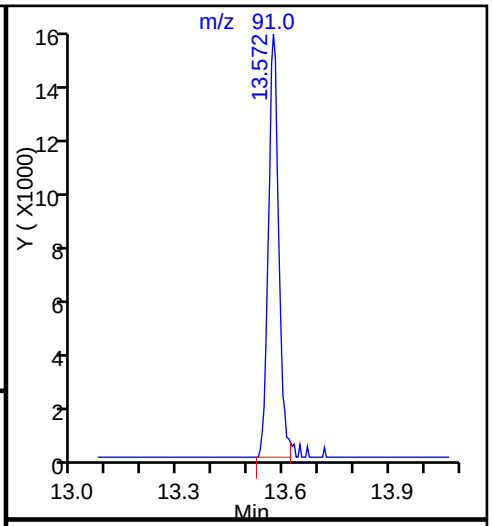


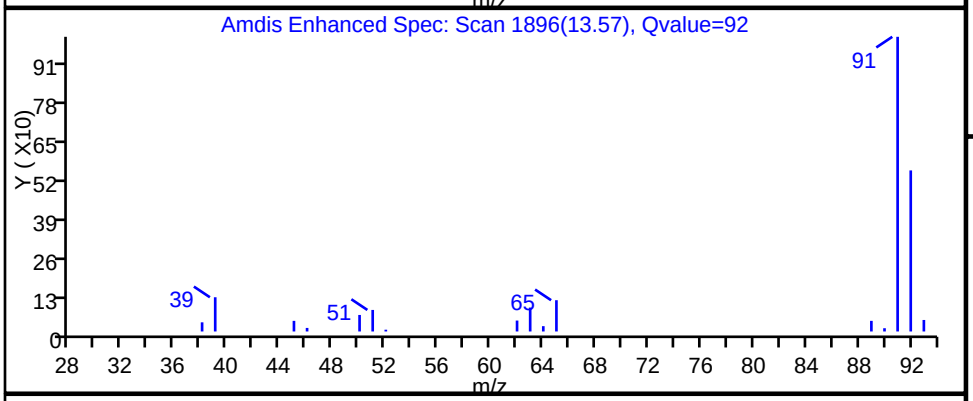
TestAmerica Knoxville

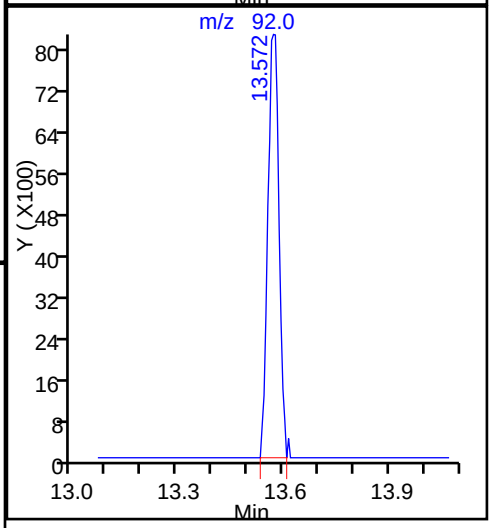
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P112.D		
Injection Date:	10-Feb-2017 22:47:30	Instrument ID:	MJ
Lims ID:	140-7052-A-3	Lab Sample ID:	140-7052-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	12 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

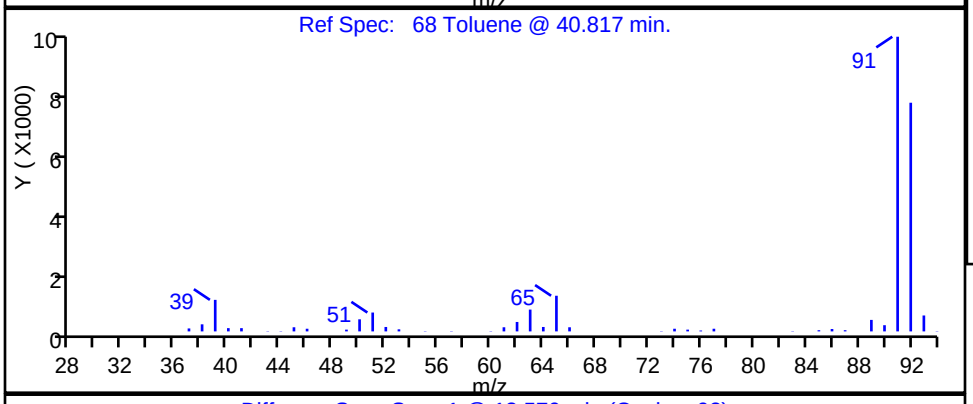
68 Toluene, CAS: 108-88-3

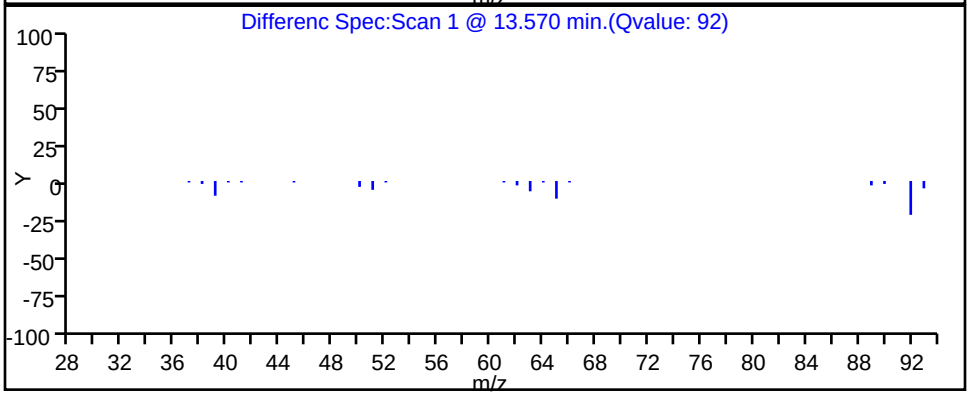








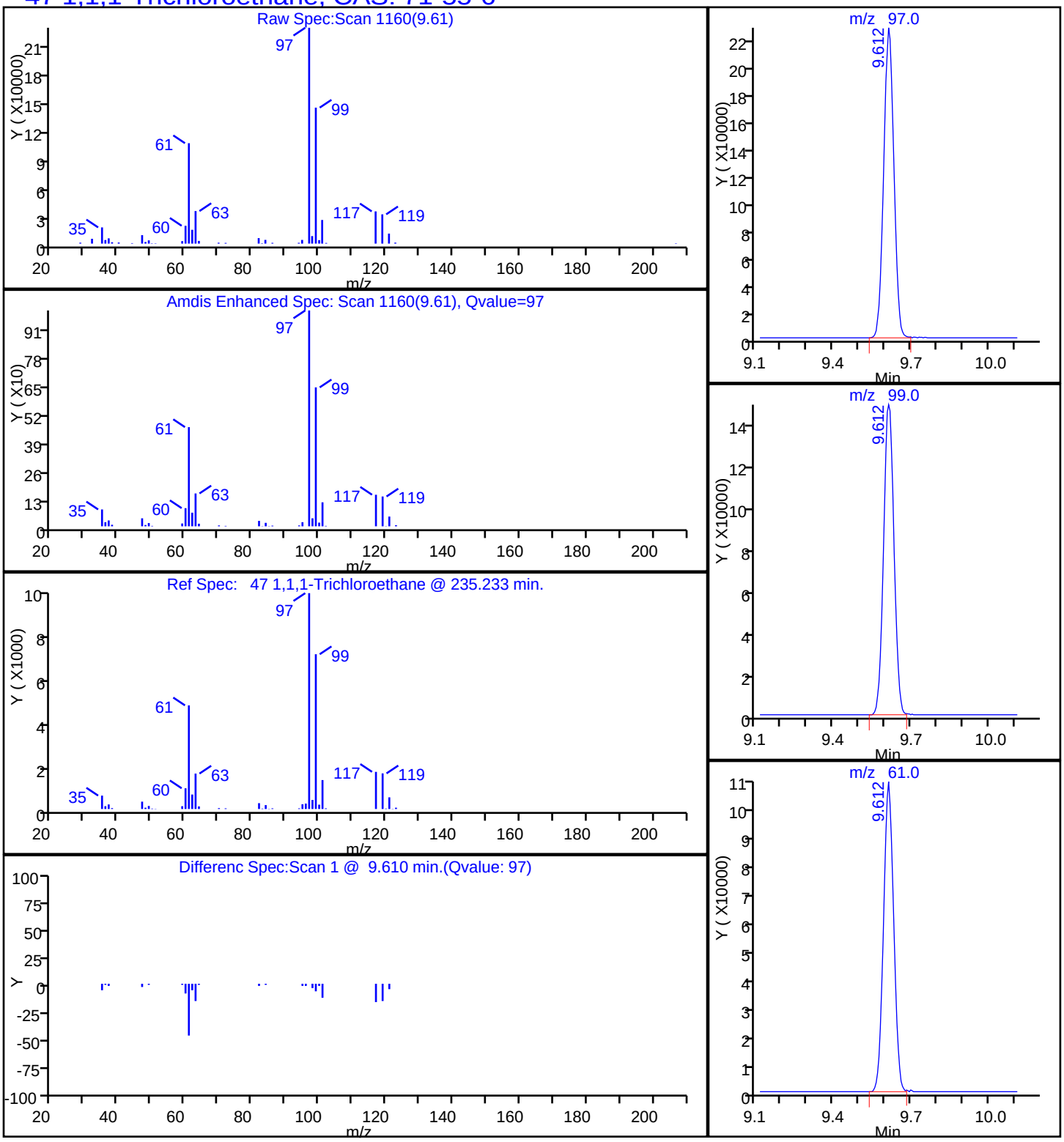




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P112.D		
Injection Date:	10-Feb-2017 22:47:30	Instrument ID:	MJ
Lims ID:	140-7052-A-3	Lab Sample ID:	140-7052-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	12 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

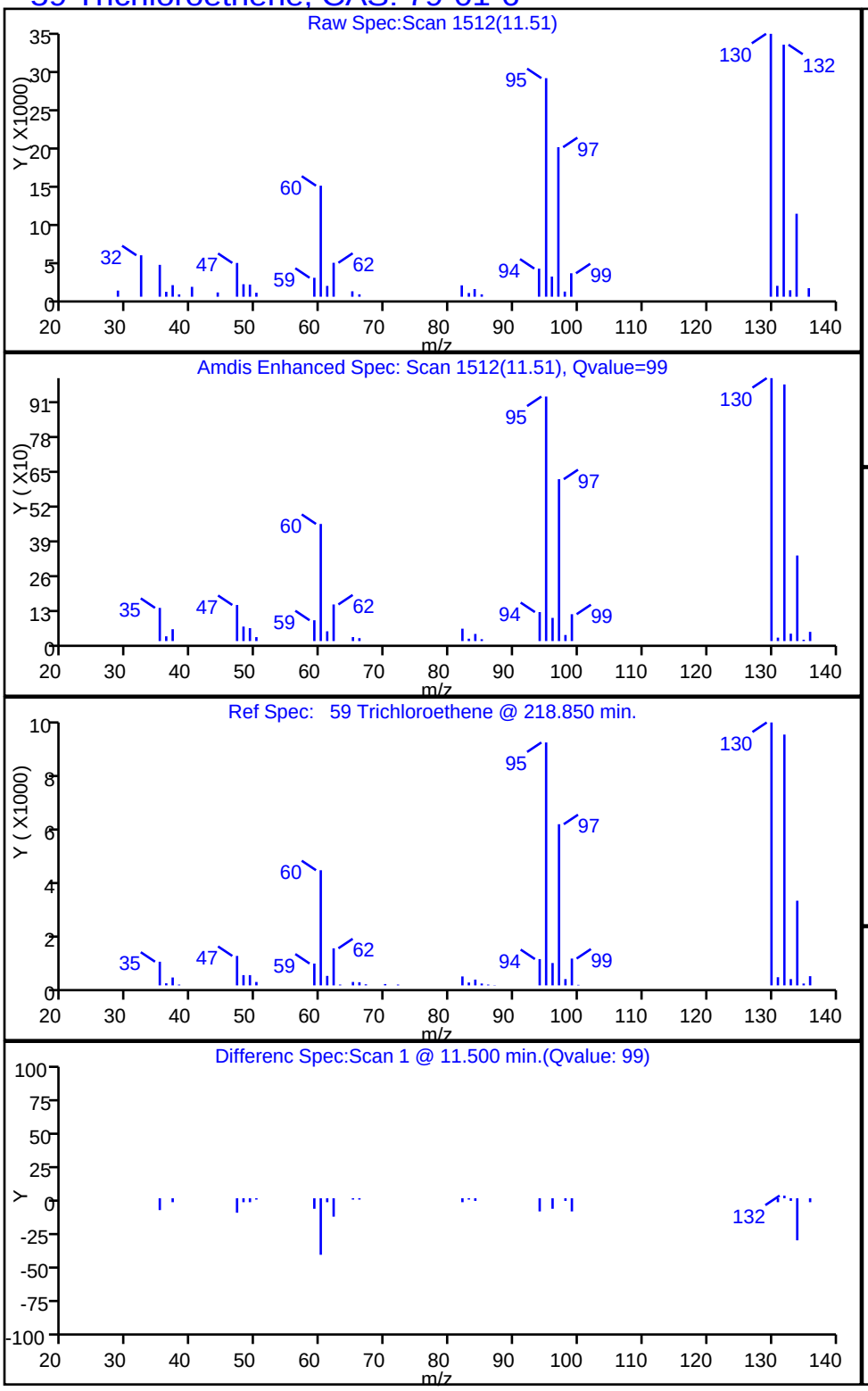
47 1,1,1-Trichloroethane, CAS: 71-55-6

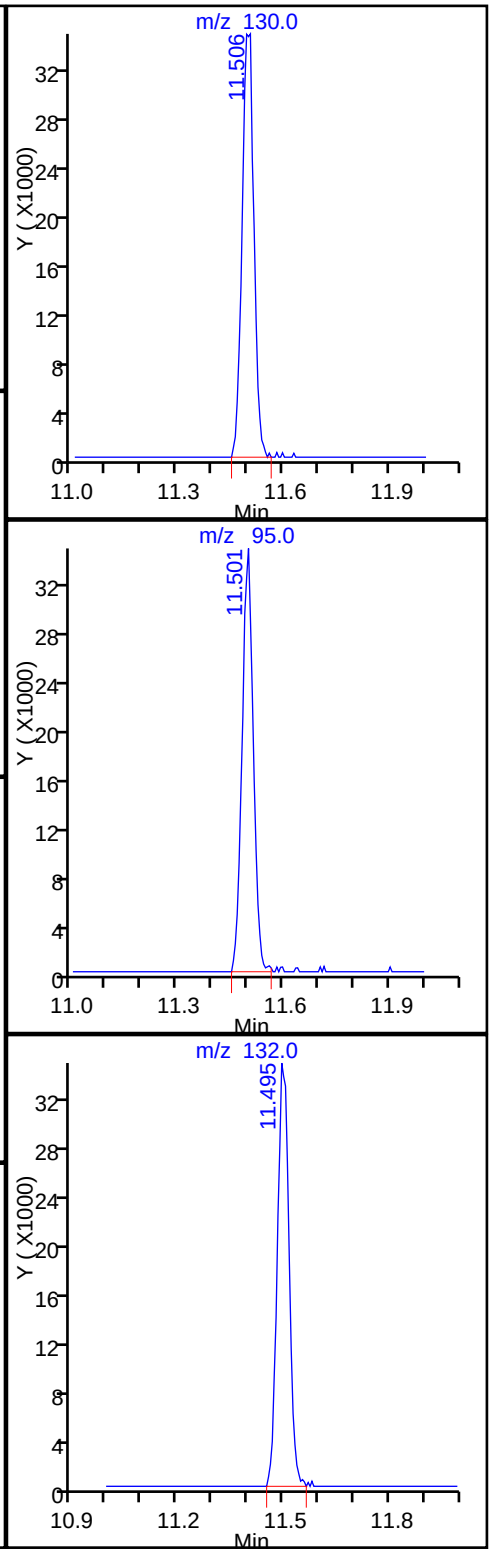


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P112.D		
Injection Date:	10-Feb-2017 22:47:30	Instrument ID:	MJ
Lims ID:	140-7052-A-3	Lab Sample ID:	140-7052-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	12 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

59 Trichloroethene, CAS: 79-01-6

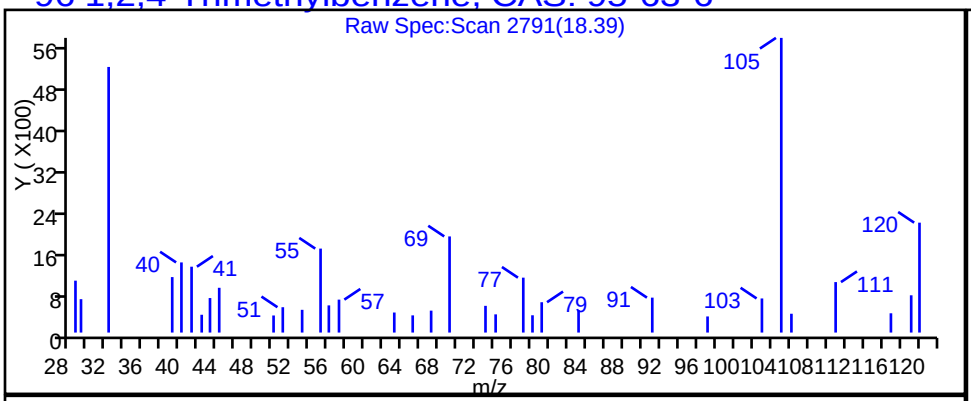


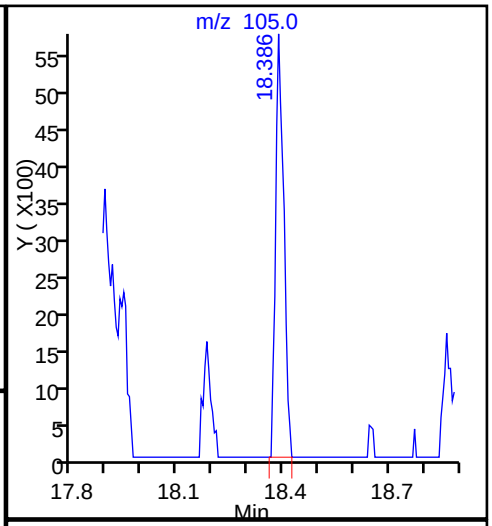


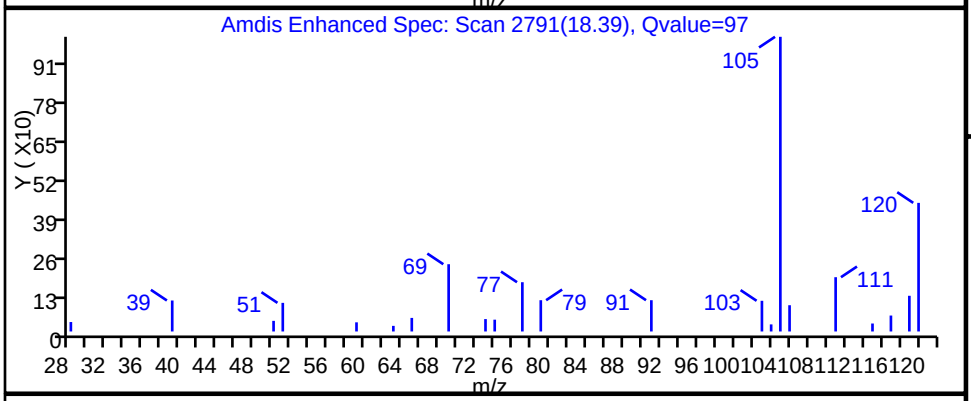
TestAmerica Knoxville

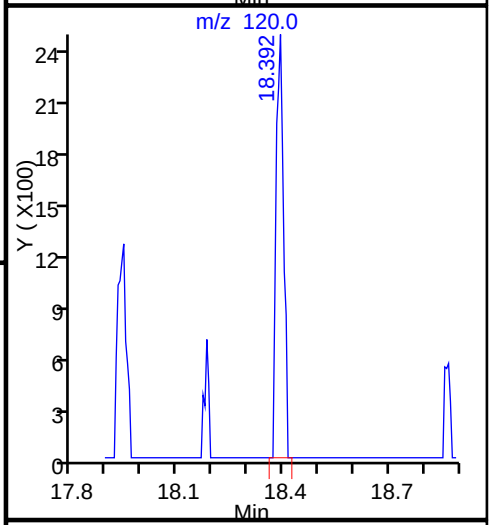
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P112.D				
Injection Date:	10-Feb-2017 22:47:30	Instrument ID:	MJ		
Lims ID:	140-7052-A-3	Lab Sample ID:	140-7052-3		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	12	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

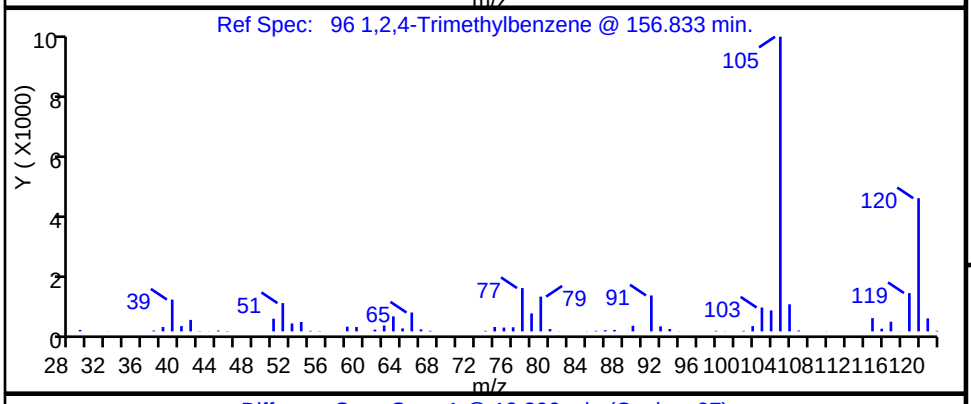
96 1,2,4-Trimethylbenzene, CAS: 95-63-6

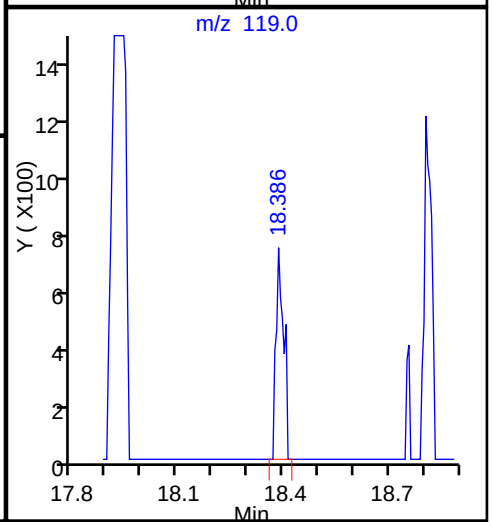


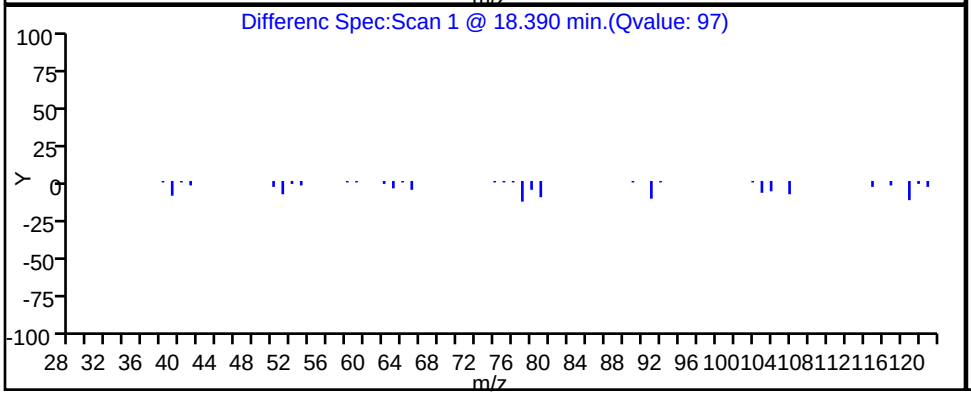








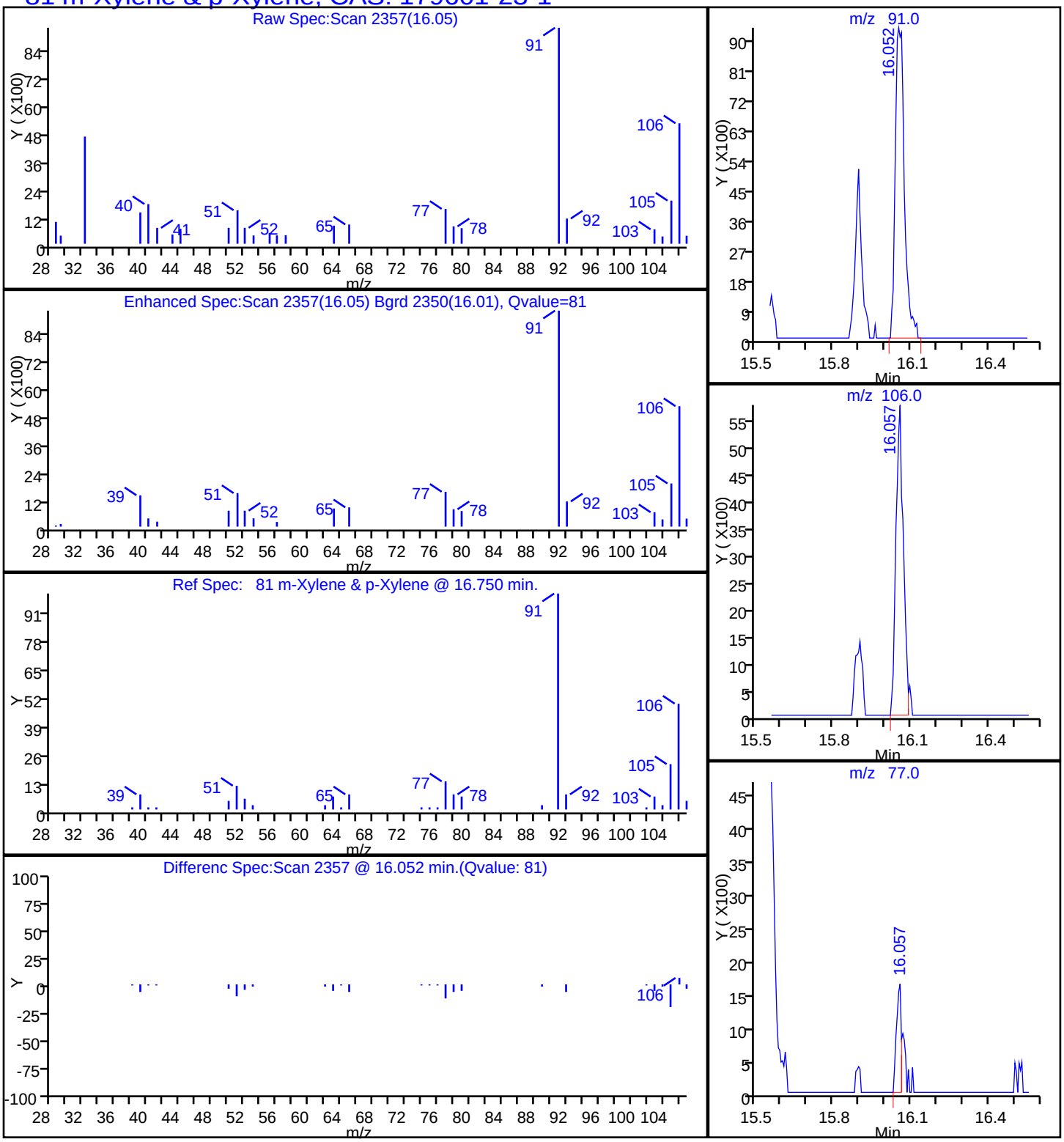




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P112.D				
Injection Date:	10-Feb-2017 22:47:30	Instrument ID:	MJ		
Lims ID:	140-7052-A-3	Lab Sample ID:	140-7052-3		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	12	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

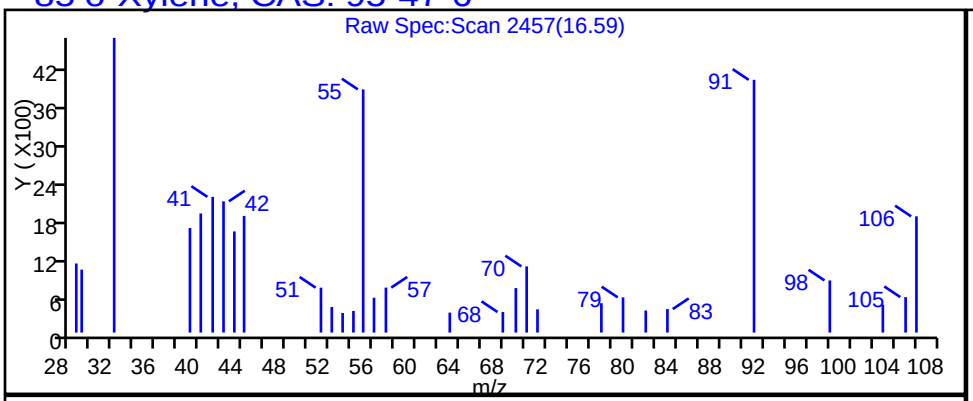
81 m-Xylene & p-Xylene, CAS: 179601-23-1

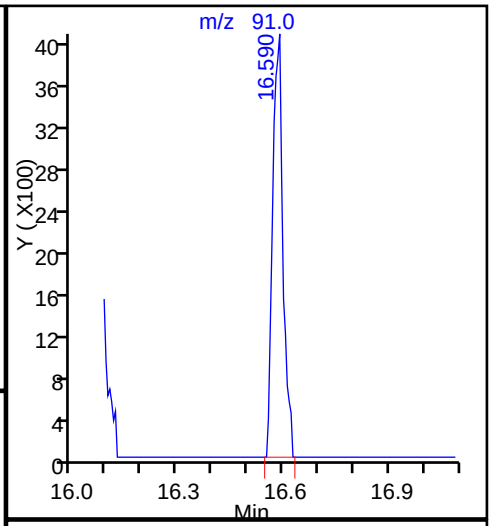


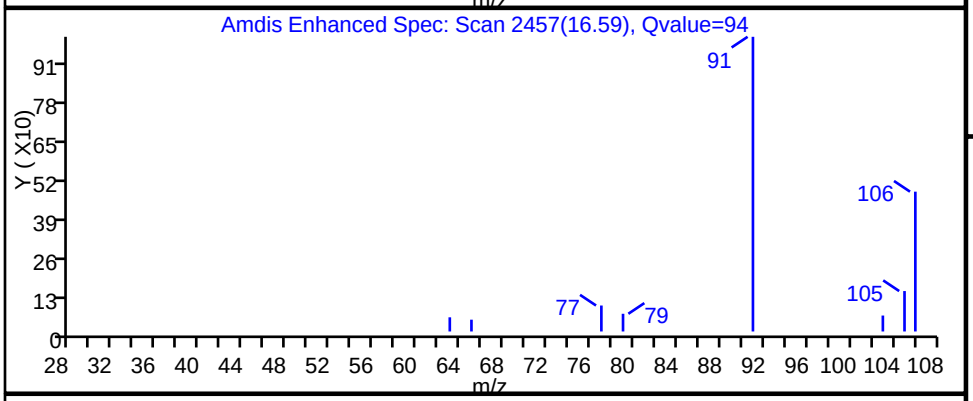
TestAmerica Knoxville

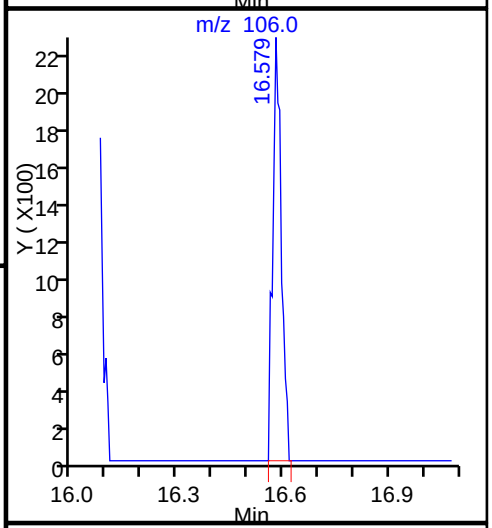
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P112.D		
Injection Date:	10-Feb-2017 22:47:30	Instrument ID:	MJ
Lims ID:	140-7052-A-3	Lab Sample ID:	140-7052-3
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	12 Worklist Smp#: 20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

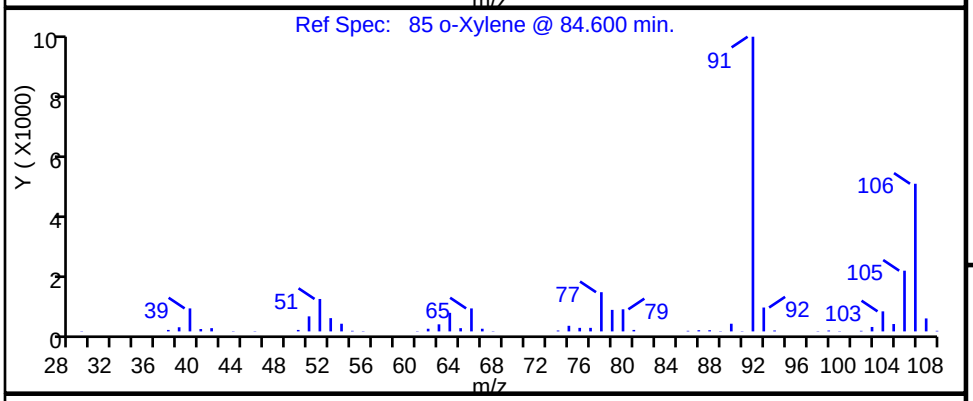
85 o-Xylene, CAS: 95-47-6

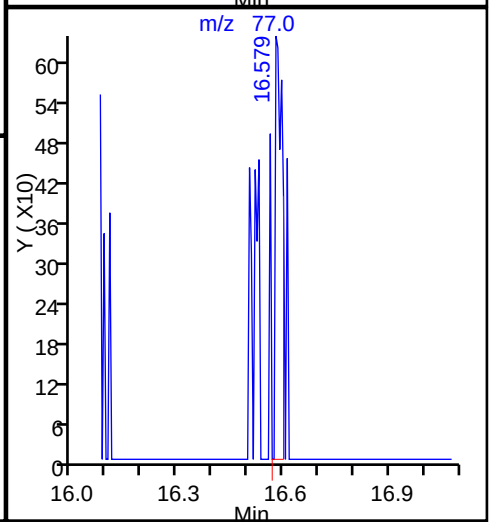


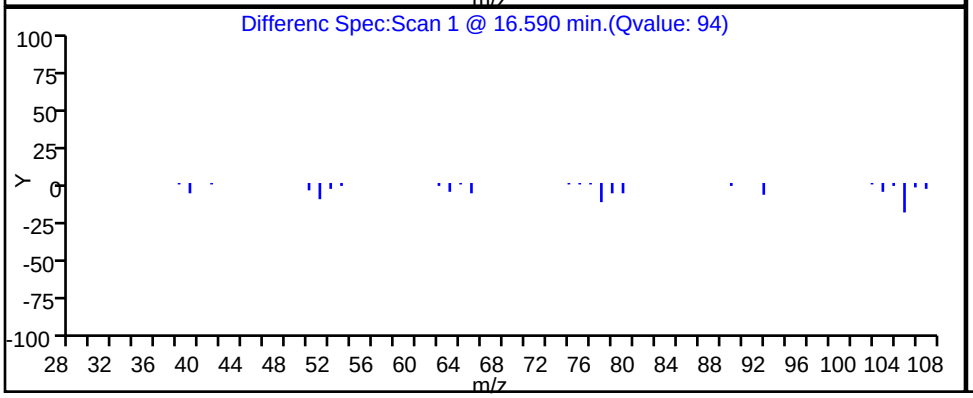












Manual Integration/User Assign Peak Report

TestAmerica Knoxville

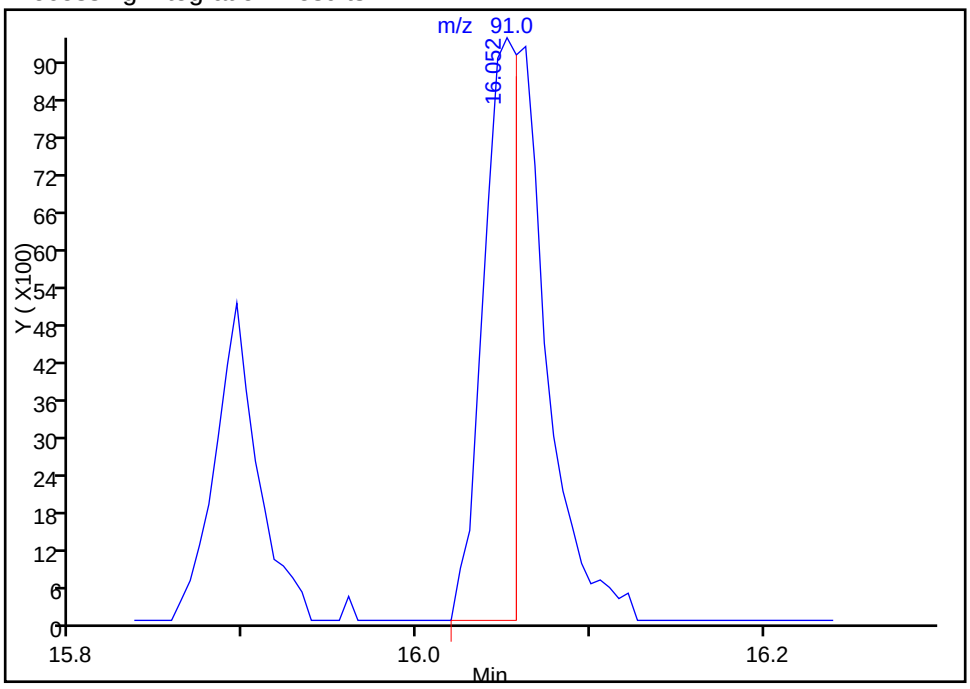
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JB10P112.D				
Injection Date:	10-Feb-2017 22:47:30	Instrument ID:	MJ		
Lims ID:	140-7052-A-3	Lab Sample ID:	140-7052-3		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	12	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

81 m-Xylene & p-Xylene, CAS: 179601-23-1

Signal: 1

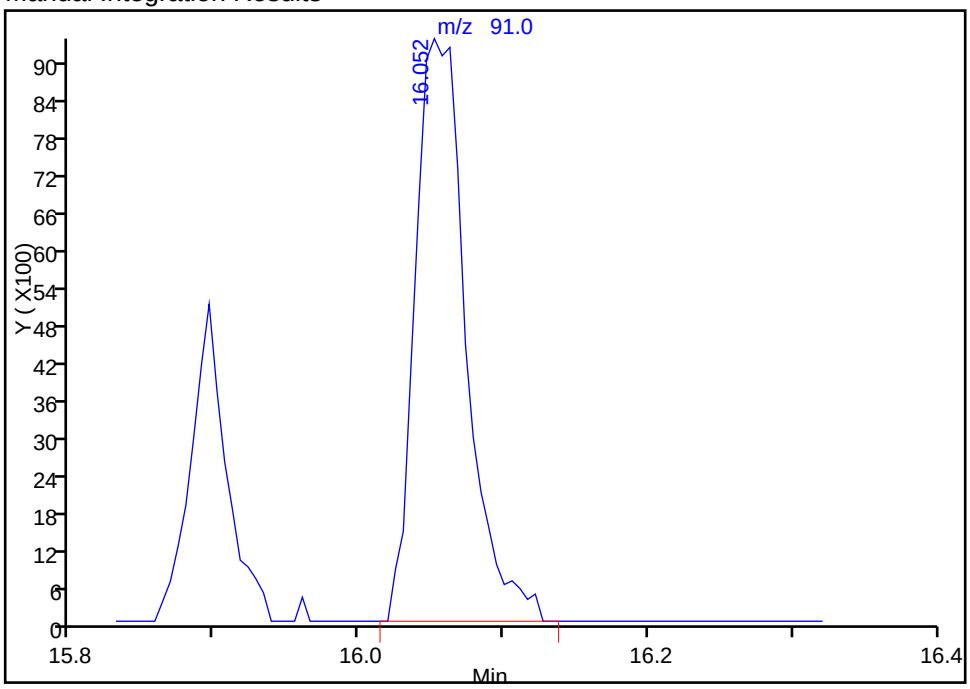
Processing Integration Results

RT: 16.05
Area: 13034
Amount: 0.062008
Amount Units: ppb v/v



Manual Integration Results

RT: 16.05
Area: 22967
Amount: 0.109263
Amount Units: ppb v/v



Reviewer: barlozhetskayaa, 15-Feb-2017 18:29:14

Audit Action: Manually Integrated Audit Reason: Split Peak

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-7241/2	JK25IC01X.D
Level 2	IC 140-7241/3	JK25IC02X.D
Level 3	IC 140-7241/4	JK25IC03X.D
Level 4	IC 140-7241/5	JK25IC04X.D
Level 5	IC 140-7241/6	JK25IC05X.D
Level 6	ICIS 140-7241/7	JK25IC06X.D
Level 7	IC 140-7241/8	JK25IC07X.D
Level 8	IC 140-7241/9	JK25IC08X.D
Level 9	IC 140-7241/10	JK25IC09X.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.3279	0.5209 0.3424	0.3376 0.3408	0.3209 0.3492	0.3466	Ave		0.3608				18.1		30.0			
Propene	+++++ 1.1758	+++++ 1.1993	1.3594 1.2672	1.2515 1.2587	1.2062	Ave		1.2455				4.9		30.0			
Dichlorodifluoromethane	3.8475 3.0537	3.3487 3.2136	3.1580 3.1835	2.9958 3.2159	3.1307	Ave		3.2386				7.7		30.0			
Chloromethane	+++++ 0.4359	0.5252 0.4576	0.4677 0.4580	0.4181 0.4804	0.4514	Ave		0.4618				6.9		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++ 2.0718	1.8918 1.6896	1.9626 1.5936	1.6292 1.6718	1.8086	Ave		1.7899				9.6		30.0			
Acetaldehyde	+++++ 0.4566	+++++ 0.4368	0.6805 0.4719	0.4532 0.5131	0.4805	Ave		0.4989				16.8		30.0			
Vinyl chloride	1.5299 1.3297	1.4001 1.3957	1.3464 1.3972	1.2586 1.4297	1.3793	Ave		1.3852				5.4		30.0			
Butane	2.9735 2.2299	2.5054 2.3309	2.3789 2.3726	2.1780 2.4282	2.3273	Ave		2.4138				9.6		30.0			
1,3-Butadiene	+++++ 1.0536	1.1806 1.1114	1.1186 1.1221	1.0201 1.1708	1.1152	Ave		1.1116				4.8		30.0			
Bromomethane	+++++ 1.1936	1.2661 1.2491	1.2107 1.2599	1.1307 1.2876	1.2587	Ave		1.2320				4.1		30.0			
Chloroethane	+++++ 0.6554	0.7015 0.6546	0.6348 0.6662	0.6137 0.6695	0.6603	Ave		0.6570				3.9		30.0			
Ethanol	0.5705 0.5223	0.5667 0.5053	0.5919 0.4982	0.4772 0.4781	0.5432	Ave		0.5282				8.0		30.0			
Vinyl bromide	1.3456 1.1540	1.2167 1.2054	1.1654 1.2260	1.0712 1.2467	1.2246	Ave		1.2062				6.2		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	2.0288 1.6960	1.8143 1.7503	1.6822 1.7808	1.5836 1.8155	1.7549	Ave		1.7674				6.9		30.0			
Trichlorofluoromethane	3.6024 3.2281	3.3180 3.3173	3.1843 3.3742	2.9197 3.3969	3.3115	Ave		3.2947				5.6		30.0			
Acrolein	+++++ 0.3517	+++++ 0.3409	0.5264 0.3539	0.3333 0.4239	0.3839	Ave		0.3877				17.7		30.0			
Acetonitrile	+++++ 0.4656	+++++ 0.4481	0.5197 0.4687	0.4059 0.5215	0.5094	Ave		0.4770				9.0		30.0			
Acetone	+++++ 0.4196	+++++ 0.3917	+++++ 0.3945	0.4202 0.4174	0.4431	Ave		0.4144				4.6		30.0			
Isopropyl alcohol	2.1209 1.9104	1.9735 1.9294	1.9325 1.9239	1.6981 1.9040	1.9590	Ave		1.9280				5.6		30.0			
Pentane	+++++ 0.1846	+++++ 0.1866	0.1863 0.1929	0.1616 0.1996	0.1846	Ave		0.1852				6.3		30.0			
Ethyl ether	+++++ 1.3268	1.4955 1.2979	1.4011 1.3235	1.1595 1.4364	1.4228	Ave		1.3579				7.7		30.0			
1,1-Dichloroethene	1.4517 1.1478	1.2123 1.1795	1.1371 1.2067	1.0798 1.2269	1.1937	Ave		1.2040				8.6		30.0			
Acrylonitrile	0.9001 0.7158	0.7984 0.7022	0.8029 0.7410	0.6242 0.8371	0.7564	Ave		0.7642				10.6		30.0			
tert-Butyl alcohol	1.8439 1.9956	1.9418 2.0218	1.9150 2.0374	1.7291 1.9964	2.0129	Ave		1.9438				5.2		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	2.8738 2.6185	2.7163 2.6279	2.5695 2.7290	2.4107 2.8100	2.6551	Ave		2.6679				5.1		30.0			
Methylene Chloride	+++++ 1.0931	+++++ 1.0697	1.5404 1.0991	1.1635 1.1074	1.1789	Ave		1.1789				13.9		30.0			
3-Chloropropene	+++++ 1.3409	1.4536 1.3288	1.5147 1.3596	1.2743 1.4217	1.4115	Ave		1.3881				5.5		30.0			
Carbon disulfide	3.9115 3.3893	3.7671 3.4592	3.4541 3.5389	3.2558 3.5681	3.5744	Ave		3.5465				5.5		30.0			
trans-1,2-Dichloroethene	1.3787 1.1690	1.2657 1.1718	1.1799 1.2095	1.0788 1.2275	1.2113	Ave		1.2102				6.7		30.0			
2-Methylpentane	3.5552 3.0451	3.2099 3.0193	3.0439 3.1532	2.7866 3.2386	3.1086	Ave		3.1289				6.6		30.0			
Methyl tert-butyl ether	2.8993 2.3272	2.8445 2.2839	2.5815 2.3429	2.0927 2.4349	2.4571	Ave		2.4738				10.6		30.0			
1,1-Dichloroethane	2.6041 2.2322	2.4643 2.1350	2.2671 2.2124	2.1642 2.3110	2.3145	Ave		2.3005				6.5		30.0			
Vinyl acetate	2.9851 2.7422	3.0101 2.6575	2.9743 2.7570	2.3823 3.0708	2.9180	Ave		2.8330				7.8		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.3708	0.3334 0.3586	0.3892 0.3677	0.3327 0.3798	0.3687	Ave		0.3626				5.6		30.0			
Hexane	+++++ 1.0259	1.2313 0.9943	1.0969 1.0492	0.9671 1.1068	1.0490	Ave		1.0651				7.7		30.0			
Isopropyl ether	4.0607 3.6638	3.7881 3.6242	3.9354 3.7695	3.2767 3.8864	3.9218	Ave		3.7696				6.1		30.0			
cis-1,2-Dichloroethene	1.4783 1.1314	1.2330 1.0794	1.1960 1.1235	1.1085 1.1935	1.1910	Ave		1.1928				9.9		30.0			
Ethyl acetate	2.4761 2.0850	2.2471 2.0350	2.1376 2.0630	1.7887 2.1294	2.0820	Ave		2.1160				8.6		30.0			
Chloroform	3.0247 2.3882	2.7668 2.2280	2.6010 2.3049	2.3218 2.4506	2.4911	Ave		2.5086				10.1		30.0			
Tert-butyl ethyl ether	2.7965 2.8749	3.0587 2.8302	3.0183 2.9494	2.4991 3.0294	3.0020	Ave		2.8954				6.1		30.0			
Tetrahydrofuran	+++++ 1.1460	1.3809 1.0826	1.2631 1.1127	1.0323 1.2144	1.1865	Ave		1.1773				9.4		30.0			
1,1,1-Trichloroethane	3.1145 2.5058	2.7531 2.3548	2.6301 2.4015	2.4118 2.5385	2.5942	Ave		2.5894				9.0		30.0			
1,2-Dichloroethane	0.4336 0.3666	0.3727 0.3311	0.3707 0.3547	0.3467 0.4034	0.3755	Ave		0.3728				8.2		30.0			
1-Butanol	+++++ 0.1215	0.1246 0.1211	0.1092 0.1266	0.0991 0.1337	0.1196	Ave		0.1194				9.0		30.0			
Cyclohexane	+++++ 0.1293	+++++ 0.1205	0.1569 0.1244	0.1230 0.1388	0.1342	Ave		0.1325				9.5		30.0			
Benzene	0.9199 0.6870	0.7288 0.6372	0.7252 0.6816	0.6544 0.7950	0.7103	Ave		0.7266				11.8		30.0			
Carbon tetrachloride	0.7660 0.6506	0.6614 0.6021	0.6423 0.5137	0.5728 0.6916	0.6637	Ave		0.6405				11.3		30.0			
2,3-Dimethylpentane	+++++ 0.1639	0.1817 0.1498	0.1699 0.1601	0.1592 0.1819	0.1674	Ave		0.1667				6.6		30.0			
Thiophene	0.5058 0.3990	0.4152 0.3696	0.4238 0.3916	0.3745 0.4451	0.4135	Ave		0.4153				10.0		30.0			
Tert-amyl methyl ether	+++++ 0.6604	0.5982 0.6006	0.5926 0.6188	0.5386 0.6438	0.7224	Ave		0.6219				8.8		30.0			
2,2,4-Trimethylpentane	+++++ 1.3383	1.5785 1.2186	1.4409 1.2948	1.2908 1.4822	1.3763	Ave		1.3776				8.5		30.0			
Heptane	0.3156 0.2383	0.2763 0.2197	0.2614 0.2336	0.2274 0.2722	0.2470	Ave		0.2546				11.8		30.0			
1,2-Dichloropropane	0.3317 0.2850	0.2964 0.2668	0.2887 0.2829	0.2636 0.3323	0.3019	Ave		0.2944				8.4		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.4047 0.3224	0.3508 0.3009	0.3621 0.3176	0.3154 0.3719	0.3318	Ave		0.3420				9.7		30.0			
Dibromomethane	0.4152 0.3099	0.3258 0.2848	0.3210 0.3000	0.3016 0.3484	0.3163	Ave		0.3248				11.8		30.0			
Bromodichloromethane	0.7155 0.5386	0.5955 0.4942	0.5617 0.5262	0.4941 0.6104	0.5528	Ave		0.5654				12.2		30.0			
1,4-Dioxane	0.0760 0.0803	0.0765 0.0791	0.0708 0.0817	0.0636 0.0846	0.0805	Ave		0.0770				8.3		30.0			
Methyl methacrylate	+++++ 0.2758	0.2781 0.2750	0.2691 0.2947	0.2314 0.3249	0.2784	Ave		0.2784				9.4		30.0			
Methylcyclohexane	+++++ 0.5470	0.6129 0.4948	0.5612 0.5246	0.5222 0.5970	0.5628	Ave		0.5528				7.1		30.0			
4-Methyl-2-pentanone (MIBK)	0.6044 0.5456	0.5569 0.5396	0.5362 0.5676	0.4620 0.6066	0.5373	Ave		0.5507				7.8		30.0			
cis-1,3-Dichloropropene	0.4472 0.3699	0.3541 0.3619	0.3536 0.3931	0.3411 0.4436	0.3748	Ave		0.3821				10.1		30.0			
trans-1,3-Dichloropropene	0.4678 0.3274	0.3618 0.3204	0.2858 0.3429	0.2743 0.3961	0.3224	Ave		0.3443				17.2		30.0			
Toluene Range	2.9852 2.1585	2.2448 2.0285	2.1821 2.1704	1.8063 2.4356	2.2621	Ave		2.2526				14.4		30.0			
Toluene	+++++ 0.8479	0.8984 0.7936	0.8894 0.8539	0.7495 0.9595	0.8883	Ave		0.8601				7.6		30.0			
1,1,2-Trichloroethane	0.3435 0.2646	0.2696 0.2425	0.2602 0.2572	0.2323 0.2883	0.2753	Ave		0.2704				11.9		30.0			
2-Methylthiophene	+++++ 0.7403	0.7593 0.6716	0.6686 0.7239	0.6483 0.8025	0.7594	Ave		0.7217				7.5		30.0			
3-Methylthiophene	+++++ 0.6788	0.7328 0.6493	0.6904 0.6885	0.6001 0.7729	0.6991	Ave		0.6890				7.5		30.0			
2-Hexanone	+++++ 0.2614	0.2290 0.2734	0.2173 0.2785	0.1991 0.2986	0.2517	Ave		0.2511				13.4		30.0			
C8 Range	+++++ 3.1096	+++++ 2.8109	3.2020 2.9646	2.7739 3.3358	3.2719	Ave		3.0670				7.2		30.0			
Octane	0.3590 0.2789	0.3147 0.2536	0.2752 0.2683	0.2446 0.3054	0.2923	Ave		0.2880				12.1		30.0			
Dibromochloromethane	0.7263 0.6428	0.6250 0.5873	0.5865 0.6267	0.5131 0.7138	0.6522	Ave		0.6304				10.4		30.0			
1,2-Dibromoethane (EDB)	0.5581 0.4501	0.4574 0.4226	0.4244 0.4524	0.3554 0.5175	0.4565	Ave		0.4549				12.6		30.0			
Tetrachloroethene	0.4997 0.3580	0.4044 0.3239	0.3567 0.3458	0.3374 0.3924	0.3731	Ave		0.3768				14.0		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorobenzene	0.8119 0.6651	0.6711 0.6266	0.6199 0.6745	0.5616 0.7759	0.6719	Ave		0.6754				11.4		30.0			
2,3-Dimethylheptane	1.1660 1.0785	1.1670 0.9808	1.0695 1.0153	0.9629 1.1134	1.1327	Ave		1.0762				7.1		30.0			
Ethylbenzene	1.3653 0.9774	1.0019 0.9174	0.9920 0.9981	0.7905 1.1242	1.0145	Ave		1.0201				15.4		30.0			
2-Ethylthiophene	0.9035 0.7469	0.7527 0.7105	0.7245 0.7758	0.6125 0.8812	0.7573	Ave		0.7628				11.5		30.0			
m-Xylene & p-Xylene	0.9161 0.7347	0.7271 0.6977	0.7185 0.7666	0.5864 0.8663	0.7608	Ave		0.7527				12.7		30.0			
Nonane	0.7785 0.6367	0.6093 0.6067	0.6044 0.6540	0.5024 0.7504	0.6488	Ave		0.6435				12.7		30.0			
Bromoform	0.6867 0.5981	0.5302 0.5880	0.5387 0.6519	0.4509 0.8044	0.5555	Ave		0.6005				17.2		30.0			
Styrene	0.6616 0.5192	0.4669 0.5187	0.4666 0.5854	0.3764 0.6988	0.5235	Ave		0.5352				18.7		30.0			
o-Xylene	1.0374 0.7741	0.8121 0.7268	0.8252 0.7878	0.6459 0.8841	0.8122	Ave		0.8117				13.3		30.0			
1,1,2,2-Tetrachloroethane	0.7578 0.5860	0.5524 0.5636	0.5036 0.6170	0.4597 0.6778	0.5995	Ave		0.5908				15.1		30.0			
1,2,3-Trichloropropane	+++++ 0.1362	0.1351 0.1310	0.1263 0.1469	0.1017 0.1656	0.1423	Ave		0.1356				13.5		30.0			
Isopropylbenzene	1.4300 1.0460	1.1107 0.9870	1.0783 1.0790	0.8534 1.2030	1.0952	Ave		1.0980				14.3		30.0			
Propylbenzene	0.3117 0.2615	0.2150 0.2492	0.2338 0.2793	0.1871 0.3270	0.2606	Ave		0.2584				17.1		30.0			
2-Chlorotoluene	0.3232 0.2648	0.2511 0.2595	0.2653 0.2876	0.2101 0.3338	0.2744	Ave		0.2744				13.6		30.0			
4-Ethyltoluene	1.1777 0.9153	0.7877 0.8908	0.8034 0.9987	0.6479 1.1417	0.9015	Ave		0.9183				18.4		30.0			
1,3,5-Trimethylbenzene	0.5614 0.4580	0.4000 0.4385	0.4540 0.4896	0.3436 0.5642	0.4574	Ave		0.4630				15.2		30.0			
Alpha Methyl Styrene	0.4217 0.3608	0.2786 0.3630	0.2794 0.4253	0.2366 0.5040	0.3478	Ave		0.3575				23.7		30.0			
Decane	+++++ 0.6528	0.6013 0.6570	0.5953 0.7392	0.4586 0.8575	0.6448	Ave		0.6508				17.7		30.0			
tert-Butylbenzene	1.1493 0.9074	0.8557 0.8661	0.9100 0.9720	0.7027 1.1125	0.9329	Ave		0.9343				14.4		30.0			
1,2,4-Trimethylbenzene	0.9974 0.7933	0.6954 0.7726	0.7121 0.8661	0.5683 0.9996	0.7846	Ave		0.7988				17.5		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	1.5378 1.1932	1.0946 1.1562	1.1832 1.2867	0.8961 1.4520	1.2291	Ave		1.2254				15.4		30.0			
1,3-Dichlorobenzene	0.5550 0.4199	0.3703 0.4402	0.3233 0.5410	0.2865 0.6876	0.4043	Ave		0.4476				28.3		30.0			
Benzyl chloride	+++++ 0.4344	0.3207 0.4606	0.2811 0.5817	0.2549 +++++	0.3836	Ave		0.3881				29.5		30.0			
1,4-Dichlorobenzene	0.4368 0.3614	0.2948 0.3825	0.2705 0.4825	0.2323 +++++	0.3308	Ave		0.3490				24.2		30.0			
4-Isopropyltoluene	1.2247 0.9539	0.8120 0.9215	0.8627 1.0355	0.6793 1.1549	0.9553	Ave		0.9555				17.6		30.0			
1,2,3-Trimethylbenzene	0.7389 0.5904	0.5559 0.5663	0.5748 0.6310	0.4445 0.7050	0.5967	Ave		0.6004				14.3		30.0			
Butylcyclohexane	0.9939 0.7487	0.6964 0.7290	0.7343 0.8014	0.5920 0.8884	0.7723	Ave		0.7729				14.9		30.0			
Indane	0.8395 0.6893	0.5975 0.6764	0.6142 0.7856	0.4850 0.9222	0.6825	Ave		0.6991				19.0		30.0			
1,2-Dichlorobenzene	0.5313 0.4395	0.3695 0.4481	0.3510 0.5483	0.2920 0.6744	0.4257	Ave		0.4533				25.7		30.0			
Indene	0.5216 0.4348	0.3300 0.4414	0.3234 0.5337	0.2717 0.6454	0.4085	Ave		0.4345				27.3		30.0			
Butylbenzene	1.0320 0.8033	0.6580 0.8001	0.6470 0.9309	0.5248 1.0536	0.7655	Ave		0.8017				22.3		30.0			
Undecane	+++++ 0.5973	0.5390 0.5900	0.4922 0.6843	0.4020 0.8030	0.5661	Ave		0.5842				20.7		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 0.6180	0.5048 0.6086	0.5006 0.6944	0.4163 0.7766	0.5937	Ave		0.5891				19.5		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.1739	0.1315 0.1811	0.1242 0.2201	0.1052 +++++	0.1558	Ave		0.1560				25.2		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 0.7255	0.5992 0.7149	0.6031 0.8093	0.4817 0.8971	0.6875	Ave		0.6898				18.8		30.0			
1,2,3,5-Tetramethylbenzene	+++++ 0.4432	0.3662 0.4420	0.3835 0.4915	0.2965 0.5445	0.4246	Ave		0.4240				18.1		30.0			
1,2,3,4-Tetramethylbenzene	+++++ 0.5580	0.5018 0.5469	0.4684 0.6231	0.3685 0.6869	0.5361	Ave		0.5362				17.9		30.0			
Dodecane	+++++ 0.5103	0.4533 0.4838	0.4122 0.5557	0.3131 0.6262	0.5110	Ave		0.4832				19.5		30.0			
1,2,4-Trichlorobenzene	0.1681 0.1556	0.1028 0.1706	0.0957 +++++	0.0776 +++++	0.1423	Ave		0.1304				29.0		30.0			
Naphthalene	0.4947 0.3598	0.2746 0.3910	0.2282 0.5046	0.2037 +++++	0.3360	Ave		0.3491				32.3	*	30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	+++++ 0.1503	0.1107 0.1611	0.0905 0.2166	0.0836 +++++	0.1388	Ave		0.1359				34.0	*	30.0			
Hexachlorobutadiene	0.6292 0.4815	0.4595 0.4700	0.4647 0.5481	0.3282 0.6640	0.4975	Ave		0.5047				19.7		30.0			
1,2,3-Trichlorobenzene	0.1979 0.1824	0.1457 0.1937	0.1256 0.2459	0.0937 +++++	0.1794	Ave		0.1705				27.8		30.0			
2-Methylnaphthalene	+++++ 0.0376	0.0294 0.0397	0.0240 0.0458	0.0144 0.0500	0.0333	Ave		0.0343				33.9		50.0			
1-Methylnaphthalene	+++++ 0.0439	0.0354 0.0453	0.0295 0.0483	0.0162 0.0466	0.0401	Ave		0.0381				28.5		50.0			
4-Bromofluorobenzene (Surr)	0.5598 0.6420	0.6032 0.6644	0.6008 0.6801	0.6245 0.7022	0.6235	Ave		0.6334				7.0		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-7241/2	JK25IC01X.D
Level 2	IC 140-7241/3	JK25IC02X.D
Level 3	IC 140-7241/4	JK25IC03X.D
Level 4	IC 140-7241/5	JK25IC04X.D
Level 5	IC 140-7241/6	JK25IC05X.D
Level 6	ICIS 140-7241/7	JK25IC06X.D
Level 7	IC 140-7241/8	JK25IC07X.D
Level 8	IC 140-7241/9	JK25IC08X.D
Level 9	IC 140-7241/10	JK25IC09X.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 58411	3817 118844	5092 235313	11982 484336	30842	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propene	CBM	Ave	+++++ 209464	+++++ 416325	20501 875090	46736 1745617	107343	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	13281 544024	24537 1115556	47625 2198367	111873 4459893	278609	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	+++++ 77658	3848 158851	7053 316299	15615 666251	40173	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	+++++ 369090	13862 586542	29597 1100458	60841 2318437	160950	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 406708	+++++ 758197	51314 1629284	84629 3557537	213784	+++++ 9.99	+++++ 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl chloride	CBM	Ave	5281 236881	10259 484487	20305 964833	47000 1982759	122746	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butane	CBM	Ave	10264 397262	18358 809131	35876 1638360	81334 3367418	207118	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	+++++ 187703	8651 385793	16869 774881	38093 1623732	99249	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	+++++ 212632	9277 433625	18258 870033	42225 1785611	112019	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	+++++ 116765	5140 227227	9573 460075	22919 928476	58761	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	9847 465217	20763 876962	44631 1720033	89104 3315415	241723	0.196 9.99	0.392 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl bromide	CBM	Ave	4645 205590	8915 418434	17575 846638	40004 1728904	108983	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	7003 302142	13294 607591	25369 1229715	59137 2517794	156174	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Trichlorofluoromethane	CBM	Ave	12435 575081	24312 1151548	48022 2330072	109033 4710858	294702	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrolein	CBM	Ave	+++++ 62656	+++++ 118346	7938 244387	12447 587930	34165	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 82955	+++++ 155542	7837 323650	15157 723270	45336	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 224276	+++++ 407996	+++++ 817306	47081 1736723	118305	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.01
Isopropyl alcohol	CBM	Ave	21965 1021108	43385 2009448	87437 3985916	190258 7921894	523062	0.118 5.99	0.235 12.0	0.476 24.0	1.20 48.0	3.01
Pentane	CBM	Ave	+++++ 32889	+++++ 64760	2810 133194	6036 276851	16429	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl ether	CBM	Ave	+++++ 236371	10958 450555	21130 913954	43301 1992033	126616	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	5011 204488	8883 409463	17148 833287	40325 1701547	106234	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	3107 127525	5850 243769	12108 511675	23310 1160939	67317	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butyl alcohol	CBM	Ave	6365 355509	14228 701844	28880 1406893	64571 2768624	179135	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroetha ne	CBM	Ave	9920 466491	19903 912233	38750 1884507	90023 3896999	236287	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 194734	+++++ 371333	23231 758999	43448 1535696	104918	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	+++++ 238874	10651 461294	22843 938863	47589 1971589	125613	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	13502 603813	27603 1200814	52091 2443791	121583 4948271	318098	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	4759 208258	9274 406768	17794 835250	40286 1702361	107797	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylpentane	CBM	Ave	12272 542486	23520 1048110	45905 2177430	104062 4491353	276646	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	10008 414593	20843 792821	38931 1617852	78151 3376773	218669	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	8989 397664	18057 741147	34190 1527772	80819 3204866	205971	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	10304 488532	22056 922514	44854 1903842	88963 4258617	259685	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Butanone (MEK)	CBM	Ave	+++++ 66052	2443 124487	5869 253927	12424 526678	32810	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Hexane	CBM	Ave	+++++ 182768	9022 345145	16542 724504	36117 1534885	93351	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isopropyl ether	CBM	Ave	14017 652700	27757 1258094	59349 2603004	122364 5389640	349017	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	5103 201554	9035 374711	18037 775858	41397 1655099	105995	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	8547 371439	16465 706434	32237 1424609	66797 2953037	185284	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroform	CBM	Ave	10441 425460	20273 773414	39225 1591650	86703 3398489	221690	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	9653 512166	22412 982477	45518 2036709	93325 4201218	267158	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	+++++ 204152	10118 375805	19048 768341	38550 1684106	105594	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	10751 446406	20173 817437	39664 1658324	90067 3520443	230864	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFBZ	Ave	6047 287059	12345 518857	25128 1078779	58242 2324578	148871	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1-Butanol	DFBZ	Ave	+++++ 95163	4128 189813	7404 385011	16643 770202	47398	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Cyclohexane	DFBZ	Ave	+++++ 101218	+++++ 188882	10636 378419	20665 799986	53224	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Benzene	DFBZ	Ave	12828 537887	24141 998620	49152 2072736	109926 4580943	281600	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFBZ	Ave	10682 509407	21907 943611	43534 1562157	96221 3985428	263147	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylpentane	DFBZ	Ave	+++++ 128303	6018 234828	11513 486787	26735 1047976	66382	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Thiophene	DFBZ	Ave	7053 312374	13753 579159	28726 1190849	62914 2564706	163933	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-amyl methyl ether	CBZd5	Ave	+++++ 439550	16558 826406	34262 1687255	78058 3478703	238993	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 1047845	52286 1909813	97663 3937619	216817 8541251	545679	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Heptane	DFBZ	Ave	4401 186596	9153 344303	17720 710384	38197 1568743	97916	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFBZ	Ave	4626 223106	9817 418060	19570 860195	44282 1914762	119711	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Trichloroethene	DFBZ	Ave	5644 252436	11621 471497	24542 965984	52984 2143254	131547	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromomethane	DFBZ	Ave	5790 242664	10791 446341	21756 912301	50658 2007775	125422	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromodichloromethane	DFBZ	Ave	9978 421714	19726 774474	38075 1600155	83001 3517359	219152	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DFBZ	Ave	1060 62903	2535 123907	4802 248451	10682 487655	31913	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl methacrylate	DFBZ	Ave	+++++ 215926	9213 430899	18239 896296	38866 1872520	110367	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylcyclohexane	DFBZ	Ave	+++++ 428267	20303 775502	38039 1595324	87709 3440508	223142	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	8429 427163	18448 845642	36347 1726160	77604 3495706	213021	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFBZ	Ave	6237 289600	11728 567162	23969 1195443	57296 2556154	148579	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZd 5	Ave	4949 217897	10015 440824	16526 934863	39757 2140300	106665	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene Range	CBZd 5	Ave	31580 1436613	62136 2791156	126167 5917756	261800 13161341	748324	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene	CBZd 5	Ave	+++++ 564299	24869 1091996	51423 2328051	108634 5184820	293852	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZd 5	Ave	3634 176087	7462 333675	15047 701197	33667 1557835	91074	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylthiophene	CBZd 5	Ave	+++++ 492684	21017 924136	38657 1973707	93967 4336537	251216	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
3-Methylthiophene	CBZd 5	Ave	+++++ 451800	20285 893344	39921 1877320	86973 4176696	231259	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Hexanone	CBZd 5	Ave	+++++ 173958	6340 376223	12562 759406	28857 1613389	83279	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
C8 Range	CBZd 5	Ave	+++++ 2069587	+++++ 3867680	185140 8082975	402043 18025464	1082393	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Octane	CBZd 5	Ave	3798 185643	8712 348881	15913 731653	35453 1650234	96708	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZd 5	Ave	7683 427846	17301 808128	33912 1708750	74369 3856951	215761	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	5904 299565	12660 581436	24538 1233456	51514 2796441	151021	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZd 5	Ave	5286 238290	11194 445648	20627 942886	48901 2120157	123410	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chlorobenzene	CBZd 5	Ave	8589 442675	18576 862198	35843 1839152	81389 4192705	222281	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylheptane	CBZd 5	Ave	12335 717787	32304 1349555	61836 2768264	139554 6016570	374711	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethylbenzene	CBZd 5	Ave	14443 650505	27733 1262362	57358 2721372	114570 6074677	335611	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Ethylthiophene	CBZd 5	Ave	9558 497116	20835 977657	41893 2115122	88766 4761553	250527	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m-Xylene & p-Xylene	CBZd 5	Ave	19383 978007	40253 1919976	83085 4180493	169976 9362617	503389	0.0784 3.99	0.157 8.00	0.317 16.0	0.800 32.0	2.00
Nonane	CBZd 5	Ave	8236 423733	16865 834807	34945 1783024	72811 4054710	214636	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromoform	CBZd 5	Ave	7264 398085	14675 809091	31148 1777546	65347 4346492	183780	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Styrene	CBZd 5	Ave	6999 345579	12925 713753	26979 1596019	54555 3775896	173185	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
o-Xylene	CBZd 5	Ave	10974 515214	22480 1000055	47711 2147893	93610 4777380	268703	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	8017 389997	15290 775460	29118 1682135	66629 3662446	198338	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZd 5	Ave	+++++ 90650	3741 180195	7300 400421	14733 894821	47060	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Isopropylbenzene	CBZd 5	Ave	15128 696162	30745 1358053	62346 2941806	123682 6500407	362291	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propylbenzene	CBZd 5	Ave	3297 174024	5951 342915	13516 761562	27120 1767252	86216	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZd 5	Ave	3419 176214	6950 357053	15341 784198	30458 1803940	90776	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZd 5	Ave	12458 609217	21804 1225761	46453 2722956	93901 6169617	298239	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZd 5	Ave	5939 304811	11072 603355	26253 1334976	49807 3048962	151317	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZd 5	Ave	4461 240130	7712 499500	16153 1159461	34288 2723428	115072	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Decane	CBZd 5	Ave	+++++ 434454	16645 903971	34420 2015482	66474 4633466	213303	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butylbenzene	CBZd 5	Ave	12158 603936	23687 1191702	52616 2650102	101841 6011355	308625	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZd 5	Ave	10551 527968	19250 1063039	41173 2361494	82370 5401392	259545	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZd 5	Ave	16268 794110	30298 1590827	68410 3508321	129882 7846256	406602	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Dichlorobenzene	CBZd 5	Ave	5871 279497	10249 605637	18695 1475008	41517 3715351	133752	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzyl chloride	CBZd 5	Ave	+++++ 289147	8876 633760	16254 1586115	36944 +++++	126892	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
1,4-Dichlorobenzene	CBZd 5	Ave	4621 240547	8160 526340	15642 1315653	33672 +++++	109444	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
4-Isopropyltoluene	CBZd 5	Ave	12956 634861	22476 1267933	49882 2823302	98451 6240921	316041	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZd 5	Ave	7817 392961	15387 779253	33236 1720307	64421 3809531	197400	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylcyclohexane	CBZd 5	Ave	10514 498300	19278 1003008	42456 2185035	85795 4800601	255485	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indane	CBZd 5	Ave	8881 458736	16540 930740	35512 2141880	70292 4983494	225790	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorobenzene	CBZd 5	Ave	5620 292486	10229 616546	20295 1494867	42321 3643973	140823	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indene	CBZd 5	Ave	5518 289355	9134 607320	18700 1455216	39379 3487774	135133	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylbenzene	CBZd 5	Ave	10917 534655	18213 1100830	37412 2538094	76064 5693195	253234	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Undecane	CBZd 5	Ave	+++++ 397504	14919 811824	28458 1865694	58268 4338903	187279	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	Ave	+++++ 411342	13973 837435	28944 1893275	60335 4196638	196408	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	+++++ 115728	3641 249204	7180 600110	15249 +++++	51540	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 482854	16586 983706	34869 2206639	69812 4847664	227428	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 294960	10137 608119	22173 1340133	42970 2942221	140477	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	+++++ 371381	13891 752440	27081 1698919	53410 3711528	177361	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dodecane	CBZd 5	Ave	+++++ 339664	12548 665748	23834 1515010	45381 3383807	169033	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZd 5	Ave	1778 103584	2846 234735	5532 +++++	11248 +++++	47080	0.0392 2.00	0.0784 4.00	0.159 +++++	0.400 +++++	1.00
Naphthalene	CBZd 5	Ave	5233 239465	7601 538060	13194 1375773	29521 +++++	111140	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
Benzo(b)thiophene	CBZd 5	Ave	+++++ 100021	3065 221729	5231 590694	12110 +++++	45901	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
Hexachlorobutadiene	CBZd 5	Ave	6656 320484	12720 646694	26869 1494370	47565 3588165	164579	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZd 5	Ave	2094 121404	4032 266581	7260 670480	13575 +++++	59332	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
2-Methylnaphthalene	CBZd 5	Ave	+++++ 78199	2539 170697	4331 389989	6537 844376	34373	+++++ 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
1-Methylnaphthalene	CBZd 5	Ave	+++++ 91252	3063 194863	5326 411293	7334 786213	41424	+++++ 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	604280 855705	851872 914153	875722 927094	905137 948626	823670	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7241

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2016 18:47 Calibration End Date: 11/26/2016 01:58 Calibration ID: 790

Curve Type Legend:
Ave = Average ISTD

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC01X.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 25-Nov-2016 18:47:30 ALS Bottle#: 1 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003656-003
Misc. Info.: 067941
Operator ID: 007126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Nov-2016 13:55:16 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: barlozhetskayaa Date: 26-Nov-2016 10:51:34

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.641	8.640	0.001	98	352231	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.841	10.843	-0.002	96	1422985	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.607	15.609	-0.002	89	1079457	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.253	17.254	-0.001	95	604280	4.00	3.54	
6 Chlorodifluoromethane	67	3.568	3.568	0.000	95	2178	0.0392	0.0686	
7 Propene	41	3.579	3.578	0.001	90	5725	0.0392	0.0522	
8 Dichlorodifluoromethane	85	3.627	3.627	0.000	98	13281	0.0392	0.0466	
9 Chloromethane	52	3.810	3.806	0.004	59	2667	0.0392	0.0656	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.810	3.810	0.000	90	10207	0.0392	0.0648	
11 Acetaldehyde	44	3.955	3.953	0.002	94	13489	0.1960	0.3070	
12 Vinyl chloride	62	3.966	3.969	-0.003	96	5281	0.0392	0.0433	
13 Butane	43	4.057	4.055	0.002	86	10264	0.0392	0.0483	
14 Butadiene	54	4.057	4.057	0.000	63	5184	0.0392	0.0530	
15 Bromomethane	94	4.369	4.367	0.002	96	5229	0.0392	0.0482	
16 Chloroethane	64	4.509	4.504	0.005	34	2567	0.0392	0.0444	
17 Ethanol	31	4.611	4.602	0.009	98	9847	0.1960	0.2117	
18 Vinyl bromide	106	4.794	4.797	-0.003	93	4645	0.0392	0.0437	
19 2-Methylbutane	43	4.848	4.845	0.003	94	7003	0.0392	0.0450	
20 Trichlorofluoromethane	101	5.069	5.060	0.009	98	12435	0.0392	0.0429	
21 Acrolein	56	5.074	5.074	0.000	26	2130	0.0392	0.0624	
22 Acetonitrile	40	5.149	5.138	0.011	71	3006	0.0392	0.0716	
23 Acetone	58	5.203	5.192	0.011	97	5322	0.1176	0.1458	
24 Isopropyl alcohol	45	5.289	5.273	0.016	87	21965	0.1176	0.1294	
26 Ethyl ether	31	5.456	5.451	0.005	90	2691	0.0392	0.0225	
27 1,1-Dichloroethene	96	5.763	5.758	0.005	93	5011	0.0392	0.0473	
29 Acrylonitrile	53	5.870	5.865	0.005	93	3107	0.0392	0.0462	
28 2-Methyl-2-propanol	59	5.892	5.868	0.024	88	6365	0.0392	0.0372	
30 1,1,2-Trichloro-1,2,2-trif	101	5.935	5.931	0.004	95	9920	0.0392	0.0422	
31 Methylene Chloride	84	6.107	6.105	0.002	94	10989	0.0392	0.1059	
32 3-Chloro-1-propene	39	6.123	6.121	0.002	72	5261	0.0392	0.0430	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.263	6.264	-0.001	96	13502	0.0392	0.0432	
34 trans-1,2-Dichloroethene	96	6.908	6.908	0.000	67	4759	0.0392	0.0447	
35 2-Methylpentane	43	6.919	6.923	-0.004	95	12272	0.0392	0.0445	
36 Methyl tert-butyl ether	73	7.070	7.049	0.021	95	10008	0.0392	0.0459	
37 1,1-Dichloroethane	63	7.328	7.326	0.002	97	8989	0.0392	0.0444	
38 Vinyl acetate	43	7.430	7.435	-0.005	98	10304	0.0392	0.0413	
39 2-Butanone (MEK)	72	7.904	7.895	0.009	84	1230	0.0392	0.0385	
40 Hexane	56	7.898	7.901	-0.003	80	5273	0.0392	0.0562	
41 Isopropyl ether	45	8.087	8.072	0.015	97	14017	0.0392	0.0422	
42 cis-1,2-Dichloroethene	96	8.307	8.307	0.000	93	5103	0.0392	0.0486	
43 Ethyl acetate	43	8.511	8.508	0.003	96	8547	0.0392	0.0459	
44 Chloroform	83	8.646	8.651	-0.005	28	10441	0.0392	0.0473	
45 Tert-butyl ethyl ether	59	8.764	8.750	0.014	96	9653	0.0392	0.0379	
46 Tetrahydrofuran	42	9.109	9.083	0.026	90	5546	0.0392	0.0535	
47 1,1,1-Trichloroethane	97	9.679	9.679	0.000	96	10751	0.0392	0.0472	
48 1,2-Dichloroethane	62	9.792	9.792	0.000	95	6047	0.0392	0.0456	
49 n-Butanol	31	10.297	10.272	0.025	64	2090	0.0392	0.0492	
50 Cyclohexane	69	10.287	10.285	0.002	81	4196	0.0392	0.0890	
51 Benzene	78	10.281	10.285	-0.004	94	12828	0.0392	0.0496	
52 Carbon tetrachloride	117	10.314	10.308	0.006	92	10682	0.0392	0.0469	
53 2,3-Dimethylpentane	71	10.400	10.407	-0.007	90	3251	0.0392	0.0548	
54 Thiophene	84	10.566	10.565	0.001	94	7053	0.0392	0.0477	
55 Tert-amyl methyl ether	73	10.841	10.821	0.020	39	14163	0.0392	0.0844	
56 Isooctane	57	11.056	11.058	-0.002	97	26791	0.0392	0.0547	
57 n-Heptane	71	11.438	11.441	-0.003	94	4401	0.0392	0.0486	
58 1,2-Dichloropropane	63	11.519	11.526	-0.007	88	4626	0.0392	0.0442	
59 Trichloroethene	130	11.562	11.561	0.001	94	5644	0.0392	0.0464	
60 Dibromomethane	93	11.642	11.648	-0.006	94	5790	0.0392	0.0501	
62 Dichlorobromomethane	83	11.793	11.795	-0.002	95	9978	0.0392	0.0496	
61 1,4-Dioxane	88	11.847	11.835	0.012	30	1060	0.0392	0.0387	
63 Methyl methacrylate	41	11.901	11.902	-0.001	35	2571	0.0392	0.0260	
64 Methylcyclohexane	83	12.336	12.336	0.000	91	10487	0.0392	0.0533	
65 4-Methyl-2-pentanone (MIBK	43	12.767	12.764	0.003	96	8429	0.0392	0.0430	
66 cis-1,3-Dichloropropene	75	12.810	12.808	0.002	93	6237	0.0392	0.0459	
67 trans-1,3-Dichloropropene	75	13.509	13.509	0.000	91	4949	0.0392	0.0533	
68 Toluene	91	13.627	13.630	-0.003	89	12311	0.0392	0.0530	
69 1,1,2-Trichloroethane	83	13.713	13.709	0.004	92	3634	0.0392	0.0498	
70 2-Methylthiophene	97	13.789	13.784	0.005	95	10651	0.0392	0.0547	
71 3-Methylthiophene	97	13.982	13.985	-0.003	97	9795	0.0392	0.0527	
72 2-Hexanone	58	14.117	14.106	0.011	88	3389	0.0392	0.0500	
73 n-Octane	85	14.321	14.322	-0.001	97	3798	0.0392	0.0489	
74 Chlorodibromomethane	129	14.413	14.412	0.001	92	7683	0.0392	0.0452	
75 Ethylene Dibromide	107	14.709	14.706	0.003	99	5904	0.0392	0.0481	
76 Tetrachloroethene	129	14.779	14.777	0.002	90	5286	0.0392	0.0520	
78 Chlorobenzene	112	15.661	15.658	0.003	96	8589	0.0392	0.0471	
77 2,3-Dimethylheptane	43	15.677	15.677	0.000	94	12335	0.0392	0.0425	
79 Ethylbenzene	91	15.951	15.947	0.004	97	14443	0.0392	0.0525	
80 2-Ethylthiophene	97	16.054	16.050	0.004	96	9558	0.0392	0.0464	
81 m-Xylene & p-Xylene	91	16.113	16.110	0.003	99	19383	0.0784	0.0954	
82 n-Nonane	57	16.527	16.528	-0.001	94	8236	0.0392	0.0474	
83 Bromoform	173	16.554	16.559	-0.005	84	7264	0.0392	0.0448	
84 Styrene	104	16.570	16.575	-0.005	95	6999	0.0392	0.0485	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	16.634	16.634	0.000	96	10974	0.0392	0.0501	
86 1,1,2,2-Tetrachloroethane	83	16.963	16.962	0.001	95	8017	0.0392	0.0503	
87 1,2,3-Trichloropropane	110	17.124	17.122	0.002	95	1498	0.0392	0.0409	
88 Isopropylbenzene	105	17.221	17.221	0.000	87	15128	0.0392	0.0511	
89 N-Propylbenzene	120	17.770	17.767	0.003	99	3297	0.0392	0.0473	
90 2-Chlorotoluene	126	17.818	17.813	0.005	89	3419	0.0392	0.0462	
91 4-Ethyltoluene	105	17.926	17.921	0.005	97	12458	0.0392	0.0503	
92 1,3,5-Trimethylbenzene	120	17.995	17.995	0.000	92	5939	0.0392	0.0475	
93 Alpha Methyl Styrene	118	18.232	18.229	0.003	89	4461	0.0392	0.0462	
94 n-Decane	57	18.286	18.287	-0.001	86	9240	0.0392	0.0526	
95 tert-Butylbenzene	119	18.420	18.422	-0.002	90	12158	0.0392	0.0482	
96 1,2,4-Trimethylbenzene	105	18.437	18.436	0.001	95	10551	0.0392	0.0489	
97 sec-Butylbenzene	105	18.695	18.694	0.001	97	16268	0.0392	0.0492	
98 1,3-Dichlorobenzene	146	18.711	18.710	0.001	93	5871	0.0392	0.0486	
99 Benzyl chloride	91	18.786	18.786	0.000	70	6308	0.0392	0.0602	
100 1,4-Dichlorobenzene	146	18.797	18.799	-0.002	94	4621	0.0392	0.0491	
101 4-Isopropyltoluene	119	18.856	18.857	-0.001	97	12956	0.0392	0.0502	
102 1,2,3-Trimethylbenzene	105	18.915	18.912	0.003	97	7817	0.0392	0.0482	
103 Butylcyclohexane	83	18.964	18.964	0.000	86	10514	0.0392	0.0504	
104 2,3-Dihydroindene	117	19.157	19.159	-0.002	93	8881	0.0392	0.0471	
105 1,2-Dichlorobenzene	146	19.157	19.159	-0.002	78	5620	0.0392	0.0459	
107 Indene	116	19.292	19.290	0.002	69	5518	0.0392	0.0471	
106 n-Butylbenzene	91	19.297	19.294	0.003	97	10917	0.0392	0.0505	
108 Undecane	57	19.604	19.605	-0.001	91	8186	0.0392	0.0519	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.663	19.667	-0.004	97	9618	0.0392	0.0605	
110 1,2-Dibromo-3-Chloropropan	157	19.760	19.765	-0.005	89	2631	0.0392	0.0625	
111 1,2,4,5-Tetramethylbenzene	119	20.050	20.052	-0.002	98	11087	0.0392	0.0596	
112 1,2,3,5-Tetramethylbenzene	119	20.110	20.108	0.002	95	6542	0.0392	0.0572	
113 1,2,3,4-Tetramethylbenzene	119	20.502	20.505	-0.003	96	8071	0.0392	0.0558	
114 Dodecane	57	20.669	20.665	0.004	91	7473	0.0392	0.0573	
115 1,2,4-Trichlorobenzene	180	20.868	20.865	0.003	79	1778	0.0392	0.0505	
116 Naphthalene	128	21.008	21.007	0.001	94	5233	0.0392	0.0556	
117 Benzo(b)thiophene	134	21.110	21.112	-0.002	95	2516	0.0392	0.0686	
118 Hexachlorobutadiene	225	21.229	21.225	0.004	92	6656	0.0392	0.0489	
119 1,2,3-Trichlorobenzene	180	21.298	21.297	0.001	93	2094	0.0392	0.0455	
120 2-Methylnaphthalene	142	21.971	21.967	0.004	93	2038	0.1225	0.2204	
121 1-Methylnaphthalene	142	22.095	22.095	0.000	95	1742	0.1225	0.1692	
A 124 Toluene Range	1	13.627	(13.597-13.657)		0	31580	0.0392	0.0519	
S 126 Xylenes, Total	100				0		0.1176	0.1455	
S 127 1,2-Dichloroethene, Total	1				0		0.0784	0.0932	

Reagents:

40L12DNP_00008	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

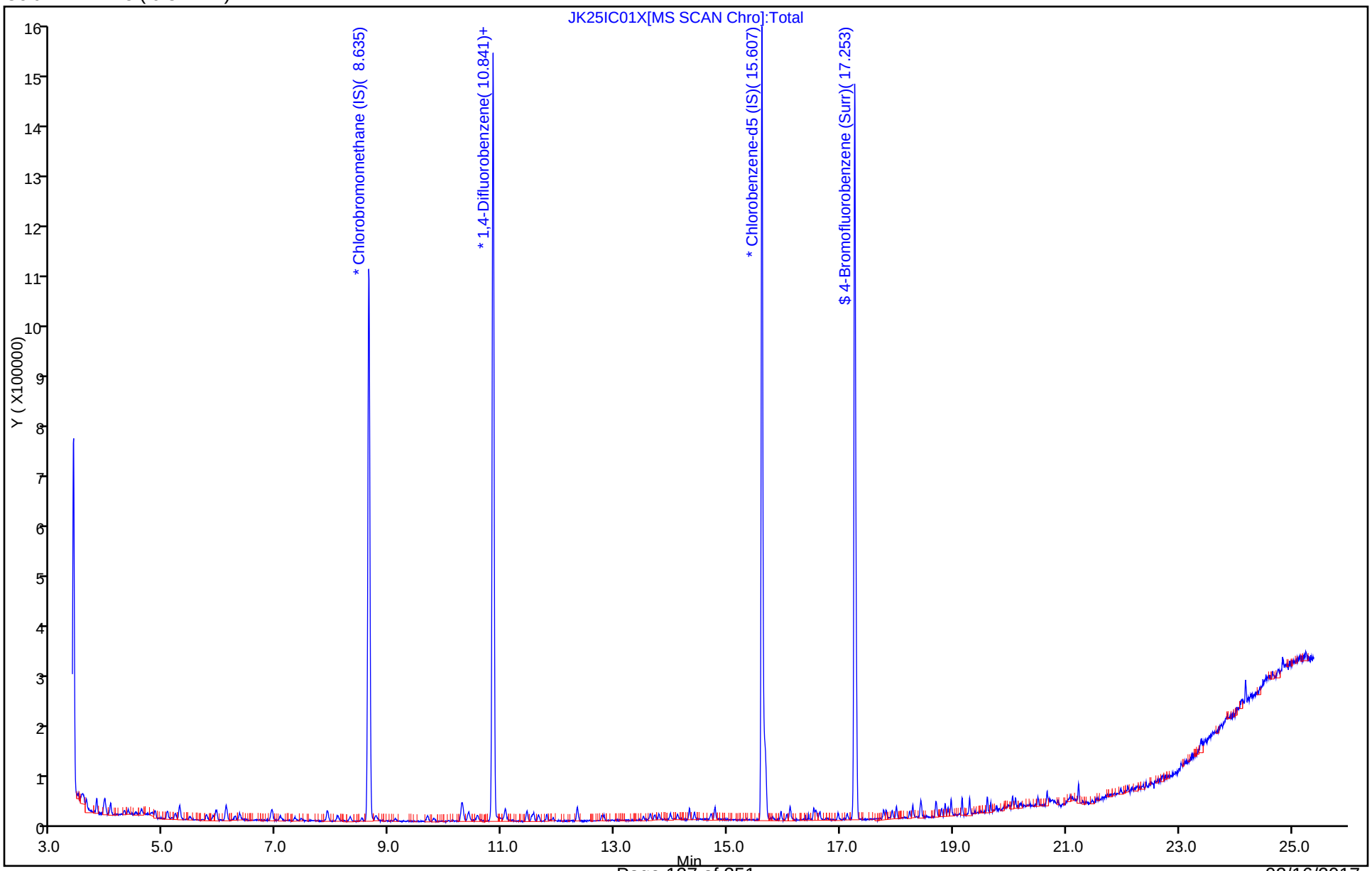
Report Date: 28-Nov-2016 13:55:17 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC01X.D

Injection Date:	25-Nov-2016 18:47:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	IC L1			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

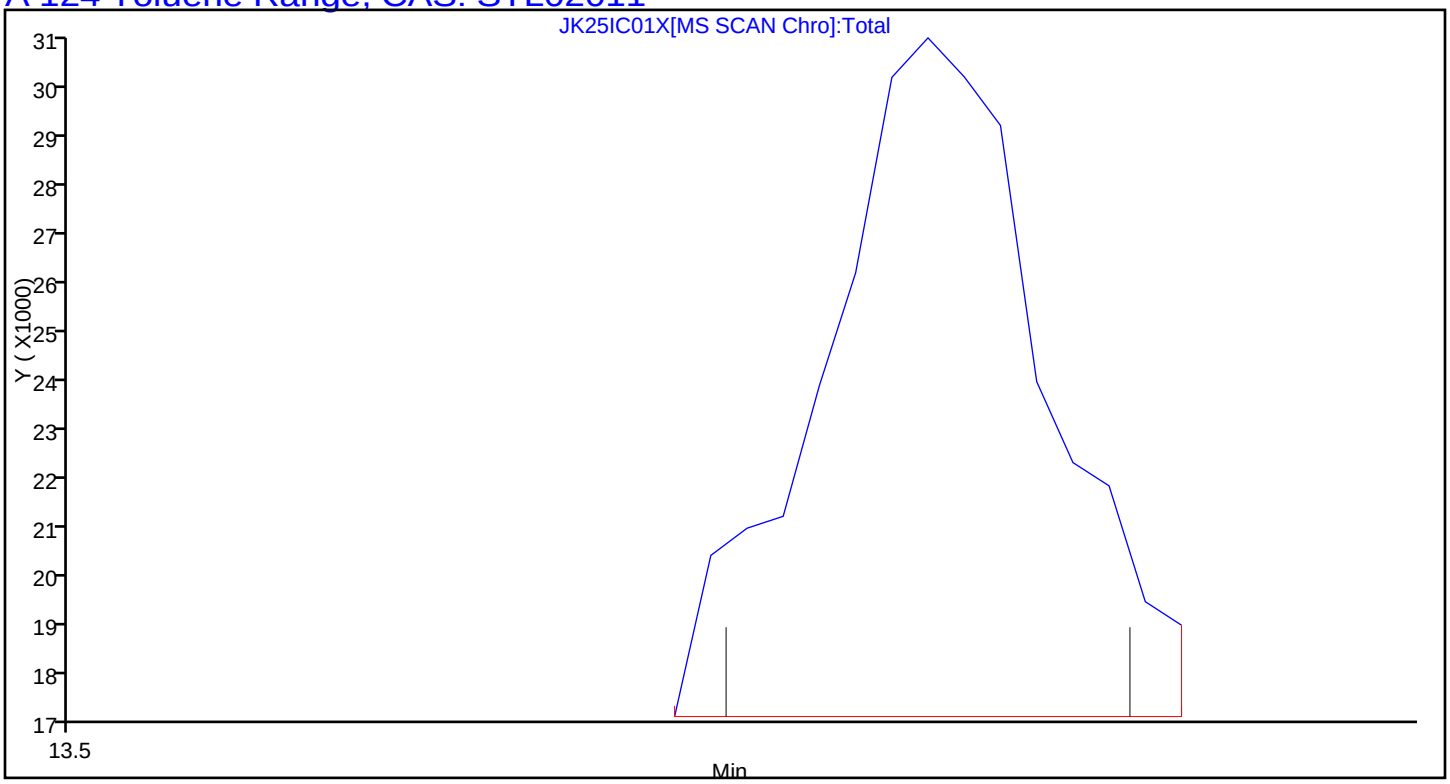


Report Date: 28-Nov-2016 13:55:17 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC01X.D				
Injection Date:	25-Nov-2016 18:47:30	Instrument ID:	MJ		
Lims ID:	IC L1				
Client ID:					
Operator ID:	007126	ALS Bottle#:	1	Worklist Smp#:	2
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC02X.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 25-Nov-2016 19:41:30 ALS Bottle#: 1 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003656-004
Misc. Info.: 067941
Operator ID: 007126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Nov-2016 13:55:20 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: barlozhetskayaa Date: 26-Nov-2016 10:59:20

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.638	8.640	-0.002	98	373845	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.843	10.843	0.000	96	1690007	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.610	15.609	0.001	89	1412269	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.256	17.254	0.002	97	851872	4.00	3.81	
6 Chlorodifluoromethane	67	3.576	3.568	0.008	97	3817	0.0784	0.1132	
7 Propene	41	3.586	3.578	0.008	98	14059	0.0784	0.1208	
8 Dichlorodifluoromethane	85	3.635	3.627	0.008	99	24537	0.0784	0.0811	
9 Chloromethane	52	3.807	3.806	0.001	77	3848	0.0784	0.0892	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.818	3.810	0.008	89	13862	0.0784	0.0829	
11 Acetaldehyde	44	3.963	3.953	0.010	86	27933	0.3920	0.5990	
12 Vinyl chloride	62	3.979	3.969	0.010	97	10259	0.0784	0.0792	
13 Butane	43	4.065	4.055	0.010	86	18358	0.0784	0.0814	
14 Butadiene	54	4.065	4.057	0.008	65	8651	0.0784	0.0833	
15 Bromomethane	94	4.377	4.367	0.010	95	9277	0.0784	0.0806	
16 Chloroethane	64	4.512	4.504	0.008	89	5140	0.0784	0.0837	
17 Ethanol	31	4.619	4.602	0.017	97	20763	0.3920	0.4206	
18 Vinyl bromide	106	4.802	4.797	0.005	97	8915	0.0784	0.0791	
19 2-Methylbutane	43	4.856	4.845	0.011	94	13294	0.0784	0.0805	
20 Trichlorofluoromethane	101	5.066	5.060	0.006	99	24312	0.0784	0.0790	
21 Acrolein	56	5.087	5.074	0.013	89	4293	0.0784	0.1185	
22 Acetonitrile	40	5.146	5.138	0.008	88	6608	0.0784	0.1482	
23 Acetone	58	5.216	5.192	0.024	98	10873	0.2352	0.2807	
24 Isopropyl alcohol	45	5.292	5.273	0.019	84	43385	0.2352	0.2408	
25 Pentane	72	5.292	5.279	0.013	71	942	0.0784	0.0544	
26 Ethyl ether	31	5.469	5.451	0.018	89	10958	0.0784	0.0863	
27 1,1-Dichloroethene	96	5.765	5.758	0.007	95	8883	0.0784	0.0789	
29 Acrylonitrile	53	5.867	5.865	0.002	77	5850	0.0784	0.0819	
28 2-Methyl-2-propanol	59	5.894	5.868	0.026	92	14228	0.0784	0.0783	
30 1,1,2-Trichloro-1,2,2-trif	101	5.937	5.931	0.006	96	19903	0.0784	0.0798	
31 Methylene Chloride	84	6.109	6.105	0.004	95	15555	0.0784	0.1412	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.126	6.121	0.005	97	10651	0.0784	0.0821	
33 Carbon disulfide	76	6.271	6.264	0.007	99	27603	0.0784	0.0833	
34 trans-1,2-Dichloroethene	96	6.911	6.908	0.003	96	9274	0.0784	0.0820	
35 2-Methylpentane	43	6.932	6.923	0.009	97	23520	0.0784	0.0804	
36 Methyl tert-butyl ether	73	7.072	7.049	0.023	96	20843	0.0784	0.0902	
37 1,1-Dichloroethane	63	7.325	7.326	-0.001	98	18057	0.0784	0.0840	
38 Vinyl acetate	43	7.443	7.435	0.008	100	22056	0.0784	0.0833	
39 2-Butanone (MEK)	72	7.917	7.895	0.022	82	2443	0.0784	0.0721	
40 Hexane	56	7.911	7.901	0.010	80	9022	0.0784	0.0906	
41 Isopropyl ether	45	8.089	8.072	0.017	96	27757	0.0784	0.0788	
42 cis-1,2-Dichloroethene	96	8.304	8.307	-0.003	97	9035	0.0784	0.0810	
43 Ethyl acetate	43	8.519	8.508	0.011	96	16465	0.0784	0.0833	
44 Chloroform	83	8.648	8.651	-0.003	28	20273	0.0784	0.0865	
45 Tert-butyl ethyl ether	59	8.772	8.750	0.022	96	22412	0.0784	0.0828	
46 Tetrahydrofuran	42	9.116	9.083	0.033	92	10118	0.0784	0.0920	
47 1,1,1-Trichloroethane	97	9.681	9.679	0.002	97	20173	0.0784	0.0834	
48 1,2-Dichloroethane	62	9.794	9.792	0.002	95	12345	0.0784	0.0784	
49 n-Butanol	31	10.305	10.272	0.033	61	4128	0.0784	0.0818	
50 Cyclohexane	69	10.284	10.285	-0.001	82	5864	0.0784	0.1048	
51 Benzene	78	10.289	10.285	0.004	95	24141	0.0784	0.0786	
52 Carbon tetrachloride	117	10.305	10.308	-0.003	95	21907	0.0784	0.0810	
53 2,3-Dimethylpentane	71	10.402	10.407	-0.005	91	6018	0.0784	0.0854	
54 Thiophene	84	10.564	10.565	-0.001	96	13753	0.0784	0.0784	
55 Tert-amyl methyl ether	73	10.800	10.811	-0.011	50	16558	0.0784	0.0754	
56 Isooctane	57	11.064	11.058	0.006	97	52286	0.0784	0.0898	
57 n-Heptane	71	11.440	11.441	-0.001	93	9153	0.0784	0.0851	
58 1,2-Dichloropropane	63	11.532	11.526	0.006	88	9817	0.0784	0.0789	
59 Trichloroethene	130	11.564	11.561	0.003	96	11621	0.0784	0.0804	
60 Dibromomethane	93	11.645	11.648	-0.003	94	10791	0.0784	0.0786	
62 Dichlorobromomethane	83	11.801	11.795	0.006	96	19726	0.0784	0.0826	
61 1,4-Dioxane	88	11.860	11.835	0.025	84	2535	0.0784	0.0779	
63 Methyl methacrylate	41	11.908	11.902	0.006	92	9213	0.0784	0.0783	
64 Methylcyclohexane	83	12.339	12.336	0.003	90	20303	0.0784	0.0869	
65 4-Methyl-2-pentanone (MIBK	43	12.775	12.764	0.011	97	18448	0.0784	0.0793	
66 cis-1,3-Dichloropropene	75	12.807	12.808	-0.001	97	11728	0.0784	0.0726	
67 trans-1,3-Dichloropropene	75	13.506	13.509	-0.003	95	10015	0.0784	0.0824	
68 Toluene	91	13.630	13.630	0.000	92	24869	0.0784	0.0819	
69 1,1,2-Trichloroethane	83	13.711	13.709	0.002	97	7462	0.0784	0.0782	
70 2-Methylthiophene	97	13.786	13.784	0.002	97	21017	0.0784	0.0825	
71 3-Methylthiophene	97	13.985	13.985	0.000	98	20285	0.0784	0.0834	
72 2-Hexanone	58	14.109	14.106	0.003	89	6340	0.0784	0.0715	
73 n-Octane	85	14.324	14.322	0.002	96	8712	0.0784	0.0857	
74 Chlorodibromomethane	129	14.410	14.412	-0.002	96	17301	0.0784	0.0777	
75 Ethylene Dibromide	107	14.706	14.706	0.000	96	12660	0.0784	0.0788	
76 Tetrachloroethene	129	14.776	14.777	-0.001	94	11194	0.0784	0.0841	
78 Chlorobenzene	112	15.658	15.658	0.000	96	18576	0.0784	0.0779	
77 2,3-Dimethylheptane	43	15.674	15.677	-0.003	94	32304	0.0784	0.0850	
79 Ethylbenzene	91	15.948	15.947	0.001	99	27733	0.0784	0.0770	
80 2-Ethylthiophene	97	16.051	16.050	0.001	98	20835	0.0784	0.0774	
81 m-Xylene & p-Xylene	91	16.110	16.110	0.000	97	40253	0.1568	0.1515	
82 n-Nonane	57	16.529	16.528	0.001	95	16865	0.0784	0.0742	
83 Bromoform	173	16.556	16.559	-0.003	96	14675	0.0784	0.0692	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.572	16.575	-0.003	97	12925	0.0784	0.0684	
85 o-Xylene	91	16.632	16.634	-0.002	99	22480	0.0784	0.0784	
86 1,1,2,2-Tetrachloroethane	83	16.960	16.962	-0.002	98	15290	0.0784	0.0733	
87 1,2,3-Trichloropropane	110	17.121	17.122	-0.001	94	3741	0.0784	0.0781	
88 Isopropylbenzene	105	17.223	17.221	0.002	95	30745	0.0784	0.0793	
89 N-Propylbenzene	120	17.772	17.767	0.005	98	5951	0.0784	0.0652	
90 2-Chlorotoluene	126	17.810	17.813	-0.003	95	6950	0.0784	0.0717	
91 4-Ethyltoluene	105	17.923	17.921	0.002	98	21804	0.0784	0.0672	
92 1,3,5-Trimethylbenzene	120	17.993	17.995	-0.002	92	11072	0.0784	0.0677	
93 Alpha Methyl Styrene	118	18.229	18.229	0.000	87	7712	0.0784	0.0611	
94 n-Decane	57	18.288	18.287	0.001	89	16645	0.0784	0.0724	
95 tert-Butylbenzene	119	18.423	18.422	0.001	91	23687	0.0784	0.0718	
96 1,2,4-Trimethylbenzene	105	18.434	18.436	-0.002	95	19250	0.0784	0.0683	
97 sec-Butylbenzene	105	18.692	18.694	-0.002	98	30298	0.0784	0.0700	
98 1,3-Dichlorobenzene	146	18.713	18.710	0.003	96	10249	0.0784	0.0649	
99 Benzyl chloride	91	18.789	18.786	0.003	96	8876	0.0784	0.0648	
100 1,4-Dichlorobenzene	146	18.805	18.799	0.006	94	8160	0.0784	0.0662	
101 4-Isopropyltoluene	119	18.859	18.857	0.002	96	22476	0.0784	0.0666	
102 1,2,3-Trimethylbenzene	105	18.913	18.912	0.000	99	15387	0.0784	0.0726	
103 Butylcyclohexane	83	18.966	18.964	0.002	87	19278	0.0784	0.0706	
104 2,3-Dihydroindene	117	19.160	19.159	0.001	94	16540	0.0784	0.0670	
105 1,2-Dichlorobenzene	146	19.160	19.159	0.001	76	10229	0.0784	0.0639	
107 Indene	116	19.289	19.290	-0.001	69	9134	0.0784	0.0595	
106 n-Butylbenzene	91	19.294	19.294	0.000	95	18213	0.0784	0.0643	
108 Undecane	57	19.606	19.605	0.001	93	14919	0.0784	0.0723	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.671	19.667	0.004	97	13973	0.0784	0.0672	
110 1,2-Dibromo-3-Chloropropan	157	19.768	19.765	0.003	91	3641	0.0784	0.0661	
111 1,2,4,5-Tetramethylbenzene	119	20.053	20.052	0.001	97	16586	0.0784	0.0681	
112 1,2,3,5-Tetramethylbenzene	119	20.107	20.108	-0.001	95	10137	0.0784	0.0677	
113 1,2,3,4-Tetramethylbenzene	119	20.505	20.505	0.000	97	13891	0.0784	0.0734	
114 Dodecane	57	20.666	20.665	0.001	90	12548	0.0784	0.0736	
115 1,2,4-Trichlorobenzene	180	20.871	20.865	0.006	91	2846	0.0784	0.0618	
116 Naphthalene	128	21.005	21.007	-0.002	99	7601	0.0784	0.0617	
117 Benzo(b)thiophene	134	21.113	21.112	0.001	95	3065	0.0784	0.0639	
118 Hexachlorobutadiene	225	21.226	21.225	0.001	93	12720	0.0784	0.0714	
119 1,2,3-Trichlorobenzene	180	21.296	21.297	-0.001	91	4032	0.0784	0.0670	
120 2-Methylnaphthalene	142	21.968	21.967	0.001	93	2539	0.2450	0.2099	
121 1-Methylnaphthalene	142	22.097	22.095	0.002	94	3063	0.2450	0.2274	
A 124 Toluene Range	1	13.630	(13.600-13.660)		0	62136	0.0784	0.0781	
S 126 Xylenes, Total	100				0		0.2352	0.2299	
S 127 1,2-Dichloroethene, Total	1				0		0.1568	0.1630	

Reagents:

40L12DNP_00008	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

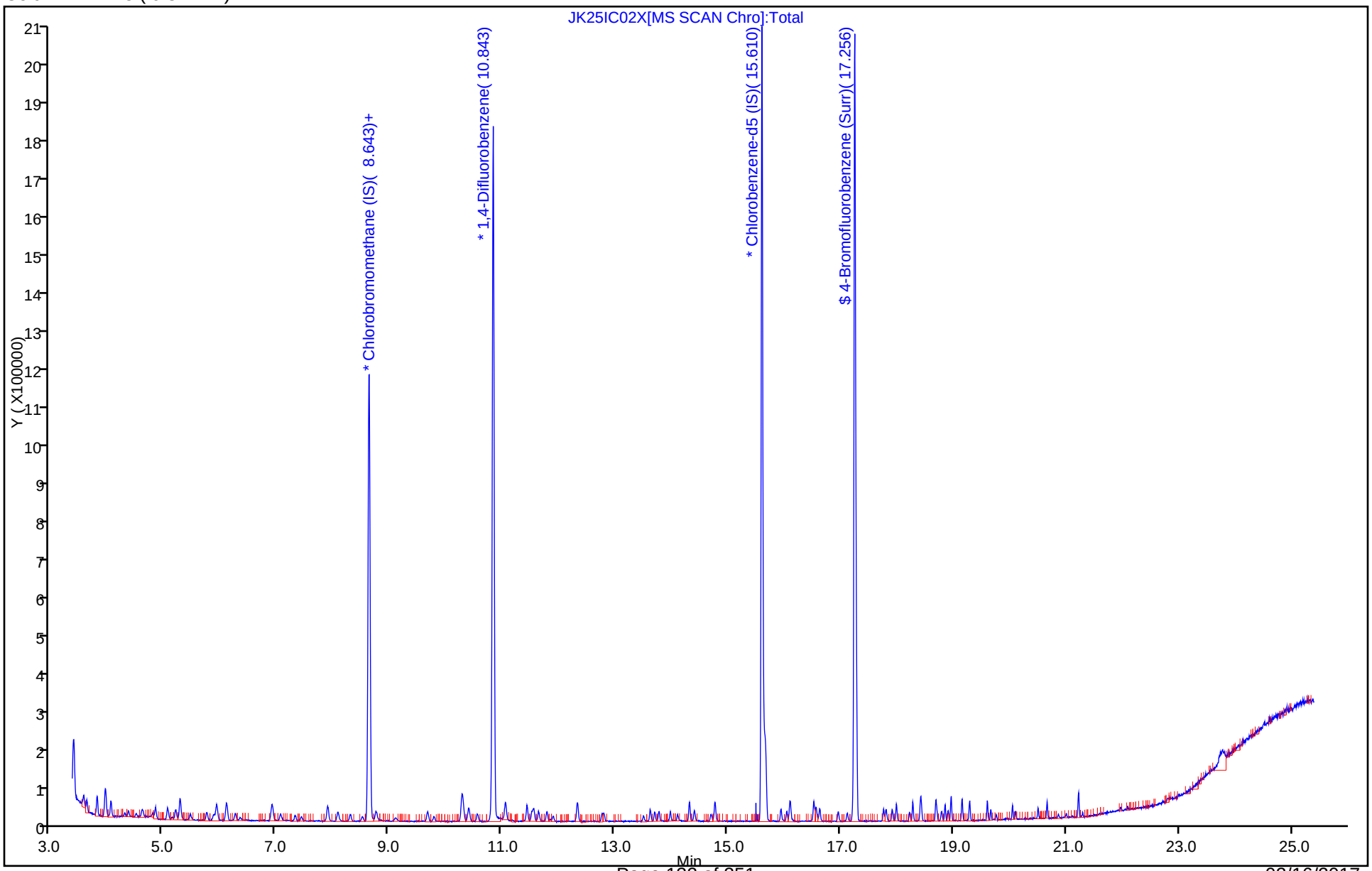
Report Date: 28-Nov-2016 13:55:21 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC02X.D

Injection Date:	25-Nov-2016 19:41:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	IC L2			Worklist Smp#:	3
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

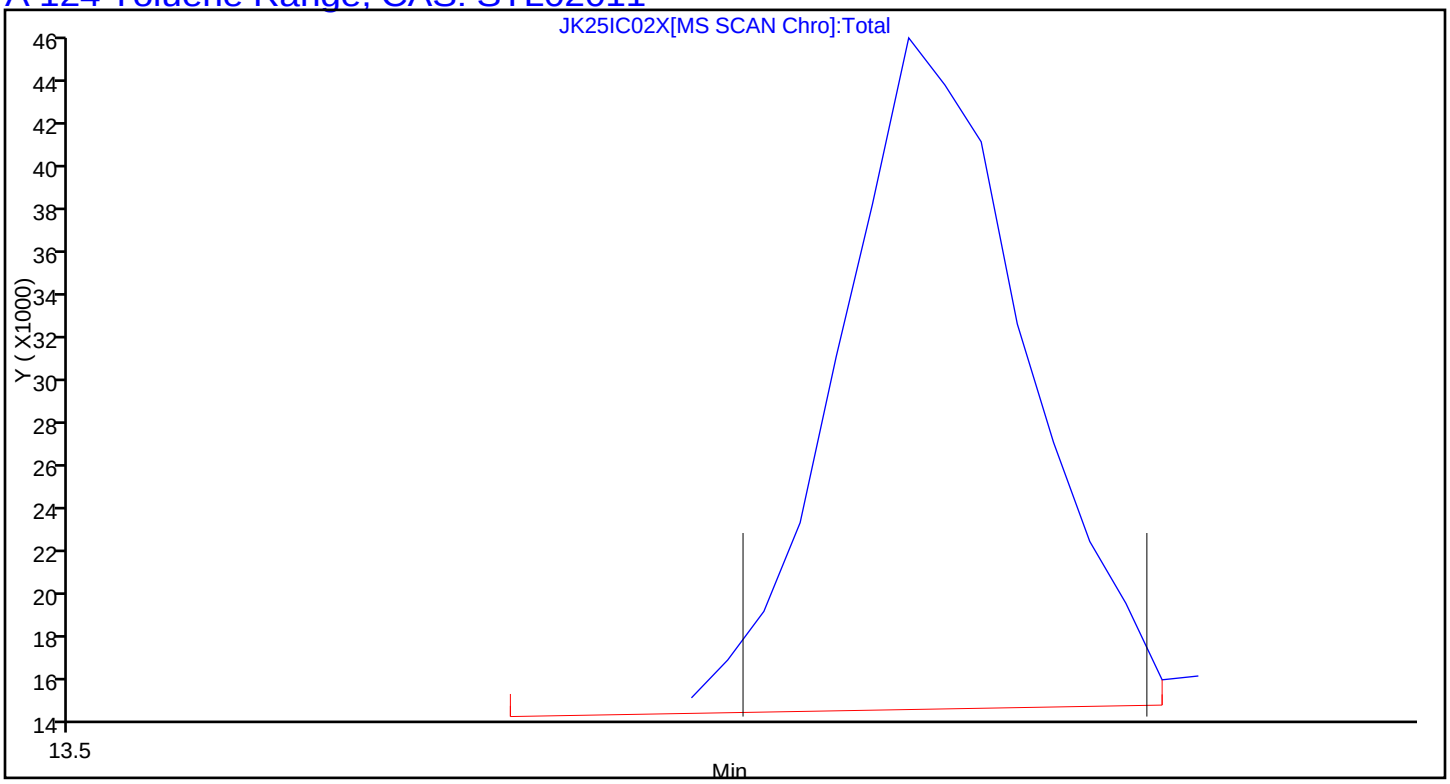


Report Date: 28-Nov-2016 13:55:21 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC02X.D				
Injection Date:	25-Nov-2016 19:41:30	Instrument ID:	MJ		
Lims ID:	IC L2				
Client ID:					
Operator ID:	007126	ALS Bottle#:	1	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC03X.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 25-Nov-2016 20:34:30 ALS Bottle#: 2 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003656-005
Misc. Info.: 067940
Operator ID: 007126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Nov-2016 13:55:24 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh Date: 28-Nov-2016 11:48:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.636	8.640	-0.004	98	380187	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.836	10.843	-0.007	96	1708776	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.608	15.609	-0.001	89	1457644	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.254	17.254	0.000	96	875722	4.00	3.79	
6 Chlorodifluoromethane	67	3.569	3.568	0.001	98	5092	0.1587	0.1485	
7 Propene	41	3.574	3.578	-0.004	97	20501	0.1587	0.1732	
8 Dichlorodifluoromethane	85	3.628	3.627	0.001	99	47625	0.1587	0.1547	
9 Chloromethane	52	3.805	3.806	-0.001	64	7053	0.1587	0.1607	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.811	3.810	0.001	91	29597	0.1587	0.1740	
11 Acetaldehyde	44	3.951	3.953	-0.003	94	51314	0.7933	1.08	
12 Vinyl chloride	62	3.967	3.969	-0.002	99	20305	0.1587	0.1542	
13 Butane	43	4.053	4.055	-0.002	86	35876	0.1587	0.1564	
14 Butadiene	54	4.058	4.057	0.001	67	16869	0.1587	0.1597	
15 Bromomethane	94	4.365	4.367	-0.002	98	18258	0.1587	0.1559	
16 Chloroethane	64	4.499	4.504	-0.005	87	9573	0.1587	0.1533	
17 Ethanol	31	4.596	4.602	-0.006	97	44631	0.7933	0.8891	
18 Vinyl bromide	106	4.795	4.797	-0.002	97	17575	0.1587	0.1533	
19 2-Methylbutane	43	4.838	4.845	-0.007	94	25369	0.1587	0.1510	
20 Trichlorofluoromethane	101	5.053	5.060	-0.007	99	48022	0.1587	0.1534	
21 Acrolein	56	5.075	5.074	0.001	71	7938	0.1587	0.2154	
22 Acetonitrile	40	5.123	5.138	-0.015	99	7837	0.1587	0.1729	
23 Acetone	58	5.193	5.192	0.001	99	27346	0.4760	0.6942	
24 Isopropyl alcohol	45	5.268	5.273	-0.005	88	87437	0.4760	0.4772	
25 Pentane	72	5.279	5.279	0.000	76	2810	0.1587	0.1597	
26 Ethyl ether	31	5.457	5.451	0.006	88	21130	0.1587	0.1637	
27 1,1-Dichloroethene	96	5.753	5.758	-0.005	94	17148	0.1587	0.1499	
29 Acrylonitrile	53	5.860	5.865	-0.005	94	12108	0.1587	0.1667	
28 2-Methyl-2-propanol	59	5.871	5.868	0.003	95	28880	0.1587	0.1563	
30 1,1,2-Trichloro-1,2,2-trif	101	5.925	5.931	-0.006	97	38750	0.1587	0.1528	
31 Methylene Chloride	84	6.102	6.105	-0.003	96	23231	0.1587	0.2073	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.118	6.121	-0.003	95	22843	0.1587	0.1731	
33 Carbon disulfide	76	6.258	6.264	-0.006	100	52091	0.1587	0.1545	
34 trans-1,2-Dichloroethene	96	6.904	6.908	-0.004	94	17794	0.1587	0.1547	
35 2-Methylpentane	43	6.920	6.923	-0.003	96	45905	0.1587	0.1544	
36 Methyl tert-butyl ether	73	7.049	7.049	0.000	96	38931	0.1587	0.1656	
37 1,1-Dichloroethane	63	7.323	7.326	-0.003	99	34190	0.1587	0.1564	
38 Vinyl acetate	43	7.436	7.435	0.001	100	44854	0.1587	0.1666	
39 2-Butanone (MEK)	72	7.899	7.895	0.004	82	5869	0.1587	0.1703	
40 Hexane	56	7.899	7.901	-0.002	74	16542	0.1587	0.1634	
41 Isopropyl ether	45	8.071	8.072	-0.001	96	59349	0.1587	0.1656	
42 cis-1,2-Dichloroethene	96	8.302	8.307	-0.005	98	18037	0.1587	0.1591	
43 Ethyl acetate	43	8.507	8.508	-0.001	97	32237	0.1587	0.1603	
44 Chloroform	83	8.647	8.651	-0.004	91	39225	0.1587	0.1645	
45 Tert-butyl ethyl ether	59	8.754	8.750	0.004	97	45518	0.1587	0.1654	
46 Tetrahydrofuran	42	9.088	9.083	0.005	93	19048	0.1587	0.1702	
47 1,1,1-Trichloroethane	97	9.674	9.679	-0.005	97	39664	0.1587	0.1612	
48 1,2-Dichloroethane	62	9.793	9.792	0.001	96	25128	0.1587	0.1578	
49 n-Butanol	31	10.288	10.272	0.016	59	7404	0.1587	0.1451	
50 Cyclohexane	69	10.282	10.285	-0.003	80	10636	0.1587	0.1880	
51 Benzene	78	10.282	10.285	-0.003	96	49152	0.1587	0.1584	
52 Carbon tetrachloride	117	10.304	10.308	-0.004	95	43534	0.1587	0.1591	
53 2,3-Dimethylpentane	71	10.406	10.407	-0.001	92	11513	0.1587	0.1616	
54 Thiophene	84	10.562	10.565	-0.003	96	28726	0.1587	0.1619	
55 Tert-amyl methyl ether	73	10.793	10.811	-0.018	95	34262	0.1587	0.1512	
56 Isooctane	57	11.057	11.058	-0.001	98	97663	0.1587	0.1660	
57 n-Heptane	71	11.444	11.441	0.003	96	17720	0.1587	0.1629	
58 1,2-Dichloropropane	63	11.519	11.526	-0.007	88	19570	0.1587	0.1556	
59 Trichloroethene	130	11.557	11.561	-0.004	94	24542	0.1587	0.1680	
60 Dibromomethane	93	11.649	11.648	0.001	94	21756	0.1587	0.1568	
62 Dichlorobromomethane	83	11.794	11.795	-0.001	97	38075	0.1587	0.1576	
61 1,4-Dioxane	88	11.842	11.835	0.007	91	4802	0.1587	0.1459	
63 Methyl methacrylate	41	11.907	11.902	0.005	92	18239	0.1587	0.1533	
64 Methylcyclohexane	83	12.326	12.336	-0.010	91	38039	0.1587	0.1611	
65 4-Methyl-2-pentanone (MIBK	43	12.762	12.764	-0.002	97	36347	0.1587	0.1545	
66 cis-1,3-Dichloropropene	75	12.805	12.808	-0.003	98	23969	0.1587	0.1468	
67 trans-1,3-Dichloropropene	75	13.510	13.509	0.001	95	16526	0.1587	0.1317	
68 Toluene	91	13.628	13.630	-0.002	92	51423	0.1587	0.1641	
69 1,1,2-Trichloroethane	83	13.709	13.709	0.000	97	15047	0.1587	0.1527	
70 2-Methylthiophene	97	13.779	13.784	-0.005	98	38657	0.1587	0.1470	
71 3-Methylthiophene	97	13.983	13.985	-0.002	98	39921	0.1587	0.1590	
72 2-Hexanone	58	14.107	14.106	0.001	89	12562	0.1587	0.1373	
73 n-Octane	85	14.322	14.322	0.000	98	15913	0.1587	0.1516	
74 Chlorodibromomethane	129	14.408	14.412	-0.004	96	33912	0.1587	0.1476	
75 Ethylene Dibromide	107	14.704	14.706	-0.002	96	24538	0.1587	0.1480	
76 Tetrachloroethene	129	14.774	14.777	-0.003	95	20627	0.1587	0.1502	
78 Chlorobenzene	112	15.656	15.658	-0.002	97	35843	0.1587	0.1456	
77 2,3-Dimethylheptane	43	15.678	15.677	0.001	93	61836	0.1587	0.1577	
79 Ethylbenzene	91	15.947	15.947	0.000	98	57358	0.1587	0.1543	
80 2-Ethylthiophene	97	16.049	16.050	-0.001	98	41893	0.1587	0.1507	
81 m-Xylene & p-Xylene	91	16.108	16.110	-0.002	99	83085	0.3173	0.3029	
82 n-Nonane	57	16.528	16.528	0.000	94	34945	0.1587	0.1490	
83 Bromoform	173	16.560	16.559	0.001	93	31148	0.1587	0.1423	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.576	16.575	0.001	97	26979	0.1587	0.1383	
85 o-Xylene	91	16.635	16.634	0.001	98	47711	0.1587	0.1613	
86 1,1,2,2-Tetrachloroethane	83	16.963	16.962	0.001	99	29118	0.1587	0.1352	
87 1,2,3-Trichloropropane	110	17.119	17.122	-0.003	94	7300	0.1587	0.1477	
88 Isopropylbenzene	105	17.222	17.221	0.001	97	62346	0.1587	0.1558	
89 N-Propylbenzene	120	17.765	17.767	-0.002	99	13516	0.1587	0.1436	
90 2-Chlorotoluene	126	17.813	17.813	0.000	97	15341	0.1587	0.1534	
91 4-Ethyltoluene	105	17.921	17.921	0.000	98	46453	0.1587	0.1388	
92 1,3,5-Trimethylbenzene	120	17.996	17.995	0.001	92	26253	0.1587	0.1556	
93 Alpha Methyl Styrene	118	18.228	18.229	-0.001	84	16153	0.1587	0.1240	
94 n-Decane	57	18.287	18.287	0.000	87	34420	0.1587	0.1451	
95 tert-Butylbenzene	119	18.421	18.422	-0.001	91	52616	0.1587	0.1545	
96 1,2,4-Trimethylbenzene	105	18.432	18.436	-0.004	96	41173	0.1587	0.1414	
97 sec-Butylbenzene	105	18.690	18.694	-0.004	98	68410	0.1587	0.1532	
98 1,3-Dichlorobenzene	146	18.706	18.710	-0.004	97	18695	0.1587	0.1146	
99 Benzyl chloride	91	18.782	18.786	-0.004	98	16254	0.1587	0.1149	
100 1,4-Dichlorobenzene	146	18.798	18.799	-0.001	91	15642	0.1587	0.1230	
101 4-Isopropyltoluene	119	18.857	18.857	0.000	97	49882	0.1587	0.1433	
102 1,2,3-Trimethylbenzene	105	18.911	18.912	-0.001	98	33236	0.1587	0.1519	
103 Butylcyclohexane	83	18.965	18.964	0.001	89	42456	0.1587	0.1507	
104 2,3-Dihydroindene	117	19.158	19.159	-0.001	93	35512	0.1587	0.1394	
105 1,2-Dichlorobenzene	146	19.158	19.159	-0.001	74	20295	0.1587	0.1229	
107 Indene	116	19.287	19.290	-0.003	84	18700	0.1587	0.1181	
106 n-Butylbenzene	91	19.293	19.294	-0.001	96	37412	0.1587	0.1281	
108 Undecane	57	19.605	19.605	0.000	92	28458	0.1587	0.1337	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.664	19.667	-0.003	97	28944	0.1587	0.1348	
110 1,2-Dibromo-3-Chloropropan	157	19.766	19.765	0.001	92	7180	0.1587	0.1263	
111 1,2,4,5-Tetramethylbenzene	119	20.051	20.052	-0.001	96	34869	0.1587	0.1387	
112 1,2,3,5-Tetramethylbenzene	119	20.105	20.108	-0.003	94	22173	0.1587	0.1435	
113 1,2,3,4-Tetramethylbenzene	119	20.503	20.505	-0.002	97	27081	0.1587	0.1386	
114 Dodecane	57	20.665	20.665	-0.001	91	23834	0.1587	0.1354	
115 1,2,4-Trichlorobenzene	180	20.864	20.865	-0.001	91	5532	0.1587	0.1164	
116 Naphthalene	128	21.009	21.007	0.002	98	13194	0.1587	0.1037	
117 Benzo(b)thiophene	134	21.111	21.112	-0.001	98	5231	0.1587	0.1056	
118 Hexachlorobutadiene	225	21.224	21.225	-0.001	94	26869	0.1587	0.1461	
119 1,2,3-Trichlorobenzene	180	21.299	21.297	0.002	94	7260	0.1587	0.1168	
120 2-Methylnaphthalene	142	21.966	21.967	-0.001	93	4331	0.4958	0.3469	
121 1-Methylnaphthalene	142	22.095	22.095	0.000	94	5326	0.4958	0.3831	
A 124 Toluene Range	1	13.628	(13.598-13.658)		0	126167	0.1587	0.1537	
A 125 C8 Range	1	14.307	(14.284-14.331)		0	185140	0.1587	0.1657	
S 126 Xylenes, Total	100				0		0.4760	0.4642	
S 127 1,2-Dichloroethene, Total	1				0		0.3173	0.3138	

Reagents:

40L3DNP_00009	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

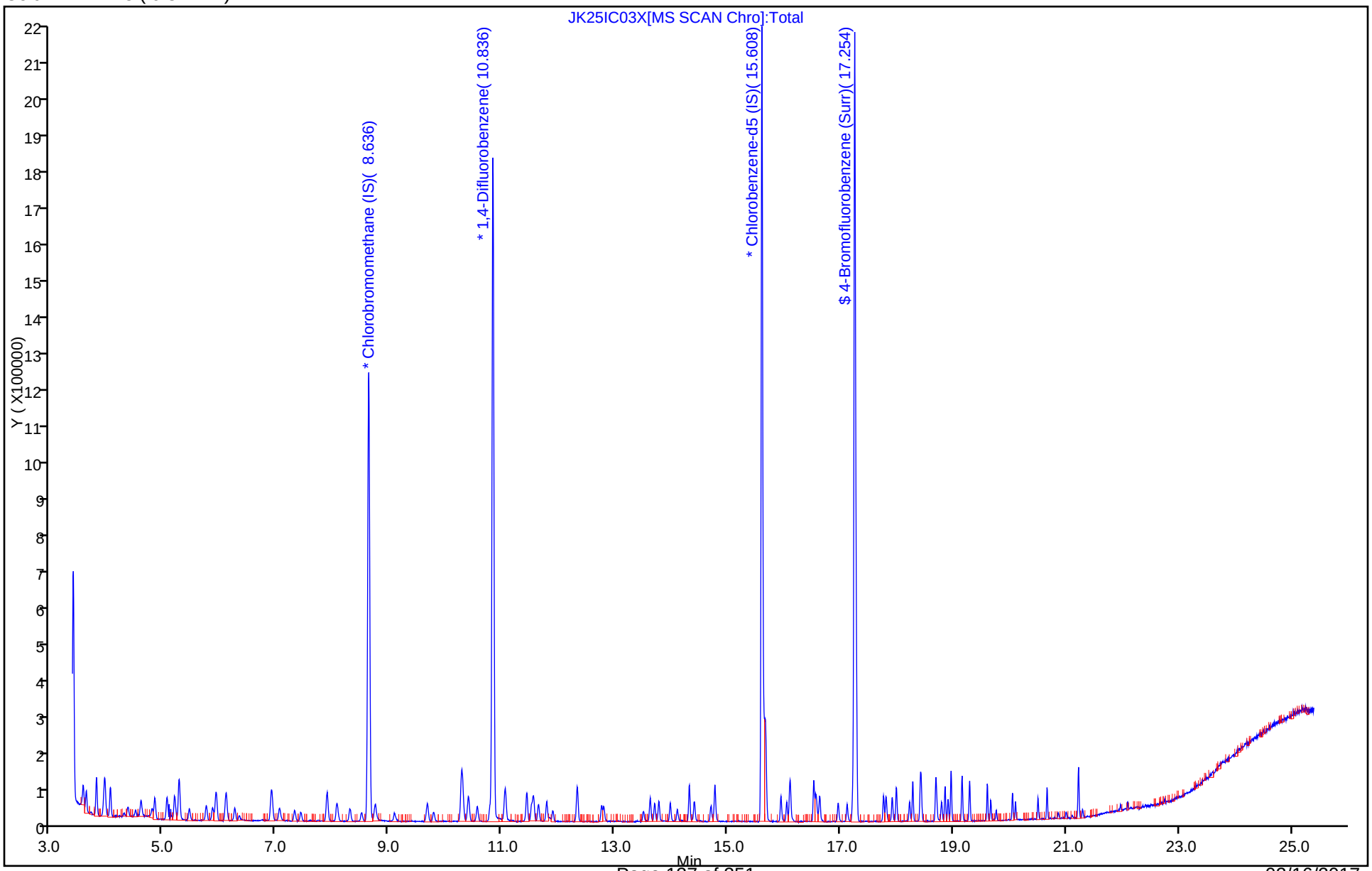
Report Date: 28-Nov-2016 13:55:25 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC03X.D

Injection Date:	25-Nov-2016 20:34:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	IC L3			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

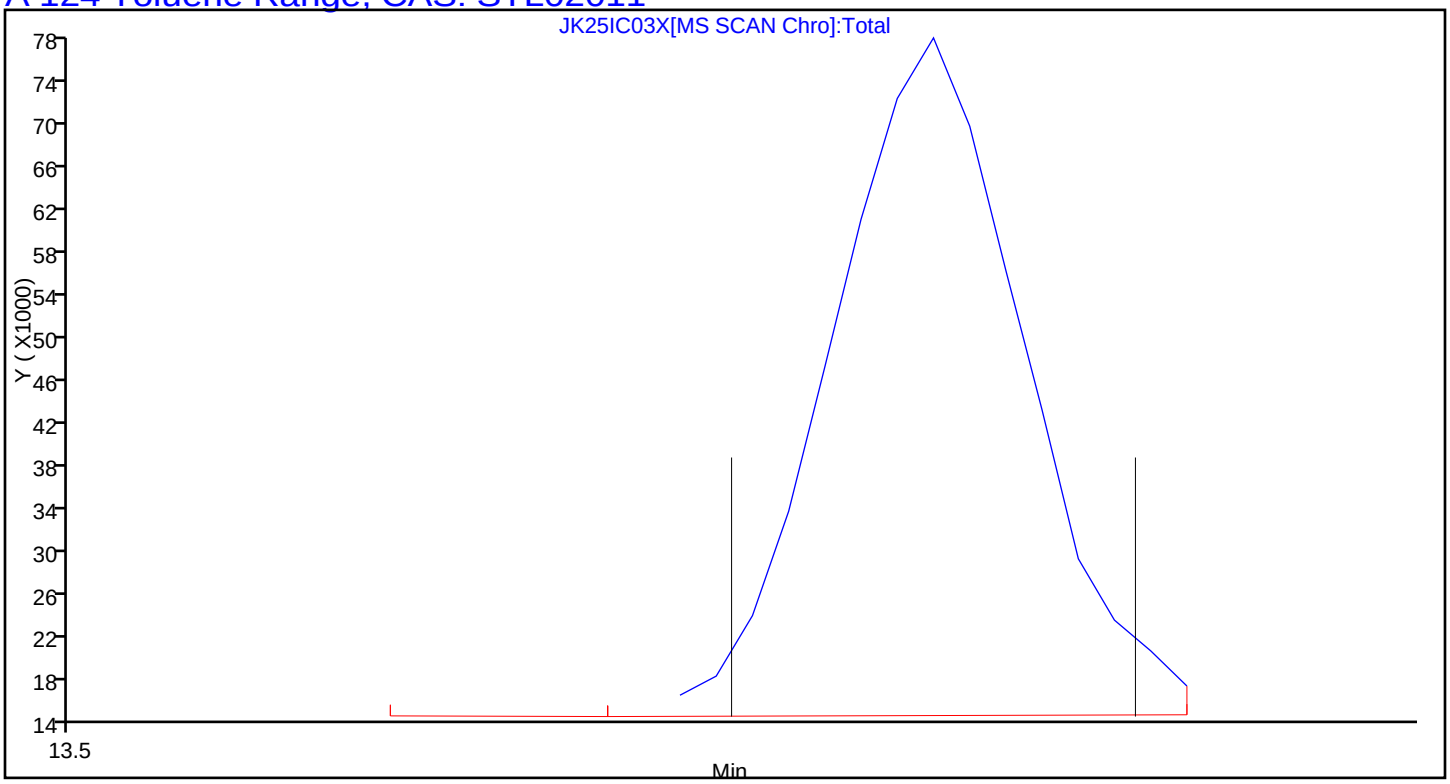


Report Date: 28-Nov-2016 13:55:25 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC03X.D				
Injection Date:	25-Nov-2016 20:34:30	Instrument ID:	MJ		
Lims ID:	IC L3				
Client ID:					
Operator ID:	007126	ALS Bottle#:	2	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

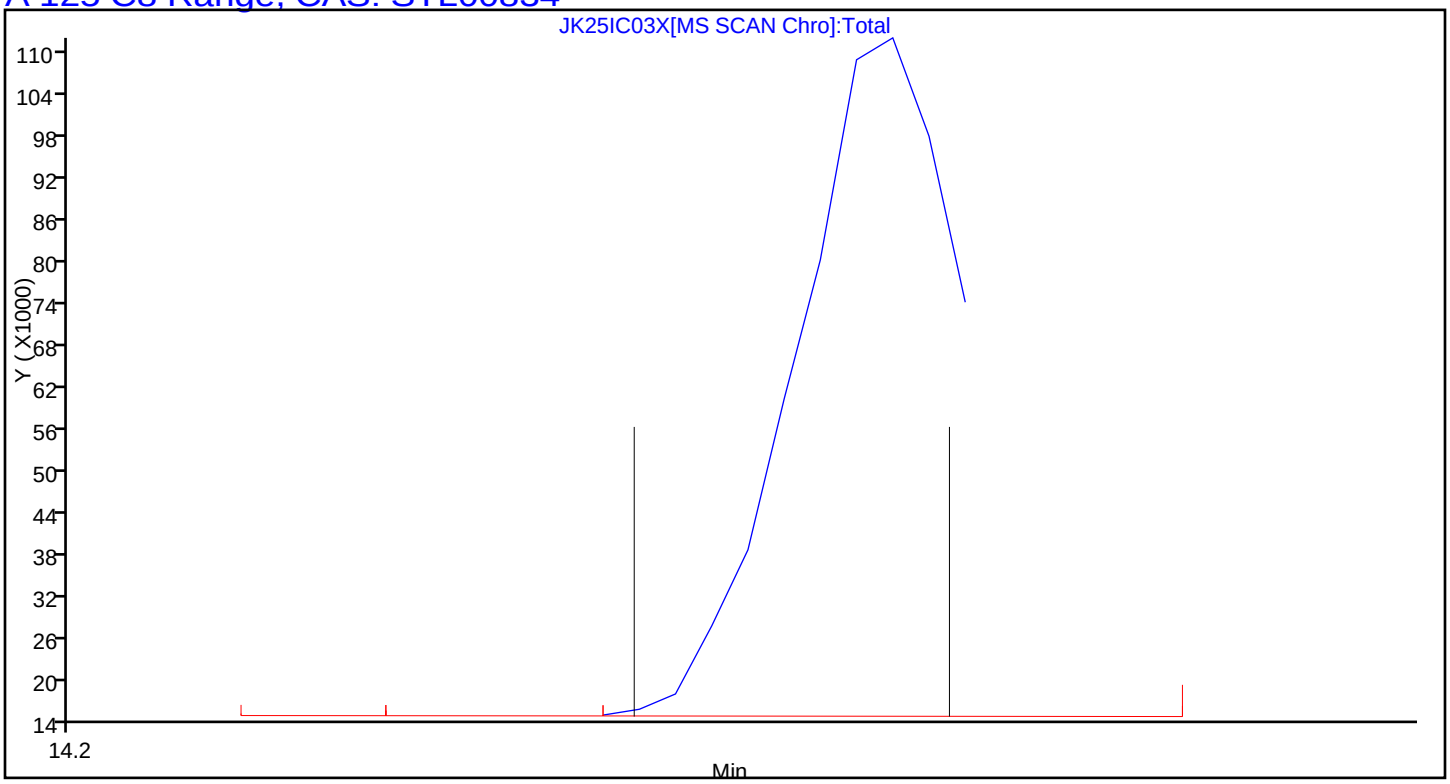


Report Date: 28-Nov-2016 13:55:25 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC03X.D				
Injection Date:	25-Nov-2016 20:34:30	Instrument ID:	MJ		
Lims ID:	IC L3				
Client ID:					
Operator ID:	007126	ALS Bottle#:	2	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC04X.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 25-Nov-2016 21:29:30 ALS Bottle#: 3 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003656-006
Misc. Info.: 067939
Operator ID: 007126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Nov-2016 13:55:28 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh Date: 28-Nov-2016 11:52:02

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.635	8.640	-0.005	98	373438	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.841	10.843	-0.002	96	1679746	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.607	15.609	-0.002	89	1449355	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.253	17.254	-0.001	96	905137	4.00	3.94	
6 Chlorodifluoromethane	67	3.568	3.568	0.000	97	11982	0.4000	0.3557	
7 Propene	41	3.578	3.578	0.000	98	46736	0.4000	0.4019	
8 Dichlorodifluoromethane	85	3.627	3.627	0.000	99	111873	0.4000	0.3700	
9 Chloromethane	52	3.810	3.806	0.004	65	15615	0.4000	0.3622	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.810	3.810	0.000	92	60841	0.4000	0.3641	
11 Acetaldehyde	44	3.950	3.953	-0.003	94	84629	2.00	1.82	
12 Vinyl chloride	62	3.966	3.969	-0.003	99	47000	0.4000	0.3634	
13 Butane	43	4.052	4.055	-0.003	86	81334	0.4000	0.3609	
14 Butadiene	54	4.057	4.057	0.000	65	38093	0.4000	0.3671	
15 Bromomethane	94	4.364	4.367	-0.003	98	42225	0.4000	0.3671	
16 Chloroethane	64	4.498	4.504	-0.006	86	22919	0.4000	0.3737	
17 Ethanol	31	4.595	4.602	-0.007	98	89104	2.00	1.81	
18 Vinyl bromide	106	4.794	4.797	-0.003	98	40004	0.4000	0.3552	
19 2-Methylbutane	43	4.843	4.845	-0.002	94	59137	0.4000	0.3584	
20 Trichlorofluoromethane	101	5.058	5.060	-0.002	100	109033	0.4000	0.3545	
21 Acrolein	56	5.074	5.074	0.000	95	12447	0.4000	0.3439	
22 Acetonitrile	40	5.133	5.138	-0.005	98	15157	0.4000	0.3404	
23 Acetone	58	5.187	5.192	-0.005	99	47081	1.20	1.22	
24 Isopropyl alcohol	45	5.262	5.273	-0.011	93	190258	1.20	1.06	
25 Pentane	72	5.278	5.279	-0.001	96	6036	0.4000	0.3491	
26 Ethyl ether	31	5.450	5.451	-0.001	90	43301	0.4000	0.3416	
27 1,1-Dichloroethene	96	5.757	5.758	-0.001	95	40325	0.4000	0.3588	
29 Acrylonitrile	53	5.865	5.865	0.000	57	23310	0.4000	0.3267	
28 2-Methyl-2-propanol	59	5.859	5.868	-0.009	96	64571	0.4000	0.3558	
30 1,1,2-Trichloro-1,2,2-trif	101	5.929	5.931	-0.002	96	90023	0.4000	0.3614	
31 Methylene Chloride	84	6.101	6.105	-0.004	95	43448	0.4000	0.3948	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.118	6.121	-0.003	95	47589	0.4000	0.3672	
33 Carbon disulfide	76	6.263	6.264	-0.001	100	121583	0.4000	0.3672	
34 trans-1,2-Dichloroethene	96	6.903	6.908	-0.005	96	40286	0.4000	0.3566	
35 2-Methylpentane	43	6.924	6.923	0.001	97	104062	0.4000	0.3562	
36 Methyl tert-butyl ether	73	7.048	7.049	-0.001	96	78151	0.4000	0.3384	
37 1,1-Dichloroethane	63	7.323	7.326	-0.003	99	80819	0.4000	0.3763	
38 Vinyl acetate	43	7.430	7.435	-0.005	100	88963	0.4000	0.3364	
39 2-Butanone (MEK)	72	7.898	7.895	0.003	81	12424	0.4000	0.3670	
40 Hexane	56	7.898	7.901	-0.003	78	36117	0.4000	0.3632	
41 Isopropyl ether	45	8.070	8.072	-0.002	96	122364	0.4000	0.3477	
42 cis-1,2-Dichloroethene	96	8.302	8.307	-0.005	98	41397	0.4000	0.3718	
43 Ethyl acetate	43	8.506	8.508	-0.002	98	66797	0.4000	0.3381	
44 Chloroform	83	8.646	8.651	-0.005	97	86703	0.4000	0.3702	
45 Tert-butyl ethyl ether	59	8.743	8.750	-0.007	98	93325	0.4000	0.3453	
46 Tetrahydrofuran	42	9.087	9.083	0.004	92	38550	0.4000	0.3507	
47 1,1,1-Trichloroethane	97	9.679	9.679	0.000	97	90067	0.4000	0.3726	
48 1,2-Dichloroethane	62	9.786	9.792	-0.006	97	58242	0.4000	0.3720	
49 n-Butanol	31	10.265	10.272	-0.007	67	16643	0.4000	0.3319	
50 Cyclohexane	69	10.281	10.285	-0.004	80	20665	0.4000	0.3715	
51 Benzene	78	10.281	10.285	-0.004	96	109926	0.4000	0.3603	
52 Carbon tetrachloride	117	10.303	10.308	-0.005	95	96221	0.4000	0.3578	
53 2,3-Dimethylpentane	71	10.410	10.407	0.003	92	26735	0.4000	0.3819	
54 Thiophene	84	10.566	10.565	0.001	97	62914	0.4000	0.3607	
55 Tert-amyl methyl ether	73	10.782	10.811	-0.029	94	78058	0.4000	0.3464	
56 Isooctane	57	11.056	11.058	-0.002	97	216817	0.4000	0.3748	
57 n-Heptane	71	11.432	11.441	-0.009	96	38197	0.4000	0.3572	
58 1,2-Dichloropropane	63	11.524	11.526	-0.002	88	44282	0.4000	0.3582	
59 Trichloroethene	130	11.556	11.561	-0.005	95	52984	0.4000	0.3690	
60 Dibromomethane	93	11.642	11.648	-0.006	95	50658	0.4000	0.3714	
62 Dichlorobromomethane	83	11.788	11.795	-0.007	97	83001	0.4000	0.3495	
61 1,4-Dioxane	88	11.836	11.835	0.001	86	10682	0.4000	0.3303	
63 Methyl methacrylate	41	11.895	11.902	-0.007	93	38866	0.4000	0.3324	
64 Methylcyclohexane	83	12.336	12.336	0.000	90	87709	0.4000	0.3778	
65 4-Methyl-2-pentanone (MIBK	43	12.761	12.764	-0.003	97	77604	0.4000	0.3356	
66 cis-1,3-Dichloropropene	75	12.804	12.808	-0.004	98	57296	0.4000	0.3570	
67 trans-1,3-Dichloropropene	75	13.509	13.509	0.000	95	39757	0.4000	0.3187	
68 Toluene	91	13.627	13.630	-0.003	92	108634	0.4000	0.3486	
69 1,1,2-Trichloroethane	83	13.703	13.709	-0.006	97	33667	0.4000	0.3436	
70 2-Methylthiophene	97	13.783	13.784	-0.001	98	93967	0.4000	0.3593	
71 3-Methylthiophene	97	13.982	13.985	-0.003	99	86973	0.4000	0.3484	
72 2-Hexanone	58	14.106	14.106	0.000	91	28857	0.4000	0.3171	
73 n-Octane	85	14.321	14.322	-0.001	98	35453	0.4000	0.3397	
74 Chlorodibromomethane	129	14.407	14.412	-0.005	97	74369	0.4000	0.3256	
75 Ethylene Dibromide	107	14.703	14.706	-0.003	99	51514	0.4000	0.3125	
76 Tetrachloroethene	129	14.778	14.777	0.001	95	48901	0.4000	0.3582	
78 Chlorobenzene	112	15.655	15.658	-0.003	95	81389	0.4000	0.3326	
77 2,3-Dimethylheptane	43	15.677	15.677	0.000	94	139554	0.4000	0.3579	
79 Ethylbenzene	91	15.946	15.947	-0.001	99	114570	0.4000	0.3100	
80 2-Ethylthiophene	97	16.048	16.050	-0.002	99	88766	0.4000	0.3212	
81 m-Xylene & p-Xylene	91	16.107	16.110	-0.003	99	169976	0.8000	0.6232	
82 n-Nonane	57	16.527	16.528	-0.001	95	72811	0.4000	0.3123	
83 Bromoform	173	16.559	16.559	0.000	96	65347	0.4000	0.3003	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.575	16.575	0.000	99	54555	0.4000	0.2813	
85 o-Xylene	91	16.634	16.634	0.000	98	93610	0.4000	0.3183	
86 1,1,2,2-Tetrachloroethane	83	16.963	16.962	0.001	99	66629	0.4000	0.3112	
87 1,2,3-Trichloropropane	110	17.119	17.122	-0.003	96	14733	0.4000	0.2998	
88 Isopropylbenzene	105	17.221	17.221	0.000	94	123682	0.4000	0.3109	
89 N-Propylbenzene	120	17.764	17.767	-0.003	99	27120	0.4000	0.2897	
90 2-Chlorotoluene	126	17.813	17.813	-0.001	97	30458	0.4000	0.3063	
91 4-Ethyltoluene	105	17.920	17.921	-0.001	98	93901	0.4000	0.2822	
92 1,3,5-Trimethylbenzene	120	17.995	17.995	0.000	92	49807	0.4000	0.2969	
93 Alpha Methyl Styrene	118	18.227	18.229	-0.002	87	34288	0.4000	0.2647	
94 n-Decane	57	18.286	18.287	-0.001	88	66474	0.4000	0.2819	
95 tert-Butylbenzene	119	18.420	18.422	-0.002	92	101841	0.4000	0.3008	
96 1,2,4-Trimethylbenzene	105	18.437	18.436	0.001	96	82370	0.4000	0.2846	
97 sec-Butylbenzene	105	18.695	18.694	0.001	98	129882	0.4000	0.2925	
98 1,3-Dichlorobenzene	146	18.711	18.710	0.001	97	41517	0.4000	0.2560	
99 Benzyl chloride	91	18.786	18.786	0.000	98	36944	0.4000	0.2627	
100 1,4-Dichlorobenzene	146	18.797	18.799	-0.002	92	33672	0.4000	0.2663	
101 4-Isopropyltoluene	119	18.856	18.857	-0.001	97	98451	0.4000	0.2844	
102 1,2,3-Trimethylbenzene	105	18.910	18.912	-0.002	99	64421	0.4000	0.2961	
103 Butylcyclohexane	83	18.964	18.964	0.000	90	85795	0.4000	0.3063	
104 2,3-Dihydroindene	117	19.157	19.159	-0.002	93	70292	0.4000	0.2775	
105 1,2-Dichlorobenzene	146	19.157	19.159	-0.002	75	42321	0.4000	0.2577	
107 Indene	116	19.292	19.290	0.002	88	39379	0.4000	0.2501	
106 n-Butylbenzene	91	19.292	19.294	-0.002	97	76064	0.4000	0.2619	
108 Undecane	57	19.604	19.605	-0.001	92	58268	0.4000	0.2753	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.668	19.667	0.001	98	60335	0.4000	0.2826	
110 1,2-Dibromo-3-Chloropropan	157	19.765	19.765	0.000	93	15249	0.4000	0.2698	
111 1,2,4,5-Tetramethylbenzene	119	20.050	20.052	-0.002	97	69812	0.4000	0.2793	
112 1,2,3,5-Tetramethylbenzene	119	20.110	20.108	0.002	95	42970	0.4000	0.2797	
113 1,2,3,4-Tetramethylbenzene	119	20.508	20.505	0.003	98	53410	0.4000	0.2749	
114 Dodecane	57	20.664	20.665	-0.001	90	45381	0.4000	0.2592	
115 1,2,4-Trichlorobenzene	180	20.863	20.865	-0.002	93	11248	0.4000	0.2381	
116 Naphthalene	128	21.008	21.007	0.001	99	29521	0.4000	0.2334	
117 Benzo(b)thiophene	134	21.110	21.112	-0.002	99	12110	0.4000	0.2459	
118 Hexachlorobutadiene	225	21.223	21.225	-0.002	95	47565	0.4000	0.2601	
119 1,2,3-Trichlorobenzene	180	21.293	21.297	-0.004	93	13575	0.4000	0.2197	
120 2-Methylnaphthalene	142	21.965	21.967	-0.002	96	6537	1.25	0.5266	
121 1-Methylnaphthalene	142	22.095	22.095	0.000	96	7334	1.25	0.5306	
A 124 Toluene Range	1	13.627	(13.597-13.657)		0	261800	0.4000	0.3207	
A 125 C8 Range	1	14.306	(14.283-14.330)		0	402043	0.4000	0.3618	
S 126 Xylenes, Total	100				0		1.20	0.9415	
S 127 1,2-Dichloroethene, Total	1				0		0.8000	0.7283	

Reagents:

40L4DNP_00008	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

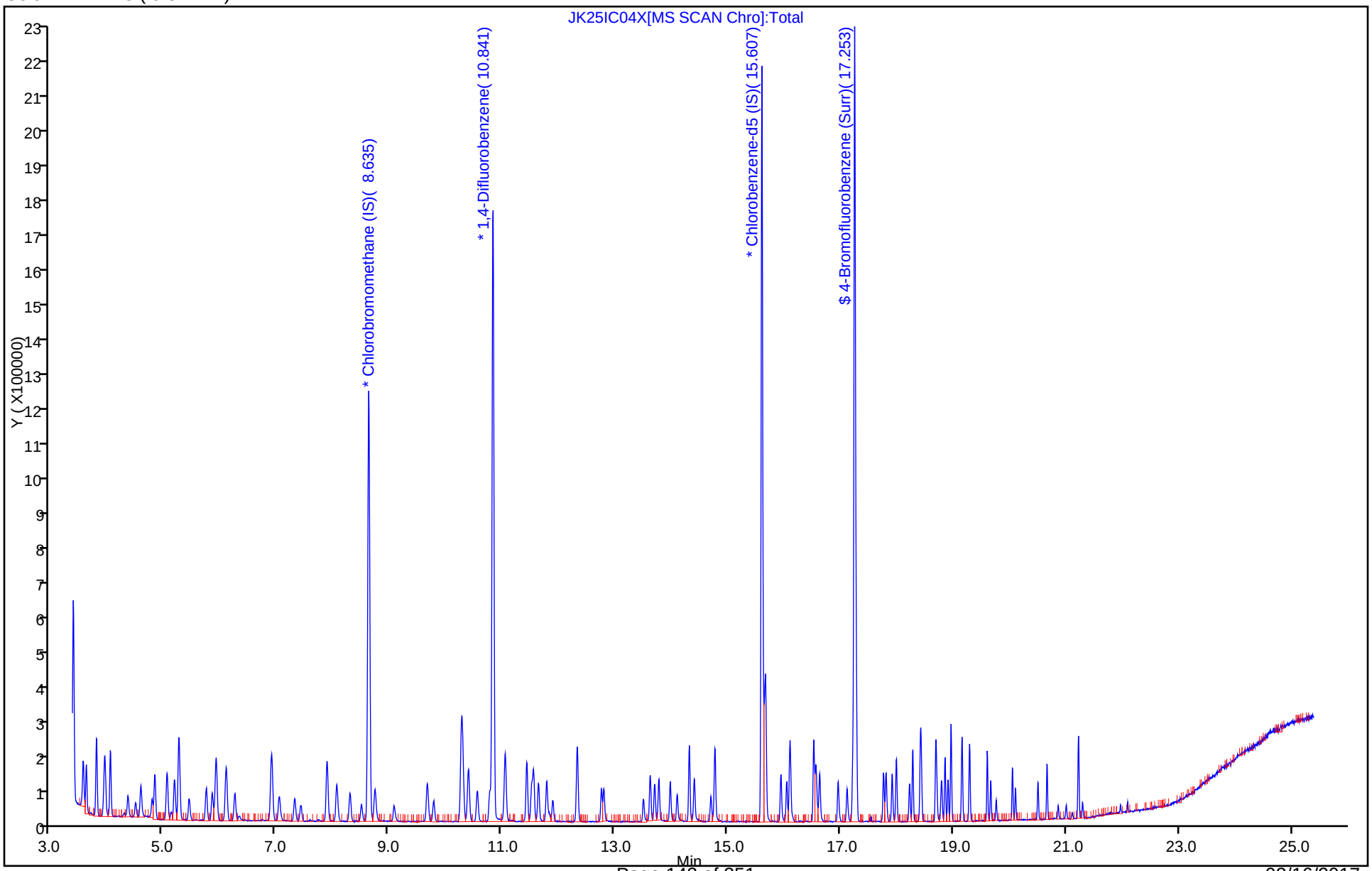
Report Date: 28-Nov-2016 13:55:29 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC04X.D

Injection Date:	25-Nov-2016 21:29:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	IC L4			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

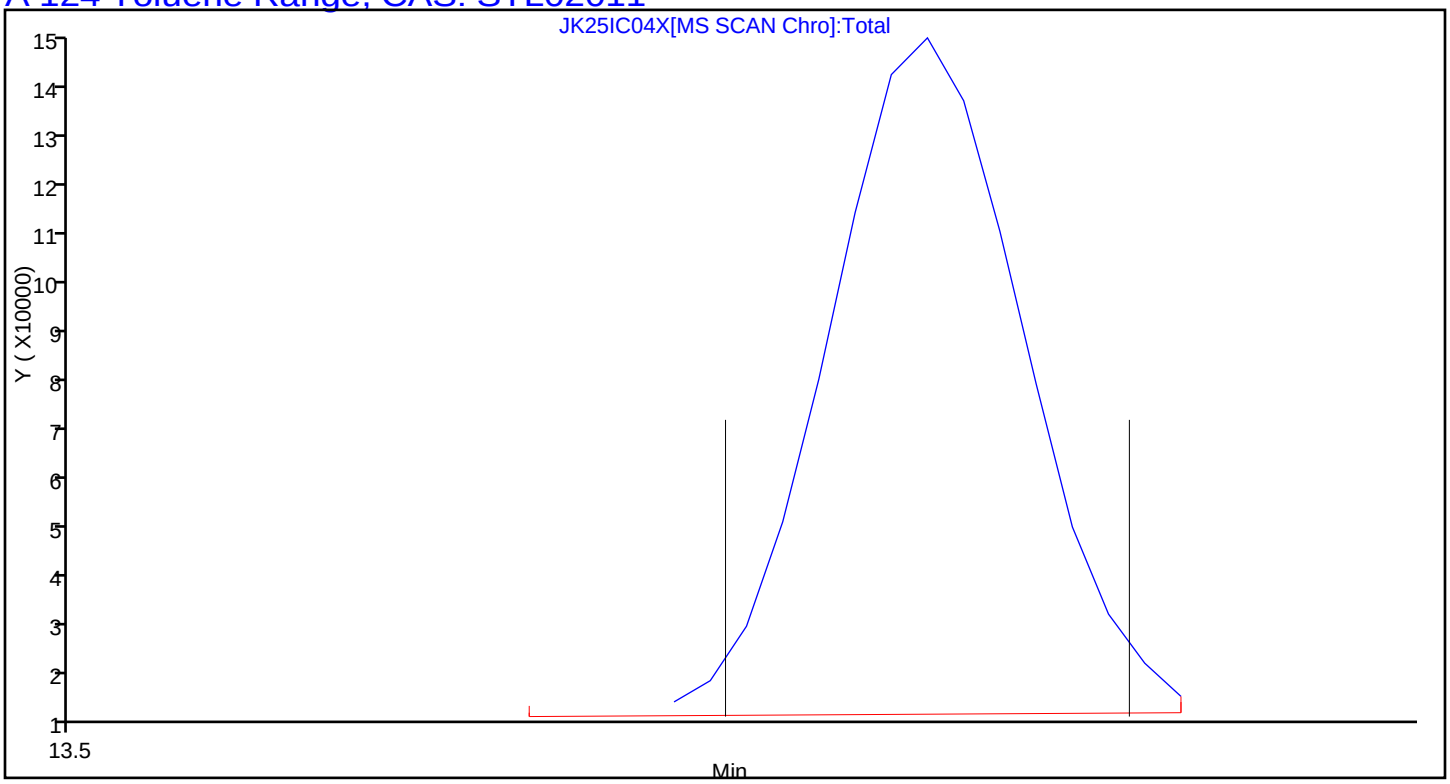


Report Date: 28-Nov-2016 13:55:29 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC04X.D				
Injection Date:	25-Nov-2016 21:29:30	Instrument ID:	MJ		
Lims ID:	IC L4				
Client ID:					
Operator ID:	007126	ALS Bottle#:	3	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

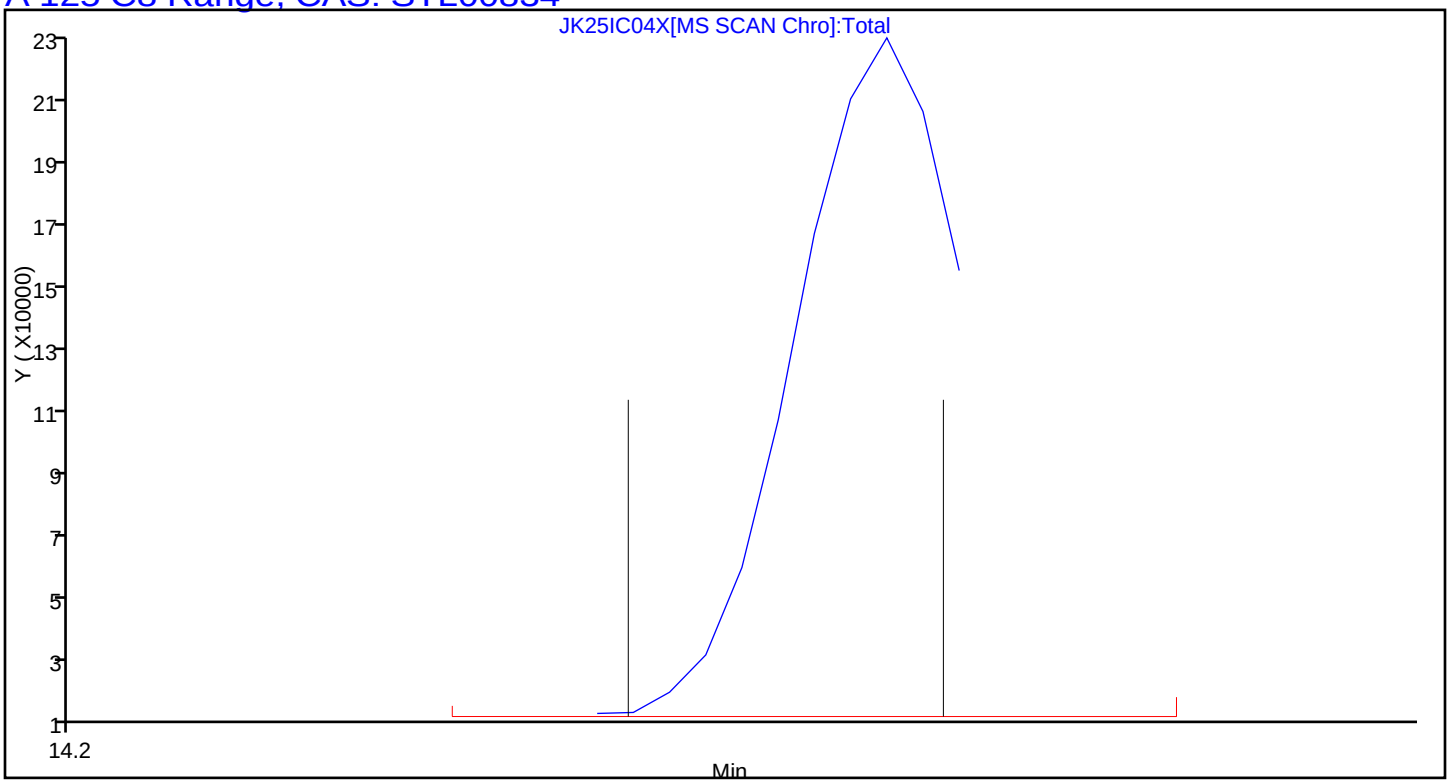


Report Date: 28-Nov-2016 13:55:29 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC04X.D				
Injection Date:	25-Nov-2016 21:29:30	Instrument ID:	MJ		
Lims ID:	IC L4				
Client ID:					
Operator ID:	007126	ALS Bottle#:	3	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC05X.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 25-Nov-2016 22:23:30 ALS Bottle#: 4 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003656-006
Misc. Info.: 067938
Operator ID: 007126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Nov-2016 13:55:32 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh Date: 28-Nov-2016 11:52:51

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	8.634	8.640	-0.006	97	355404	4.00	4.00	
*	2 1,4-Difluorobenzene	114	10.839	10.843	-0.004	96	1583347	4.00	4.00	
*	3 Chlorobenzene-d5 (IS)	117	15.605	15.609	-0.004	89	1321140	4.00	4.00	
$	4 4-Bromofluorobenzene (Surr	95	17.252	17.254	-0.002	96	823670	4.00	3.94	
	6 Chlorodifluoromethane	67	3.566	3.568	-0.002	98	30842	1.00	0.9621	
	7 Propene	41	3.577	3.578	-0.001	98	107343	1.00	0.9700	
	8 Dichlorodifluoromethane	85	3.625	3.627	-0.002	99	278609	1.00	0.9682	
	9 Chloromethane	52	3.803	3.806	-0.003	98	40173	1.00	0.9791	
	10 1,2-Dichloro-1,1,2,2-tetra	135	3.808	3.810	-0.002	92	160950	1.00	1.01	
	11 Acetaldehyde	44	3.948	3.953	-0.005	94	213784	5.01	4.82	
	12 Vinyl chloride	62	3.970	3.969	0.001	99	122746	1.00	1.00	
	13 Butane	43	4.050	4.055	-0.005	86	207118	1.00	0.9657	
	14 Butadiene	54	4.050	4.057	-0.007	66	99249	1.00	1.00	
	15 Bromomethane	94	4.362	4.367	-0.005	98	112019	1.00	1.02	
	16 Chloroethane	64	4.502	4.504	-0.002	89	58761	1.00	1.01	
	17 Ethanol	31	4.594	4.602	-0.008	98	241723	5.01	5.15	
	18 Vinyl bromide	106	4.793	4.797	-0.004	98	108983	1.00	1.02	
	19 2-Methylbutane	43	4.841	4.845	-0.004	94	156174	1.00	0.99	
	20 Trichlorofluoromethane	101	5.056	5.060	-0.004	100	294702	1.00	1.01	
	21 Acrolein	56	5.067	5.074	-0.007	97	34165	1.00	0.99	
	22 Acetonitrile	40	5.132	5.138	-0.006	99	45336	1.00	1.07	
	23 Acetone	58	5.185	5.192	-0.007	99	118305	3.01	3.21	
	24 Isopropyl alcohol	45	5.261	5.273	-0.012	93	523062	3.01	3.05	
	25 Pentane	72	5.271	5.279	-0.008	96	16429	1.00	1.00	
	26 Ethyl ether	31	5.444	5.451	-0.007	89	126616	1.00	1.05	
	27 1,1-Dichloroethene	96	5.756	5.758	-0.002	95	106234	1.00	0.99	
	29 Acrylonitrile	53	5.858	5.865	-0.007	58	67317	1.00	0.99	
	28 2-Methyl-2-propanol	59	5.852	5.868	-0.016	95	179135	1.00	1.04	
	30 1,1,2-Trichloro-1,2,2-trif	101	5.928	5.931	-0.003	96	236287	1.00	1.00	
	31 Methylene Chloride	84	6.100	6.105	-0.005	96	104918	1.00	1.00	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.116	6.121	-0.005	94	125613	1.00	1.02	
33 Carbon disulfide	76	6.261	6.264	-0.003	100	318098	1.00	1.01	
34 trans-1,2-Dichloroethene	96	6.907	6.908	-0.001	94	107797	1.00	1.00	
35 2-Methylpentane	43	6.918	6.923	-0.005	96	276646	1.00	1.00	
36 Methyl tert-butyl ether	73	7.041	7.049	-0.008	97	218669	1.00	0.99	
37 1,1-Dichloroethane	63	7.321	7.326	-0.005	99	205971	1.00	1.01	
38 Vinyl acetate	43	7.429	7.435	-0.006	100	259685	1.00	1.03	
39 2-Butanone (MEK)	72	7.881	7.895	-0.015	94	32810	1.00	1.02	
40 Hexane	56	7.897	7.901	-0.004	78	93351	1.00	0.9865	
41 Isopropyl ether	45	8.063	8.072	-0.009	97	349017	1.00	1.04	
42 cis-1,2-Dichloroethene	96	8.300	8.307	-0.007	98	105995	1.00	1.00	
43 Ethyl acetate	43	8.499	8.508	-0.009	97	185284	1.00	0.9855	
44 Chloroform	83	8.650	8.651	-0.001	97	221690	1.00	0.99	
45 Tert-butyl ethyl ether	59	8.741	8.750	-0.009	98	267158	1.00	1.04	
46 Tetrahydrofuran	42	9.075	9.083	-0.008	93	105594	1.00	1.01	
47 1,1,1-Trichloroethane	97	9.677	9.679	-0.002	97	230864	1.00	1.00	
48 1,2-Dichloroethane	62	9.790	9.792	-0.002	96	148871	1.00	1.01	
49 n-Butanol	31	10.258	10.272	-0.014	84	47398	1.00	1.00	
50 Cyclohexane	69	10.285	10.285	0.000	81	53224	1.00	1.02	
51 Benzene	78	10.285	10.285	0.000	98	281600	1.00	0.9791	
52 Carbon tetrachloride	117	10.307	10.308	-0.001	95	263147	1.00	1.04	
53 2,3-Dimethylpentane	71	10.409	10.407	0.002	91	66382	1.00	1.01	
54 Thiophene	84	10.559	10.565	-0.006	97	163933	1.00	1.00	
55 Tert-amyl methyl ether	73	10.780	10.804	-0.024	95	238993	1.00	1.16	
56 Isooctane	57	11.054	11.058	-0.004	97	545679	1.00	1.00	
57 n-Heptane	71	11.436	11.441	-0.005	96	97916	1.00	0.9715	
58 1,2-Dichloropropane	63	11.522	11.526	-0.004	89	119711	1.00	1.03	
59 Trichloroethene	130	11.555	11.561	-0.006	95	131547	1.00	0.9718	
60 Dibromomethane	93	11.646	11.648	-0.002	96	125422	1.00	0.9756	
62 Dichlorobromomethane	83	11.791	11.795	-0.004	97	219152	1.00	0.9791	
61 1,4-Dioxane	88	11.834	11.835	-0.001	96	31913	1.00	1.05	
63 Methyl methacrylate	41	11.899	11.902	-0.003	93	110367	1.00	1.00	
64 Methylcyclohexane	83	12.335	12.336	-0.001	91	223142	1.00	1.02	
65 4-Methyl-2-pentanone (MIBK	43	12.760	12.764	-0.004	97	213021	1.00	0.9772	
66 cis-1,3-Dichloropropene	75	12.808	12.808	0.000	98	148579	1.00	0.9822	
67 trans-1,3-Dichloropropene	75	13.507	13.509	-0.002	97	106665	1.00	0.9379	
68 Toluene	91	13.626	13.630	-0.004	93	293852	1.00	1.03	
69 1,1,2-Trichloroethane	83	13.706	13.709	-0.003	97	91074	1.00	1.02	
70 2-Methylthiophene	97	13.782	13.784	-0.002	99	251216	1.00	1.05	
71 3-Methylthiophene	97	13.986	13.985	0.001	99	231259	1.00	1.02	
72 2-Hexanone	58	14.099	14.106	-0.007	90	83279	1.00	1.00	
73 n-Octane	85	14.320	14.322	-0.002	98	96708	1.00	1.02	
74 Chlorodibromomethane	129	14.411	14.412	-0.001	98	215761	1.00	1.04	
75 Ethylene Dibromide	107	14.702	14.706	-0.004	97	151021	1.00	1.01	
76 Tetrachloroethene	129	14.777	14.777	0.000	96	123410	1.00	0.99	
78 Chlorobenzene	112	15.654	15.658	-0.004	94	222281	1.00	1.00	
77 2,3-Dimethylheptane	43	15.675	15.677	-0.002	94	374711	1.00	1.05	
79 Ethylbenzene	91	15.944	15.947	-0.003	99	335611	1.00	1.00	
80 2-Ethylthiophene	97	16.047	16.050	-0.003	98	250527	1.00	0.99	
81 m-Xylene & p-Xylene	91	16.106	16.110	-0.004	99	503389	2.00	2.02	
82 n-Nonane	57	16.525	16.528	-0.003	94	214636	1.00	1.01	
83 Bromoform	173	16.558	16.559	-0.001	97	183780	1.00	0.9266	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.574	16.575	-0.001	98	173185	1.00	0.9797	
85 o-Xylene	91	16.633	16.634	-0.001	98	268703	1.00	1.00	
86 1,1,2,2-Tetrachloroethane	83	16.961	16.962	-0.001	99	198338	1.00	1.02	
87 1,2,3-Trichloropropane	110	17.122	17.122	0.000	96	47060	1.00	1.05	
88 Isopropylbenzene	105	17.219	17.221	-0.002	97	362291	1.00	1.00	
89 N-Propylbenzene	120	17.763	17.767	-0.004	99	86216	1.00	1.01	
90 2-Chlorotoluene	126	17.811	17.813	-0.002	97	90776	1.00	1.00	
91 4-Ethyltoluene	105	17.919	17.921	-0.002	98	298239	1.00	0.9833	
92 1,3,5-Trimethylbenzene	120	17.994	17.995	-0.001	92	151317	1.00	0.9895	
93 Alpha Methyl Styrene	118	18.225	18.229	-0.004	87	115072	1.00	0.9747	
94 n-Decane	57	18.284	18.287	-0.003	88	213303	1.00	0.99	
95 tert-Butylbenzene	119	18.419	18.422	-0.003	91	308625	1.00	1.00	
96 1,2,4-Trimethylbenzene	105	18.435	18.436	-0.001	96	259545	1.00	0.9837	
97 sec-Butylbenzene	105	18.693	18.694	-0.001	98	406602	1.00	1.00	
98 1,3-Dichlorobenzene	146	18.709	18.710	-0.001	97	133752	1.00	0.9048	
99 Benzyl chloride	91	18.785	18.786	-0.001	97	126892	1.00	0.9898	
100 1,4-Dichlorobenzene	146	18.801	18.799	0.002	95	109444	1.00	0.9495	
101 4-Isopropyltoluene	119	18.855	18.857	-0.002	97	316041	1.00	1.00	
102 1,2,3-Trimethylbenzene	105	18.908	18.912	-0.004	99	197400	1.00	1.00	
103 Butylcyclohexane	83	18.962	18.964	-0.002	89	255485	1.00	1.00	
104 2,3-Dihydroindene	117	19.156	19.159	-0.003	93	225790	1.00	0.9778	
105 1,2-Dichlorobenzene	146	19.161	19.159	0.002	78	140823	1.00	0.9406	
107 Indene	116	19.290	19.290	0.000	89	135133	1.00	0.9416	
106 n-Butylbenzene	91	19.290	19.294	-0.004	98	253234	1.00	0.9564	
108 Undecane	57	19.602	19.605	-0.003	92	187279	1.00	0.9706	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.667	19.667	0.000	98	196408	1.00	1.01	
110 1,2-Dibromo-3-Chloropropan	157	19.764	19.765	-0.001	94	51540	1.00	1.00	
111 1,2,4,5-Tetramethylbenzene	119	20.054	20.052	0.002	97	227428	1.00	1.00	
112 1,2,3,5-Tetramethylbenzene	119	20.108	20.108	0.000	95	140477	1.00	1.00	
113 1,2,3,4-Tetramethylbenzene	119	20.506	20.505	0.001	97	177361	1.00	1.00	
114 Dodecane	57	20.662	20.665	-0.003	91	169033	1.00	1.06	
115 1,2,4-Trichlorobenzene	180	20.861	20.865	-0.004	93	47080	1.00	1.09	
116 Naphthalene	128	21.006	21.007	-0.001	99	111140	1.00	0.9640	
117 Benzo(b)thiophene	134	21.114	21.112	0.002	99	45901	1.00	1.02	
118 Hexachlorobutadiene	225	21.222	21.225	-0.003	95	164579	1.00	0.9872	
119 1,2,3-Trichlorobenzene	180	21.297	21.297	0.000	95	59332	1.00	1.05	
120 2-Methylnaphthalene	142	21.969	21.967	0.002	97	34373	3.13	3.04	
121 1-Methylnaphthalene	142	22.093	22.095	-0.002	97	41424	3.13	3.29	
A 124 Toluene Range	1	13.626	(13.596-13.656)		0	748324	1.00	1.01	
A 125 C8 Range	1	14.305	(14.281-14.328)		0	1082393	1.00	1.07	
S 126 Xylenes, Total	100				0		3.00	3.03	
S 127 1,2-Dichloroethene, Total	1				0		2.00	2.00	

Reagents:

40L5DNP_00008	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

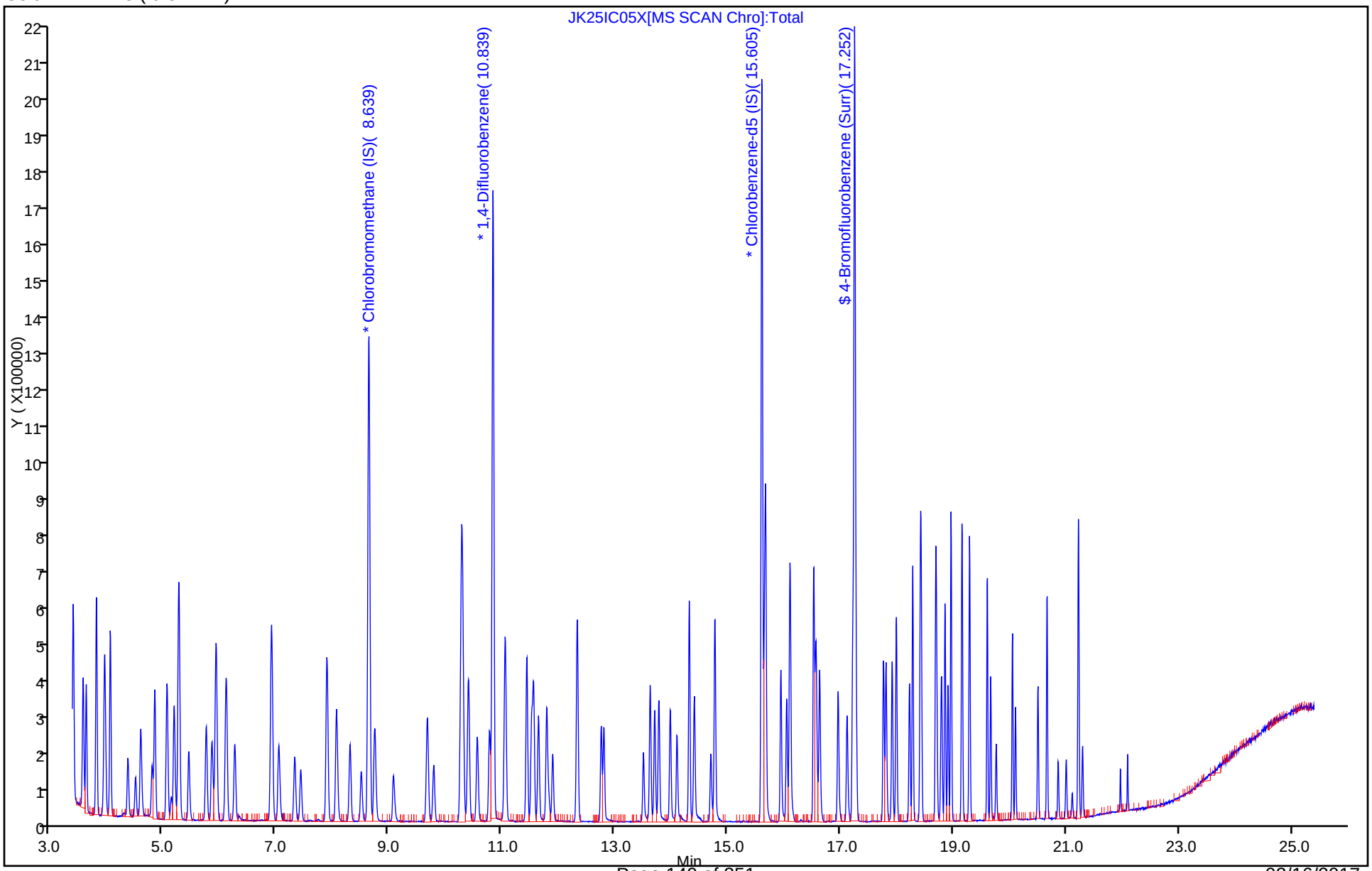
Report Date: 28-Nov-2016 13:55:33 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC05X.D

Injection Date:	25-Nov-2016 22:23:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	IC L5			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

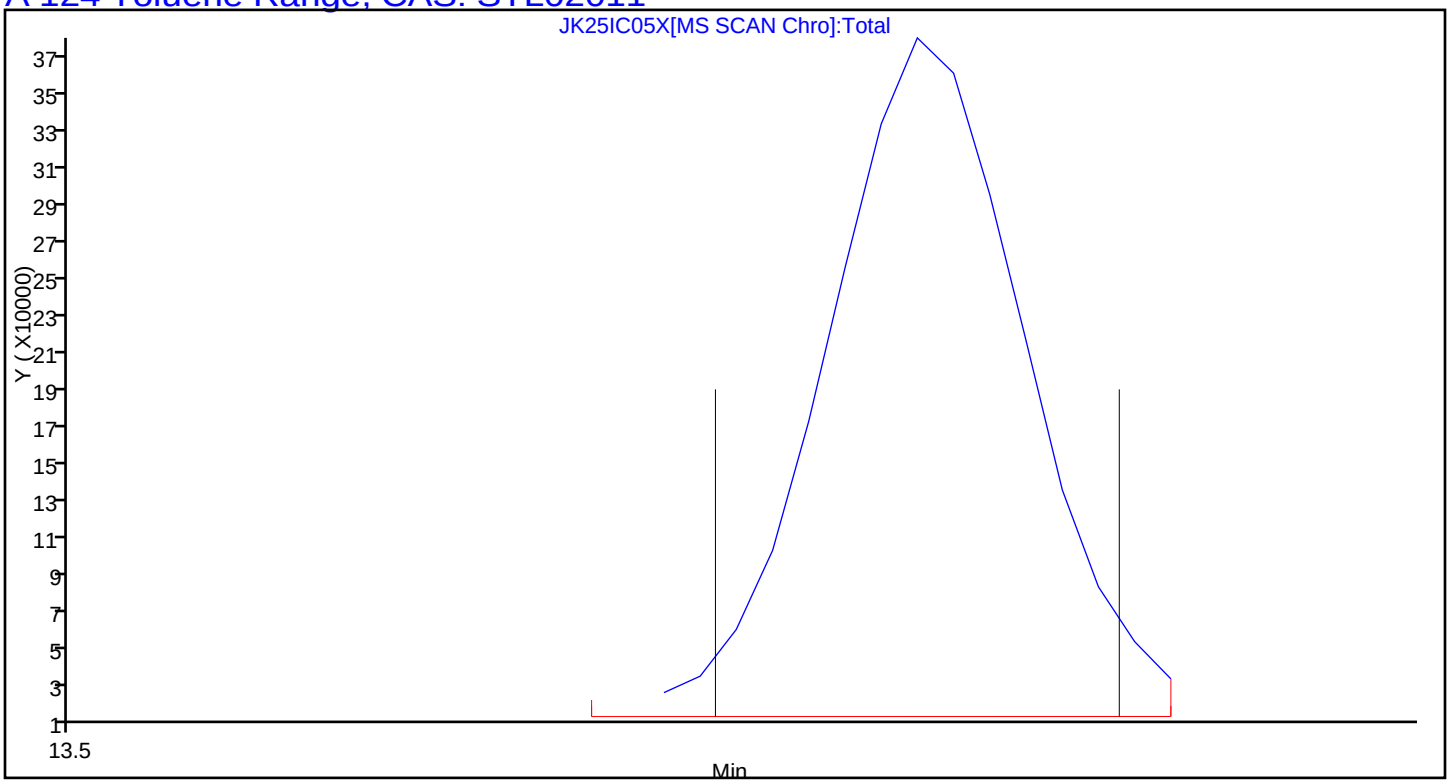


Report Date: 28-Nov-2016 13:55:33 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC05X.D				
Injection Date:	25-Nov-2016 22:23:30	Instrument ID:	MJ		
Lims ID:	IC L5				
Client ID:					
Operator ID:	007126	ALS Bottle#:	4	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

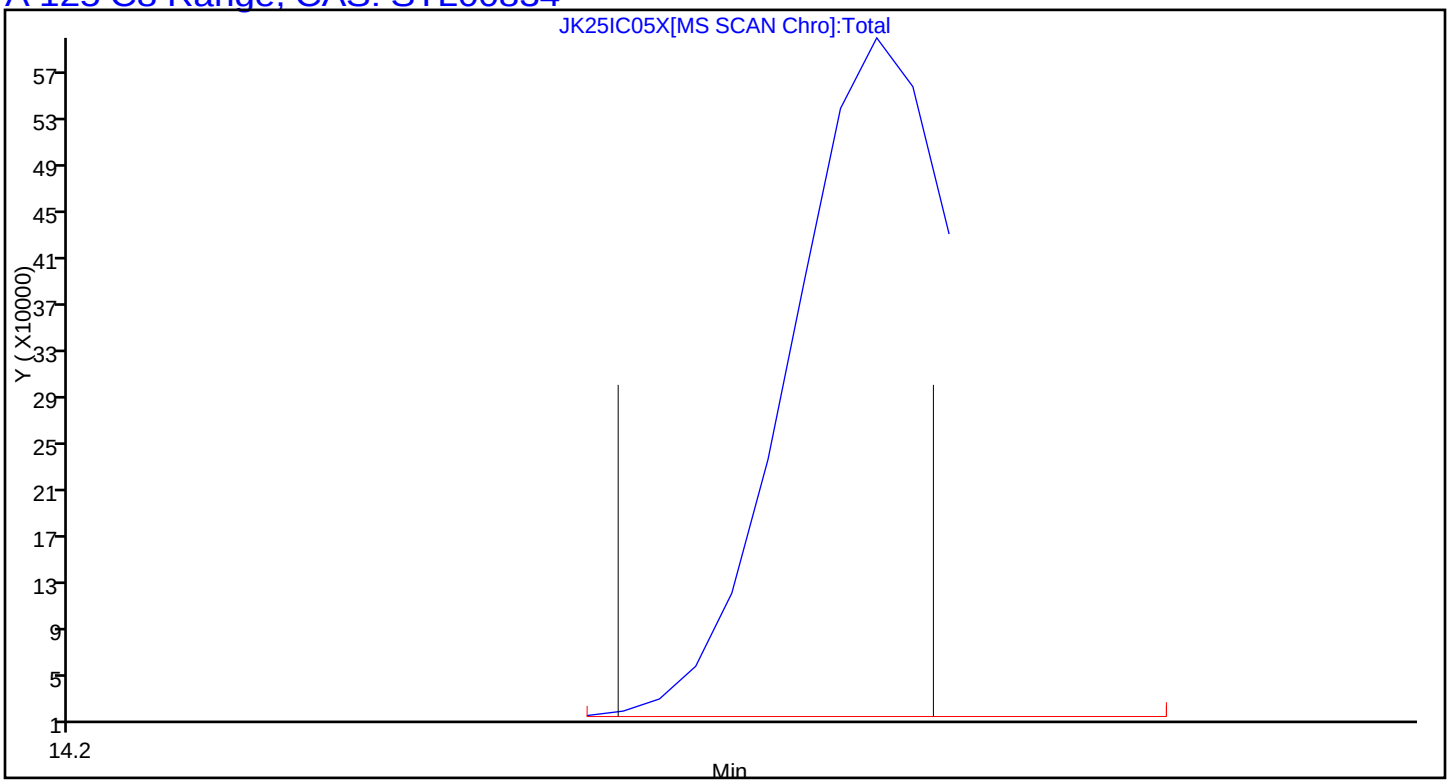


Report Date: 28-Nov-2016 13:55:33 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC05X.D				
Injection Date:	25-Nov-2016 22:23:30	Instrument ID:	MJ		
Lims ID:	IC L5				
Client ID:					
Operator ID:	007126	ALS Bottle#:	4	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC06X.D
Lims ID: ICIS L6
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 25-Nov-2016 23:17:30 ALS Bottle#: 5 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003656-007
Misc. Info.: 067938
Operator ID: 007126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Nov-2016 13:55:35 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: barlozhetskayaa Date: 26-Nov-2016 10:31:05

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.640	8.640	0.000	97	356777	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.841	10.843	-0.002	96	1567971	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.607	15.609	-0.002	89	1332891	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.253	17.254	-0.001	96	855705	4.00	4.05	
6 Chlorodifluoromethane	67	3.568	3.568	0.000	97	58411	2.00	1.82	
7 Propene	41	3.578	3.578	0.000	99	209464	2.00	1.89	
8 Dichlorodifluoromethane	85	3.627	3.627	0.000	99	544024	2.00	1.88	
9 Chloromethane	52	3.804	3.806	-0.002	65	77658	2.00	1.89	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.810	3.810	0.000	91	369090	2.00	2.31	
11 Acetaldehyde	44	3.955	3.953	0.002	95	406708	9.99	9.14	
12 Vinyl chloride	62	3.971	3.969	0.002	99	236881	2.00	1.92	
13 Butane	43	4.057	4.055	0.002	86	397262	2.00	1.85	
14 Butadiene	54	4.057	4.057	0.000	67	187703	2.00	1.89	
15 Bromomethane	94	4.369	4.367	0.002	98	212632	2.00	1.93	
16 Chloroethane	64	4.504	4.504	0.000	89	116765	2.00	1.99	
17 Ethanol	31	4.595	4.602	-0.007	97	465217	9.99	9.88	
18 Vinyl bromide	106	4.800	4.797	0.003	98	205590	2.00	1.91	
19 2-Methylbutane	43	4.843	4.845	-0.002	93	302142	2.00	1.92	
20 Trichlorofluoromethane	101	5.058	5.060	-0.002	100	575081	2.00	1.96	
21 Acrolein	56	5.069	5.074	-0.005	95	62656	2.00	1.81	
22 Acetonitrile	40	5.138	5.138	0.000	99	82955	2.00	1.95	
23 Acetone	58	5.187	5.192	-0.005	99	224276	5.99	6.07	
24 Isopropyl alcohol	45	5.262	5.273	-0.011	95	1021108	5.99	5.94	
25 Pentane	72	5.278	5.279	-0.001	98	32889	2.00	1.99	
26 Ethyl ether	31	5.445	5.451	-0.006	89	236371	2.00	1.95	
27 1,1-Dichloroethene	96	5.757	5.758	-0.001	95	204488	2.00	1.90	
29 Acrylonitrile	53	5.865	5.865	0.000	95	127525	2.00	1.87	
28 2-Methyl-2-propanol	59	5.854	5.868	-0.014	95	355509	2.00	2.05	
30 1,1,2-Trichloro-1,2,2-trif	101	5.929	5.931	-0.002	96	466491	2.00	1.96	
31 Methylene Chloride	84	6.101	6.105	-0.004	95	194734	2.00	1.85	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.118	6.121	-0.003	95	238874	2.00	1.93	
33 Carbon disulfide	76	6.263	6.264	-0.001	100	603813	2.00	1.91	
34 trans-1,2-Dichloroethene	96	6.908	6.908	0.000	94	208258	2.00	1.93	
35 2-Methylpentane	43	6.919	6.923	-0.004	96	542486	2.00	1.94	
36 Methyl tert-butyl ether	73	7.043	7.049	-0.006	98	414593	2.00	1.88	
37 1,1-Dichloroethane	63	7.328	7.326	0.002	100	397664	2.00	1.94	
38 Vinyl acetate	43	7.435	7.435	0.000	100	488532	2.00	1.93	
39 2-Butanone (MEK)	72	7.887	7.895	-0.008	95	66052	2.00	2.04	
40 Hexane	56	7.898	7.901	-0.003	80	182768	2.00	1.92	
41 Isopropyl ether	45	8.065	8.072	-0.007	97	652700	2.00	1.94	
42 cis-1,2-Dichloroethene	96	8.307	8.307	0.000	98	201554	2.00	1.89	
43 Ethyl acetate	43	8.506	8.508	-0.002	97	371439	2.00	1.97	
44 Chloroform	83	8.651	8.651	0.000	96	425460	2.00	1.90	
45 Tert-butyl ethyl ether	59	8.743	8.750	-0.007	98	512166	2.00	1.98	
46 Tetrahydrofuran	42	9.071	9.083	-0.012	92	204152	2.00	1.94	
47 1,1,1-Trichloroethane	97	9.679	9.679	0.000	97	446406	2.00	1.93	
48 1,2-Dichloroethane	62	9.792	9.792	0.000	97	287059	2.00	1.96	
49 n-Butanol	31	10.260	10.272	-0.012	92	95163	2.00	2.03	
50 Cyclohexane	69	10.287	10.285	0.002	85	101218	2.00	1.95	
51 Benzene	78	10.287	10.285	0.002	96	537887	2.00	1.89	
52 Carbon tetrachloride	117	10.308	10.308	0.000	96	509407	2.00	2.03	
53 2,3-Dimethylpentane	71	10.410	10.407	0.003	91	128303	2.00	1.96	
54 Thiophene	84	10.561	10.565	-0.004	97	312374	2.00	1.92	
55 Tert-amyl methyl ether	73	10.782	10.799	-0.017	95	439550	2.00	2.12	
56 Isooctane	57	11.056	11.058	-0.002	97	1047845	2.00	1.94	
57 n-Heptane	71	11.443	11.441	0.002	96	186596	2.00	1.87	
58 1,2-Dichloropropane	63	11.529	11.526	0.003	88	223106	2.00	1.93	
59 Trichloroethene	130	11.562	11.561	0.001	95	252436	2.00	1.88	
60 Dibromomethane	93	11.648	11.648	0.000	95	242664	2.00	1.91	
62 Dichlorobromomethane	83	11.793	11.795	-0.002	97	421714	2.00	1.90	
61 1,4-Dioxane	88	11.825	11.835	-0.010	97	62903	2.00	2.08	
63 Methyl methacrylate	41	11.900	11.902	-0.002	93	215926	2.00	1.98	
64 Methylcyclohexane	83	12.336	12.336	0.000	92	428267	2.00	1.98	
65 4-Methyl-2-pentanone (MIBK	43	12.761	12.764	-0.003	97	427163	2.00	1.98	
66 cis-1,3-Dichloropropene	75	12.810	12.808	0.002	98	289600	2.00	1.93	
67 trans-1,3-Dichloropropene	75	13.509	13.509	0.000	96	217897	2.00	1.90	
68 Toluene	91	13.627	13.630	-0.003	93	564299	2.00	1.97	
69 1,1,2-Trichloroethane	83	13.708	13.709	-0.001	98	176087	2.00	1.95	
70 2-Methylthiophene	97	13.783	13.784	-0.001	98	492684	2.00	2.05	
71 3-Methylthiophene	97	13.982	13.985	-0.003	100	451800	2.00	1.97	
72 2-Hexanone	58	14.101	14.106	-0.005	91	173958	2.00	2.08	
73 n-Octane	85	14.321	14.322	-0.001	97	185643	2.00	1.93	
74 Chlorodibromomethane	129	14.413	14.412	0.001	98	427846	2.00	2.04	
75 Ethylene Dibromide	107	14.703	14.706	-0.003	98	299565	2.00	1.98	
76 Tetrachloroethene	129	14.778	14.777	0.001	95	238290	2.00	1.90	
78 Chlorobenzene	112	15.655	15.658	-0.003	95	442675	2.00	1.97	
77 2,3-Dimethylheptane	43	15.677	15.677	0.000	94	717787	2.00	2.00	
79 Ethylbenzene	91	15.946	15.947	-0.001	99	650505	2.00	1.91	
80 2-Ethylthiophene	97	16.048	16.050	-0.002	98	497116	2.00	1.96	
81 m-Xylene & p-Xylene	91	16.107	16.110	-0.003	100	978007	3.99	3.90	
82 n-Nonane	57	16.527	16.528	-0.001	94	423733	2.00	1.98	
83 Bromoform	173	16.559	16.559	0.000	96	398085	2.00	1.99	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.575	16.575	0.000	98	345579	2.00	1.94	
85 o-Xylene	91	16.634	16.634	0.000	98	515214	2.00	1.90	
86 1,1,2,2-Tetrachloroethane	83	16.957	16.962	-0.005	99	389997	2.00	1.98	
87 1,2,3-Trichloropropane	110	17.119	17.122	-0.003	96	90650	2.00	2.01	
88 Isopropylbenzene	105	17.221	17.221	0.000	97	696162	2.00	1.90	
89 N-Propylbenzene	120	17.764	17.767	-0.003	99	174024	2.00	2.02	
90 2-Chlorotoluene	126	17.812	17.813	-0.001	96	176214	2.00	1.93	
91 4-Ethyltoluene	105	17.920	17.921	-0.001	98	609217	2.00	1.99	
92 1,3,5-Trimethylbenzene	120	17.995	17.995	0.000	92	304811	2.00	1.98	
93 Alpha Methyl Styrene	118	18.227	18.229	-0.002	86	240130	2.00	2.02	
94 n-Decane	57	18.286	18.287	-0.001	88	434454	2.00	2.00	
95 tert-Butylbenzene	119	18.420	18.422	-0.002	90	603936	2.00	1.94	
96 1,2,4-Trimethylbenzene	105	18.436	18.436	0.000	96	527968	2.00	1.98	
97 sec-Butylbenzene	105	18.695	18.694	0.001	98	794110	2.00	1.94	
98 1,3-Dichlorobenzene	146	18.711	18.710	0.001	97	279497	2.00	1.87	
99 Benzyl chloride	91	18.786	18.786	0.000	97	289147	2.00	2.24	
100 1,4-Dichlorobenzene	146	18.797	18.799	-0.002	94	240547	2.00	2.07	
101 4-Isopropyltoluene	119	18.856	18.857	-0.001	97	634861	2.00	1.99	
102 1,2,3-Trimethylbenzene	105	18.910	18.912	-0.002	99	392961	2.00	1.96	
103 Butylcyclohexane	83	18.964	18.964	0.000	89	498300	2.00	1.93	
104 2,3-Dihydroindene	117	19.157	19.159	-0.002	93	458736	2.00	1.97	
105 1,2-Dichlorobenzene	146	19.157	19.159	-0.002	78	292486	2.00	1.94	
107 Indene	116	19.286	19.290	-0.004	89	289355	2.00	2.00	
106 n-Butylbenzene	91	19.292	19.294	-0.002	98	534655	2.00	2.00	
108 Undecane	57	19.604	19.605	-0.001	93	397504	2.00	2.04	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.668	19.667	0.001	98	411342	2.00	2.10	
110 1,2-Dibromo-3-Chloropropan	157	19.765	19.765	0.000	96	115728	2.00	2.23	
111 1,2,4,5-Tetramethylbenzene	119	20.050	20.052	-0.002	97	482854	2.00	2.10	
112 1,2,3,5-Tetramethylbenzene	119	20.104	20.108	-0.004	95	294960	2.00	2.09	
113 1,2,3,4-Tetramethylbenzene	119	20.502	20.505	-0.003	98	371381	2.00	2.08	
114 Dodecane	57	20.664	20.665	-0.001	91	339664	2.00	2.11	
115 1,2,4-Trichlorobenzene	180	20.863	20.865	-0.002	94	103584	2.00	2.38	
116 Naphthalene	128	21.008	21.007	0.001	99	239465	2.00	2.06	
117 Benzo(b)thiophene	134	21.110	21.112	-0.002	99	100021	2.00	2.21	
118 Hexachlorobutadiene	225	21.223	21.225	-0.002	95	320484	2.00	1.91	
119 1,2,3-Trichlorobenzene	180	21.298	21.297	0.001	94	121404	2.00	2.14	
120 2-Methylnaphthalene	142	21.965	21.967	-0.002	98	78199	6.24	6.85	
121 1-Methylnaphthalene	142	22.095	22.095	0.000	99	91252	6.24	7.18	
A 124 Toluene Range	1	13.627	(13.597-13.657)		0	1436613	2.00	1.91	
A 125 C8 Range	1	14.306	(14.283-14.330)		0	2069587	2.00	2.03	
S 126 Xylenes, Total	100				0		5.99	5.80	
S 127 1,2-Dichloroethene, Total	1				0		3.99	3.82	

Reagents:

40L6DNP_00009	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

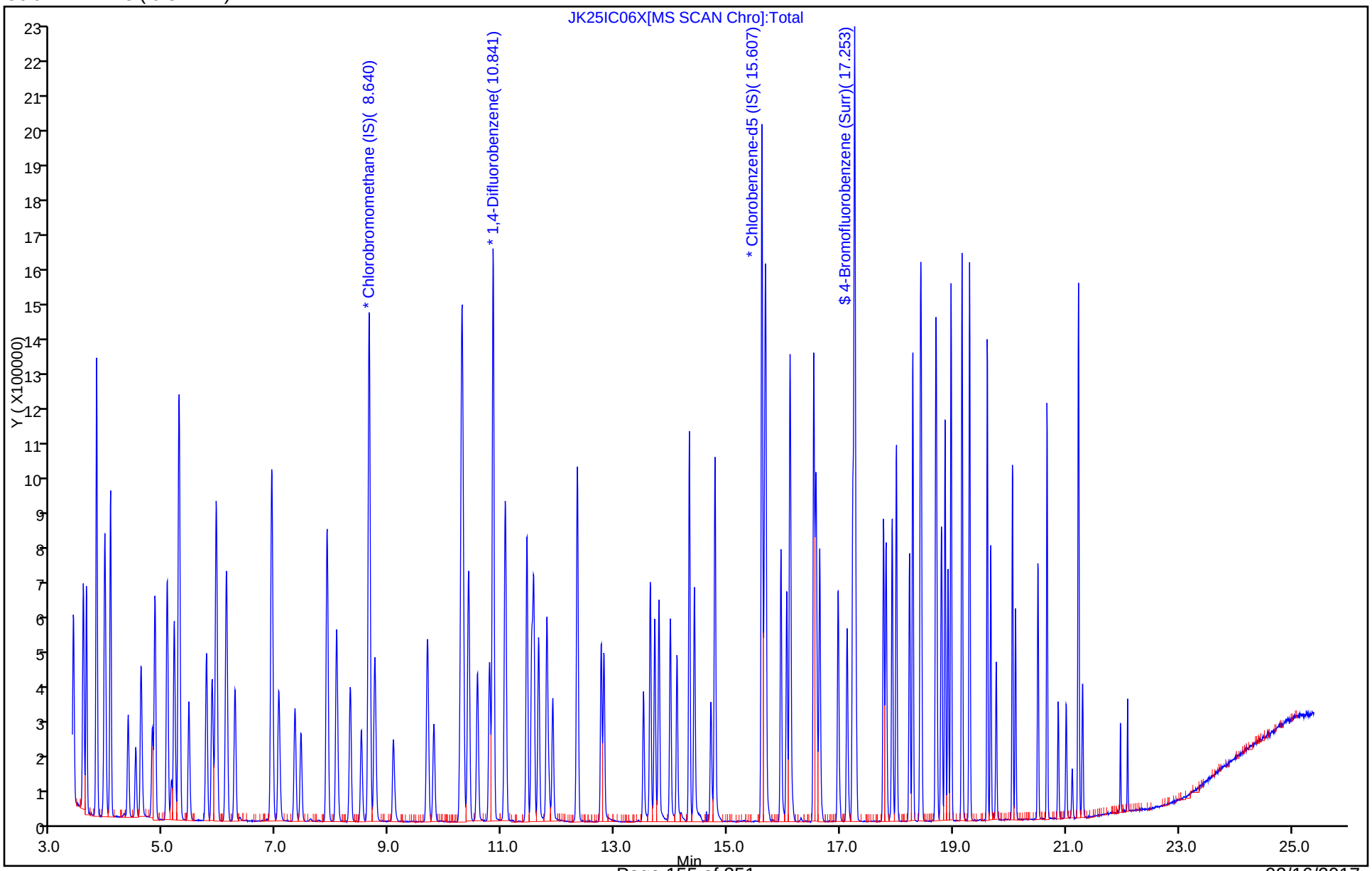
Report Date: 28-Nov-2016 13:55:36 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC06X.D

Injection Date:	25-Nov-2016 23:17:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	ICIS L6			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

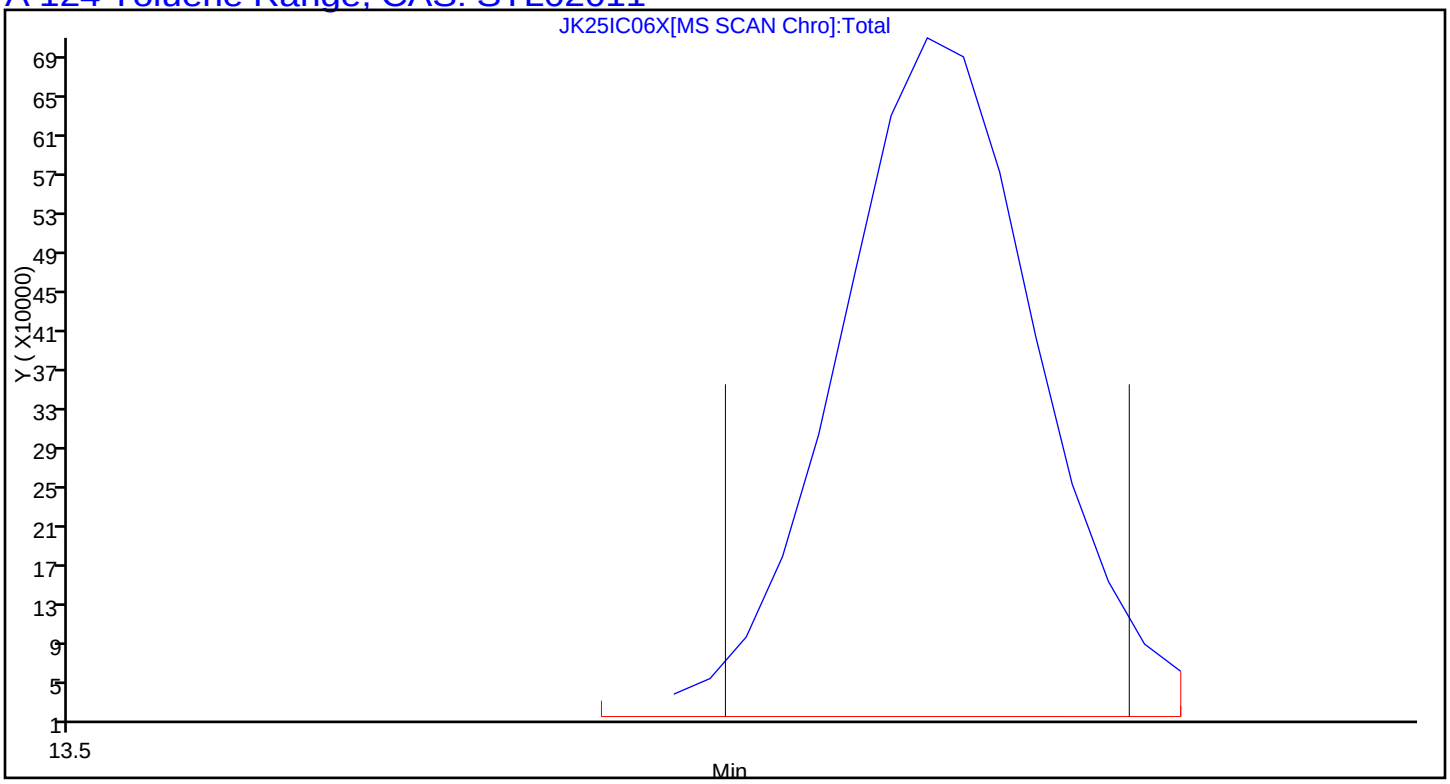


Report Date: 28-Nov-2016 13:55:36 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC06X.D				
Injection Date:	25-Nov-2016 23:17:30	Instrument ID:	MJ		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	007126	ALS Bottle#:	5	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

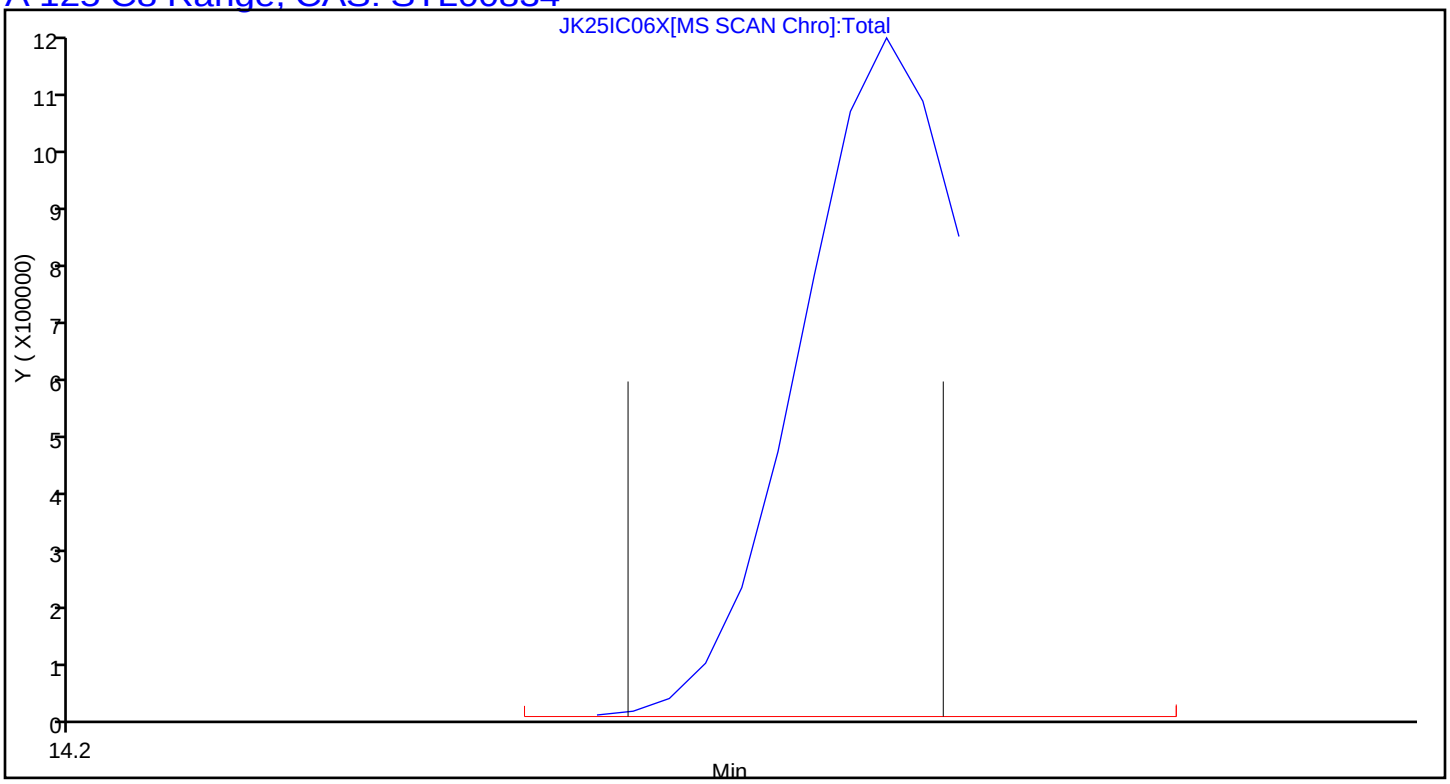


Report Date: 28-Nov-2016 13:55:37 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC06X.D				
Injection Date:	25-Nov-2016 23:17:30	Instrument ID:	MJ		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	007126	ALS Bottle#:	5	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC07X.D
Lims ID: IC L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 26-Nov-2016 00:11:30 ALS Bottle#: 6 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003656-008
Misc. Info.: 067936
Operator ID: 007126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Nov-2016 13:55:40 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh Date: 28-Nov-2016 11:54:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.644	8.640	0.004	98	347139	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.844	10.843	0.001	95	1567181	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.610	15.609	0.001	89	1375951	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.251	17.254	-0.003	96	914153	4.00	4.20	
6 Chlorodifluoromethane	67	3.566	3.568	-0.002	98	118844	4.00	3.80	
7 Propene	41	3.577	3.578	-0.002	98	416325	4.00	3.85	
8 Dichlorodifluoromethane	85	3.625	3.627	-0.002	100	1115556	4.00	3.97	
9 Chloromethane	52	3.802	3.806	-0.004	98	158851	4.00	3.96	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.808	3.810	-0.002	91	586542	4.00	3.78	
11 Acetaldehyde	44	3.953	3.953	0.000	95	758197	20.0	17.5	
12 Vinyl chloride	62	3.969	3.969	0.000	99	484487	4.00	4.03	
13 Butane	43	4.055	4.055	0.000	86	809131	4.00	3.86	
14 Butadiene	54	4.055	4.057	-0.002	66	385793	4.00	4.00	
15 Bromomethane	94	4.367	4.367	0.000	98	433625	4.00	4.06	
16 Chloroethane	64	4.502	4.504	-0.002	89	227227	4.00	3.99	
17 Ethanol	31	4.599	4.602	-0.003	97	876962	20.0	19.1	
18 Vinyl bromide	106	4.798	4.797	0.001	99	418434	4.00	4.00	
19 2-Methylbutane	43	4.846	4.845	0.001	94	607591	4.00	3.96	
20 Trichlorofluoromethane	101	5.061	5.060	0.001	99	1151548	4.00	4.03	
21 Acrolein	56	5.072	5.074	-0.002	96	118346	4.00	3.52	
22 Acetonitrile	40	5.137	5.138	-0.001	98	155542	4.00	3.76	
23 Acetone	58	5.185	5.192	-0.007	99	407996	12.0	11.3	
24 Isopropyl alcohol	45	5.266	5.273	-0.007	93	2009448	12.0	12.0	
25 Pentane	72	5.276	5.279	-0.003	95	64760	4.00	4.03	
26 Ethyl ether	31	5.443	5.451	-0.008	89	450555	4.00	3.82	
27 1,1-Dichloroethene	96	5.755	5.758	-0.003	95	409463	4.00	3.92	
29 Acrylonitrile	53	5.863	5.865	-0.002	93	243769	4.00	3.68	
28 2-Methyl-2-propanol	59	5.852	5.868	-0.016	95	701844	4.00	4.16	
30 1,1,2-Trichloro-1,2,2-trif	101	5.933	5.931	0.002	97	912233	4.00	3.94	
31 Methylene Chloride	84	6.105	6.105	0.000	95	371333	4.00	3.63	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.121	6.121	0.000	95	461294	4.00	3.83	
33 Carbon disulfide	76	6.266	6.264	0.002	100	1200814	4.00	3.90	
34 trans-1,2-Dichloroethene	96	6.906	6.908	-0.002	95	406768	4.00	3.87	
35 2-Methylpentane	43	6.923	6.923	0.000	96	1048110	4.00	3.86	
36 Methyl tert-butyl ether	73	7.036	7.049	-0.013	97	792821	4.00	3.69	
37 1,1-Dichloroethane	63	7.326	7.326	0.000	100	741147	4.00	3.71	
38 Vinyl acetate	43	7.434	7.435	-0.001	100	922514	4.00	3.75	
39 2-Butanone (MEK)	72	7.885	7.895	-0.010	95	124487	4.00	3.96	
40 Hexane	56	7.902	7.901	0.001	90	345145	4.00	3.73	
41 Isopropyl ether	45	8.063	8.072	-0.009	96	1258094	4.00	3.85	
42 cis-1,2-Dichloroethene	96	8.310	8.307	0.003	98	374711	4.00	3.62	
43 Ethyl acetate	43	8.504	8.508	-0.004	98	706434	4.00	3.85	
44 Chloroform	83	8.655	8.651	0.004	96	773414	4.00	3.55	
45 Tert-butyl ethyl ether	59	8.741	8.750	-0.009	97	982477	4.00	3.91	
46 Tetrahydrofuran	42	9.069	9.083	-0.014	93	375805	4.00	3.68	
47 1,1,1-Trichloroethane	97	9.677	9.679	-0.002	97	817437	4.00	3.64	
48 1,2-Dichloroethane	62	9.790	9.792	-0.002	97	518857	4.00	3.55	
49 n-Butanol	31	10.252	10.272	-0.020	89	189813	4.00	4.06	
50 Cyclohexane	69	10.285	10.285	0.000	81	188882	4.00	3.64	
51 Benzene	78	10.285	10.285	0.000	98	998620	4.00	3.51	
52 Carbon tetrachloride	117	10.312	10.308	0.004	96	943611	4.00	3.76	
53 2,3-Dimethylpentane	71	10.408	10.407	0.001	92	234828	4.00	3.59	
54 Thiophene	84	10.564	10.565	-0.001	97	579159	4.00	3.56	
55 Tert-amyl methyl ether	73	10.780	10.796	-0.016	95	826406	4.00	3.86	
56 Isooctane	57	11.059	11.058	0.001	97	1909813	4.00	3.54	
57 n-Heptane	71	11.441	11.441	0.000	96	344303	4.00	3.45	
58 1,2-Dichloropropane	63	11.527	11.526	0.001	89	418060	4.00	3.62	
59 Trichloroethene	130	11.560	11.561	-0.001	96	471497	4.00	3.52	
60 Dibromomethane	93	11.651	11.648	0.003	95	446341	4.00	3.51	
62 Dichlorobromomethane	83	11.796	11.795	0.001	97	774474	4.00	3.50	
61 1,4-Dioxane	88	11.823	11.835	-0.012	97	123907	4.00	4.11	
63 Methyl methacrylate	41	11.899	11.902	-0.003	93	430899	4.00	3.95	
64 Methylcyclohexane	83	12.334	12.336	-0.002	91	775502	4.00	3.58	
65 4-Methyl-2-pentanone (MIBK	43	12.759	12.764	-0.005	98	845642	4.00	3.92	
66 cis-1,3-Dichloropropene	75	12.808	12.808	0.000	98	567162	4.00	3.79	
67 trans-1,3-Dichloropropene	75	13.507	13.509	-0.002	96	440824	4.00	3.72	
68 Toluene	91	13.631	13.630	0.001	93	1091996	4.00	3.69	
69 1,1,2-Trichloroethane	83	13.711	13.709	0.002	98	333675	4.00	3.59	
70 2-Methylthiophene	97	13.781	13.784	-0.003	99	924136	4.00	3.72	
71 3-Methylthiophene	97	13.986	13.985	0.001	100	893344	4.00	3.77	
72 2-Hexanone	58	14.104	14.106	-0.002	91	376223	4.00	4.36	
73 n-Octane	85	14.325	14.322	0.003	97	348881	4.00	3.52	
74 Chlorodibromomethane	129	14.411	14.412	-0.001	98	808128	4.00	3.73	
75 Ethylene Dibromide	107	14.707	14.706	0.001	98	581436	4.00	3.72	
76 Tetrachloroethene	129	14.777	14.777	0.000	95	445648	4.00	3.44	
78 Chlorobenzene	112	15.659	15.658	0.001	94	862198	4.00	3.71	
77 2,3-Dimethylheptane	43	15.675	15.677	-0.002	94	1349555	4.00	3.65	
79 Ethylbenzene	91	15.944	15.947	-0.003	99	1262362	4.00	3.60	
80 2-Ethylthiophene	97	16.051	16.050	0.001	98	977657	4.00	3.73	
81 m-Xylene & p-Xylene	91	16.111	16.110	0.001	100	1919976	8.00	7.42	
82 n-Nonane	57	16.530	16.528	0.002	94	834807	4.00	3.77	
83 Bromoform	173	16.557	16.559	-0.002	97	809091	4.00	3.92	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.573	16.575	-0.002	98	713753	4.00	3.88	
85 o-Xylene	91	16.632	16.634	-0.002	98	1000055	4.00	3.58	
86 1,1,2,2-Tetrachloroethane	83	16.961	16.962	-0.001	99	775460	4.00	3.82	
87 1,2,3-Trichloropropane	110	17.122	17.122	0.000	96	180195	4.00	3.86	
88 Isopropylbenzene	105	17.219	17.221	-0.002	97	1358053	4.00	3.60	
89 N-Propylbenzene	120	17.768	17.767	0.001	99	342915	4.00	3.86	
90 2-Chlorotoluene	126	17.811	17.813	-0.002	97	357053	4.00	3.78	
91 4-Ethyltoluene	105	17.918	17.921	-0.003	98	1225761	4.00	3.88	
92 1,3,5-Trimethylbenzene	120	17.993	17.995	-0.002	92	603355	4.00	3.79	
93 Alpha Methyl Styrene	118	18.230	18.229	0.001	86	499500	4.00	4.06	
94 n-Decane	57	18.284	18.287	-0.003	88	903971	4.00	4.04	
95 tert-Butylbenzene	119	18.424	18.422	0.002	92	1191702	4.00	3.71	
96 1,2,4-Trimethylbenzene	105	18.435	18.436	-0.001	96	1063039	4.00	3.87	
97 sec-Butylbenzene	105	18.693	18.694	-0.001	98	1590827	4.00	3.77	
98 1,3-Dichlorobenzene	146	18.709	18.710	-0.001	98	605637	4.00	3.93	
99 Benzyl chloride	91	18.784	18.786	-0.002	97	633760	4.00	4.75	
100 1,4-Dichlorobenzene	146	18.800	18.799	0.001	95	526340	4.00	4.38	
101 4-Isopropyltoluene	119	18.860	18.857	0.003	97	1267933	4.00	3.86	
102 1,2,3-Trimethylbenzene	105	18.913	18.912	0.001	99	779253	4.00	3.77	
103 Butylcyclohexane	83	18.962	18.964	-0.002	89	1003008	4.00	3.77	
104 2,3-Dihydroindene	117	19.161	19.159	0.002	93	930740	4.00	3.87	
105 1,2-Dichlorobenzene	146	19.161	19.159	0.002	80	616546	4.00	3.95	
107 Indene	116	19.290	19.290	0.000	89	607320	4.00	4.06	
106 n-Butylbenzene	91	19.295	19.294	0.001	98	1100830	4.00	3.99	
108 Undecane	57	19.607	19.605	0.002	93	811824	4.00	4.04	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.667	19.667	-0.001	98	837435	4.00	4.13	
110 1,2-Dibromo-3-Chloropropan	157	19.763	19.765	-0.002	96	249204	4.00	4.64	
111 1,2,4,5-Tetramethylbenzene	119	20.054	20.052	0.002	97	983706	4.00	4.15	
112 1,2,3,5-Tetramethylbenzene	119	20.108	20.108	0.000	95	608119	4.00	4.17	
113 1,2,3,4-Tetramethylbenzene	119	20.506	20.505	0.001	98	752440	4.00	4.08	
114 Dodecane	57	20.667	20.665	0.002	92	665748	4.00	4.01	
115 1,2,4-Trichlorobenzene	180	20.866	20.865	0.001	94	234735	4.00	5.23	
116 Naphthalene	128	21.006	21.007	-0.001	99	538060	4.00	4.48	
117 Benzo(b)thiophene	134	21.114	21.112	0.002	99	221729	4.00	4.74	
118 Hexachlorobutadiene	225	21.227	21.225	0.002	95	646694	4.00	3.72	
119 1,2,3-Trichlorobenzene	180	21.296	21.297	-0.001	94	266581	4.00	4.54	
120 2-Methylnaphthalene	142	21.969	21.967	0.002	98	170697	12.5	14.5	
121 1-Methylnaphthalene	142	22.093	22.095	-0.002	98	194863	12.5	14.8	
A 124 Toluene Range	1	13.631	(13.601-13.661)		0	2791156	4.00	3.60	
A 125 C8 Range	1	14.310	(14.286-14.333)		0	3867680	4.00	3.67	
S 126 Xylenes, Total	100				0		12.0	11.0	
S 127 1,2-Dichloroethene, Total	1				0		8.00	7.49	

Reagents:

40L7DNP_00008	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

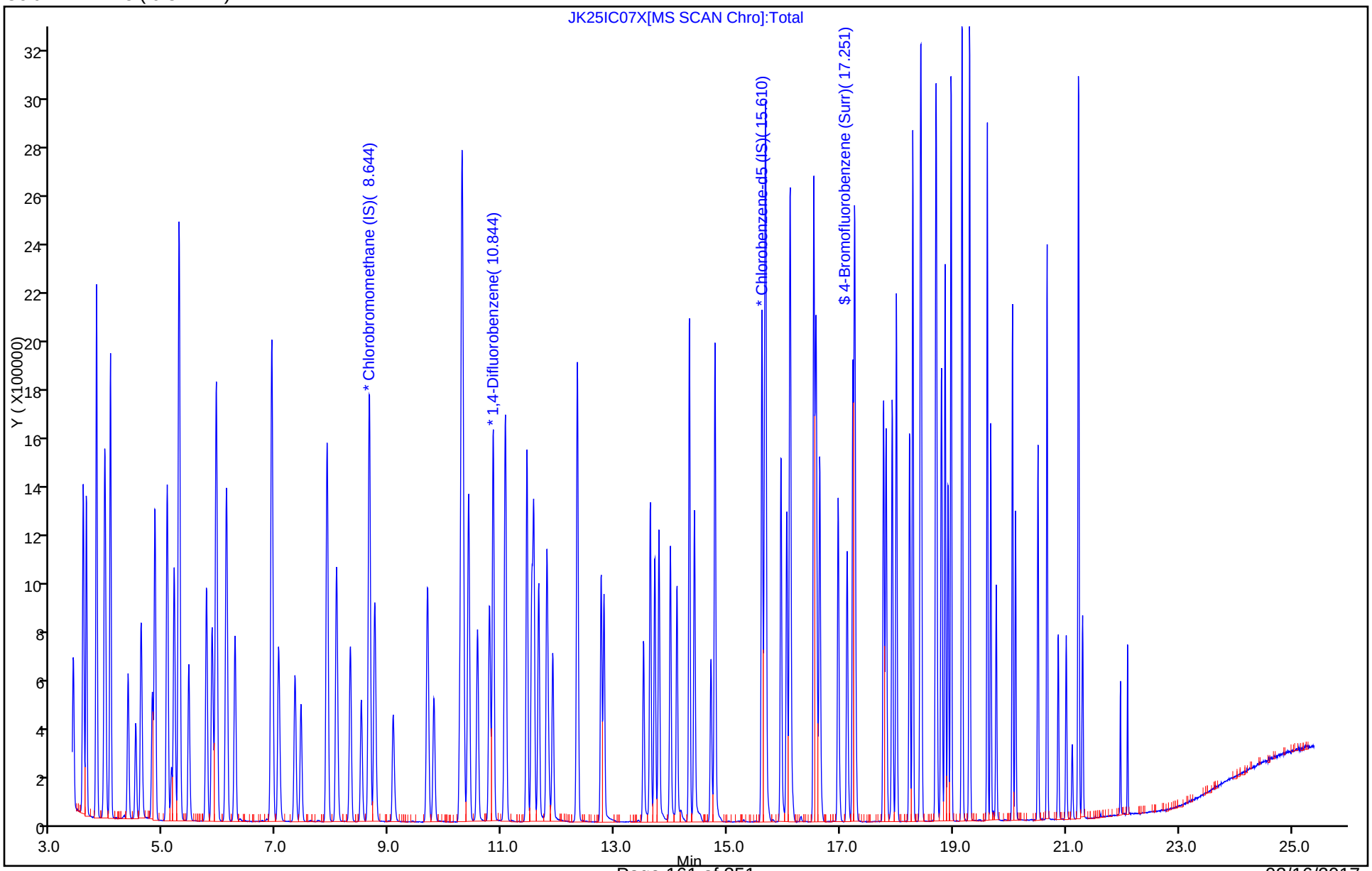
Report Date: 28-Nov-2016 13:55:40 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC07X.D

Injection Date:	26-Nov-2016 00:11:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	IC L7			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

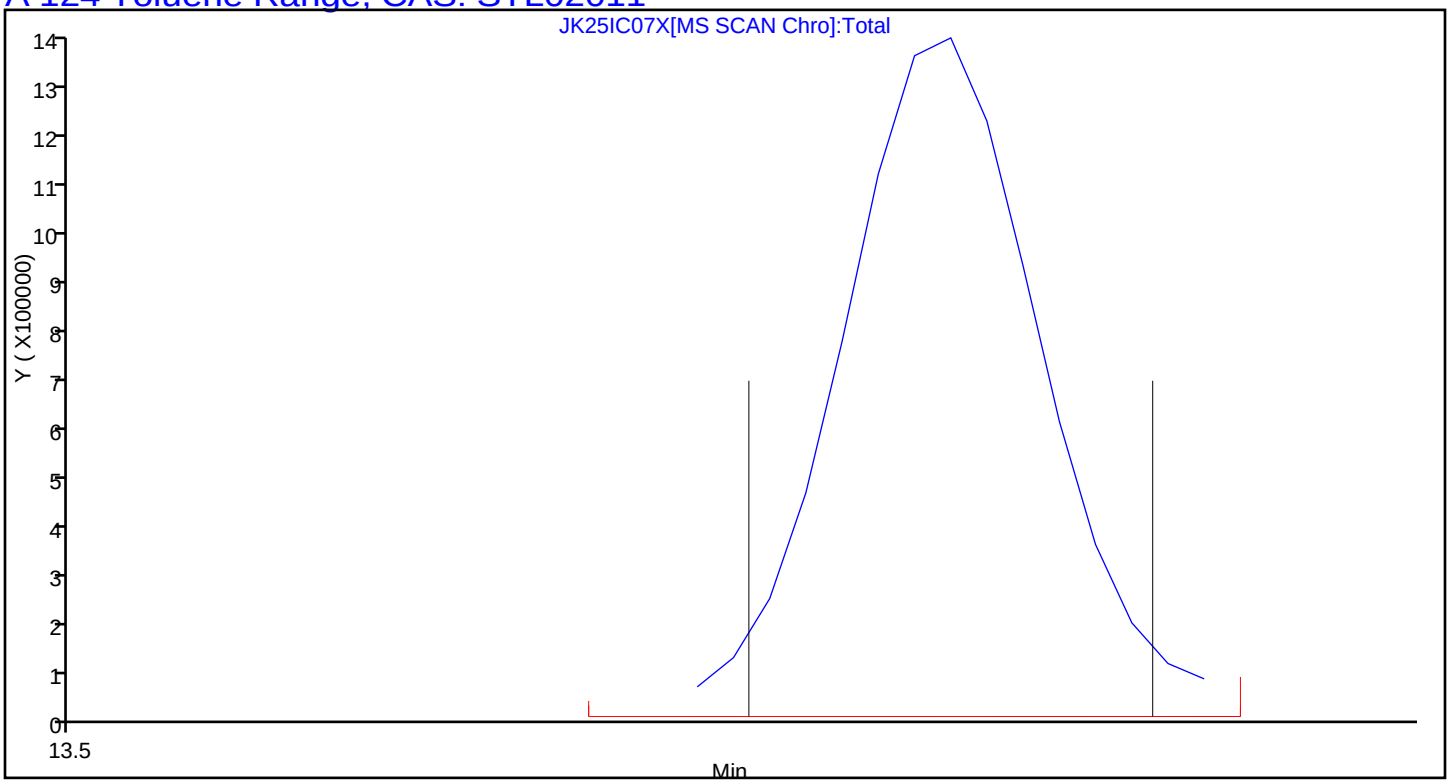


Report Date: 28-Nov-2016 13:55:40 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC07X.D				
Injection Date:	26-Nov-2016 00:11:30	Instrument ID:	MJ		
Lims ID:	IC L7				
Client ID:					
Operator ID:	007126	ALS Bottle#:	6	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

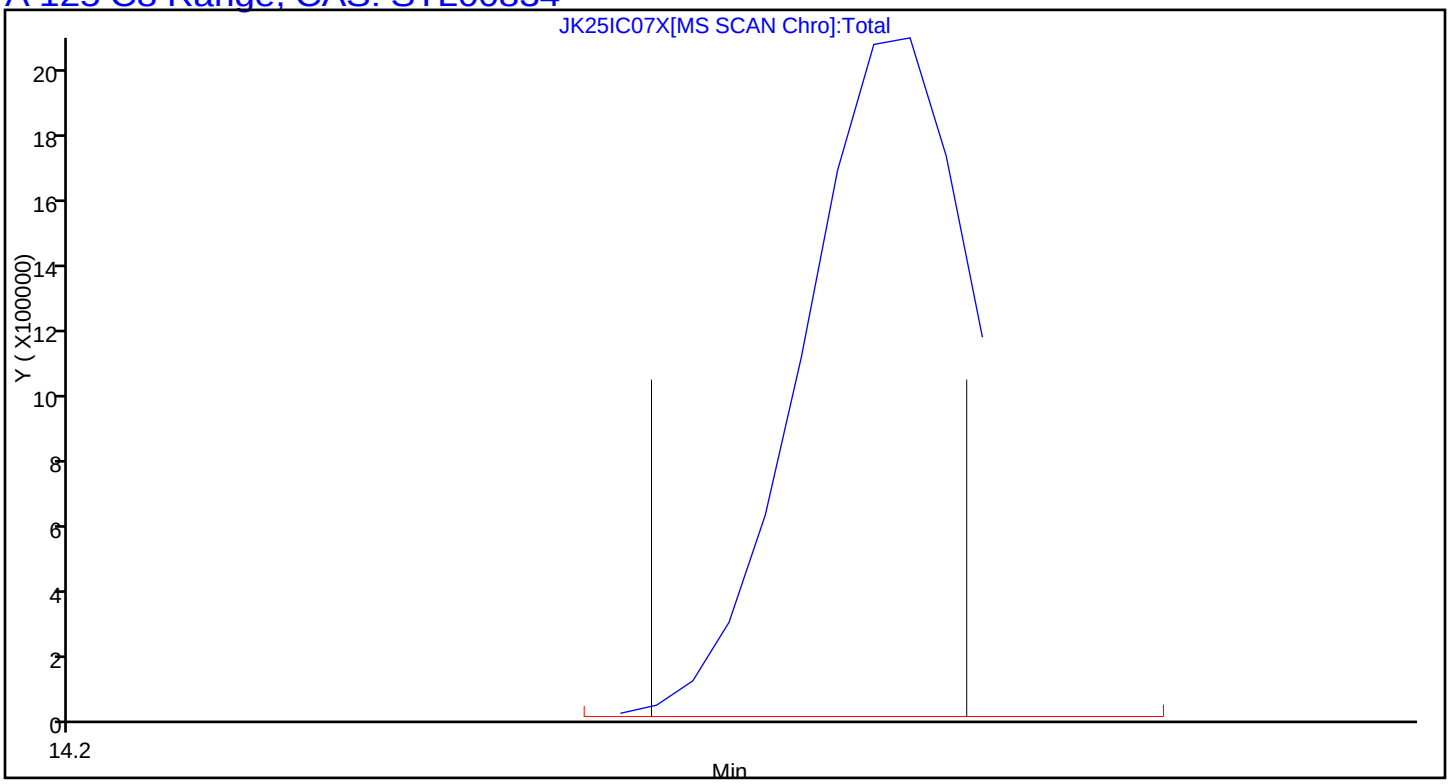


Report Date: 28-Nov-2016 13:55:41 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC07X.D				
Injection Date:	26-Nov-2016 00:11:30	Instrument ID:	MJ		
Lims ID:	IC L7				
Client ID:					
Operator ID:	007126	ALS Bottle#:	6	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC08X.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 26-Nov-2016 01:05:30 ALS Bottle#: 7 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003656-009
Misc. Info.: 067935
Operator ID: 007126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Nov-2016 13:55:44 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh Date: 28-Nov-2016 11:54:50

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	8.641	8.640	0.001	98	345274	4.00	4.00	
*	2 1,4-Difluorobenzene	114	10.847	10.843	0.004	95	1520526	4.00	4.00	
*	3 Chlorobenzene-d5 (IS)	117	15.613	15.609	0.004	88	1363260	4.00	4.00	
$	4 4-Bromofluorobenzene (Surr	95	17.254	17.254	0.000	97	927094	4.00	4.29	
	6 Chlorodifluoromethane	67	3.568	3.568	0.000	97	235313	8.00	7.56	
	7 Propene	41	3.574	3.578	-0.004	98	875090	8.00	8.14	
	8 Dichlorodifluoromethane	85	3.628	3.627	0.001	100	2198367	8.00	7.86	
	9 Chloromethane	52	3.805	3.806	-0.001	98	316299	8.00	7.93	
	10 1,2-Dichloro-1,1,2,2-tetra	135	3.811	3.810	0.001	90	1100458	8.00	7.12	
	11 Acetaldehyde	44	3.950	3.953	-0.003	96	1629284	40.0	37.8	
	12 Vinyl chloride	62	3.967	3.969	-0.002	99	964833	8.00	8.07	
	13 Butane	43	4.053	4.055	-0.002	86	1638360	8.00	7.86	
	14 Butadiene	54	4.053	4.057	-0.004	66	774881	8.00	8.08	
	15 Bromomethane	94	4.365	4.367	-0.002	99	870033	8.00	8.18	
	16 Chloroethane	64	4.504	4.504	0.000	90	460075	8.00	8.11	
	17 Ethanol	31	4.601	4.602	-0.001	97	1720033	40.0	37.7	
	18 Vinyl bromide	106	4.800	4.797	0.003	98	846638	8.00	8.13	
	19 2-Methylbutane	43	4.843	4.845	-0.002	93	1229715	8.00	8.06	
	20 Trichlorofluoromethane	101	5.059	5.060	-0.001	100	2330072	8.00	8.19	
	21 Acrolein	56	5.075	5.074	0.001	96	244387	8.00	7.30	
	22 Acetonitrile	40	5.139	5.138	0.001	98	323650	8.00	7.86	
	23 Acetone	58	5.182	5.192	-0.010	99	817306	24.0	22.8	
	24 Isopropyl alcohol	45	5.274	5.273	0.001	93	3985916	24.0	24.0	
	25 Pentane	72	5.279	5.279	0.000	94	133194	8.00	8.33	
	26 Ethyl ether	31	5.446	5.451	-0.005	90	913954	8.00	7.80	
	27 1,1-Dichloroethene	96	5.758	5.758	0.000	95	833287	8.00	8.02	
	29 Acrylonitrile	53	5.865	5.865	0.000	93	511675	8.00	7.76	
	28 2-Methyl-2-propanol	59	5.860	5.868	-0.008	96	1406893	8.00	8.39	
	30 1,1,2-Trichloro-1,2,2-trif	101	5.930	5.931	-0.001	97	1884507	8.00	8.18	
	31 Methylene Chloride	84	6.108	6.105	0.003	95	758999	8.00	7.46	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.124	6.121	0.003	95	938863	8.00	7.84	
33 Carbon disulfide	76	6.264	6.264	0.000	100	2443791	8.00	7.98	
34 trans-1,2-Dichloroethene	96	6.909	6.908	0.001	95	835250	8.00	8.00	
35 2-Methylpentane	43	6.925	6.923	0.002	96	2177430	8.00	8.06	
36 Methyl tert-butyl ether	73	7.038	7.049	-0.011	97	1617852	8.00	7.58	
37 1,1-Dichloroethane	63	7.329	7.326	0.003	100	1527772	8.00	7.69	
38 Vinyl acetate	43	7.436	7.435	0.001	100	1903842	8.00	7.79	
39 2-Butanone (MEK)	72	7.888	7.895	-0.007	97	253927	8.00	8.11	
40 Hexane	56	7.899	7.901	-0.002	85	724504	8.00	7.88	
41 Isopropyl ether	45	8.066	8.072	-0.006	96	2603004	8.00	8.00	
42 cis-1,2-Dichloroethene	96	8.313	8.307	0.006	98	775858	8.00	7.54	
43 Ethyl acetate	43	8.507	8.508	-0.001	98	1424609	8.00	7.80	
44 Chloroform	83	8.657	8.651	0.006	97	1591650	8.00	7.35	
45 Tert-butyl ethyl ether	59	8.744	8.750	-0.006	97	2036709	8.00	8.15	
46 Tetrahydrofuran	42	9.066	9.083	-0.017	93	768341	8.00	7.56	
47 1,1,1-Trichloroethane	97	9.680	9.679	0.001	97	1658324	8.00	7.42	
48 1,2-Dichloroethane	62	9.793	9.792	0.000	97	1078779	8.00	7.61	
49 n-Butanol	31	10.255	10.272	-0.017	86	385011	8.00	8.48	
50 Cyclohexane	69	10.287	10.285	0.002	84	378419	8.00	7.52	
51 Benzene	78	10.287	10.285	0.002	98	2072736	8.00	7.50	
52 Carbon tetrachloride	117	10.309	10.308	0.001	96	1562157	8.00	6.42	
53 2,3-Dimethylpentane	71	10.406	10.407	-0.001	92	486787	8.00	7.68	
54 Thiophene	84	10.567	10.565	0.002	97	1190849	8.00	7.54	
55 Tert-amyl methyl ether	73	10.777	10.794	-0.017	95	1687255	8.00	7.96	
56 Isooctane	57	11.062	11.058	0.004	97	3937619	8.00	7.52	
57 n-Heptane	71	11.444	11.441	0.003	95	710384	8.00	7.34	
58 1,2-Dichloropropane	63	11.530	11.526	0.004	88	860195	8.00	7.69	
59 Trichloroethene	130	11.568	11.561	0.007	96	965984	8.00	7.43	
60 Dibromomethane	93	11.654	11.648	0.006	94	912301	8.00	7.39	
62 Dichlorobromomethane	83	11.799	11.795	0.004	98	1600155	8.00	7.44	
61 1,4-Dioxane	88	11.821	11.835	-0.014	98	248451	8.00	8.49	
63 Methyl methacrylate	41	11.901	11.902	-0.001	93	896296	8.00	8.47	
64 Methylcyclohexane	83	12.337	12.336	0.001	90	1595324	8.00	7.59	
65 4-Methyl-2-pentanone (MIBK	43	12.762	12.764	-0.002	98	1726160	8.00	8.25	
66 cis-1,3-Dichloropropene	75	12.810	12.808	0.002	98	1195443	8.00	8.23	
67 trans-1,3-Dichloropropene	75	13.510	13.509	0.001	97	934863	8.00	7.97	
68 Toluene	91	13.633	13.630	0.003	93	2328051	8.00	7.94	
69 1,1,2-Trichloroethane	83	13.709	13.709	0.000	98	701197	8.00	7.61	
70 2-Methylthiophene	97	13.784	13.784	0.000	98	1973707	8.00	8.02	
71 3-Methylthiophene	97	13.988	13.985	0.003	100	1877320	8.00	7.99	
72 2-Hexanone	58	14.101	14.106	-0.005	91	759406	8.00	8.87	
73 n-Octane	85	14.322	14.322	0.000	97	731653	8.00	7.45	
74 Chlorodibromomethane	129	14.413	14.412	0.001	98	1708750	8.00	7.95	
75 Ethylene Dibromide	107	14.709	14.706	0.003	98	1233456	8.00	7.96	
76 Tetrachloroethene	129	14.779	14.777	0.002	95	942886	8.00	7.34	
78 Chlorobenzene	112	15.662	15.658	0.004	94	1839152	8.00	7.99	
77 2,3-Dimethylheptane	43	15.678	15.677	0.001	94	2768264	8.00	7.55	
79 Ethylbenzene	91	15.947	15.947	0.000	99	2721372	8.00	7.83	
80 2-Ethylthiophene	97	16.054	16.050	0.004	98	2115122	8.00	8.14	
81 m-Xylene & p-Xylene	91	16.113	16.110	0.003	99	4180493	16.0	16.3	
82 n-Nonane	57	16.528	16.528	0.000	94	1783024	8.00	8.13	
83 Bromoform	173	16.560	16.559	0.001	97	1777546	8.00	8.69	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.576	16.575	0.001	99	1596019	8.00	8.75	
85 o-Xylene	91	16.635	16.634	0.001	99	2147893	8.00	7.76	
86 1,1,2,2-Tetrachloroethane	83	16.963	16.962	0.001	99	1682135	8.00	8.35	
87 1,2,3-Trichloropropane	110	17.125	17.122	0.003	96	400421	8.00	8.66	
88 Isopropylbenzene	105	17.222	17.221	0.001	97	2941806	8.00	7.86	
89 N-Propylbenzene	120	17.770	17.767	0.003	99	761562	8.00	8.65	
90 2-Chlorotoluene	126	17.813	17.813	0.000	97	784198	8.00	8.38	
91 4-Ethyltoluene	105	17.921	17.921	0.000	98	2722956	8.00	8.70	
92 1,3,5-Trimethylbenzene	120	17.996	17.995	0.001	93	1334976	8.00	8.46	
93 Alpha Methyl Styrene	118	18.228	18.229	-0.001	87	1159461	8.00	9.52	
94 n-Decane	57	18.287	18.287	0.000	88	2015482	8.00	9.09	
95 tert-Butylbenzene	119	18.421	18.422	-0.001	92	2650102	8.00	8.32	
96 1,2,4-Trimethylbenzene	105	18.437	18.436	0.001	96	2361494	8.00	8.67	
97 sec-Butylbenzene	105	18.696	18.694	0.002	98	3508321	8.00	8.40	
98 1,3-Dichlorobenzene	146	18.712	18.710	0.002	97	1475008	8.00	9.67	
99 Benzyl chloride	91	18.787	18.786	0.001	98	1586115	8.00	12.0	
100 1,4-Dichlorobenzene	146	18.798	18.799	-0.001	95	1315653	8.00	11.1	
101 4-Isopropyltoluene	119	18.857	18.857	0.000	97	2823302	8.00	8.67	
102 1,2,3-Trimethylbenzene	105	18.911	18.912	-0.001	99	1720307	8.00	8.41	
103 Butylcyclohexane	83	18.964	18.964	0.000	89	2185035	8.00	8.29	
104 2,3-Dihydroindene	117	19.158	19.159	-0.001	93	2141880	8.00	8.99	
105 1,2-Dichlorobenzene	146	19.158	19.159	-0.001	82	1494867	8.00	9.68	
107 Indene	116	19.293	19.290	0.003	89	1455216	8.00	9.83	
106 n-Butylbenzene	91	19.293	19.294	-0.001	98	2538094	8.00	9.29	
108 Undecane	57	19.605	19.605	0.000	93	1865694	8.00	9.37	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.669	19.667	0.002	98	1893275	8.00	9.43	
110 1,2-Dibromo-3-Chloropropan	157	19.766	19.765	0.001	96	600110	8.00	11.3	
111 1,2,4,5-Tetramethylbenzene	119	20.051	20.052	-0.001	97	2206639	8.00	9.39	
112 1,2,3,5-Tetramethylbenzene	119	20.110	20.108	0.002	95	1340133	8.00	9.27	
113 1,2,3,4-Tetramethylbenzene	119	20.508	20.505	0.003	98	1698919	8.00	9.30	
114 Dodecane	57	20.664	20.665	-0.001	91	1515010	8.00	9.20	
115 1,2,4-Trichlorobenzene	180	20.863	20.865	-0.002	94	642323	8.00	14.5	
116 Naphthalene	128	21.009	21.007	0.002	99	1375773	8.00	11.6	
117 Benzo(b)thiophene	134	21.111	21.112	-0.001	99	590694	8.00	12.7	
118 Hexachlorobutadiene	225	21.224	21.225	-0.001	94	1494370	8.00	8.69	
119 1,2,3-Trichlorobenzene	180	21.299	21.297	0.002	94	670480	8.00	11.5	
120 2-Methylnaphthalene	142	21.966	21.967	-0.001	99	389989	25.0	33.4	
121 1-Methylnaphthalene	142	22.095	22.095	0.000	98	411293	25.0	31.6	
A 124 Toluene Range	1	13.633	(13.603-13.663)		0	5917756	8.00	7.71	
A 125 C8 Range	1	14.307	(14.284-14.330)		0	8082975	8.00	7.73	
S 126 Xylenes, Total	100				0		24.0	24.1	
S 127 1,2-Dichloroethene, Total	1				0		16.0	15.5	

Reagents:

40L8DNP_00008	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

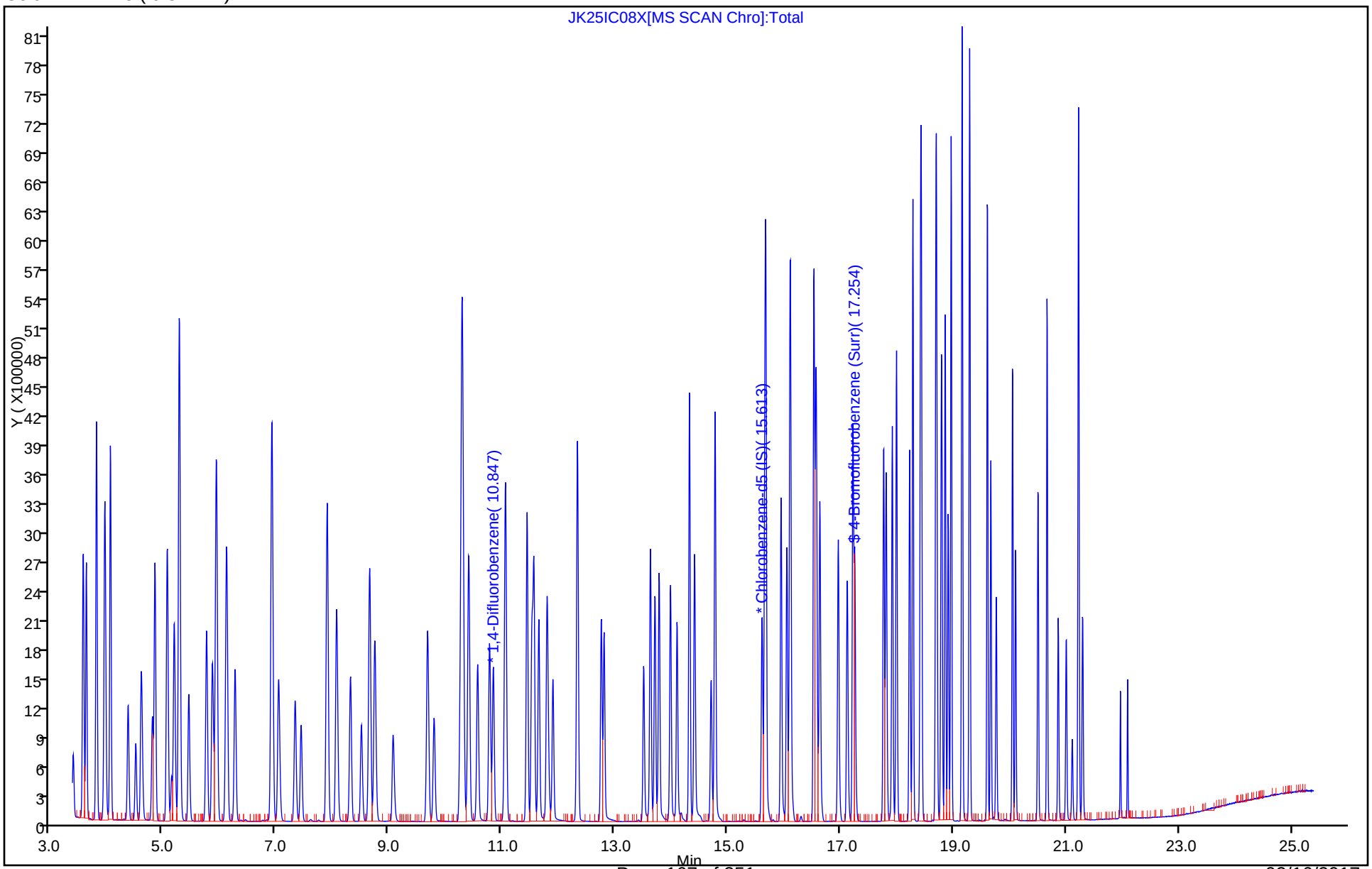
Report Date: 28-Nov-2016 13:55:44 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC08X.D

Injection Date:	26-Nov-2016 01:05:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	IC L8			Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

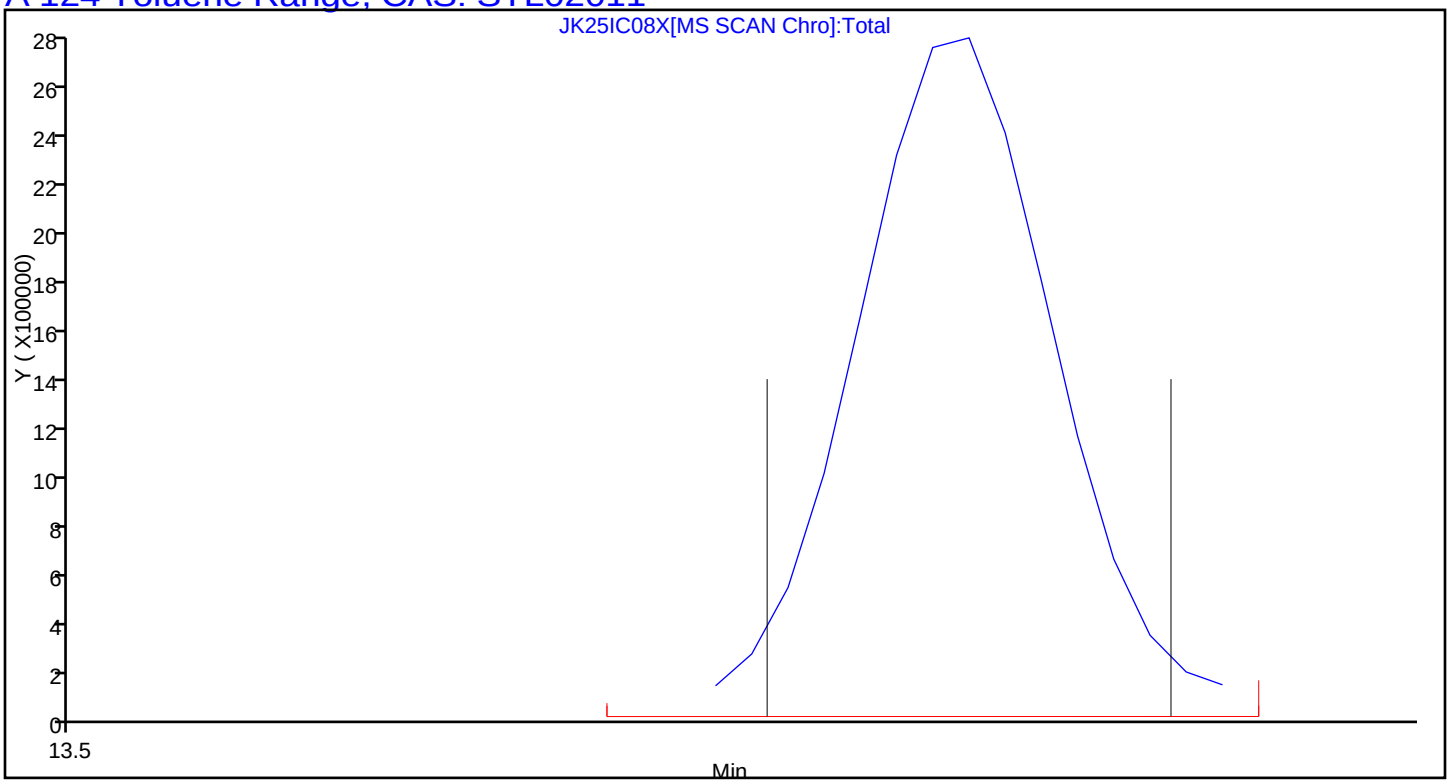


Report Date: 28-Nov-2016 13:55:45 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC08X.D				
Injection Date:	26-Nov-2016 01:05:30	Instrument ID:	MJ		
Lims ID:	IC L8				
Client ID:					
Operator ID:	007126	ALS Bottle#:	7	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

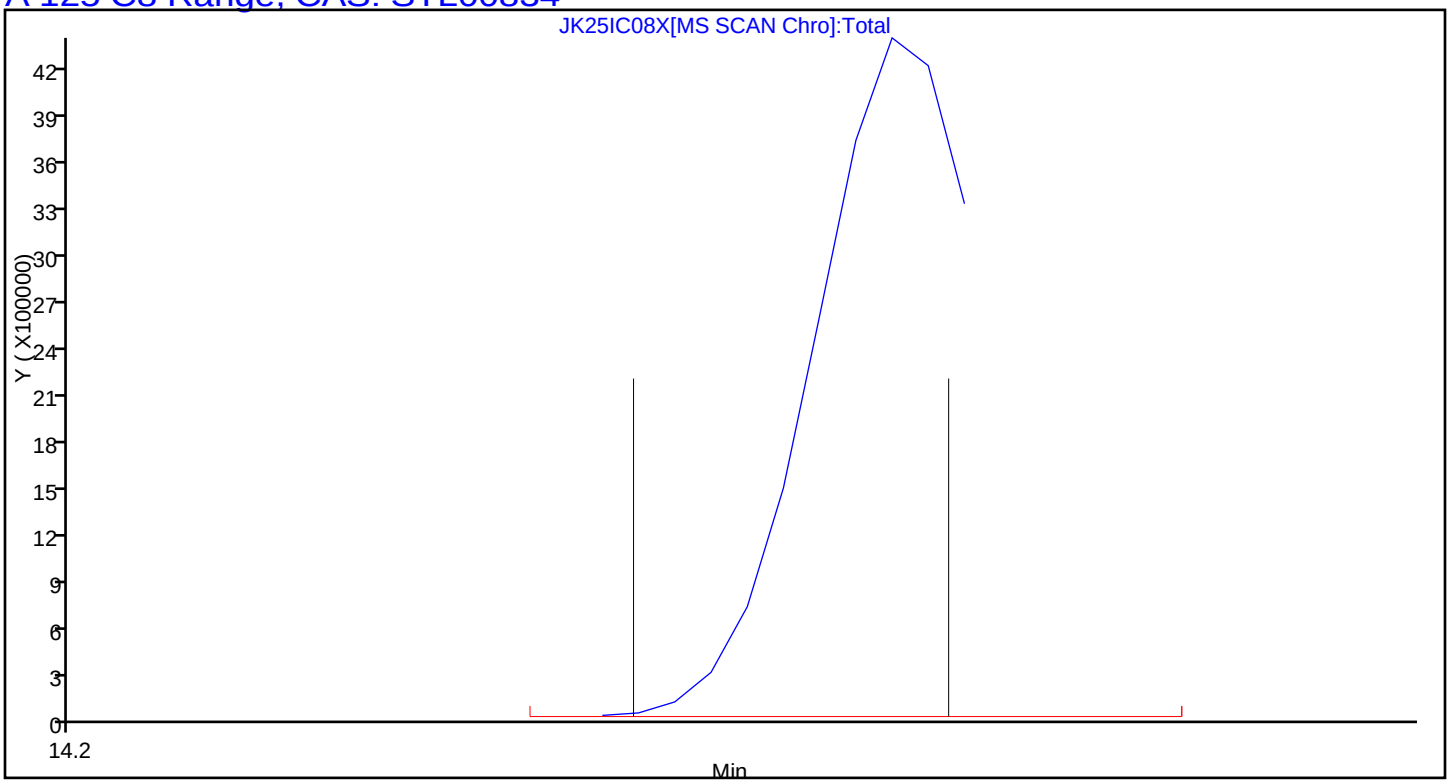


Report Date: 28-Nov-2016 13:55:45 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC08X.D				
Injection Date:	26-Nov-2016 01:05:30	Instrument ID:	MJ		
Lims ID:	IC L8				
Client ID:					
Operator ID:	007126	ALS Bottle#:	7	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 26-Nov-2016 01:58:30 ALS Bottle#: 8 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003656-010
Misc. Info.: 067934
Operator ID: 007126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Nov-2016 13:55:48 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: barlozhetskayaa Date: 26-Nov-2016 11:03:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.651	8.640	0.011	98	346703	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.851	10.843	0.008	95	1440637	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.612	15.609	0.003	88	1350914	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.258	17.254	0.004	97	948626	4.00	4.43	
6 Chlorodifluoromethane	67	3.567	3.568	-0.001	98	484336	16.0	15.5	
7 Propene	41	3.578	3.578	0.000	98	1745617	16.0	16.2	
8 Dichlorodifluoromethane	85	3.626	3.627	-0.001	99	4459893	16.0	15.9	
9 Chloromethane	52	3.804	3.806	-0.002	99	666251	16.0	16.6	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.809	3.810	-0.001	90	2318437	16.0	14.9	
11 Acetaldehyde	44	3.955	3.953	0.002	98	3557537	80.0	82.3	
12 Vinyl chloride	62	3.971	3.969	0.002	99	1982759	16.0	16.5	
13 Butane	43	4.051	4.055	-0.004	86	3367418	16.0	16.1	
14 Butadiene	54	4.057	4.057	0.000	67	1623732	16.0	16.9	
15 Bromomethane	94	4.369	4.367	0.002	99	1785611	16.0	16.7	
16 Chloroethane	64	4.509	4.504	0.005	88	928476	16.0	16.3	
17 Ethanol	31	4.611	4.602	0.009	97	3315415	80.0	72.4	
18 Vinyl bromide	106	4.799	4.797	0.002	99	1728904	16.0	16.5	
19 2-Methylbutane	43	4.848	4.845	0.003	93	2517794	16.0	16.4	
20 Trichlorofluoromethane	101	5.063	5.060	0.003	100	4710858	16.0	16.5	
21 Acrolein	56	5.074	5.074	0.000	96	587930	16.0	17.5	
22 Acetonitrile	40	5.143	5.138	0.005	98	723270	16.0	17.5	
23 Acetone	58	5.186	5.192	-0.006	99	1736723	48.0	48.3	
24 Isopropyl alcohol	45	5.283	5.273	0.010	96	7921894	48.0	47.4	
25 Pentane	72	5.278	5.279	-0.001	97	276851	16.0	17.2	
26 Ethyl ether	31	5.445	5.451	-0.006	90	1992033	16.0	16.9	
27 1,1-Dichloroethene	96	5.762	5.758	0.004	95	1701547	16.0	16.3	
29 Acrylonitrile	53	5.870	5.865	0.005	93	1160939	16.0	17.5	
28 2-Methyl-2-propanol	59	5.875	5.868	0.007	94	2768624	16.0	16.4	
30 1,1,2-Trichloro-1,2,2-trif	101	5.934	5.931	0.003	97	3896999	16.0	16.9	
31 Methylene Chloride	84	6.112	6.105	0.007	95	1535696	16.0	15.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.123	6.121	0.001	95	1971589	16.0	16.4	
33 Carbon disulfide	76	6.268	6.264	0.004	100	4948271	16.0	16.1	
34 trans-1,2-Dichloroethene	96	6.913	6.908	0.005	95	1702361	16.0	16.2	
35 2-Methylpentane	43	6.924	6.923	0.001	96	4491353	16.0	16.6	
36 Methyl tert-butyl ether	73	7.042	7.049	-0.007	98	3376773	16.0	15.7	
37 1,1-Dichloroethane	63	7.333	7.326	0.007	100	3204866	16.0	16.1	
38 Vinyl acetate	43	7.440	7.435	0.005	100	4258617	16.0	17.3	
39 2-Butanone (MEK)	72	7.892	7.895	-0.003	95	526678	16.0	16.8	
40 Hexane	56	7.903	7.901	0.002	83	1534885	16.0	16.6	
41 Isopropyl ether	45	8.070	8.072	-0.002	96	5389640	16.0	16.5	
42 cis-1,2-Dichloroethene	96	8.317	8.307	0.010	98	1655099	16.0	16.0	
43 Ethyl acetate	43	8.511	8.508	0.003	98	2953037	16.0	16.1	
44 Chloroform	83	8.662	8.651	0.011	97	3398489	16.0	15.6	
45 Tert-butyl ethyl ether	59	8.748	8.750	-0.002	97	4201218	16.0	16.7	
46 Tetrahydrofuran	42	9.070	9.083	-0.013	93	1684106	16.0	16.5	
47 1,1,1-Trichloroethane	97	9.684	9.679	0.005	97	3520443	16.0	15.7	
48 1,2-Dichloroethane	62	9.797	9.792	0.005	96	2324578	16.0	17.3	
49 n-Butanol	31	10.265	10.272	-0.007	82	770202	16.0	17.9	
50 Cyclohexane	69	10.286	10.285	0.001	92	799986	16.0	16.8	
51 Benzene	78	10.292	10.285	0.007	97	4580943	16.0	17.5	
52 Carbon tetrachloride	117	10.313	10.308	0.005	97	3985428	16.0	17.3	
53 2,3-Dimethylpentane	71	10.410	10.407	0.003	91	1047976	16.0	17.5	
54 Thiophene	84	10.571	10.565	0.006	97	2564706	16.0	17.1	
55 Tert-amyl methyl ether	73	10.781	10.792	-0.011	96	3478703	16.0	16.6	
56 Isooctane	57	11.061	11.058	0.003	97	8541251	16.0	17.2	
57 n-Heptane	71	11.448	11.441	0.007	95	1568743	16.0	17.1	
58 1,2-Dichloropropane	63	11.534	11.526	0.008	88	1914762	16.0	18.1	
59 Trichloroethene	130	11.567	11.561	0.006	97	2143254	16.0	17.4	
60 Dibromomethane	93	11.653	11.648	0.005	93	2007775	16.0	17.2	
62 Dichlorobromomethane	83	11.803	11.795	0.008	98	3517359	16.0	17.3	
61 1,4-Dioxane	88	11.825	11.835	-0.010	98	487655	16.0	17.6	
63 Methyl methacrylate	41	11.905	11.902	0.003	93	1872520	16.0	18.7	
64 Methylcyclohexane	83	12.341	12.336	0.005	90	3440508	16.0	17.3	
65 4-Methyl-2-pentanone (MIBK	43	12.766	12.764	0.002	97	3495706	16.0	17.6	
66 cis-1,3-Dichloropropene	75	12.815	12.808	0.007	98	2556154	16.0	18.6	
67 trans-1,3-Dichloropropene	75	13.514	13.509	0.005	97	2140300	16.0	18.4	
68 Toluene	91	13.638	13.630	0.008	93	5184820	16.0	17.9	
69 1,1,2-Trichloroethane	83	13.713	13.709	0.004	98	1557835	16.0	17.1	
70 2-Methylthiophene	97	13.788	13.784	0.004	98	4336537	16.0	17.8	
71 3-Methylthiophene	97	13.993	13.985	0.008	99	4176696	16.0	17.9	
72 2-Hexanone	58	14.106	14.106	0.000	91	1613389	16.0	19.0	
73 n-Octane	85	14.326	14.322	0.004	97	1650234	16.0	17.0	
74 Chlorodibromomethane	129	14.418	14.412	0.006	98	3856951	16.0	18.1	
75 Ethylene Dibromide	107	14.708	14.706	0.002	98	2796441	16.0	18.2	
76 Tetrachloroethene	129	14.778	14.777	0.001	96	2120157	16.0	16.7	
78 Chlorobenzene	112	15.660	15.658	0.002	94	4192705	16.0	18.4	
77 2,3-Dimethylheptane	43	15.682	15.677	0.005	94	6016570	16.0	16.6	
79 Ethylbenzene	91	15.951	15.947	0.004	98	6074677	16.0	17.6	
80 2-Ethylthiophene	97	16.053	16.050	0.003	98	4761553	16.0	18.5	
81 m-Xylene & p-Xylene	91	16.112	16.110	0.002	98	9362617	32.0	36.8	
82 n-Nonane	57	16.532	16.528	0.004	94	4054710	16.0	18.7	
83 Bromoform	173	16.564	16.559	0.005	97	4346492	16.0	21.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.580	16.575	0.005	99	3775896	16.0	20.9	
85 o-Xylene	91	16.639	16.634	0.005	99	4777380	16.0	17.4	
86 1,1,2,2-Tetrachloroethane	83	16.968	16.962	0.006	99	3662446	16.0	18.4	
87 1,2,3-Trichloropropane	110	17.124	17.122	0.002	96	894821	16.0	19.5	
88 Isopropylbenzene	105	17.226	17.221	0.005	97	6500407	16.0	17.5	
89 N-Propylbenzene	120	17.769	17.767	0.002	99	1767252	16.0	20.3	
90 2-Chlorotoluene	126	17.817	17.813	0.004	96	1803940	16.0	19.5	
91 4-Ethyltoluene	105	17.925	17.921	0.004	98	6169617	16.0	19.9	
92 1,3,5-Trimethylbenzene	120	18.000	17.995	0.005	93	3048962	16.0	19.5	
93 Alpha Methyl Styrene	118	18.232	18.229	0.003	87	2723428	16.0	22.6	
94 n-Decane	57	18.291	18.287	0.004	89	4633466	16.0	21.1	
95 tert-Butylbenzene	119	18.425	18.422	0.003	91	6011355	16.0	19.1	
96 1,2,4-Trimethylbenzene	105	18.441	18.436	0.005	96	5401392	16.0	20.0	
97 sec-Butylbenzene	105	18.700	18.694	0.006	97	7846256	16.0	19.0	
98 1,3-Dichlorobenzene	146	18.710	18.710	0.000	97	3715351	16.0	24.6	
99 Benzyl chloride	91	18.791	18.786	0.005	98	3895610	16.0	29.7	
100 1,4-Dichlorobenzene	146	18.802	18.799	0.003	94	3392724	16.0	28.8	
101 4-Isopropyltoluene	119	18.861	18.857	0.004	96	6240921	16.0	19.3	
102 1,2,3-Trimethylbenzene	105	18.915	18.912	0.003	99	3809531	16.0	18.8	
103 Butylcyclohexane	83	18.969	18.964	0.005	89	4800601	16.0	18.4	
104 2,3-Dihydroindene	117	19.162	19.159	0.003	94	4983494	16.0	21.1	
105 1,2-Dichlorobenzene	146	19.162	19.159	0.003	84	3643973	16.0	23.8	
107 Indene	116	19.291	19.290	0.001	89	3487774	16.0	23.8	
106 n-Butylbenzene	91	19.297	19.294	0.003	99	5693195	16.0	21.0	
108 Undecane	57	19.609	19.605	0.004	94	4338903	16.0	22.0	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.668	19.667	0.001	98	4196638	16.0	21.1	
110 1,2-Dibromo-3-Chloropropan	157	19.770	19.765	0.005	96	1430687	16.0	27.2	
111 1,2,4,5-Tetramethylbenzene	119	20.055	20.052	0.003	98	4847664	16.0	20.8	
112 1,2,3,5-Tetramethylbenzene	119	20.109	20.108	0.001	96	2942221	16.0	20.5	
113 1,2,3,4-Tetramethylbenzene	119	20.507	20.505	0.002	98	3711528	16.0	20.5	
114 Dodecane	57	20.669	20.665	0.004	93	3383807	16.0	20.7	
115 1,2,4-Trichlorobenzene	180	20.868	20.865	0.003	94	1719710	16.0	39.1	
116 Naphthalene	128	21.007	21.007	0.000	99	3348078	16.0	28.4	
117 Benzo(b)thiophene	134	21.115	21.112	0.003	99	1572555	16.0	34.3	
118 Hexachlorobutadiene	225	21.228	21.225	0.003	94	3588165	16.0	21.0	
119 1,2,3-Trichlorobenzene	180	21.298	21.297	0.001	95	1635288	16.0	28.4	
120 2-Methylnaphthalene	142	21.965	21.967	-0.002	98	844376	50.0	73.0	
121 1-Methylnaphthalene	142	22.094	22.095	-0.001	99	786213	50.0	61.0	
A 124 Toluene Range	1	13.638	(13.608-13.668)		0	13161341	16.0	17.3	
A 125 C8 Range	1	14.314	(14.282-14.345)		0	18025464	16.0	17.4	
S 126 Xylenes, Total	100				0		48.0	54.3	
S 127 1,2-Dichloroethene, Total	1				0		32.0	32.2	

Reagents:

40L9DNP_00011	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

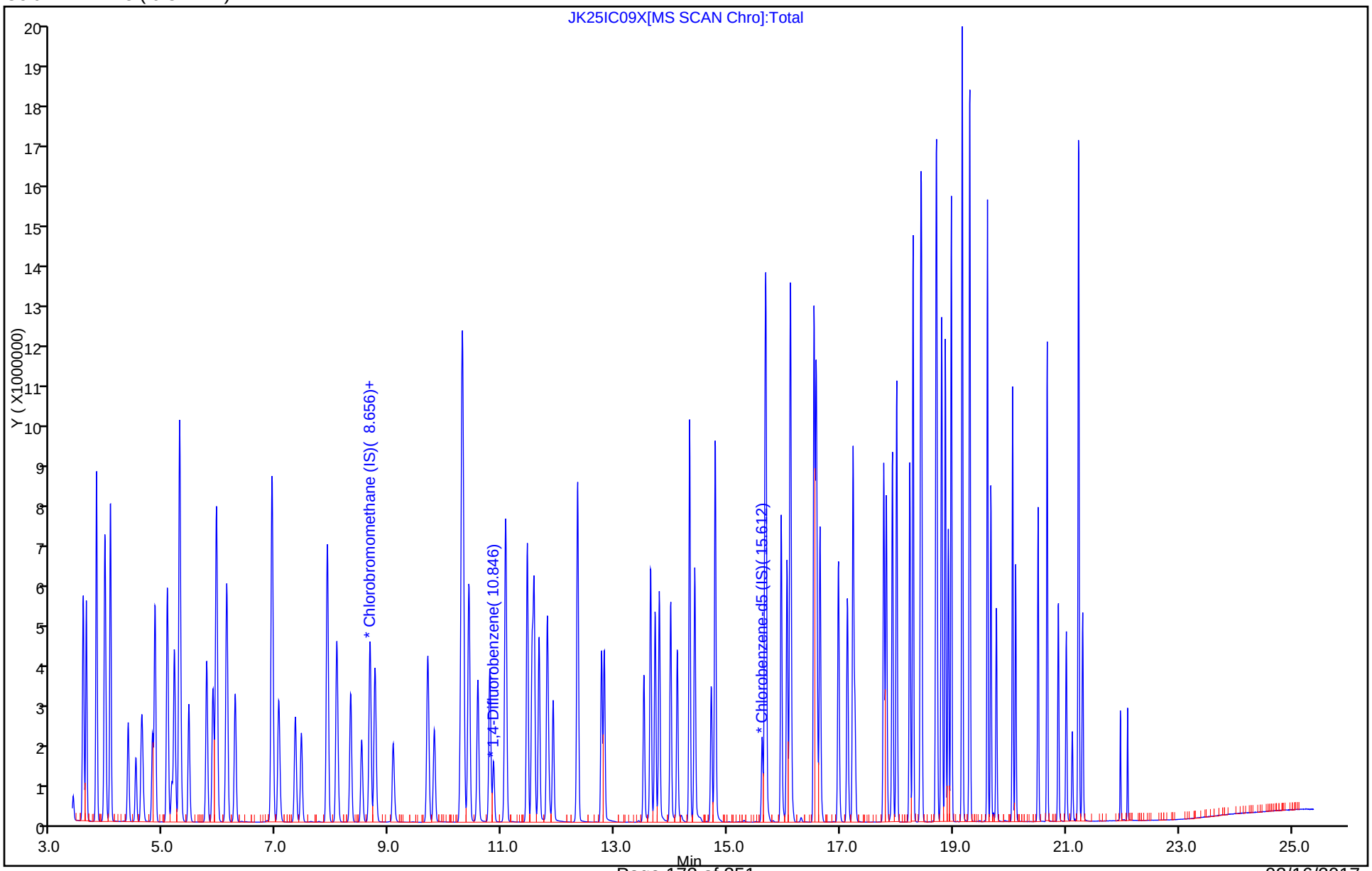
Report Date: 28-Nov-2016 13:55:48 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Injection Date:	26-Nov-2016 01:58:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	IC L9			Worklist Smp#:	10
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

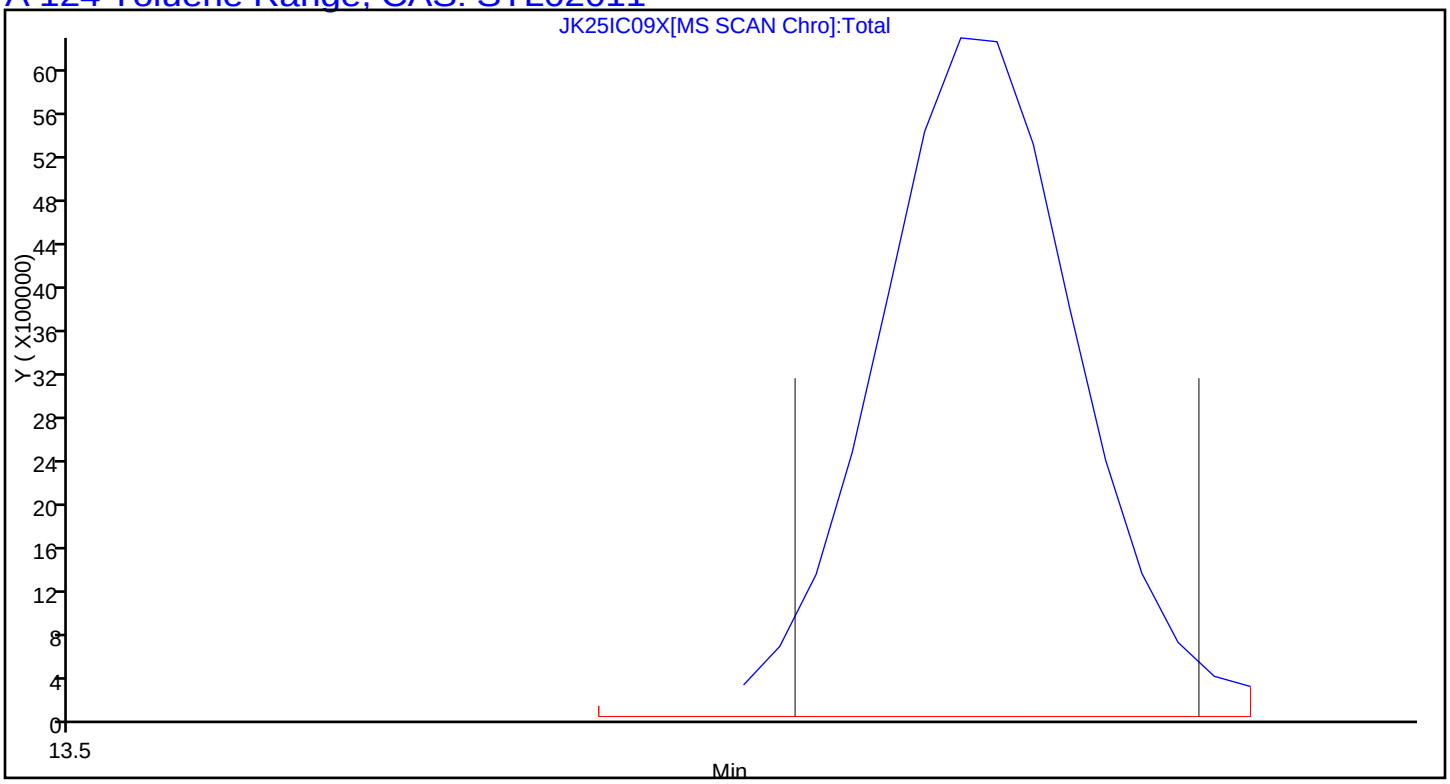


Report Date: 28-Nov-2016 13:55:48 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Injection Date:	26-Nov-2016 01:58:30	Instrument ID:	MJ		
Lims ID:	IC L9				
Client ID:					
Operator ID:	007126	ALS Bottle#:	8	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

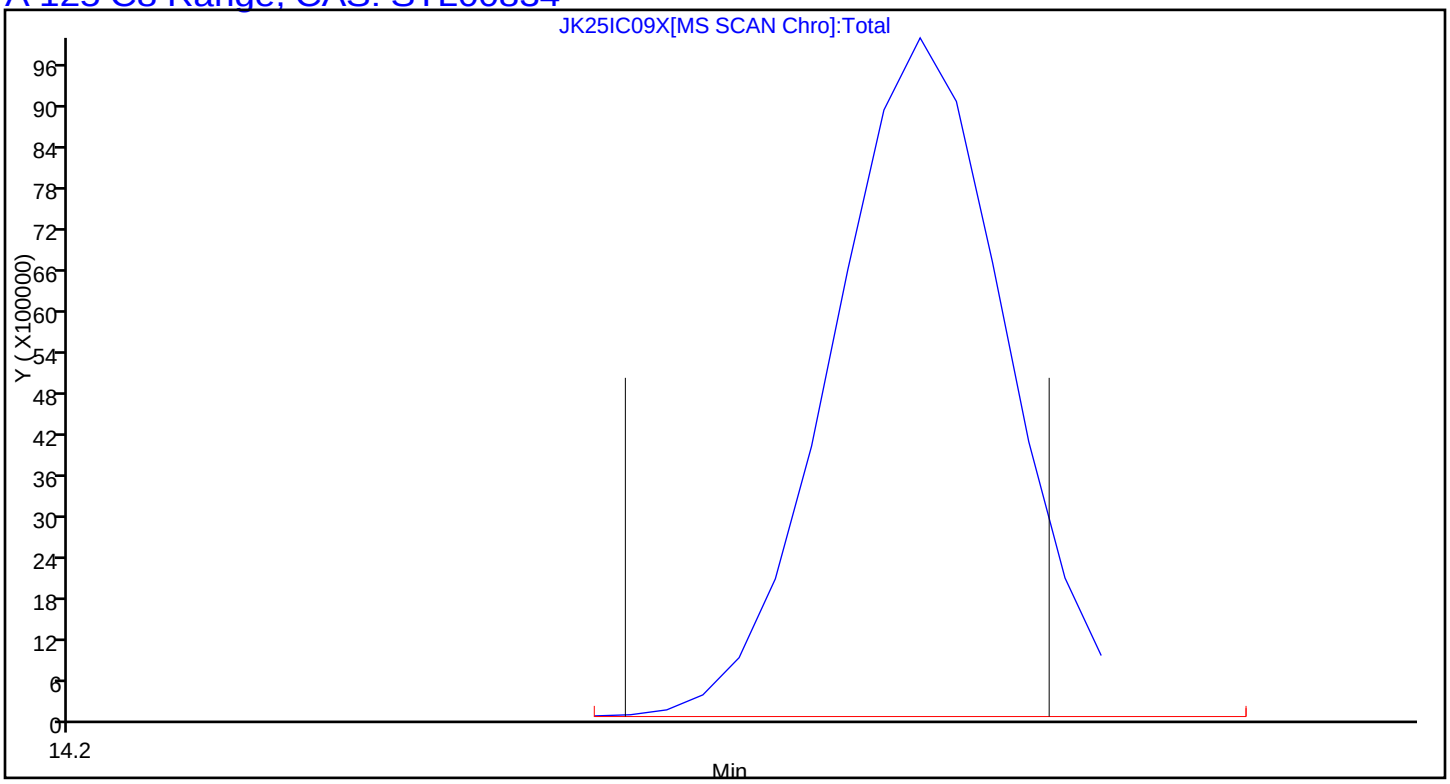


Report Date: 28-Nov-2016 13:55:48 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Injection Date:	26-Nov-2016 01:58:30	Instrument ID:	MJ		
Lims ID:	IC L9				
Client ID:					
Operator ID:	007126	ALS Bottle#:	8	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-7852/24	RA16IC01R.D
Level 2	IC 140-7852/4	RA16IC02.D
Level 3	IC 140-7852/5	RA16IC03.D
Level 4	IC 140-7852/6	RA16IC04.D
Level 5	IC 140-7852/7	RA16IC05.D
Level 6	ICIS 140-7852/8	RA16IC06.D
Level 7	IC 140-7852/9	RA16IC07.D
Level 8	IC 140-7852/10	RA16IC08.D
Level 9	IC 140-7852/11	RA16IC09.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.2161	0.2441 0.2201	0.2289 0.2230	0.2134 0.2141	0.2156	Ave		0.2219				4.7		30.0			
Propene	+++++ 1.0755	1.2246 1.0498	1.0808 1.0117	0.9919 0.8540	1.0336	Ave		1.0402				9.9		30.0			
Dichlorodifluoromethane	+++++ 1.8016	1.9272 1.8187	1.8464 1.7431	1.7140 1.7881	1.8455	Ave		1.8106				3.7		30.0			
Chloromethane	+++++ 0.3330	+++++ 0.3365	0.4280 0.3217	0.3393 0.2593	0.3620	Ave		0.3400				14.8		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++ 1.9747	2.3813 1.9453	2.3124 1.8494	2.1620 1.6090	2.1698	Ave		2.0505				12.5		30.0			
Acetaldehyde	+++++ 0.2866	+++++ 0.2755	+++++ 0.2504	0.4390 0.2061	0.3736	Ave		0.3052				28.0		30.0			
Vinyl chloride	1.0021 0.8866	1.2091 0.8748	1.1435 0.7929	1.1172 0.6718	1.0767	Ave		0.9750				18.4		30.0			
1,3-Butadiene	0.8237 0.6260	0.8413 0.5908	0.8414 0.5487	0.7789 0.4583	0.6918	Ave		0.6890				20.5		30.0			
Butane	+++++ 1.1797	+++++ 1.1260	1.6540 1.0290	1.4768 0.8581	1.3359	Ave		1.2371				22.0		30.0			
Bromomethane	+++++ 0.8112	1.0396 0.7778	1.0414 0.7209	0.9255 0.6263	0.8817	Ave		0.8530				17.3		30.0			
Chloroethane	+++++ 0.3815	0.4691 0.3696	0.4476 0.3378	0.4046 0.2903	0.3749	Ave		0.3844				14.9		30.0			
Ethanol	+++++ 0.2521	0.3207 0.2389	0.2859 0.2163	0.2799 0.1810	0.2722	Ave		0.2559				17.1		30.0			
Vinyl bromide	+++++ 0.7716	0.9408 0.7696	0.8812 0.6992	0.8575 0.6099	0.8352	Ave		0.7956				13.3		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	+++++ 0.7241	0.8786 0.7020	0.9758 0.6221	0.8106 0.5320	0.7515	Ave		0.7496				18.7		30.0			
Acrolein	+++++ 0.2708	+++++ 0.2471	0.3730 0.2433	0.3627 0.2201	0.2980	Ave		0.2879				20.8		30.0			
Trichlorofluoromethane	2.9543 2.4463	2.5611 2.3911	2.5585 2.3598	2.4007 2.1985	2.5019	Ave		2.4858				8.4		30.0			
Acetonitrile	+++++ 0.4295	0.3891 0.4213	0.5115 0.4450	0.3882 0.4114	0.4584	Ave		0.4318				9.4		30.0			
Acetone	+++++ 0.4378	0.5374 0.4358	0.5047 0.4394	0.4667 0.4153	0.4473	Ave		0.4605				8.9		30.0			
Isopropyl alcohol	+++++ 1.3969	1.3713 1.4324	1.3011 1.3858	1.2896 1.2702	1.3886	Ave		1.3545				4.4		30.0			
Pentane	+++++ 0.2003	0.2025 0.1965	0.1804 0.2003	0.1872 0.1857	0.2044	Ave		0.1947				4.6		30.0			
Ethyl ether	+++++ 1.1837	1.1102 1.2161	1.0606 1.2091	1.0838 1.0667	1.1181	Ave		1.1310				5.6		30.0			
1,1-Dichloroethene	1.3463 1.0721	1.0778 1.0552	1.0360 1.0738	1.0532 1.0715	1.1251	Ave		1.1012				8.6		30.0			
Acrylonitrile	+++++ 0.7151	0.6443 0.7392	0.6691 0.7653	0.6648 0.7419	0.7102	Ave		0.7062				6.1		30.0			
tert-Butyl alcohol	+++++ 1.5098	1.3294 1.5499	1.3375 1.6371	1.3720 1.6064	1.5006	Ave		1.4803				8.1		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++ 2.1233	2.2008 2.0996	2.0666 2.1228	2.1218 2.0087	2.1519	Ave		2.1119				2.7		30.0			
Methylene Chloride	+++++ 0.9523	+++++ 0.9293	1.4019 0.9267	1.1057 0.9125	1.0261	Ave		1.0363				16.9		30.0			
3-Chloropropene	+++++ 0.7696	0.7141 0.7976	0.8874 0.8077	0.7119 0.7821	0.7629	Ave		0.7792				7.2		30.0			
Carbon disulfide	+++++ 2.8568	2.7858 2.8574	2.6419 2.9952	2.7646 2.9174	2.8945	Ave		2.8392				3.8		30.0			
trans-1,2-Dichloroethene	1.4931 1.1241	1.1692 1.1042	1.1151 1.1323	1.1161 1.1241	1.1546	Ave		1.1703				10.5		30.0			
2-Methylpentane	+++++ 2.1922	2.1213 2.2706	2.0350 2.2896	2.0228 2.1056	2.1795	Ave		2.1521				4.6		30.0			
Methyl tert-butyl ether	+++++ 2.4749	2.2835 2.5215	2.2652 2.6956	2.3430 2.7007	2.4921	Ave		2.4721				6.8		30.0			
1,1-Dichloroethane	2.4072 1.7643	1.7106 1.8202	1.6421 1.8786	1.7212 1.8604	1.7954	Ave		1.8444				12.1		30.0			
Vinyl acetate	+++++ 2.7065	2.1705 2.8988	2.2221 3.0080	2.3836 2.9229	2.5896	Ave		2.6128				12.5		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.4934	0.4322 0.4958	0.4300 0.5195	0.4619 0.5256	0.4992	Ave		0.4822				7.6		30.0			
Hexane	+++++ 0.7586	0.7517 0.7698	0.7050 0.7993	0.7313 0.7679	0.7748	Ave		0.7573				3.8		30.0			
C6 Range	+++++ 1.3569	+++++ 1.4029	1.3756 1.4097	1.3452 1.3030	1.3559	Ave		1.3642				2.7		30.0			
Isopropyl ether	+++++ 3.5132	3.2867 3.6681	3.2391 3.7256	3.3292 3.4148	3.4796	Ave		3.4570				5.1		30.0			
cis-1,2-Dichloroethene	1.5958 1.1710	1.1793 1.1511	1.1491 1.1718	1.1642 1.1842	1.2033	Ave		1.2189				11.7		30.0			
Ethyl acetate	+++++ 2.2624	1.8663 2.3977	1.9812 2.4846	2.0544 2.3670	2.1890	Ave		2.2003				9.9		30.0			
Chloroform	2.6747 1.9405	2.0331 2.0010	1.9556 2.0748	1.9733 2.1026	1.9813	Ave		2.0819				11.0		30.0			
Tert-butyl ethyl ether	+++++ 2.5192	2.2509 2.6638	2.2506 2.7923	2.3886 2.7716	2.5280	Ave		2.5206				8.5		30.0			
Tetrahydrofuran	+++++ 1.1882	1.1429 1.2590	1.1877 1.2978	1.1028 1.2251	1.1717	Ave		1.1969				5.2		30.0			
1,1,1-Trichloroethane	2.7744 1.9164	1.9201 2.0299	1.8245 2.1626	1.8713 2.2488	1.9512	Ave		2.0777				14.2		30.0			
1,2-Dichloroethane	0.3022 0.2283	0.2249 0.2377	0.2236 0.2507	0.2157 0.2546	0.2293	Ave		0.2408				10.9		30.0			
1-Butanol	+++++ 0.0863	+++++ 0.0924	0.0576 0.0956	0.0653 0.0862	0.0827	Ave		0.0809				17.4		30.0			
Benzene	0.9386 0.6683	0.7102 0.6690	0.6717 0.6752	0.6631 0.5946	0.6694	Ave		0.6956				13.8		30.0			
Cyclohexane	+++++ 0.1009	0.1076 0.1049	0.0920 0.1045	0.0996 0.0864	0.0991	Ave		0.0994				7.1		30.0			
Carbon tetrachloride	0.4863 0.4132	0.3986 0.4405	0.3766 0.4708	0.3788 0.4627	0.4018	Ave		0.4255				9.6		30.0			
2,3-Dimethylpentane	+++++ 0.1469	0.1544 0.1500	0.1392 0.1539	0.1408 0.1479	0.1473	Ave		0.1475				3.7		30.0			
Thiophene	+++++ 0.3665	0.3443 0.3653	0.3490 0.3728	0.3564 0.3684	0.3667	Ave		0.3612				2.8		30.0			
Tert-amyl methyl ether	+++++ 0.5651	0.3709 0.5849	0.4583 0.6043	0.4968 0.5908	0.5755	Ave		0.5308				15.5		30.0			
2,2,4-Trimethylpentane	+++++ 0.9657	0.9347 1.0023	0.9196 1.0215	0.8959 0.9164	0.9346	Ave		0.9488				4.6		30.0			
1,2-Dichloropropane	+++++ 0.2463	0.2535 0.2524	0.2317 0.2560	0.2270 0.2130	0.2429	Ave		0.2404				6.3		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Heptane	+++++ 0.2311	0.2261 0.2368	0.2226 0.2423	0.2170 0.2059	0.2292	Ave		0.2264				5.1		30.0			
Trichloroethene	0.4212 0.3043	0.3214 0.3025	0.2896 0.3028	0.2949 0.2842	0.3091	Ave		0.3144				13.2		30.0			
Dibromomethane	+++++ 0.2424	0.2445 0.2465	0.2315 0.2585	0.2259 0.2445	0.2414	Ave		0.2419				4.1		30.0			
Bromodichloromethane	0.4769 0.4011	0.3439 0.4243	0.3474 0.4496	0.3472 0.4396	0.3889	Ave		0.4021				12.2		30.0			
1,4-Dioxane	0.1619 0.1092	0.1078 0.1080	0.1046 0.1095	0.0980 0.0978	0.1066	Ave		0.1115				17.4		30.0			
Methyl methacrylate	+++++ 0.2628	0.2088 0.2897	0.2060 0.2972	0.2128 0.2789	0.2501	Ave		0.2508				14.9		30.0			
Methylcyclohexane	+++++ 0.4739	0.4415 0.4776	0.4456 0.4883	0.4538 0.4420	0.4721	Ave		0.4619				4.0		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.4864	0.4096 0.5279	0.4237 0.5364	0.4260 0.4785	0.4674	Ave		0.4695				10.1		30.0			
cis-1,3-Dichloropropene	0.4244 0.3472	0.3101 0.3609	0.2982 0.3771	0.3035 0.3725	0.3345	Ave		0.3476				11.8		30.0			
trans-1,3-Dichloropropene	0.4499 0.3466	0.2964 0.3728	0.2973 0.3987	0.3013 0.3963	0.3351	Ave		0.3550				15.1		30.0			
Toluene	+++++ 0.8880	0.8620 0.8943	0.8516 0.8992	0.8666 0.8292	0.8999	Ave		0.8739				2.9		30.0			
1,1,2-Trichloroethane	0.3817 0.2637	0.2536 0.2680	0.2616 0.2711	0.2616 0.2471	0.2699	Ave		0.2754				14.8		30.0			
2-Methylthiophene	+++++ 0.7758	0.7388 0.7838	0.7323 0.7918	0.7429 0.7344	0.7875	Ave		0.7609				3.4		30.0			
3-Methylthiophene	+++++ 0.7617	0.7225 0.7775	0.7012 0.7852	0.7403 0.7242	0.7828	Ave		0.7494				4.2		30.0			
2-Hexanone	+++++ 0.2699	+++++ 0.2886	0.1937 0.2996	0.2255 0.2701	0.2558	Ave		0.2576				14.3		30.0			
Dibromochloromethane	0.5793 0.5279	0.4113 0.5707	0.4202 0.5782	0.4316 0.5056	0.5074	Ave		0.5036				13.5		30.0			
Octane	0.3472 0.2867	0.2696 0.2912	0.2560 0.2834	0.2625 0.2238	0.2830	Ave		0.2781				11.9		30.0			
1,2-Dibromoethane (EDB)	+++++ 0.4967	0.4402 0.5116	0.4464 0.5180	0.4561 0.4839	0.4980	Ave		0.4814				6.2		30.0			
Tetrachloroethene	0.4692 0.3215	0.3324 0.3236	0.3203 0.3258	0.3056 0.2873	0.3348	Ave		0.3356				15.5		30.0			
Chlorobenzene	+++++ 0.7259	0.7484 0.7230	0.7374 0.7182	0.7116 0.6475	0.7443	Ave		0.7195				4.4		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2,3-Dimethylheptane	+++++ 0.7904	0.7439 0.8271	0.7468 0.8098	0.7410 0.6163	0.7664	Ave		0.7552				8.6		30.0			
Ethylbenzene	1.7023 1.1357	1.0544 1.1671	1.0753 1.1835	1.0795 1.0387	1.1286	Ave		1.1739				17.4		30.0			
2-Ethylthiophene	+++++ 0.8882	0.7955 0.9175	0.8086 0.9353	0.8217 0.8461	0.8934	Ave		0.8633				6.1		30.0			
m-Xylene & p-Xylene	1.2599 0.8607	0.8137 0.9057	0.8188 0.8823	0.8125 0.7206	0.8630	Ave		0.8819				17.2		30.0			
Bromoform	0.6861 0.7163	0.4437 0.7741	0.4862 0.7955	0.5299 0.7441	0.6591	Ave		0.6483				20.0		30.0			
Styrene	0.7753 0.6717	0.4846 0.6917	0.4922 0.6930	0.5548 0.6071	0.6594	Ave		0.6255				15.7		30.0			
Nonane	+++++ 0.5411	0.4588 0.5683	0.4951 0.5572	0.4984 0.4136	0.5280	Ave		0.5076				10.3		30.0			
o-Xylene	1.3054 0.8887	0.8596 0.9092	0.8356 0.9298	0.8483 0.8223	0.9052	Ave		0.9227				16.0		30.0			
1,1,2,2-Tetrachloroethane	0.9422 0.6940	0.6565 0.7104	0.6280 0.7176	0.6542 0.6131	0.6943	Ave		0.7011				13.9		30.0			
1,2,3-Trichloropropane	+++++ 0.1982	0.2030 0.2008	0.1860 0.2082	0.1841 0.2001	0.1970	Ave		0.1972				4.2		30.0			
Isopropylbenzene	+++++ 1.3247	1.3507 1.3494	1.3109 1.3185	1.2845 1.1344	1.3389	Ave		1.3015				5.5		30.0			
Propylbenzene	+++++ 0.3763	0.3528 0.3842	0.3441 0.3804	0.3516 0.3187	0.3762	Ave		0.3605				6.3		30.0			
2-Chlorotoluene	+++++ 0.3537	0.3311 0.3527	0.3387 0.3518	0.3329 0.2953	0.3599	Ave		0.3395				6.1		30.0			
4-Ethyltoluene	+++++ 1.3661	1.2174 1.3895	1.2210 1.4140	1.2635 1.2128	1.3602	Ave		1.3056				6.5		30.0			
1,3,5-Trimethylbenzene	0.9392 0.6317	0.5507 0.6354	0.5775 0.6270	0.5766 0.5277	0.6366	Ave		0.6336				19.2		30.0			
Alpha Methyl Styrene	0.5904 0.5588	0.3474 0.5854	0.3659 0.6079	0.4096 0.5337	0.5223	Ave		0.5024				20.1		30.0			
Decane	+++++ 0.6911	0.5865 0.7379	0.6016 0.6982	0.6157 0.5475	0.6875	Ave		0.6458				10.3		30.0			
tert-Butylbenzene	+++++ 1.1776	1.1390 1.1855	1.1072 1.1279	1.1011 0.8991	1.1800	Ave		1.1147				8.4		30.0			
1,2,4-Trimethylbenzene	1.6231 1.1358	1.0125 1.1689	1.0486 1.1266	1.0569 0.9064	1.1345	Ave		1.1348				17.6		30.0			
1,3-Dichlorobenzene	+++++ 0.8561	0.8070 0.8560	0.8072 0.8026	0.7890 0.6437	0.8640	Ave		0.8032				8.8		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	+++++ 1.7106	1.5949 1.7289	1.5615 1.6139	1.5928 1.2434	1.7065	Ave		1.5941				9.7		30.0			
Benzyl chloride	+++++ 0.9514	0.7071 1.0142	0.7338 1.0281	0.7811 0.8898	0.9044	Ave		0.8762				14.1		30.0			
1,4-Dichlorobenzene	+++++ 0.8706	0.7754 0.8698	0.8124 0.8394	0.8115 0.6886	0.8688	Ave		0.8171				7.6		30.0			
4-Isopropyltoluene	+++++ 1.3928	1.2255 1.4009	1.2422 1.3875	1.2399 1.1292	1.3969	Ave		1.3018				8.1		30.0			
1,2,3-Trimethylbenzene	1.3033 0.8830	0.8215 0.9012	0.7971 0.9256	0.8091 0.8224	0.8773	Ave		0.9045				17.3		30.0			
Butylcyclohexane	+++++ 0.8825	0.8437 0.8902	0.8408 0.8735	0.8238 0.6968	0.8842	Ave		0.8419				7.5		30.0			
1,2-Dichlorobenzene	+++++ 0.8397	0.7902 0.8367	0.7873 0.7782	0.7748 0.6206	0.8488	Ave		0.7845				9.3		30.0			
Indane	+++++ 1.0987	0.9605 1.1041	0.9941 1.0206	1.0038 0.7865	1.0982	Ave		1.0083				10.4		30.0			
Indene	+++++ 0.8541	0.6374 0.8793	0.6758 0.9031	0.7135 0.7861	0.8349	QuaF		0.9604	-0.010717						0.9990		0.9900
Butylbenzene	+++++ 1.3440	1.1569 1.3698	1.1996 1.3464	1.1946 1.0880	1.3486	Ave		1.2560				8.6		30.0			
Undecane	+++++ 0.8321	0.6653 0.8595	0.7098 0.7275	0.7183 0.4985	0.8361	Ave		0.7309				16.1		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 1.0715	0.8891 1.0760	0.9196 0.9884	0.9318 0.7578	1.0937	QuaF		1.1910	-0.026987						1.0000		0.9900
1,2-Dibromo-3-Chloropropane	0.4940 0.4626	0.2795 0.4805	0.3006 0.4824	0.3299 0.4259	0.4516	Ave		0.4119				20.6		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 1.2464	1.0436 1.2551	1.0362 1.2415	1.0471 1.0211	1.2850	Ave		1.1470				10.3		30.0			
1,2,3,5-Tetramethylbenzene	+++++ 0.7591	0.6553 0.7808	0.6410 0.7842	0.6442 0.6901	0.8000	Ave		0.7194				9.5		30.0			
1,2,3,4-Tetramethylbenzene	+++++ 1.0367	0.8709 1.0592	0.8885 1.0668	0.8468 0.8959	1.1099	Ave		0.9719				10.9		30.0			
Dodecane	0.8078 0.8344	0.6213 0.9193	0.7035 0.8233	0.6262 0.5948	0.9299	Ave		0.7623				17.0		30.0			
1,2,4-Trichlorobenzene	1.4485 0.9517	0.7356 0.9624	0.7974 0.9465	0.7020 0.8071	1.0481	Ave		0.9333				24.2		30.0			
Naphthalene	2.6231 1.7137	1.3040 1.7585	1.4612 1.7338	1.2911 1.4009	2.2215	Ave		1.7231				25.9		30.0			
Benzo(b)thiophene	+++++ 0.9905	0.7231 1.0354	0.7911 1.0590	0.7009 0.9299	1.3297	Ave		0.9449				22.1		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Hexachlorobutadiene	1.1212 0.8326	0.7169 0.8674	0.6881 0.9192	0.6703 0.8331	0.8444	Ave		0.8326				16.6		30.0			
1,2,3-Trichlorobenzene	+++++ 0.9134	0.7341 0.9225	0.7883 0.9086	0.6686 0.7772	1.0768	Ave		0.8487				15.4		30.0			
2-Methylnaphthalene	0.1384 0.2432	0.0607 0.2466	0.1481 0.2379	0.0847 0.2008	0.4691	Ave		0.2033				59.5	*	50.0			
1-Methylnaphthalene	+++++ 0.1910	+++++ 0.1905	0.1492 0.1871	0.0766 0.1578	0.3770	Ave		0.1899				48.3		50.0			
4-Bromofluorobenzene (Surr)	0.6350 0.6438	0.6060 0.6544	0.6133 0.6548	0.6217 0.5795	0.6228	Ave		0.6257				3.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-7852/24	RA16IC01R.D
Level 2	IC 140-7852/4	RA16IC02.D
Level 3	IC 140-7852/5	RA16IC03.D
Level 4	IC 140-7852/6	RA16IC04.D
Level 5	IC 140-7852/7	RA16IC05.D
Level 6	ICIS 140-7852/8	RA16IC06.D
Level 7	IC 140-7852/9	RA16IC07.D
Level 8	IC 140-7852/10	RA16IC08.D
Level 9	IC 140-7852/11	RA16IC09.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 44683	1661 95528	3264 200958	7868 408661	20894	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propene	CBM	Ave	+++++ 222355	8333 455692	15412 911591	36575 1629703	100161	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	+++++ 372486	13114 789485	26328 1570542	63202 3412348	178843	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	+++++ 68851	+++++ 146075	6103 289828	12511 494899	35084	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	+++++ 408268	16204 844447	32973 1666341	79723 3070600	210273	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 296274	+++++ 597951	+++++ 1128284	80942 1966956	181019	+++++ 9.99	+++++ 20.0	+++++ 40.0	2.00 80.0	5.01
Vinyl chloride	CBM	Ave	3960 183309	8228 379730	16305 714433	41198 1282078	104342	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	3255 129425	5725 256462	11998 494386	28720 874525	67044	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butane	CBM	Ave	+++++ 243917	+++++ 488808	23585 927124	54455 1637500	129454	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	+++++ 167720	7074 337645	14849 649522	34126 1195161	85440	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	+++++ 78880	3192 160420	6383 304357	14921 554082	36329	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	+++++ 260637	10913 518594	20387 974530	51601 1726674	131905	+++++ 9.99	0.392 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl bromide	CBM	Ave	+++++ 159526	6402 334058	12566 630026	31621 1163867	80932	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	+++++ 149714	5979 304726	13914 560541	29892 1015242	72823	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Acrolein	CBM	Ave	+++++ 55989	+++++ 107246	5319 219248	13376 420060	28874	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Trichlorofluoromethane	CBM	Ave	11674 505777	17428 1037976	36483 2126205	88526 4195509	242451	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 88808	2648 182904	7294 400939	14314 785119	44418	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 271574	10972 567636	21592 1187796	51628 2377763	130034	+++++ 5.99	0.235 12.0	0.476 24.0	1.20 48.0	3.01
Isopropyl alcohol	CBM	Ave	+++++ 866507	27997 1865554	55661 3746271	142667 7272319	403731	+++++ 5.99	0.235 12.0	0.476 24.0	1.20 48.0	3.01
Pentane	CBM	Ave	+++++ 41403	1378 85310	2573 180510	6904 354459	19811	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl ether	CBM	Ave	+++++ 244725	7555 527904	15123 1089447	39965 2035713	108355	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	5320 221671	7334 458052	14773 967528	38836 2044882	109033	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	+++++ 147847	4384 320898	9541 689539	24515 1415761	68828	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butyl alcohol	CBM	Ave	+++++ 312157	9046 672816	19072 1475064	50591 3065580	145418	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroetha ne	CBM	Ave	+++++ 439012	14976 911407	29469 1912665	78240 3833335	208533	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 196893	+++++ 403392	19990 835002	40772 1741347	99432	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	+++++ 159118	4859 346245	12654 727739	26252 1492611	73933	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	+++++ 590648	18957 1240384	37672 2698758	101944 5567432	280500	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	5900 232406	7956 479340	15901 1020192	41157 2145105	111888	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylpentane	CBM	Ave	+++++ 453241	14435 985644	29018 2062991	74591 4018277	211207	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	+++++ 511696	15539 1094582	32300 2428743	86399 5153893	241503	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	9512 364771	11640 790113	23416 1692604	63469 3550291	173985	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	+++++ 559575	14770 1258365	31686 2710284	87896 5577891	250951	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Butanone (MEK)	CBM	Ave	+++++ 102021	2941 215237	6131 468077	17033 1003055	48379	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Hexane	CBM	Ave	+++++ 156852	5115 334174	10053 720175	26968 1465350	75081	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
C6 Range	DFBZ	Ave	+++++ 1371214	+++++ 2975398	97182 6229109	245781 12330332	650061	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Isopropyl ether	CBM	Ave	+++++ 726368	22365 1592277	46188 3356833	122765 6516624	337195	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	6306 242118	8025 499668	16385 1055779	42929 2259890	116608	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	+++++ 467758	12700 1040805	28251 2238695	75757 4517125	212128	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroform	CBM	Ave	10569 401198	13835 868630	27886 1869398	72764 4012562	192000	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	+++++ 520851	15317 1156354	32092 2515911	88078 5289215	244976	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	+++++ 245656	7777 546503	16936 1169335	40664 2337928	113550	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	10963 396220	13066 881154	26016 1948514	69004 4291452	189083	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFBZ	Ave	5803 230738	7562 504175	15796 1107907	39418 2409618	109924	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1-Butanol	DFBZ	Ave	+++++ 87183	+++++ 196047	4070 422395	11937 815757	39645	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Benzene	DFBZ	Ave	18024 675385	23876 1418818	47452 2983633	121155 5626343	320927	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Cyclohexane	DFBZ	Ave	+++++ 102016	3617 222381	6499 461730	18191 817744	47496	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFBZ	Ave	9338 417535	13402 934318	26604 2080493	69218 4378793	192620	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylpentane	DFBZ	Ave	+++++ 148408	5190 318046	9833 679988	25724 1400028	70633	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Thiophene	DFBZ	Ave	+++++ 370335	11576 774783	24658 1647044	65113 3486321	175811	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-amyl methyl ether	DFBZ	Ave	+++++ 571096	12468 1240524	32380 2670160	90767 5591059	275898	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 975928	31423 2125744	64969 4513728	163689 8671845	448067	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFBZ	Ave	+++++ 248903	8524 535380	16372 1131282	41479 2015496	116456	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Heptane	DFBZ	Ave	+++++ 233537	7601 502236	15727 1070503	39647 1948044	109902	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Trichloroethene	DFBZ	Ave	8089 307549	10807 641583	20458 1337924	53875 2689565	148182	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromomethane	DFBZ	Ave	+++++ 245001	8220 522746	16356 1142397	41278 2313341	115739	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Bromodichloromethane	DFBZ	Ave	9159 405343	11561 899835	24543 1986552	63430 4159657	186452	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,4-Dioxane	DFBZ	Ave	3109 110327	3625 229087	7391 483811	17900 925447	51127	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl methacrylate	DFBZ	Ave	+++++ 265612	7020 614457	14557 1313409	38875 2639577	119922	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylcyclohexane	DFBZ	Ave	+++++ 478964	14844 1012881	31484 2157606	82912 4182340	226363	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	+++++ 491559	13772 1119558	29934 2370240	77833 4528099	224067	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFBZ	Ave	8151 350840	10425 765394	21066 1666244	55449 3524574	160378	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZd 5	Ave	7298 298731	8385 673680	17514 1522679	46301 3277150	136400	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene	CBZd 5	Ave	+++++ 765289	24383 1616062	50162 3434233	133147 6856744	366316	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZd 5	Ave	6192 227282	7172 484227	15408 1035226	40194 2043617	109867	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylthiophene	CBZd 5	Ave	+++++ 668558	20898 1416277	43137 3023751	114137 6073558	320571	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
3-Methylthiophene	CBZd 5	Ave	+++++ 656449	20436 1404868	41306 2998597	113741 5988983	318684	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Hexanone	CBZd 5	Ave	+++++ 232613	+++++ 521509	11411 1144315	34640 2233901	104152	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZd 5	Ave	9397 454968	11634 1031168	24752 2208273	66311 4180918	206547	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Octane	CBZd 5	Ave	5631 247038	7627 526170	15082 1082269	40330 1850963	115184	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	+++++ 428002	12452 924538	26297 1978394	70072 4001584	202714	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZd 5	Ave	7610 277054	9403 584686	18869 1244199	46954 2375762	136286	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chlorobenzene	CBZd 5	Ave	+++++ 625543	21168 1306533	43438 2742751	109332 5354812	303004	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylheptane	CBZd 5	Ave	+++++ 681133	21043 1494597	43988 3092749	113853 5096793	311980	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethylbenzene	CBZd 5	Ave	27613 978749	29825 2108922	63338 4519837	165857 8589676	459447	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Ethylthiophene	CBZd 5	Ave	+++++ 765397	22501 1657834	47630 3572042	126251 6997219	363700	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
m-Xylene & p-Xylene	CBZd 5	Ave	40874 1483468	46032 3273024	96457 6738733	249678 11917796	702600	0.0784 3.99	0.157 8.00	0.317 16.0	0.800 32.0	2.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Bromoform	CBZd 5	Ave	11129 617297	12551 1398733	28641 3037906	81415 6153703	268311	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Styrene	CBZd 5	Ave	12575 578840	13707 1249828	28992 2646737	85239 5020713	268432	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Nonane	CBZd 5	Ave	+++++ 466328	12978 1026919	29165 2128023	76571 3420328	214951	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
o-Xylene	CBZd 5	Ave	21175 765823	24314 1642978	49222 3550963	130345 6800409	368491	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	15283 598106	18569 1283721	36992 2740331	100520 5070297	282619	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZd 5	Ave	+++++ 170828	5743 362915	10957 795101	28283 1654343	80177	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Isopropylbenzene	CBZd 5	Ave	+++++ 1141588	38207 2438291	77215 5035195	197365 9381159	545051	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propylbenzene	CBZd 5	Ave	+++++ 324318	9980 694201	20267 1452626	54030 2635364	153153	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZd 5	Ave	+++++ 304799	9366 637350	19953 1343683	51145 2441631	146515	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZd 5	Ave	+++++ 1177295	34435 2510766	71922 5400070	194133 10029684	553733	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZd 5	Ave	15234 544369	15578 1148204	34016 2394702	88594 4364039	259131	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZd 5	Ave	9576 481523	9827 1057771	21551 2321622	62931 4413169	212623	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Decane	CBZd 5	Ave	+++++ 595564	16591 1333389	35435 2666611	94600 4527461	279878	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butylbenzene	CBZd 5	Ave	+++++ 1014819	32218 2142114	65220 4307394	169175 7434970	480365	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZd 5	Ave	26327 978766	28641 2112255	61769 4302436	162397 7495827	461852	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Dichlorobenzene	CBZd 5	Ave	+++++ 737746	22826 1546869	47546 3065047	121224 5323509	351729	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZd 5	Ave	+++++ 1474176	45113 3124184	91976 6163445	244731 10282209	694694	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzyl chloride	CBZd 5	Ave	+++++ 819866	20001 1832699	43224 3926456	120019 7358133	368163	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,4-Dichlorobenzene	CBZd 5	Ave	+++++ 750220	21934 1571693	47852 3205771	124690 5694211	353669	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Isopropyltoluene	CBZd 5	Ave	+++++ 1200274	34664 2531332	73168 5298681	190507 9338084	568655	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trimethylbenzene	CBZd 5	Ave	21140 760919	23236 1628428	46953 3534922	124321 6800840	357137	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Butylcyclohexane	CBZd 5	Ave	+++++ 760524	23864 1608626	49526 3335838	126579 5762440	359936	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorobenzene	CBZd 5	Ave	+++++ 723605	22351 1511871	46373 2971893	119048 5132316	345512	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indane	CBZd 5	Ave	+++++ 946819	27170 1995040	58558 3897507	154233 6504175	447073	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indene	CBZd 5	QuaF	+++++ 736039	18029 1588890	39805 3448800	109625 6501047	339863	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylbenzene	CBZd 5	Ave	+++++ 1158211	32723 2475180	70660 5141734	183545 8997517	548974	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Undecane	CBZd 5	Ave	+++++ 717061	18819 1553035	41811 2778444	110364 4122448	340377	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	QuaF	+++++ 923383	25150 1944399	54167 3774698	143169 6266512	445240	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	8013 398684	7907 868224	17704 1842254	50695 3521605	183845	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 1074131	29520 2267880	61038 4741194	160888 8444468	523086	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 654167	18537 1410963	37758 2994841	98979 5707097	325678	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	+++++ 893407	24634 1914011	52336 4074204	130114 7409018	451826	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dodecane	CBZd 5	Ave	13103 719032	17575 1661177	41438 3144288	96211 4919118	378566	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZd 5	Ave	23496 820181	20808 1739115	46967 3614528	107856 6674555	426643	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Naphthalene	CBZd 5	Ave	42548 1476806	36884 3177551	86072 6621298	198379 11584991	904334	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzo(b)thiophene	CBZd 5	Ave	+++++ 853628	20453 1870974	46597 4044337	107686 7689569	541307	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Hexachlorobutadiene	CBZd 5	Ave	18186 717540	20278 1567346	40529 3510409	102983 6889790	343721	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZd 5	Ave	+++++ 787102	20765 1667019	46436 3469925	102724 6426986	438340	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylnaphthalene	CBZd 5	Ave	7017 654883	5364 1392307	27262 2839351	40667 5188631	596748	0.122 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
1-Methylnaphthalene	CBZd 5	Ave	+++++ 514457	+++++ 1075620	27467 2232500	36793 4077774	479579	+++++ 6.24	+++++ 12.5	0.496 25.0	1.25 50.0	3.13
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1051035 1111047	874628 1182570	910745 1250364	955166 1198131	1012516	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1 Analy Batch No.: 7852

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/16/2017 18:15 Calibration End Date: 01/17/2017 10:29 Calibration ID: 857

Curve Type Legend:

Ave = Average ISTD
QuaF = Quadratic ISTD forced zero

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC02.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 16-Jan-2017 18:15:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003844-004
Misc. Info.: 073145
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jan-2017 14:55:12 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: barlozhetskayaa Date: 17-Jan-2017 10:11:08

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.231	8.242	-0.011	86	347183	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.399	10.407	-0.008	93	1715283	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.290	15.293	-0.003	84	1443170	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.983	16.984	-0.001	95	874628	4.00	3.87	
6 Chlorodifluoromethane	67	3.729	3.724	0.005	96	1661	0.0784	0.0862	
7 Propene	41	3.729	3.728	0.001	65	8333	0.0784	0.0923	
8 Dichlorodifluoromethane	85	3.777	3.776	0.001	99	13114	0.0784	0.0834	
9 Chloromethane	52	3.917	3.923	-0.006	99	3628	0.0784	0.1229	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.950	3.951	-0.001	93	16204	0.0784	0.0910	
11 Acetaldehyde	44	4.068	4.070	-0.002	97	21913	0.3920	0.8272	
12 Vinyl chloride	62	4.074	4.075	-0.001	53	8228	0.0784	0.0972	
13 Butadiene	54	4.155	4.155	0.000	70	5725	0.0784	0.0957	
14 Butane	43	4.160	4.158	0.002	86	11939	0.0784	0.1112	
15 Bromomethane	94	4.413	4.416	-0.003	97	7074	0.0784	0.0955	
16 Chloroethane	64	4.537	4.541	-0.004	95	3192	0.0784	0.0957	
17 Ethanol	31	4.645	4.651	-0.006	97	10913	0.3920	0.4914	
18 Vinyl bromide	106	4.791	4.797	-0.006	96	6402	0.0784	0.0927	
19 2-Methylbutane	43	4.856	4.856	0.000	88	5979	0.0784	0.0919	
20 Acrolein	56	5.034	5.033	0.001	34	2894	0.0784	0.1158	
21 Trichlorofluoromethane	101	5.034	5.036	-0.002	100	17428	0.0784	0.0808	
22 Acetonitrile	40	5.077	5.083	-0.006	99	2648	0.0784	0.0707	
23 Acetone	58	5.136	5.133	0.003	97	10972	0.2352	0.2745	
24 Isopropyl alcohol	45	5.228	5.232	-0.004	82	27997	0.2352	0.2381	
25 Pentane	72	5.238	5.238	0.000	79	1378	0.0784	0.0815	
26 Ethyl ether	31	5.379	5.377	0.002	93	7555	0.0784	0.0770	
27 1,1-Dichloroethene	96	5.627	5.639	-0.012	96	7334	0.0784	0.0767	
28 Acrylonitrile	53	5.708	5.712	-0.004	93	4384	0.0784	0.0715	
29 2-Methyl-2-propanol	59	5.756	5.746	0.010	96	9046	0.0784	0.0704	
30 1,1,2-Trichloro-1,2,2-trif	101	5.815	5.819	-0.004	93	14976	0.0784	0.0817	
31 Methylene Chloride	84	5.918	5.931	-0.013	92	12873	0.0784	0.1431	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.945	5.952	-0.007	93	4859	0.0784	0.0718	
33 Carbon disulfide	76	6.069	6.072	-0.003	98	18957	0.0784	0.0769	
34 trans-1,2-Dichloroethene	96	6.657	6.667	-0.010	95	7956	0.0784	0.0783	
35 2-Methylpentane	43	6.716	6.719	-0.003	94	14435	0.0784	0.0773	
36 Methyl tert-butyl ether	73	6.813	6.797	0.016	96	15539	0.0784	0.0724	
37 1,1-Dichloroethane	63	7.023	7.035	-0.012	97	11640	0.0784	0.0727	
38 Vinyl acetate	43	7.147	7.147	0.000	99	14770	0.0784	0.0651	
39 2-Butanone (MEK)	72	7.546	7.536	0.010	99	2941	0.0784	0.0703	
40 Hexane	56	7.617	7.622	-0.006	91	5115	0.0784	0.0778	
41 Isopropyl ether	45	7.767	7.761	0.006	95	22365	0.0784	0.0745	
42 cis-1,2-Dichloroethene	96	7.935	7.944	-0.009	83	8025	0.0784	0.0759	
43 Ethyl acetate	43	8.140	8.132	0.008	99	12700	0.0784	0.0665	
44 Chloroform	83	8.264	8.274	-0.010	92	13835	0.0784	0.0766	
45 Tert-butyl ethyl ether	59	8.404	8.396	0.008	94	15317	0.0784	0.0700	
46 Tetrahydrofuran	42	8.657	8.639	0.018	96	7777	0.0784	0.0749	
47 1,1,1-Trichloroethane	97	9.245	9.254	-0.009	95	13066	0.0784	0.0725	
48 1,2-Dichloroethane	62	9.321	9.328	-0.008	94	7562	0.0784	0.0732	
49 n-Butanol	31	9.844	9.825	0.019	66	1785	0.0784	0.0515	
50 Benzene	78	9.833	9.838	-0.005	95	23876	0.0784	0.0800	
51 Cyclohexane	69	9.865	9.866	-0.001	94	3617	0.0784	0.0849	
52 Carbon tetrachloride	117	9.876	9.878	-0.002	89	13402	0.0784	0.0735	
53 2,3-Dimethylpentane	71	10.027	10.026	0.001	90	5190	0.0784	0.0820	
54 Thiophene	84	10.102	10.107	-0.005	95	11576	0.0784	0.0747	
55 Tert-amyl methyl ether	73	10.367	10.361	0.006	70	12468	0.0784	0.0548	
56 Isooctane	57	10.690	10.692	-0.002	98	31423	0.0784	0.0772	
57 1,2-Dichloropropane	63	11.078	11.078	0.000	70	8524	0.0784	0.0827	
58 n-Heptane	71	11.078	11.086	-0.008	86	7601	0.0784	0.0783	
59 Trichloroethene	130	11.138	11.141	-0.003	89	10807	0.0784	0.0801	
60 Dibromomethane	93	11.181	11.186	-0.005	86	8220	0.0784	0.0792	
61 Dichlorobromomethane	83	11.353	11.354	-0.001	97	11561	0.0784	0.0670	
62 1,4-Dioxane	88	11.380	11.365	0.015	77	3625	0.0784	0.0758	
63 Methyl methacrylate	41	11.488	11.488	0.000	87	7020	0.0784	0.0653	
64 Methylcyclohexane	83	11.963	11.963	0.000	95	14844	0.0784	0.0749	
65 4-Methyl-2-pentanone (MIBK	43	12.356	12.355	0.001	95	13772	0.0784	0.0684	
66 cis-1,3-Dichloropropene	75	12.405	12.405	0.000	89	10425	0.0784	0.0699	
67 trans-1,3-Dichloropropene	75	13.122	13.126	-0.004	95	8385	0.0784	0.0655	
68 Toluene	91	13.268	13.269	-0.001	95	24383	0.0784	0.0773	
69 1,1,2-Trichloroethane	83	13.316	13.323	-0.007	91	7172	0.0784	0.0722	
70 2-Methylthiophene	97	13.413	13.417	-0.004	96	20898	0.0784	0.0761	
71 3-Methylthiophene	97	13.624	13.625	-0.001	98	20436	0.0784	0.0756	
72 2-Hexanone	58	13.758	13.752	0.006	88	5156	0.0784	0.0555	
73 Chlorodibromomethane	129	14.039	14.042	-0.003	97	11634	0.0784	0.0640	
74 n-Octane	85	14.060	14.060	0.000	93	7627	0.0784	0.0760	
75 Ethylene Dibromide	107	14.335	14.336	-0.001	96	12452	0.0784	0.0717	
76 Tetrachloroethene	129	14.454	14.456	-0.002	94	9403	0.0784	0.0777	
77 Chlorobenzene	112	15.344	15.342	0.002	96	21168	0.0784	0.0815	
78 2,3-Dimethylheptane	43	15.441	15.444	-0.003	97	21043	0.0784	0.0772	
79 Ethylbenzene	91	15.657	15.660	-0.003	98	29825	0.0784	0.0704	
80 2-Ethylthiophene	97	15.754	15.758	-0.004	97	22501	0.0784	0.0722	
81 m-Xylene & p-Xylene	91	15.829	15.830	-0.001	96	46032	0.1568	0.1447	
82 Bromoform	173	16.234	16.235	-0.001	96	12551	0.0784	0.0537	
83 Styrene	104	16.298	16.296	0.002	96	13707	0.0784	0.0607	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.320	16.324	-0.004	96	12978	0.0784	0.0709	
85 o-Xylene	91	16.358	16.359	-0.001	98	24314	0.0784	0.0730	
86 1,1,2,2-Tetrachloroethane	83	16.670	16.671	-0.001	98	18569	0.0784	0.0734	
87 1,2,3-Trichloropropane	110	16.827	16.831	-0.004	96	5743	0.0784	0.0807	
88 Isopropylbenzene	105	16.978	16.977	0.001	66	38207	0.0784	0.0814	
89 N-Propylbenzene	120	17.555	17.552	0.003	99	9980	0.0784	0.0767	
90 2-Chlorotoluene	126	17.576	17.578	-0.002	87	9366	0.0784	0.0765	
91 4-Ethyltoluene	105	17.722	17.718	0.004	99	34435	0.0784	0.0731	
92 1,3,5-Trimethylbenzene	120	17.797	17.802	-0.005	92	15578	0.0784	0.0681	
93 Alpha Methyl Styrene	118	18.045	18.042	0.003	92	9827	0.0784	0.0542	
94 n-Decane	57	18.164	18.166	-0.002	90	16591	0.0784	0.0712	
95 tert-Butylbenzene	119	18.250	18.251	-0.001	97	32218	0.0784	0.0801	
96 1,2,4-Trimethylbenzene	105	18.261	18.267	-0.006	95	28641	0.0784	0.0700	
97 1,3-Dichlorobenzene	146	18.531	18.531	0.000	93	22826	0.0784	0.0788	
98 sec-Butylbenzene	105	18.541	18.543	-0.002	99	45113	0.0784	0.0784	
99 Benzyl chloride	91	18.606	18.607	-0.001	99	20001	0.0784	0.0633	
100 1,4-Dichlorobenzene	146	18.622	18.625	-0.003	93	21934	0.0784	0.0744	
101 4-Isopropyltoluene	119	18.719	18.720	-0.001	97	34664	0.0784	0.0738	
102 1,2,3-Trimethylbenzene	105	18.763	18.762	0.001	97	23236	0.0784	0.0712	
103 Butylcyclohexane	83	18.849	18.851	-0.002	97	23864	0.0784	0.0786	
104 1,2-Dichlorobenzene	146	19.005	19.003	0.002	98	22351	0.0784	0.0790	
105 2,3-Dihydroindene	117	19.011	19.012	-0.001	95	27170	0.0784	0.0747	
106 Indene	116	19.145	19.146	-0.001	91	18029	0.0784	0.0521	
107 n-Butylbenzene	91	19.183	19.183	0.000	97	32723	0.0784	0.0722	
108 Undecane	57	19.561	19.561	0.000	94	18819	0.0784	0.0714	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.571	19.574	-0.003	98	25150	0.0784	0.0586	
110 1,2-Dibromo-3-Chloropropan	157	19.631	19.631	0.000	90	7907	0.0784	0.0532	
111 1,2,4,5-Tetramethylbenzene	119	19.976	19.977	-0.001	99	29520	0.0784	0.0713	
112 1,2,3,5-Tetramethylbenzene	119	20.030	20.031	-0.001	97	18537	0.0784	0.0714	
113 1,2,3,4-Tetramethylbenzene	119	20.440	20.439	0.001	98	24634	0.0784	0.0703	
114 Dodecane	57	20.666	20.664	0.002	94	17575	0.0784	0.0639	
115 1,2,4-Trichlorobenzene	180	20.785	20.788	-0.003	93	20808	0.0784	0.0618	
116 Naphthalene	128	20.919	20.922	-0.003	99	36884	0.0784	0.0593	
117 Benzo(b)thiophene	134	21.022	21.024	-0.002	99	20453	0.0784	0.0600	
118 Hexachlorobutadiene	225	21.173	21.173	0.000	93	20278	0.0784	0.0675	
119 1,2,3-Trichlorobenzene	180	21.216	21.217	-0.001	95	20765	0.0784	0.0678	
120 2-Methylnaphthalene	142	21.933	21.933	0.000	97	5364	0.2450	0.0731	
121 1-Methylnaphthalene	142	22.057	22.057	0.000	95	6533	0.2450	0.0954	
A 122 C6 Range	1	7.609	(7.573-7.630)		0	49495	0.0784	0.0846	
S 124 Xylenes, Total	100				0		0.2352	0.2177	
S 125 1,2-Dichloroethene, Total	1				0		0.1568	0.1542	

Reagents:

40L12DNP_00009	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

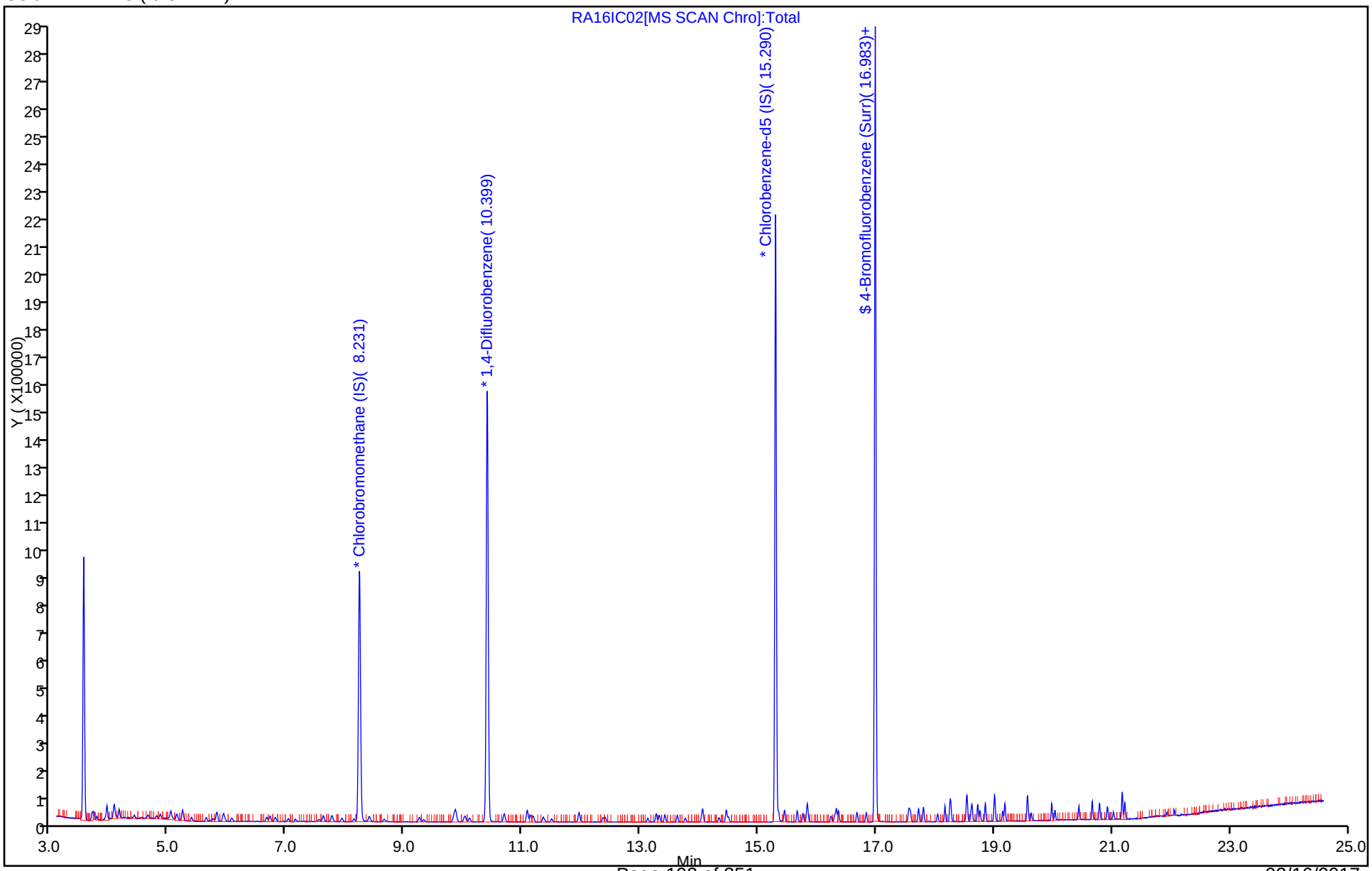
Report Date: 17-Jan-2017 14:55:13 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC02.D

Injection Date:	16-Jan-2017 18:15:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L2			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

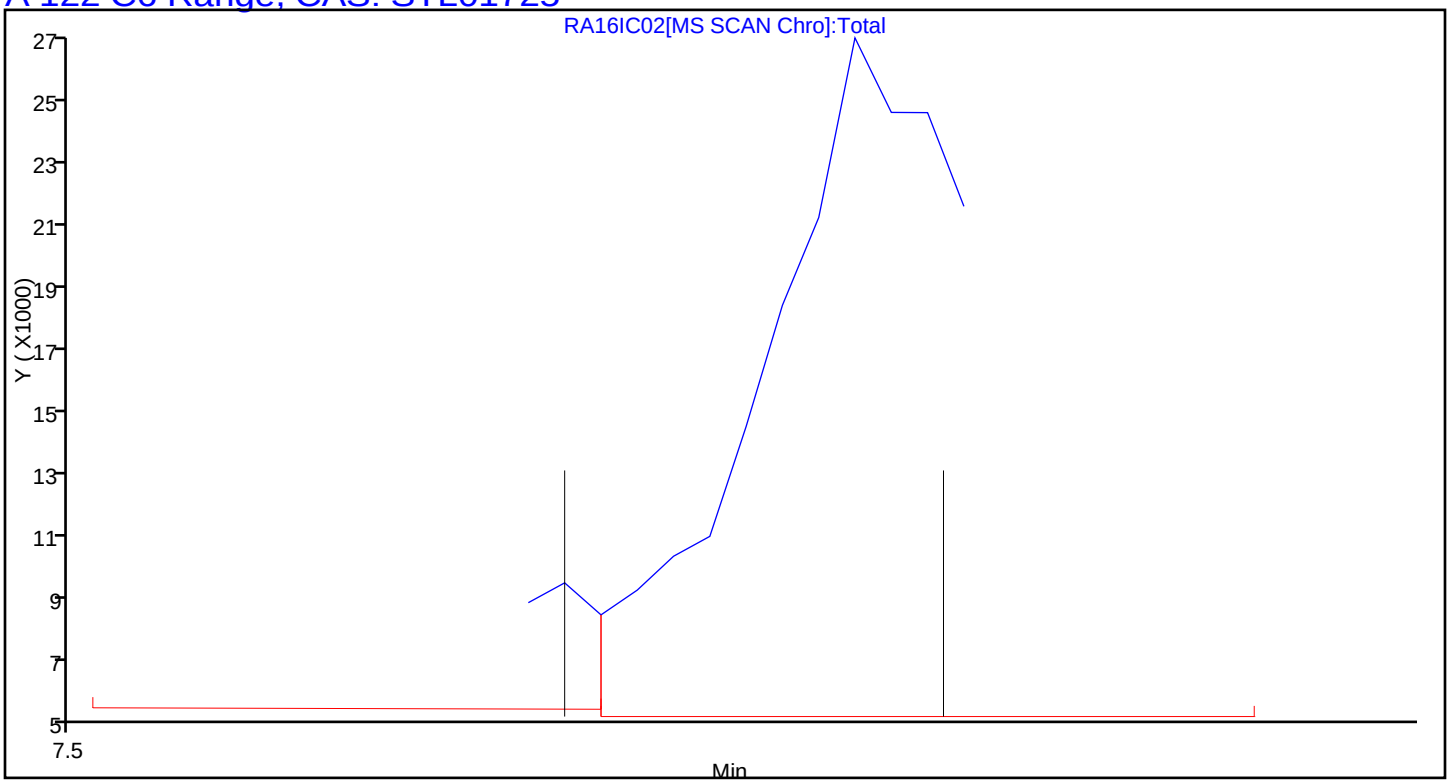


Report Date: 17-Jan-2017 14:55:13 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC02.D				
Injection Date:	16-Jan-2017 18:15:30	Instrument ID:	MR		
Lims ID:	IC L2				
Client ID:					
Operator ID:		ALS Bottle#:	3	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC03.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 16-Jan-2017 19:03:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003844-005
Misc. Info.: 073146
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jan-2017 14:55:16 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: barlozhetskayaa Date: 17-Jan-2017 10:11:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.236	8.242	-0.006	86	359480	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.399	10.407	-0.008	93	1781075	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.290	15.293	-0.003	84	1484960	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.983	16.984	-0.001	96	910745	4.00	3.92	
6 Chlorodifluoromethane	67	3.728	3.724	0.004	97	3264	0.1587	0.1637	
7 Propene	41	3.728	3.728	0.000	73	15412	0.1587	0.1649	
8 Dichlorodifluoromethane	85	3.777	3.776	0.001	99	26328	0.1587	0.1618	
9 Chloromethane	52	3.923	3.923	0.000	98	6103	0.1587	0.1997	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.950	3.951	-0.001	89	32973	0.1587	0.1789	
11 Acetaldehyde	44	4.068	4.070	-0.002	100	37677	0.7933	1.37	
12 Vinyl chloride	62	4.074	4.075	-0.001	98	16305	0.1587	0.1861	
13 Butadiene	54	4.154	4.155	-0.001	65	11998	0.1587	0.1938	
14 Butane	43	4.154	4.158	-0.004	86	23585	0.1587	0.2121	
15 Bromomethane	94	4.413	4.416	-0.003	95	14849	0.1587	0.1937	
16 Chloroethane	64	4.537	4.541	-0.004	98	6383	0.1587	0.1848	
17 Ethanol	31	4.640	4.651	-0.011	96	20387	0.7933	0.8865	
18 Vinyl bromide	106	4.785	4.797	-0.012	95	12566	0.1587	0.1757	
19 2-Methylbutane	43	4.855	4.856	-0.001	89	13914	0.1587	0.2065	
20 Acrolein	56	5.039	5.033	0.006	33	5319	0.1587	0.2056	
21 Trichlorofluoromethane	101	5.028	5.036	-0.008	98	36483	0.1587	0.1633	
22 Acetonitrile	40	5.077	5.083	-0.006	98	7294	0.1587	0.1880	
23 Acetone	58	5.136	5.133	0.003	97	21592	0.4760	0.5217	
24 Isopropyl alcohol	45	5.228	5.232	-0.004	92	55661	0.4760	0.4573	
25 Pentane	72	5.233	5.238	-0.005	98	2573	0.1587	0.1471	
26 Ethyl ether	31	5.379	5.377	0.001	91	15123	0.1587	0.1488	
27 1,1-Dichloroethene	96	5.637	5.639	-0.002	97	14773	0.1587	0.1493	
28 Acrylonitrile	53	5.707	5.712	-0.005	99	9541	0.1587	0.1503	
29 2-Methyl-2-propanol	59	5.745	5.746	-0.001	96	19072	0.1587	0.1434	
30 1,1,2-Trichloro-1,2,2-trif	101	5.815	5.819	-0.004	92	29469	0.1587	0.1553	
31 Methylene Chloride	84	5.923	5.931	-0.008	96	19990	0.1587	0.2146	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.950	5.952	-0.002	94	12654	0.1587	0.1807	
33 Carbon disulfide	76	6.069	6.072	-0.003	99	37672	0.1587	0.1476	
34 trans-1,2-Dichloroethene	96	6.656	6.667	-0.011	91	15901	0.1587	0.1512	
35 2-Methylpentane	43	6.716	6.719	-0.003	94	29018	0.1587	0.1500	
36 Methyl tert-butyl ether	73	6.797	6.797	0.000	97	32300	0.1587	0.1454	
37 1,1-Dichloroethane	63	7.029	7.035	-0.006	99	23416	0.1587	0.1413	
38 Vinyl acetate	43	7.142	7.147	-0.005	100	31686	0.1587	0.1349	
39 2-Butanone (MEK)	72	7.541	7.536	0.005	99	6131	0.1587	0.1415	
40 Hexane	56	7.616	7.622	-0.006	91	10053	0.1587	0.1477	
41 Isopropyl ether	45	7.757	7.761	-0.004	97	46188	0.1587	0.1487	
42 cis-1,2-Dichloroethene	96	7.934	7.944	-0.010	88	16385	0.1587	0.1496	
43 Ethyl acetate	43	8.129	8.132	-0.003	100	28251	0.1587	0.1429	
44 Chloroform	83	8.263	8.274	-0.011	92	27886	0.1587	0.1490	
45 Tert-butyl ethyl ether	59	8.398	8.396	0.002	93	32092	0.1587	0.1417	
46 Tetrahydrofuran	42	8.646	8.639	0.007	96	16936	0.1587	0.1575	
47 1,1,1-Trichloroethane	97	9.245	9.254	-0.009	94	26016	0.1587	0.1393	
48 1,2-Dichloroethane	62	9.320	9.328	-0.008	95	15796	0.1587	0.1473	
49 n-Butanol	31	9.838	9.825	0.013	65	4070	0.1587	0.1130	
50 Benzene	78	9.827	9.838	-0.011	94	47452	0.1587	0.1532	
51 Cyclohexane	69	9.865	9.866	-0.001	92	6499	0.1587	0.1469	
52 Carbon tetrachloride	117	9.870	9.878	-0.008	92	26604	0.1587	0.1404	
53 2,3-Dimethylpentane	71	10.027	10.026	0.001	91	9833	0.1587	0.1497	
54 Thiophene	84	10.108	10.107	0.001	92	24658	0.1587	0.1533	
55 Tert-amyl methyl ether	73	10.366	10.361	0.005	98	32380	0.1587	0.1370	M
56 Isooctane	57	10.690	10.692	-0.002	99	64969	0.1587	0.1538	
57 1,2-Dichloropropane	63	11.078	11.078	0.000	78	16372	0.1587	0.1530	
58 n-Heptane	71	11.084	11.086	-0.002	88	15727	0.1587	0.1560	
59 Trichloroethene	130	11.138	11.141	-0.003	88	20458	0.1587	0.1461	
60 Dibromomethane	93	11.181	11.186	-0.005	88	16356	0.1587	0.1518	
61 Dichlorobromomethane	83	11.348	11.354	-0.006	97	24543	0.1587	0.1371	
62 1,4-Dioxane	88	11.369	11.365	0.004	84	7391	0.1587	0.1489	
63 Methyl methacrylate	41	11.488	11.488	0.000	90	14557	0.1587	0.1303	
64 Methylcyclohexane	83	11.963	11.963	0.000	95	31484	0.1587	0.1531	
65 4-Methyl-2-pentanone (MIBK	43	12.356	12.355	0.001	95	29934	0.1587	0.1432	
66 cis-1,3-Dichloropropene	75	12.399	12.405	-0.006	92	21066	0.1587	0.1361	
67 trans-1,3-Dichloropropene	75	13.122	13.126	-0.004	97	17514	0.1587	0.1329	
68 Toluene	91	13.268	13.269	-0.001	94	50162	0.1587	0.1546	
69 1,1,2-Trichloroethane	83	13.321	13.323	-0.002	92	15408	0.1587	0.1507	
70 2-Methylthiophene	97	13.413	13.417	-0.004	97	43137	0.1587	0.1527	
71 3-Methylthiophene	97	13.623	13.625	-0.002	98	41306	0.1587	0.1485	
72 2-Hexanone	58	13.758	13.752	0.006	93	11411	0.1587	0.1193	
73 Chlorodibromomethane	129	14.044	14.042	0.002	98	24752	0.1587	0.1324	
74 n-Octane	85	14.055	14.060	-0.005	94	15082	0.1587	0.1461	
75 Ethylene Dibromide	107	14.335	14.336	-0.001	99	26297	0.1587	0.1472	
76 Tetrachloroethene	129	14.454	14.456	-0.002	93	18869	0.1587	0.1514	
77 Chlorobenzene	112	15.338	15.342	-0.004	98	43438	0.1587	0.1626	
78 2,3-Dimethylheptane	43	15.441	15.444	-0.003	98	43988	0.1587	0.1569	
79 Ethylbenzene	91	15.656	15.660	-0.004	97	63338	0.1587	0.1453	
80 2-Ethylthiophene	97	15.753	15.758	-0.005	97	47630	0.1587	0.1486	
81 m-Xylene & p-Xylene	91	15.829	15.830	-0.001	99	96457	0.3173	0.2946	
82 Bromoform	173	16.233	16.235	-0.002	97	28641	0.1587	0.1190	
83 Styrene	104	16.293	16.296	-0.003	96	28992	0.1587	0.1248	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.320	16.324	-0.004	95	29165	0.1587	0.1548	
85 o-Xylene	91	16.357	16.359	-0.002	98	49222	0.1587	0.1437	
86 1,1,2,2-Tetrachloroethane	83	16.670	16.671	-0.001	98	36992	0.1587	0.1421	
87 1,2,3-Trichloropropane	110	16.827	16.831	-0.005	97	10957	0.1587	0.1497	
88 Isopropylbenzene	105	16.972	16.977	-0.005	95	77215	0.1587	0.1598	
89 N-Propylbenzene	120	17.549	17.552	-0.003	99	20267	0.1587	0.1514	
90 2-Chlorotoluene	126	17.576	17.578	-0.002	96	19953	0.1587	0.1583	
91 4-Ethyltoluene	105	17.716	17.718	-0.002	99	71922	0.1587	0.1484	
92 1,3,5-Trimethylbenzene	120	17.803	17.802	0.001	94	34016	0.1587	0.1446	
93 Alpha Methyl Styrene	118	18.040	18.042	-0.002	90	21551	0.1587	0.1156	
94 n-Decane	57	18.164	18.166	-0.002	91	35435	0.1587	0.1478	
95 tert-Butylbenzene	119	18.250	18.251	-0.001	96	65220	0.1587	0.1576	
96 1,2,4-Trimethylbenzene	105	18.266	18.267	-0.001	95	61769	0.1587	0.1466	
97 1,3-Dichlorobenzene	146	18.530	18.531	-0.001	95	47546	0.1587	0.1595	
98 sec-Butylbenzene	105	18.541	18.543	-0.002	99	91976	0.1587	0.1554	
99 Benzyl chloride	91	18.606	18.607	-0.001	99	43224	0.1587	0.1329	
100 1,4-Dichlorobenzene	146	18.622	18.625	-0.003	96	47852	0.1587	0.1578	
101 4-Isopropyltoluene	119	18.719	18.720	-0.001	97	73168	0.1587	0.1514	
102 1,2,3-Trimethylbenzene	105	18.757	18.762	-0.005	96	46953	0.1587	0.1398	
103 Butylcyclohexane	83	18.849	18.851	-0.002	98	49526	0.1587	0.1585	
104 1,2-Dichlorobenzene	146	19.000	19.003	-0.003	97	46373	0.1587	0.1592	
105 2,3-Dihydroindene	117	19.010	19.012	-0.002	94	58558	0.1587	0.1564	
106 Indene	116	19.145	19.146	-0.001	92	39805	0.1587	0.1118	
107 n-Butylbenzene	91	19.183	19.183	0.000	97	70660	0.1587	0.1515	
108 Undecane	57	19.560	19.561	-0.001	95	41811	0.1587	0.1541	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.571	19.574	-0.003	99	54167	0.1587	0.1229	
110 1,2-Dibromo-3-Chloropropan	157	19.631	19.631	0.000	88	17704	0.1587	0.1158	
111 1,2,4,5-Tetramethylbenzene	119	19.976	19.977	-0.001	99	61038	0.1587	0.1433	
112 1,2,3,5-Tetramethylbenzene	119	20.030	20.031	-0.001	97	37758	0.1587	0.1414	
113 1,2,3,4-Tetramethylbenzene	119	20.439	20.439	0.000	98	52336	0.1587	0.1451	
114 Dodecane	57	20.660	20.664	-0.004	94	41438	0.1587	0.1464	
115 1,2,4-Trichlorobenzene	180	20.785	20.788	-0.004	93	46967	0.1587	0.1356	
116 Naphthalene	128	20.925	20.922	0.003	100	86072	0.1587	0.1346	
117 Benzo(b)thiophene	134	21.027	21.024	0.003	100	46597	0.1587	0.1328	
118 Hexachlorobutadiene	225	21.173	21.173	0.000	94	40529	0.1587	0.1311	
119 1,2,3-Trichlorobenzene	180	21.216	21.217	-0.001	94	46436	0.1587	0.1474	
120 2-Methylnaphthalene	142	21.933	21.933	0.000	100	27262	0.4958	0.3612	
121 1-Methylnaphthalene	142	22.057	22.057	0.000	96	27467	0.4958	0.3896	
A 122 C6 Range	1	7.617	(7.568-7.646)		0	97182	0.1587	0.1600	
S 124 Xylenes, Total	100				0		0.4760	0.4383	
S 125 1,2-Dichloroethene, Total	1				0		0.3173	0.3008	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L3DNP_00010	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

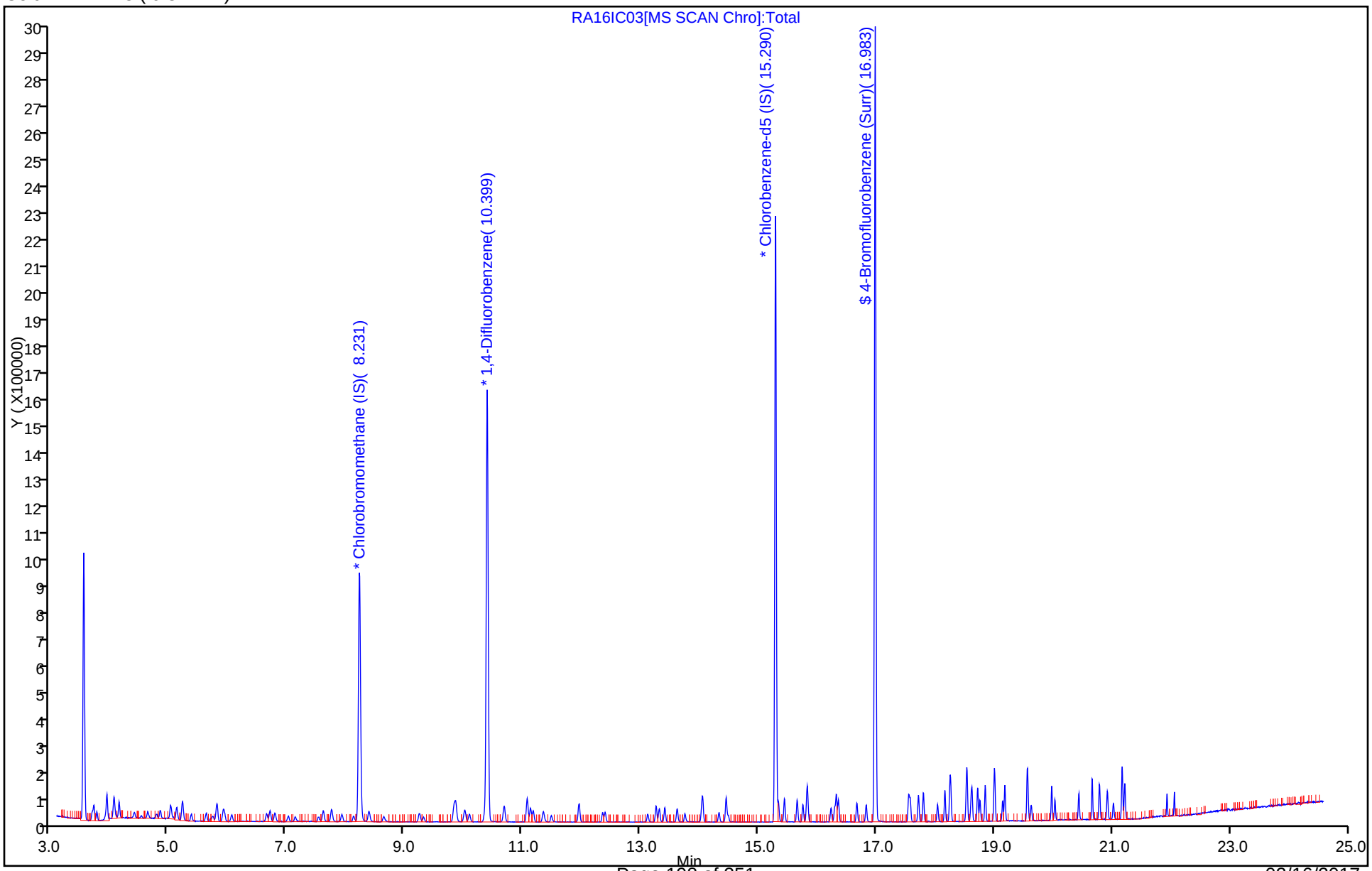
Report Date: 17-Jan-2017 14:55:17 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC03.D

Injection Date:	16-Jan-2017 19:03:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L3			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

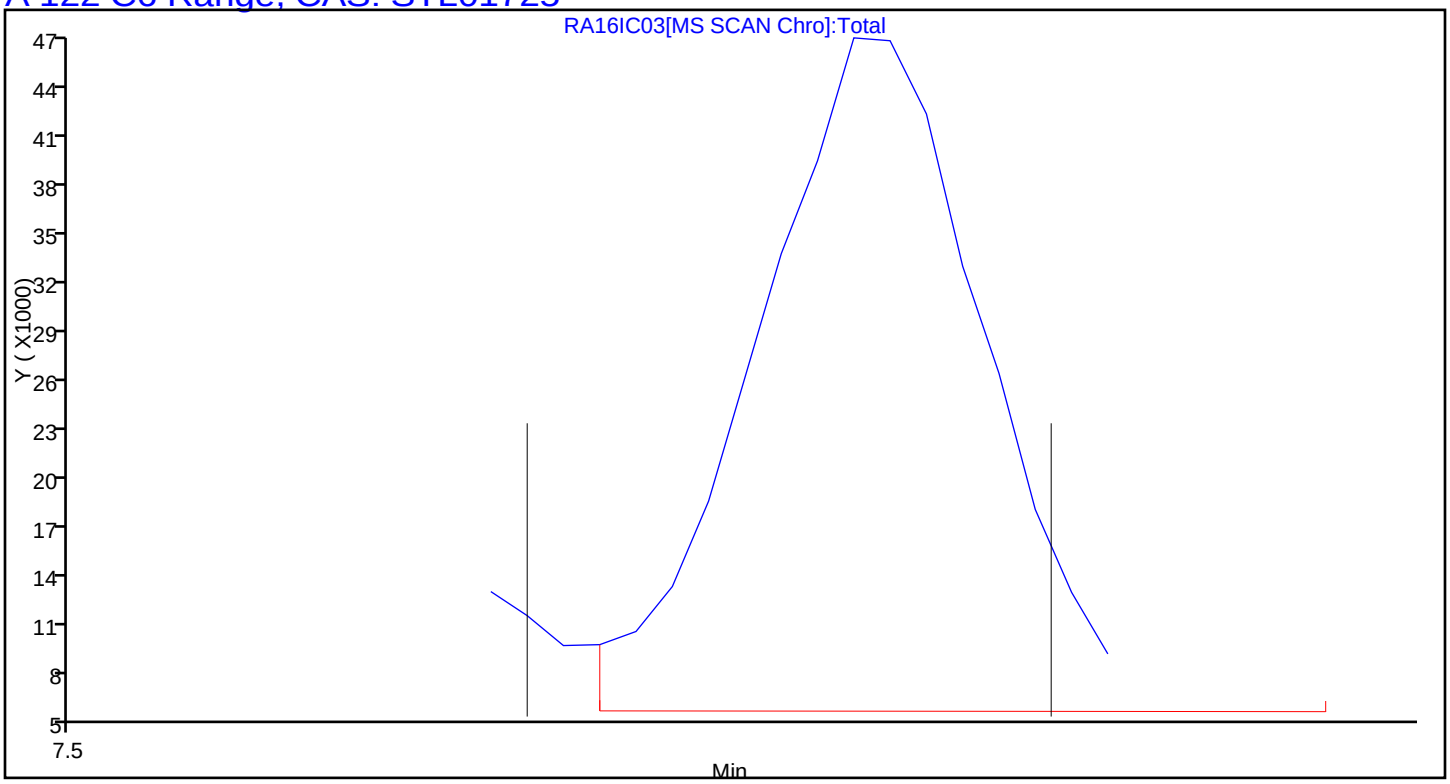


Report Date: 17-Jan-2017 14:55:17 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC03.D				
Injection Date:	16-Jan-2017 19:03:30	Instrument ID:	MR		
Lims ID:	IC L3				
Client ID:					
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

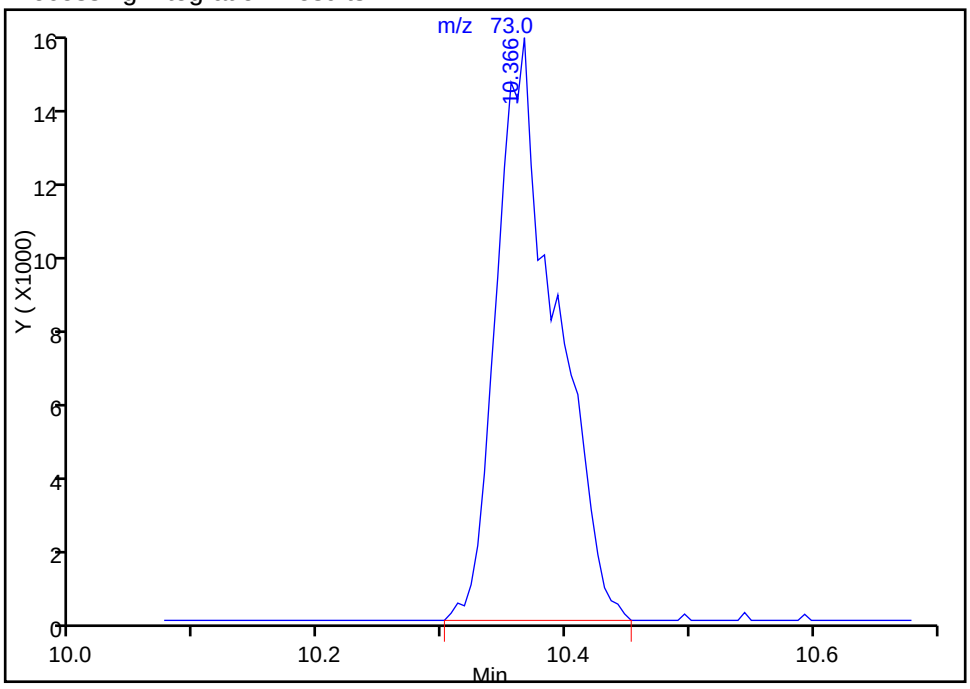
Data File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC03.D				
Injection Date:	16-Jan-2017 19:03:30	Instrument ID:	MR		
Lims ID:	IC L3				
Client ID:					
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

55 Tert-amyl methyl ether, CAS: 994-05-8

Signal: 1

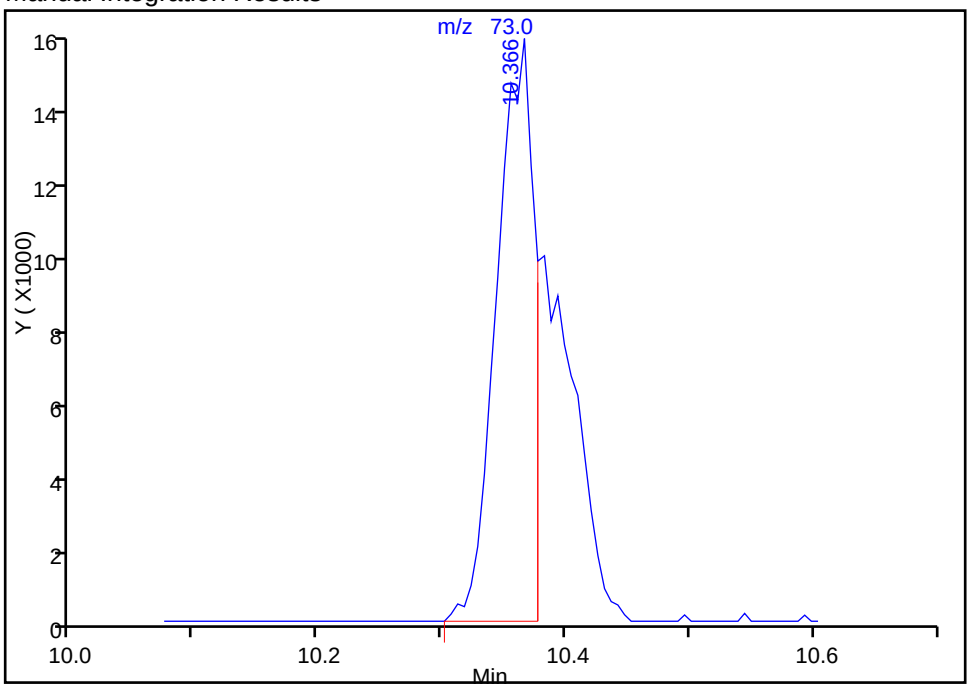
Processing Integration Results

RT: 10.37
Area: 50771
Amount: 0.198424
Amount Units: ppb v/v



Manual Integration Results

RT: 10.37
Area: 32380
Amount: 0.136995
Amount Units: ppb v/v



Reviewer: barlozhetskayaa, 17-Jan-2017 13:10:13

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC04.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 16-Jan-2017 19:50:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003844-006
Misc. Info.: 073144
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jan-2017 14:55:19 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: barlozhetskayaa Date: 17-Jan-2017 10:11:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.242	8.242	0.000	87	368748	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.404	10.407	-0.003	93	1827068	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.290	15.293	-0.003	84	1536471	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.983	16.984	-0.001	95	955166	4.00	3.97	
6 Chlorodifluoromethane	67	3.734	3.724	0.010	96	7868	0.4000	0.3846	
7 Propene	41	3.739	3.728	0.011	95	36575	0.4000	0.3814	
8 Dichlorodifluoromethane	85	3.788	3.776	0.012	99	63202	0.4000	0.3787	
9 Chloromethane	52	3.933	3.923	0.010	100	12511	0.4000	0.3992	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.960	3.951	0.009	90	79723	0.4000	0.4218	
11 Acetaldehyde	44	4.074	4.070	0.004	99	80942	2.00	2.88	
12 Vinyl chloride	62	4.084	4.075	0.009	98	41198	0.4000	0.4584	
13 Butadiene	54	4.160	4.155	0.005	96	28720	0.4000	0.4522	
14 Butane	43	4.165	4.158	0.007	93	54455	0.4000	0.4775	
15 Bromomethane	94	4.424	4.416	0.008	97	34126	0.4000	0.4340	
16 Chloroethane	64	4.543	4.541	0.002	97	14921	0.4000	0.4210	
17 Ethanol	31	4.645	4.651	-0.006	97	51601	2.00	2.19	
18 Vinyl bromide	106	4.802	4.797	0.005	99	31621	0.4000	0.4311	
19 2-Methylbutane	43	4.861	4.856	0.005	92	29892	0.4000	0.4326	
20 Acrolein	56	5.028	5.033	-0.005	33	13376	0.4000	0.5041	
21 Trichlorofluoromethane	101	5.039	5.036	0.003	99	88526	0.4000	0.3863	
22 Acetonitrile	40	5.082	5.083	-0.001	99	14314	0.4000	0.3596	
23 Acetone	58	5.136	5.133	0.003	97	51628	1.20	1.22	
24 Isopropyl alcohol	45	5.228	5.232	-0.004	95	142667	1.20	1.14	
25 Pentane	72	5.244	5.238	0.006	96	6904	0.4000	0.3847	
26 Ethyl ether	31	5.384	5.377	0.007	94	39965	0.4000	0.3833	
27 1,1-Dichloroethene	96	5.643	5.639	0.004	94	38836	0.4000	0.3825	
28 Acrylonitrile	53	5.713	5.712	0.001	97	24515	0.4000	0.3765	
29 2-Methyl-2-propanol	59	5.740	5.746	-0.006	96	50591	0.4000	0.3707	
30 1,1,2-Trichloro-1,2,2-trif	101	5.821	5.819	0.002	95	78240	0.4000	0.4019	
31 Methylene Chloride	84	5.929	5.931	-0.002	92	40772	0.4000	0.4268	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.956	5.952	0.004	94	26252	0.4000	0.3655	
33 Carbon disulfide	76	6.080	6.072	0.008	98	101944	0.4000	0.3895	
34 trans-1,2-Dichloroethene	96	6.667	6.667	0.000	94	41157	0.4000	0.3815	
35 2-Methylpentane	43	6.721	6.719	0.002	94	74591	0.4000	0.3760	
36 Methyl tert-butyl ether	73	6.797	6.797	0.000	97	86399	0.4000	0.3791	
37 1,1-Dichloroethane	63	7.034	7.035	-0.001	99	63469	0.4000	0.3733	
38 Vinyl acetate	43	7.147	7.147	0.000	100	87896	0.4000	0.3649	
39 2-Butanone (MEK)	72	7.536	7.536	0.000	100	17033	0.4000	0.3832	
40 Hexane	56	7.627	7.622	0.005	91	26968	0.4000	0.3863	
41 Isopropyl ether	45	7.757	7.761	-0.004	98	122765	0.4000	0.3852	
42 cis-1,2-Dichloroethene	96	7.940	7.944	-0.004	87	42929	0.4000	0.3821	
43 Ethyl acetate	43	8.129	8.132	-0.003	99	75757	0.4000	0.3735	
44 Chloroform	83	8.269	8.274	-0.005	93	72764	0.4000	0.3791	
45 Tert-butyl ethyl ether	59	8.398	8.396	0.002	94	88078	0.4000	0.3790	
46 Tetrahydrofuran	42	8.636	8.639	-0.003	96	40664	0.4000	0.3685	
47 1,1,1-Trichloroethane	97	9.256	9.254	0.002	94	69004	0.4000	0.3603	
48 1,2-Dichloroethane	62	9.326	9.328	-0.002	95	39418	0.4000	0.3584	
49 n-Butanol	31	9.827	9.825	0.002	61	11937	0.4000	0.3231	
50 Benzene	78	9.838	9.838	0.000	94	121155	0.4000	0.3813	
51 Cyclohexane	69	9.865	9.866	-0.001	94	18191	0.4000	0.4008	
52 Carbon tetrachloride	117	9.876	9.878	-0.002	98	69218	0.4000	0.3562	
53 2,3-Dimethylpentane	71	10.027	10.026	0.001	93	25724	0.4000	0.3817	
54 Thiophene	84	10.102	10.107	-0.005	92	65113	0.4000	0.3947	
55 Tert-amyl methyl ether	73	10.356	10.361	-0.005	98	90767	0.4000	0.3744	M
56 Isooctane	57	10.690	10.692	-0.002	99	163689	0.4000	0.3777	
57 1,2-Dichloropropane	63	11.073	11.078	-0.005	72	41479	0.4000	0.3778	
58 n-Heptane	71	11.084	11.086	-0.002	88	39647	0.4000	0.3834	
59 Trichloroethene	130	11.143	11.141	0.002	90	53875	0.4000	0.3751	
60 Dibromomethane	93	11.181	11.186	-0.005	85	41278	0.4000	0.3736	
61 Dichlorobromomethane	83	11.348	11.354	-0.006	99	63430	0.4000	0.3454	
62 1,4-Dioxane	88	11.364	11.365	-0.001	83	17900	0.4000	0.3515	
63 Methyl methacrylate	41	11.488	11.488	0.000	89	38875	0.4000	0.3393	
64 Methylcyclohexane	83	11.963	11.963	0.000	95	82912	0.4000	0.3930	
65 4-Methyl-2-pentanone (MIBK	43	12.356	12.355	0.001	96	77833	0.4000	0.3629	
66 cis-1,3-Dichloropropene	75	12.399	12.405	-0.006	91	55449	0.4000	0.3492	
67 trans-1,3-Dichloropropene	75	13.127	13.126	0.001	98	46301	0.4000	0.3396	
68 Toluene	91	13.268	13.269	-0.001	93	133147	0.4000	0.3967	
69 1,1,2-Trichloroethane	83	13.322	13.323	-0.001	93	40194	0.4000	0.3800	
70 2-Methylthiophene	97	13.413	13.417	-0.004	97	114137	0.4000	0.3905	
71 3-Methylthiophene	97	13.624	13.625	-0.001	98	113741	0.4000	0.3951	
72 2-Hexanone	58	13.753	13.752	0.001	91	34640	0.4000	0.3501	
73 Chlorodibromomethane	129	14.039	14.042	-0.003	97	66311	0.4000	0.3428	
74 n-Octane	85	14.060	14.060	0.000	95	40330	0.4000	0.3775	
75 Ethylene Dibromide	107	14.335	14.336	-0.001	99	70072	0.4000	0.3790	
76 Tetrachloroethene	129	14.454	14.456	-0.002	94	46954	0.4000	0.3642	
77 Chlorobenzene	112	15.344	15.342	0.002	97	109332	0.4000	0.3956	
78 2,3-Dimethylheptane	43	15.441	15.444	-0.003	97	113853	0.4000	0.3925	
79 Ethylbenzene	91	15.662	15.660	0.002	97	165857	0.4000	0.3678	
80 2-Ethylthiophene	97	15.759	15.758	0.001	97	126251	0.4000	0.3807	
81 m-Xylene & p-Xylene	91	15.829	15.830	-0.001	98	249678	0.8000	0.7371	
82 Bromoform	173	16.233	16.235	-0.002	97	81415	0.4000	0.3269	
83 Styrene	104	16.298	16.296	0.002	96	85239	0.4000	0.3548	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.325	16.324	0.001	96	76571	0.4000	0.3927	
85 o-Xylene	91	16.357	16.359	-0.002	98	130345	0.4000	0.3678	
86 1,1,2,2-Tetrachloroethane	83	16.670	16.671	-0.001	98	100520	0.4000	0.3732	
87 1,2,3-Trichloropropane	110	16.832	16.831	0.001	97	28283	0.4000	0.3734	
88 Isopropylbenzene	105	16.978	16.977	0.001	96	197365	0.4000	0.3948	
89 N-Propylbenzene	120	17.549	17.552	-0.003	100	54030	0.4000	0.3901	
90 2-Chlorotoluene	126	17.576	17.578	-0.002	96	51145	0.4000	0.3922	
91 4-Ethyltoluene	105	17.716	17.718	-0.002	99	194133	0.4000	0.3871	
92 1,3,5-Trimethylbenzene	120	17.803	17.802	0.001	93	88594	0.4000	0.3640	
93 Alpha Methyl Styrene	118	18.045	18.042	0.003	94	62931	0.4000	0.3261	
94 n-Decane	57	18.164	18.166	-0.002	90	94600	0.4000	0.3814	
95 tert-Butylbenzene	119	18.250	18.251	-0.001	96	169175	0.4000	0.3951	
96 1,2,4-Trimethylbenzene	105	18.266	18.267	-0.001	95	162397	0.4000	0.3725	
97 1,3-Dichlorobenzene	146	18.531	18.531	0.000	94	121224	0.4000	0.3929	
98 sec-Butylbenzene	105	18.541	18.543	-0.002	99	244731	0.4000	0.3997	
99 Benzyl chloride	91	18.606	18.607	-0.001	99	120019	0.4000	0.3566	
100 1,4-Dichlorobenzene	146	18.622	18.625	-0.003	96	124690	0.4000	0.3973	
101 4-Isopropyltoluene	119	18.719	18.720	-0.001	97	190507	0.4000	0.3810	
102 1,2,3-Trimethylbenzene	105	18.762	18.762	0.000	96	124321	0.4000	0.3578	
103 Butylcyclohexane	83	18.849	18.851	-0.002	98	126579	0.4000	0.3914	
104 1,2-Dichlorobenzene	146	19.000	19.003	-0.003	98	119048	0.4000	0.3951	
105 2,3-Dihydroindene	117	19.010	19.012	-0.002	95	154233	0.4000	0.3982	
106 Indene	116	19.145	19.146	-0.001	92	109625	0.4000	0.2982	
107 n-Butylbenzene	91	19.183	19.183	0.000	98	183545	0.4000	0.3805	
108 Undecane	57	19.561	19.561	-0.001	97	110364	0.4000	0.3931	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.571	19.574	-0.003	99	143169	0.4000	0.3152	
110 1,2-Dibromo-3-Chloropropan	157	19.631	19.631	0.000	88	50695	0.4000	0.3204	
111 1,2,4,5-Tetramethylbenzene	119	19.976	19.977	-0.001	98	160888	0.4000	0.3652	
112 1,2,3,5-Tetramethylbenzene	119	20.030	20.031	-0.001	97	98979	0.4000	0.3582	
113 1,2,3,4-Tetramethylbenzene	119	20.439	20.439	0.000	98	130114	0.4000	0.3485	
114 Dodecane	57	20.666	20.664	0.002	95	96211	0.4000	0.3286	
115 1,2,4-Trichlorobenzene	180	20.790	20.788	0.002	93	107856	0.4000	0.3009	
116 Naphthalene	128	20.919	20.922	-0.003	100	198379	0.4000	0.2997	
117 Benzo(b)thiophene	134	21.022	21.024	-0.002	100	107686	0.4000	0.2967	
118 Hexachlorobutadiene	225	21.173	21.173	0.000	93	102983	0.4000	0.3220	
119 1,2,3-Trichlorobenzene	180	21.216	21.217	-0.001	94	102724	0.4000	0.3151	
120 2-Methylnaphthalene	142	21.933	21.933	0.000	99	40667	1.25	0.5208	
121 1-Methylnaphthalene	142	22.057	22.057	0.000	100	36793	1.25	0.5044	
A 122 C6 Range	1	7.617	(7.568-7.646)		0	245781	0.4000	0.3944	
S 124 Xylenes, Total	100				0		1.20	1.10	
S 125 1,2-Dichloroethene, Total	1				0		0.8000	0.7635	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L4DNP_00009	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

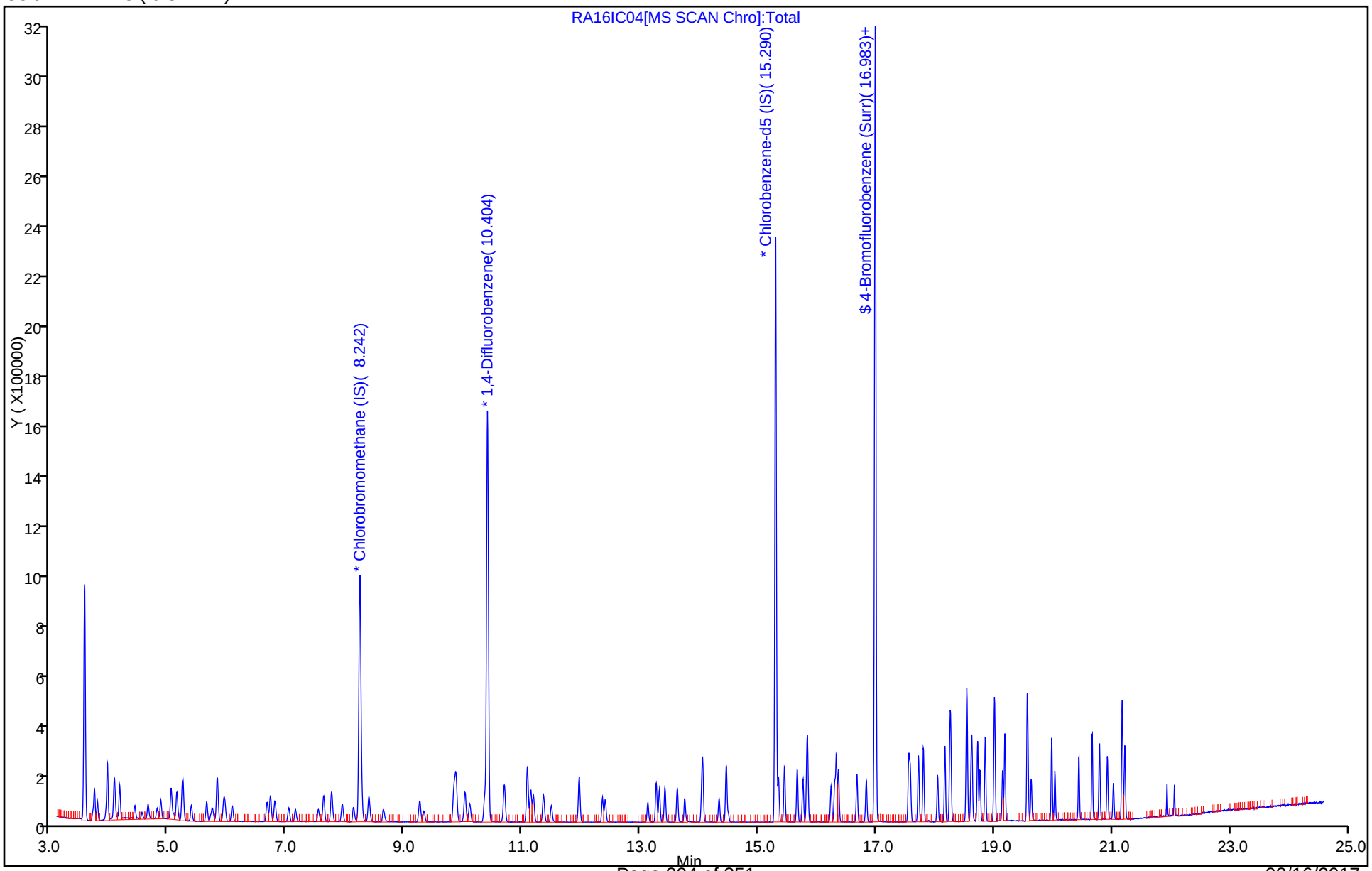
Report Date: 17-Jan-2017 14:55:20 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC04.D

Injection Date:	16-Jan-2017 19:50:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L4			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

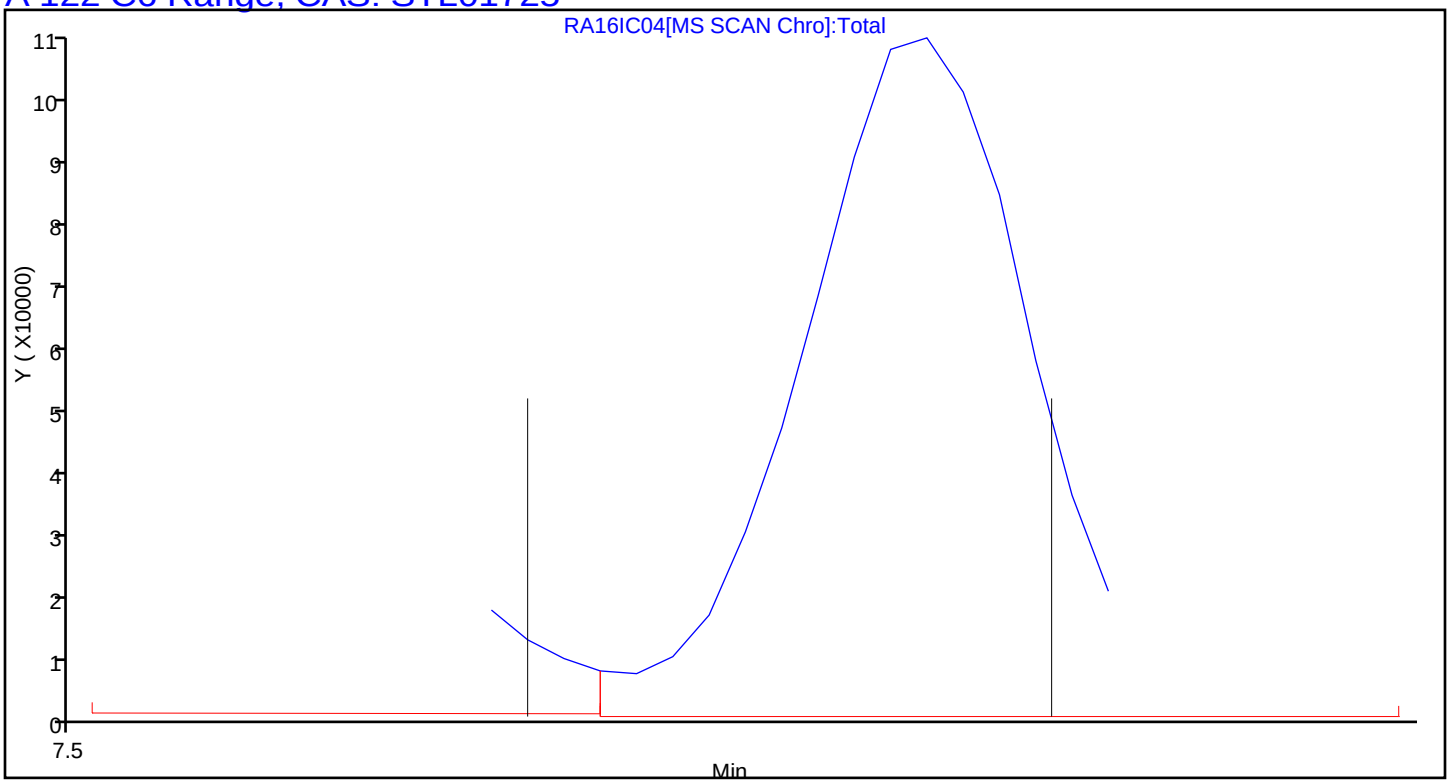


Report Date: 17-Jan-2017 14:55:21 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC04.D				
Injection Date:	16-Jan-2017 19:50:30	Instrument ID:	MR		
Lims ID:	IC L4				
Client ID:					
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

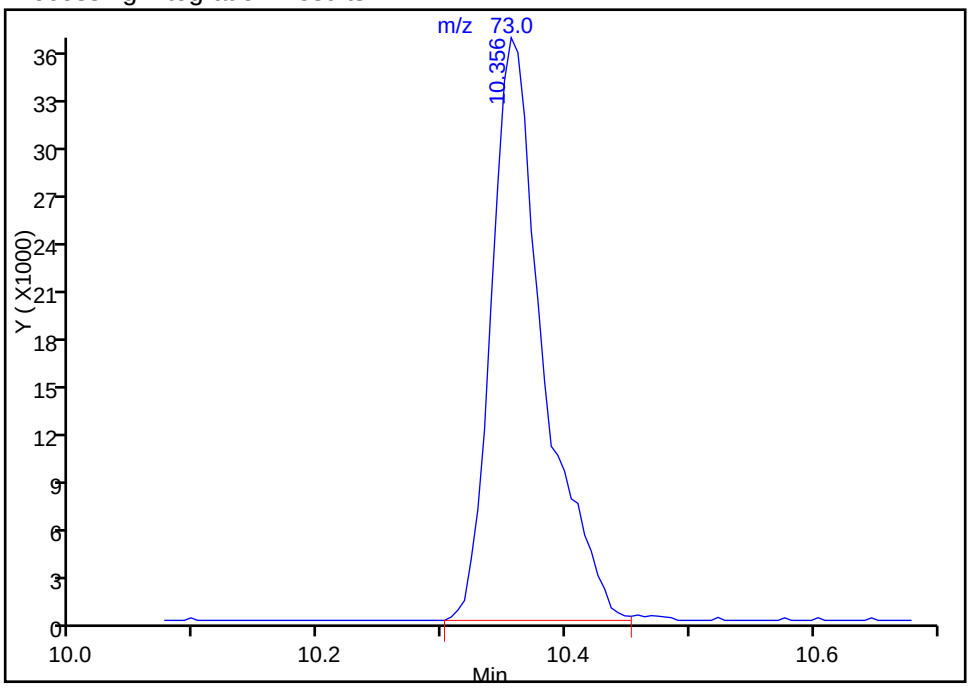
Data File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC04.D				
Injection Date:	16-Jan-2017 19:50:30	Instrument ID:	MR		
Lims ID:	IC L4				
Client ID:					
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

55 Tert-amyl methyl ether, CAS: 994-05-8

Signal: 1

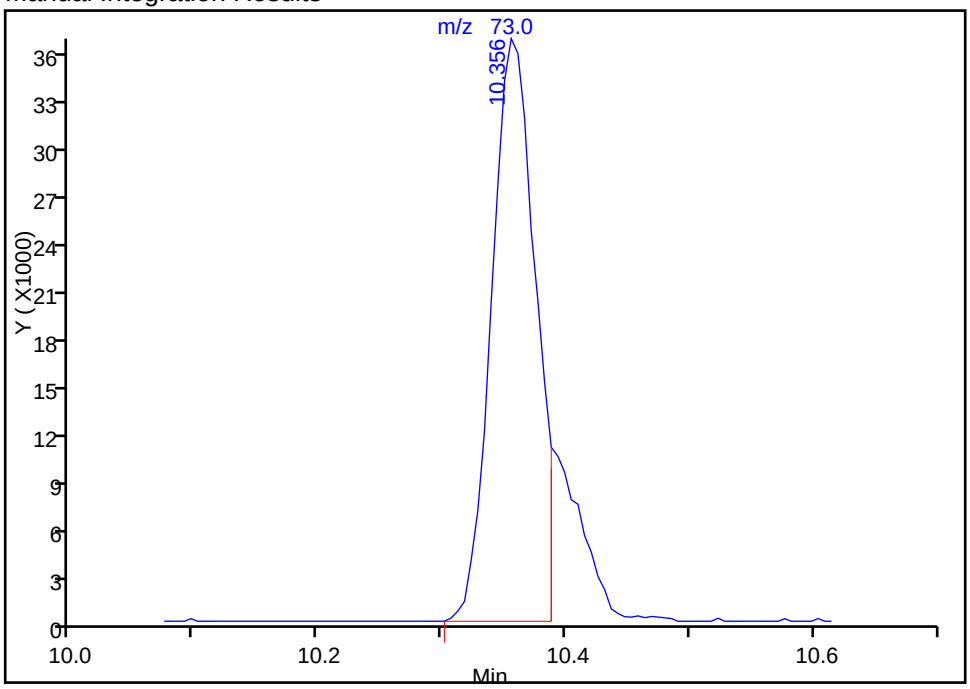
Processing Integration Results

RT: 10.36
Area: 107259
Amount: 0.433166
Amount Units: ppb v/v



Manual Integration Results

RT: 10.36
Area: 90767
Amount: 0.374355
Amount Units: ppb v/v



Reviewer: barlozhetskayaa, 17-Jan-2017 13:12:08

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC05.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 16-Jan-2017 20:38:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003844-007
Misc. Info.: 073143
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jan-2017 14:55:23 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: barlozhetskayaa Date: 17-Jan-2017 10:01:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.237	8.242	-0.005	87	387008	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.404	10.407	-0.003	93	1914665	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.290	15.293	-0.003	84	1625728	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.983	16.984	-0.001	95	1012516	4.00	3.98	
6 Chlorodifluoromethane	67	3.718	3.724	-0.006	97	20894	1.00	0.9731	
7 Propene	41	3.723	3.728	-0.005	97	100161	1.00	1.00	
8 Dichlorodifluoromethane	85	3.772	3.776	-0.004	99	178843	1.00	1.02	
9 Chloromethane	52	3.917	3.923	-0.006	99	35084	1.00	1.07	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.944	3.951	-0.007	91	210273	1.00	1.06	
11 Acetaldehyde	44	4.063	4.070	-0.007	100	181019	5.01	6.13	
12 Vinyl chloride	62	4.068	4.075	-0.007	98	104342	1.00	1.11	
13 Butadiene	54	4.149	4.155	-0.006	95	67044	1.00	1.01	
14 Butane	43	4.155	4.158	-0.003	92	129454	1.00	1.08	
15 Bromomethane	94	4.408	4.416	-0.008	97	85440	1.00	1.04	
16 Chloroethane	64	4.532	4.541	-0.009	95	36329	1.00	0.9767	
17 Ethanol	31	4.645	4.651	-0.006	99	131905	5.01	5.33	
18 Vinyl bromide	106	4.791	4.797	-0.006	99	80932	1.00	1.05	
19 2-Methylbutane	43	4.850	4.856	-0.006	89	72823	1.00	1.00	
20 Acrolein	56	5.028	5.033	-0.005	32	28874	1.00	1.04	
21 Trichlorofluoromethane	101	5.033	5.036	-0.003	98	242451	1.00	1.01	
22 Acetonitrile	40	5.071	5.083	-0.012	100	44418	1.00	1.06	
23 Acetone	58	5.125	5.133	-0.008	97	130034	3.01	2.92	
24 Isopropyl alcohol	45	5.222	5.232	-0.010	95	403731	3.01	3.08	
25 Pentane	72	5.233	5.238	-0.005	95	19811	1.00	1.05	
26 Ethyl ether	31	5.368	5.377	-0.009	95	108355	1.00	0.99	
27 1,1-Dichloroethene	96	5.632	5.639	-0.007	94	109033	1.00	1.02	
28 Acrylonitrile	53	5.708	5.712	-0.004	96	68828	1.00	1.01	
29 2-Methyl-2-propanol	59	5.735	5.746	-0.012	96	145418	1.00	1.02	
30 1,1,2-Trichloro-1,2,2-trif	101	5.815	5.819	-0.004	94	208533	1.00	1.02	
31 Methylene Chloride	84	5.923	5.931	-0.008	93	99432	1.00	0.99	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.945	5.952	-0.007	93	73933	1.00	0.9807	
33 Carbon disulfide	76	6.063	6.072	-0.009	98	280500	1.00	1.02	
34 trans-1,2-Dichloroethene	96	6.657	6.667	-0.010	95	111888	1.00	0.9882	
35 2-Methylpentane	43	6.716	6.719	-0.003	95	211207	1.00	1.01	
36 Methyl tert-butyl ether	73	6.791	6.797	-0.006	97	241503	1.00	1.01	
37 1,1-Dichloroethane	63	7.029	7.035	-0.006	99	173985	1.00	0.9750	
38 Vinyl acetate	43	7.142	7.147	-0.005	100	250951	1.00	0.99	
39 2-Butanone (MEK)	72	7.530	7.536	-0.006	100	48379	1.00	1.04	
40 Hexane	56	7.616	7.622	-0.006	91	75081	1.00	1.02	
41 Isopropyl ether	45	7.757	7.761	-0.004	97	337195	1.00	1.01	
42 cis-1,2-Dichloroethene	96	7.940	7.944	-0.004	89	116608	1.00	0.9888	
43 Ethyl acetate	43	8.123	8.132	-0.009	100	212128	1.00	1.00	
44 Chloroform	83	8.274	8.274	0.000	97	192000	1.00	0.9532	
45 Tert-butyl ethyl ether	59	8.388	8.396	-0.008	93	244976	1.00	1.00	
46 Tetrahydrofuran	42	8.630	8.639	-0.009	95	113550	1.00	0.9806	
47 1,1,1-Trichloroethane	97	9.250	9.254	-0.004	95	189083	1.00	0.9406	
48 1,2-Dichloroethane	62	9.326	9.328	-0.002	96	109924	1.00	0.9537	
49 n-Butanol	31	9.811	9.825	-0.014	83	39645	1.00	1.02	
50 Benzene	78	9.833	9.838	-0.005	94	320927	1.00	0.9639	
51 Cyclohexane	69	9.860	9.866	-0.006	94	47496	1.00	1.00	
52 Carbon tetrachloride	117	9.876	9.878	-0.002	96	192620	1.00	0.9458	
53 2,3-Dimethylpentane	71	10.021	10.026	-0.005	92	70633	1.00	1.00	
54 Thiophene	84	10.108	10.107	0.001	92	175811	1.00	1.02	
55 Tert-amyl methyl ether	73	10.350	10.361	-0.011	98	275898	1.00	1.09	
56 Isooctane	57	10.690	10.692	-0.002	99	448067	1.00	0.9866	
57 1,2-Dichloropropane	63	11.073	11.078	-0.005	91	116456	1.00	1.01	
58 n-Heptane	71	11.084	11.086	-0.002	90	109902	1.00	1.01	
59 Trichloroethene	130	11.138	11.141	-0.003	88	148182	1.00	0.9845	
60 Dibromomethane	93	11.186	11.186	0.000	86	115739	1.00	1.00	
61 Dichlorobromomethane	83	11.353	11.354	-0.001	99	186452	1.00	0.9687	
62 1,4-Dioxane	88	11.359	11.365	-0.006	41	51127	1.00	0.9580	
63 Methyl methacrylate	41	11.483	11.488	-0.005	90	119922	1.00	1.00	
64 Methylcyclohexane	83	11.957	11.963	-0.006	95	226363	1.00	1.02	
65 4-Methyl-2-pentanone (MIBK	43	12.351	12.355	-0.004	97	224067	1.00	1.00	
66 cis-1,3-Dichloropropene	75	12.405	12.405	0.000	92	160378	1.00	0.9639	
67 trans-1,3-Dichloropropene	75	13.122	13.126	-0.004	98	136400	1.00	0.9455	
68 Toluene	91	13.268	13.269	-0.001	93	366316	1.00	1.03	
69 1,1,2-Trichloroethane	83	13.322	13.323	-0.001	94	109867	1.00	0.9817	
70 2-Methylthiophene	97	13.413	13.417	-0.004	97	320571	1.00	1.04	
71 3-Methylthiophene	97	13.624	13.625	-0.001	98	318684	1.00	1.05	
72 2-Hexanone	58	13.748	13.752	-0.004	92	104152	1.00	0.99	
73 Chlorodibromomethane	129	14.039	14.042	-0.003	97	206547	1.00	1.01	
74 n-Octane	85	14.060	14.060	0.000	94	115184	1.00	1.02	
75 Ethylene Dibromide	107	14.335	14.336	-0.001	97	202714	1.00	1.04	
76 Tetrachloroethene	129	14.454	14.456	-0.002	94	136286	1.00	1.00	
77 Chlorobenzene	112	15.338	15.342	-0.004	97	303004	1.00	1.04	
78 2,3-Dimethylheptane	43	15.441	15.444	-0.003	97	311980	1.00	1.02	
79 Ethylbenzene	91	15.656	15.660	-0.004	97	459447	1.00	0.9630	
80 2-Ethylthiophene	97	15.754	15.758	-0.004	97	363700	1.00	1.04	
81 m-Xylene & p-Xylene	91	15.829	15.830	-0.001	98	702600	2.00	1.96	
82 Bromoform	173	16.233	16.235	-0.002	97	268311	1.00	1.02	
83 Styrene	104	16.293	16.296	-0.003	96	268432	1.00	1.06	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.320	16.324	-0.004	94	214951	1.00	1.04	
85 o-Xylene	91	16.357	16.359	-0.002	98	368491	1.00	0.9826	
86 1,1,2,2-Tetrachloroethane	83	16.670	16.671	-0.001	98	282619	1.00	0.99	
87 1,2,3-Trichloropropane	110	16.832	16.831	0.001	97	80177	1.00	1.00	
88 Isopropylbenzene	105	16.978	16.977	0.001	96	545051	1.00	1.03	
89 N-Propylbenzene	120	17.549	17.552	-0.003	100	153153	1.00	1.05	
90 2-Chlorotoluene	126	17.576	17.578	-0.002	96	146515	1.00	1.06	
91 4-Ethyltoluene	105	17.716	17.718	-0.002	100	553733	1.00	1.04	
92 1,3,5-Trimethylbenzene	120	17.803	17.802	0.001	94	259131	1.00	1.01	
93 Alpha Methyl Styrene	118	18.040	18.042	-0.002	93	212623	1.00	1.04	
94 n-Decane	57	18.164	18.166	-0.002	90	279878	1.00	1.07	
95 tert-Butylbenzene	119	18.250	18.251	-0.001	94	480365	1.00	1.06	
96 1,2,4-Trimethylbenzene	105	18.266	18.267	-0.001	96	461852	1.00	1.00	
97 1,3-Dichlorobenzene	146	18.531	18.531	0.000	94	351729	1.00	1.08	
98 sec-Butylbenzene	105	18.541	18.543	-0.002	99	694694	1.00	1.07	
99 Benzyl chloride	91	18.606	18.607	-0.001	100	368163	1.00	1.03	
100 1,4-Dichlorobenzene	146	18.622	18.625	-0.003	96	353669	1.00	1.07	
101 4-Isopropyltoluene	119	18.719	18.720	-0.001	97	568655	1.00	1.07	
102 1,2,3-Trimethylbenzene	105	18.762	18.762	0.000	96	357137	1.00	0.9715	
103 Butylcyclohexane	83	18.849	18.851	-0.002	98	359936	1.00	1.05	
104 1,2-Dichlorobenzene	146	19.000	19.003	-0.003	97	345512	1.00	1.08	
105 2,3-Dihydroindene	117	19.011	19.012	-0.001	94	447073	1.00	1.09	
106 Indene	116	19.145	19.146	-0.001	91	339863	1.00	0.8793	
107 n-Butylbenzene	91	19.183	19.183	0.000	97	548974	1.00	1.08	
108 Undecane	57	19.561	19.561	0.000	95	340377	1.00	1.15	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.571	19.574	-0.003	99	445240	1.00	0.9398	
110 1,2-Dibromo-3-Chloropropan	157	19.631	19.631	0.000	89	183845	1.00	1.10	
111 1,2,4,5-Tetramethylbenzene	119	19.976	19.977	-0.001	99	523086	1.00	1.12	
112 1,2,3,5-Tetramethylbenzene	119	20.030	20.031	-0.001	97	325678	1.00	1.11	
113 1,2,3,4-Tetramethylbenzene	119	20.434	20.439	-0.005	99	451826	1.00	1.14	
114 Dodecane	57	20.661	20.664	-0.003	94	378566	1.00	1.22	
115 1,2,4-Trichlorobenzene	180	20.785	20.788	-0.003	93	426643	1.00	1.12	
116 Naphthalene	128	20.919	20.922	-0.003	100	904334	1.00	1.29	
117 Benzo(b)thiophene	134	21.022	21.024	-0.002	100	541307	1.00	1.41	
118 Hexachlorobutadiene	225	21.173	21.173	0.000	94	343721	1.00	1.02	
119 1,2,3-Trichlorobenzene	180	21.216	21.217	-0.001	95	438340	1.00	1.27	
120 2-Methylnaphthalene	142	21.933	21.933	0.000	99	596748	3.13	7.22	
121 1-Methylnaphthalene	142	22.057	22.057	0.000	98	479579	3.13	6.21	
A 122 C6 Range	1	7.620	(7.563-7.651)		0	650061	1.00	1.00	
S 124 Xylenes, Total	100				0		3.00	2.94	
S 125 1,2-Dichloroethene, Total	1				0		2.00	1.98	

Reagents:

40L5DNP_00009	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

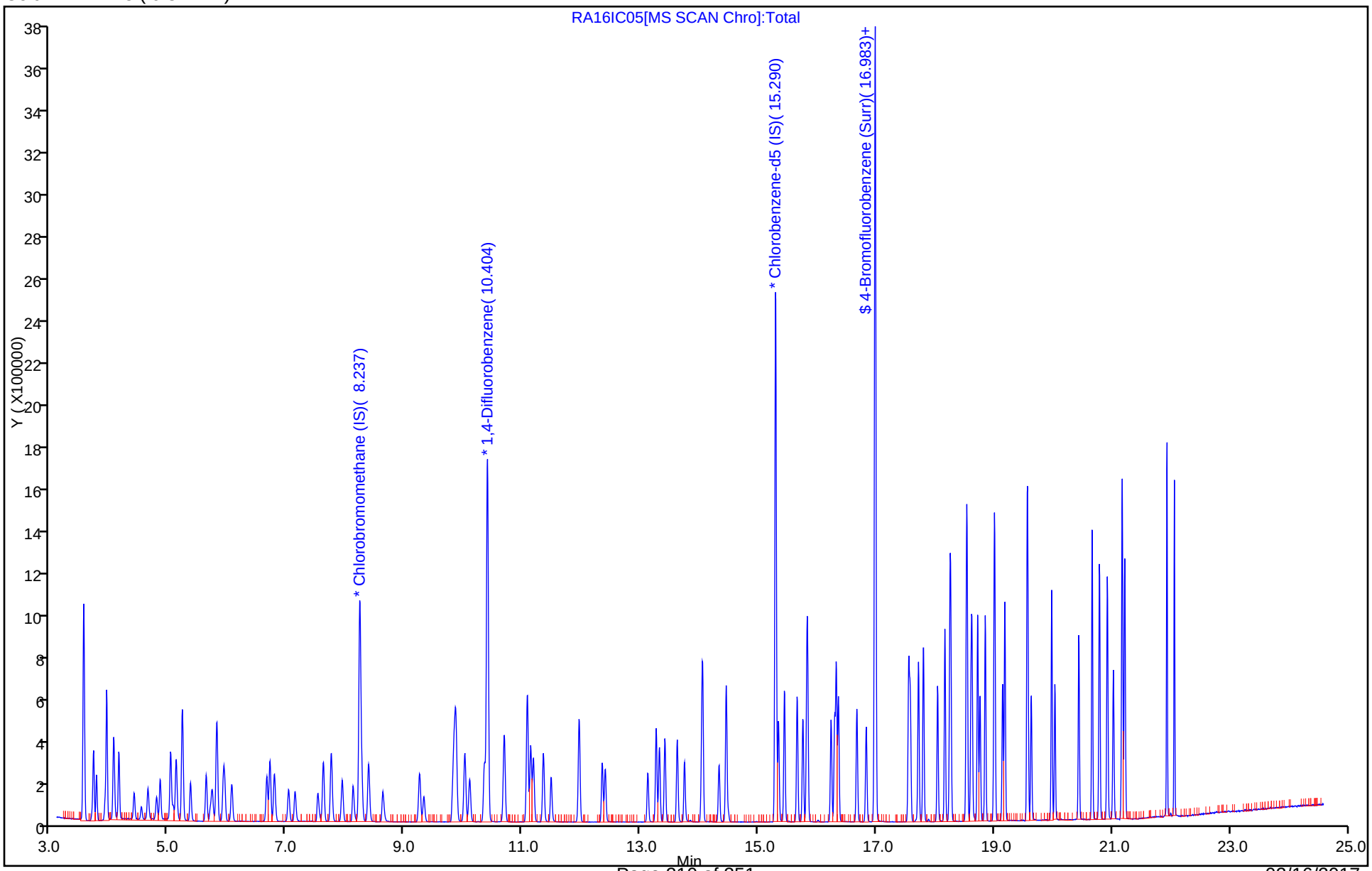
Report Date: 17-Jan-2017 14:55:24 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC05.D

Injection Date:	16-Jan-2017 20:38:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L5			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

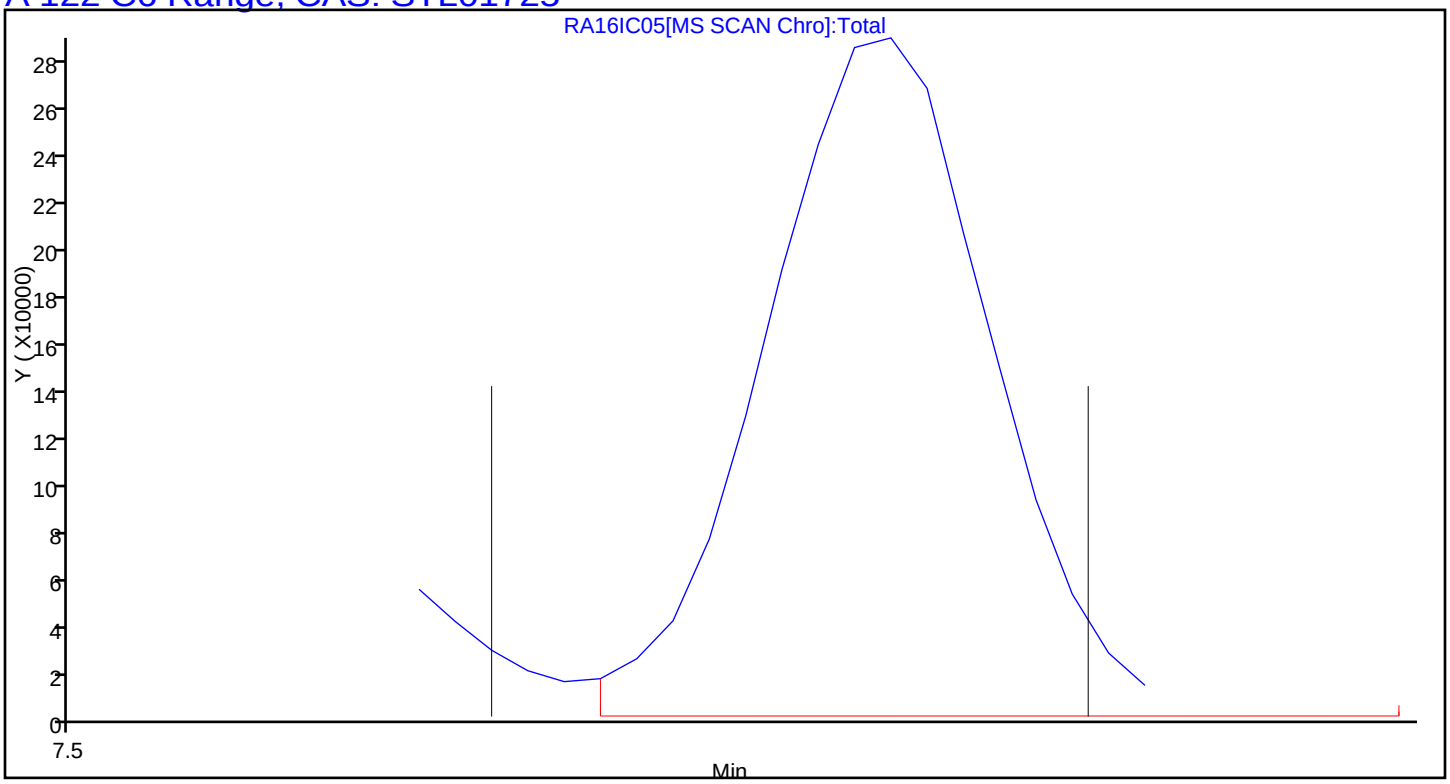


Report Date: 17-Jan-2017 14:55:24 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC05.D				
Injection Date:	16-Jan-2017 20:38:30	Instrument ID:	MR		
Lims ID:	IC L5				
Client ID:					
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC06.D
Lims ID: ICIS L6
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 16-Jan-2017 21:26:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003844-008
Misc. Info.: 073142
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jan-2017 14:55:27 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: tajh Date: 17-Jan-2017 09:39:09

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.242	8.242	0.000	90	414061	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.410	10.407	0.003	93	2023869	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.295	15.293	0.002	84	1725846	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.983	16.984	-0.001	95	1111047	4.00	4.12	
6 Chlorodifluoromethane	67	3.728	3.724	0.004	97	44683	2.00	1.95	
7 Propene	41	3.734	3.728	0.006	95	222355	2.00	2.06	
8 Dichlorodifluoromethane	85	3.782	3.776	0.006	99	372486	2.00	1.99	
9 Chloromethane	52	3.928	3.923	0.005	100	68851	2.00	1.96	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.955	3.951	0.004	91	408268	2.00	1.92	
11 Acetaldehyde	44	4.068	4.070	-0.002	99	296274	9.99	9.38	
12 Vinyl chloride	62	4.079	4.075	0.004	99	183309	2.00	1.82	
13 Butadiene	54	4.160	4.155	0.005	95	129425	2.00	1.81	
14 Butane	43	4.160	4.158	0.002	93	243917	2.00	1.90	
15 Bromomethane	94	4.419	4.416	0.003	96	167720	2.00	1.90	
16 Chloroethane	64	4.543	4.541	0.002	98	78880	2.00	1.98	
17 Ethanol	31	4.650	4.651	-0.001	98	260637	9.99	9.84	
18 Vinyl bromide	106	4.801	4.797	0.004	97	159526	2.00	1.94	
19 2-Methylbutane	43	4.861	4.856	0.005	87	149714	2.00	1.93	
20 Acrolein	56	5.033	5.033	0.000	96	55989	2.00	1.88	
21 Trichlorofluoromethane	101	5.039	5.036	0.003	99	505777	2.00	1.97	
22 Acetonitrile	40	5.082	5.083	-0.001	100	88808	2.00	1.99	
23 Acetone	58	5.125	5.133	-0.008	97	271574	5.99	5.70	
24 Isopropyl alcohol	45	5.227	5.232	-0.005	94	866507	5.99	6.18	
25 Pentane	72	5.238	5.238	0.000	96	41403	2.00	2.05	
26 Ethyl ether	31	5.373	5.377	-0.004	94	244725	2.00	2.09	
27 1,1-Dichloroethene	96	5.643	5.639	0.004	95	221671	2.00	1.94	
28 Acrylonitrile	53	5.713	5.712	0.001	96	147847	2.00	2.02	
29 2-Methyl-2-propanol	59	5.740	5.746	-0.006	96	312157	2.00	2.04	
30 1,1,2-Trichloro-1,2,2-trif	101	5.821	5.819	0.002	94	439012	2.00	2.01	
31 Methylene Chloride	84	5.934	5.931	0.003	95	196893	2.00	1.84	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.955	5.952	0.003	93	159118	2.00	1.97	
33 Carbon disulfide	76	6.074	6.072	0.002	98	590648	2.00	2.01	
34 trans-1,2-Dichloroethene	96	6.673	6.667	0.006	95	232406	2.00	1.92	
35 2-Methylpentane	43	6.721	6.719	0.002	96	453241	2.00	2.03	
36 Methyl tert-butyl ether	73	6.791	6.797	-0.006	97	511696	2.00	2.00	
37 1,1-Dichloroethane	63	7.039	7.035	0.004	99	364771	2.00	1.91	
38 Vinyl acetate	43	7.147	7.147	0.000	100	559575	2.00	2.07	
39 2-Butanone (MEK)	72	7.530	7.536	-0.006	100	102021	2.00	2.04	
40 Hexane	56	7.622	7.622	0.000	92	156852	2.00	2.00	
41 Isopropyl ether	45	7.756	7.761	-0.005	98	726368	2.00	2.03	
42 cis-1,2-Dichloroethene	96	7.945	7.944	0.001	89	242118	2.00	1.92	
43 Ethyl acetate	43	8.129	8.132	-0.003	100	467758	2.00	2.05	
44 Chloroform	83	8.280	8.274	0.006	94	401198	2.00	1.86	
45 Tert-butyl ethyl ether	59	8.393	8.396	-0.003	93	520851	2.00	2.00	
46 Tetrahydrofuran	42	8.630	8.639	-0.009	97	245656	2.00	1.98	
47 1,1,1-Trichloroethane	97	9.256	9.254	0.002	95	396220	2.00	1.84	
48 1,2-Dichloroethane	62	9.331	9.328	0.003	95	230738	2.00	1.89	
49 n-Butanol	31	9.811	9.825	-0.014	89	87183	2.00	2.13	
50 Benzene	78	9.838	9.838	0.000	94	675385	2.00	1.92	
51 Cyclohexane	69	9.865	9.866	-0.001	94	102016	2.00	2.03	
52 Carbon tetrachloride	117	9.881	9.878	0.003	98	417535	2.00	1.94	
53 2,3-Dimethylpentane	71	10.027	10.026	0.001	93	148408	2.00	1.99	
54 Thiophene	84	10.108	10.107	0.001	92	370335	2.00	2.03	
55 Tert-amyl methyl ether	73	10.350	10.361	-0.011	98	571096	2.00	2.13	
56 Isooctane	57	10.690	10.692	-0.002	99	975928	2.00	2.03	
57 1,2-Dichloropropane	63	11.078	11.078	0.000	94	248903	2.00	2.05	
58 n-Heptane	71	11.084	11.086	-0.002	92	233537	2.00	2.04	
59 Trichloroethene	130	11.143	11.141	0.002	90	307549	2.00	1.93	
60 Dibromomethane	93	11.186	11.186	0.000	86	245001	2.00	2.00	
61 Dichlorobromomethane	83	11.353	11.354	-0.001	99	405343	2.00	1.99	
62 1,4-Dioxane	88	11.359	11.365	-0.006	42	110327	2.00	1.96	
63 Methyl methacrylate	41	11.488	11.488	0.000	90	265612	2.00	2.09	
64 Methylcyclohexane	83	11.963	11.963	0.000	96	478964	2.00	2.05	
65 4-Methyl-2-pentanone (MIBK	43	12.351	12.355	-0.004	97	491559	2.00	2.07	
66 cis-1,3-Dichloropropene	75	12.405	12.405	0.000	92	350840	2.00	1.99	
67 trans-1,3-Dichloropropene	75	13.127	13.126	0.001	98	298731	2.00	1.95	
68 Toluene	91	13.267	13.269	-0.002	93	765289	2.00	2.03	
69 1,1,2-Trichloroethane	83	13.321	13.323	-0.002	94	227282	2.00	1.91	
70 2-Methylthiophene	97	13.418	13.417	0.001	96	668558	2.00	2.04	
71 3-Methylthiophene	97	13.623	13.625	-0.002	98	656449	2.00	2.03	
72 2-Hexanone	58	13.747	13.752	-0.005	91	232613	2.00	2.09	
73 Chlorodibromomethane	129	14.044	14.042	0.002	97	454968	2.00	2.09	
74 n-Octane	85	14.060	14.060	0.000	94	247038	2.00	2.06	
75 Ethylene Dibromide	107	14.335	14.336	-0.001	97	428002	2.00	2.06	
76 Tetrachloroethene	129	14.454	14.456	-0.002	95	277054	2.00	1.91	
77 Chlorobenzene	112	15.344	15.342	0.002	97	625543	2.00	2.01	
78 2,3-Dimethylheptane	43	15.446	15.444	0.002	98	681133	2.00	2.09	
79 Ethylbenzene	91	15.662	15.660	0.002	97	978749	2.00	1.93	
80 2-Ethylthiophene	97	15.759	15.758	0.001	97	765397	2.00	2.05	
81 m-Xylene & p-Xylene	91	15.829	15.830	-0.001	99	1483468	3.99	3.90	
82 Bromoform	173	16.233	16.235	-0.002	97	617297	2.00	2.21	
83 Styrene	104	16.293	16.296	-0.003	97	578840	2.00	2.14	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.325	16.324	0.001	95	466328	2.00	2.13	
85 o-Xylene	91	16.357	16.359	-0.002	99	765823	2.00	1.92	
86 1,1,2,2-Tetrachloroethane	83	16.670	16.671	-0.001	98	598106	2.00	1.98	
87 1,2,3-Trichloropropane	110	16.832	16.831	0.001	97	170828	2.00	2.01	
88 Isopropylbenzene	105	16.977	16.977	0.000	95	1141588	2.00	2.03	
89 N-Propylbenzene	120	17.554	17.552	0.002	100	324318	2.00	2.08	
90 2-Chlorotoluene	126	17.576	17.578	-0.002	96	304799	2.00	2.08	
91 4-Ethyltoluene	105	17.716	17.718	-0.002	99	1177295	2.00	2.09	
92 1,3,5-Trimethylbenzene	120	17.802	17.802	0.000	94	544369	2.00	1.99	
93 Alpha Methyl Styrene	118	18.040	18.042	-0.002	93	481523	2.00	2.22	
94 n-Decane	57	18.164	18.166	-0.002	89	595564	2.00	2.14	
95 tert-Butylbenzene	119	18.250	18.251	-0.001	96	1014819	2.00	2.11	
96 1,2,4-Trimethylbenzene	105	18.266	18.267	-0.001	95	978766	2.00	2.00	
97 1,3-Dichlorobenzene	146	18.530	18.531	-0.001	95	737746	2.00	2.13	
98 sec-Butylbenzene	105	18.541	18.543	-0.002	99	1474176	2.00	2.14	
99 Benzyl chloride	91	18.606	18.607	-0.001	100	819866	2.00	2.17	
100 1,4-Dichlorobenzene	146	18.622	18.625	-0.003	96	750220	2.00	2.13	
101 4-Isopropyltoluene	119	18.719	18.720	-0.001	97	1200274	2.00	2.14	
102 1,2,3-Trimethylbenzene	105	18.762	18.762	0.000	96	760919	2.00	1.95	
103 Butylcyclohexane	83	18.849	18.851	-0.002	98	760524	2.00	2.09	
104 1,2-Dichlorobenzene	146	19.005	19.003	0.002	97	723605	2.00	2.14	
105 2,3-Dihydroindene	117	19.010	19.012	-0.002	95	946819	2.00	2.18	
106 Indene	116	19.145	19.146	-0.001	92	736039	2.00	1.81	
107 n-Butylbenzene	91	19.183	19.183	0.000	97	1158211	2.00	2.14	
108 Undecane	57	19.560	19.561	-0.001	96	717061	2.00	2.27	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.571	19.574	-0.003	98	923383	2.00	1.88	
110 1,2-Dibromo-3-Chloropropan	157	19.630	19.631	-0.001	88	398684	2.00	2.24	
111 1,2,4,5-Tetramethylbenzene	119	19.976	19.977	-0.001	98	1074131	2.00	2.17	
112 1,2,3,5-Tetramethylbenzene	119	20.030	20.031	-0.001	97	654167	2.00	2.11	
113 1,2,3,4-Tetramethylbenzene	119	20.439	20.439	0.000	98	893407	2.00	2.13	
114 Dodecane	57	20.660	20.664	-0.004	94	719032	2.00	2.19	
115 1,2,4-Trichlorobenzene	180	20.790	20.788	0.002	92	820181	2.00	2.04	
116 Naphthalene	128	20.919	20.922	-0.003	100	1476806	2.00	1.99	
117 Benzo(b)thiophene	134	21.022	21.024	-0.002	100	853628	2.00	2.09	
118 Hexachlorobutadiene	225	21.173	21.173	0.000	93	717540	2.00	2.00	
119 1,2,3-Trichlorobenzene	180	21.216	21.217	-0.001	95	787102	2.00	2.15	
120 2-Methylnaphthalene	142	21.933	21.933	0.000	99	654883	6.24	7.47	
121 1-Methylnaphthalene	142	22.057	22.057	0.000	98	514457	6.24	6.28	
A 122 C6 Range	1	7.631	(7.562-7.673)		0	1371214	2.00	1.99	
S 124 Xylenes, Total	100				0		5.99	5.82	
S 125 1,2-Dichloroethene, Total	1				0		3.99	3.84	

Reagents:

40L6DNP_00010	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

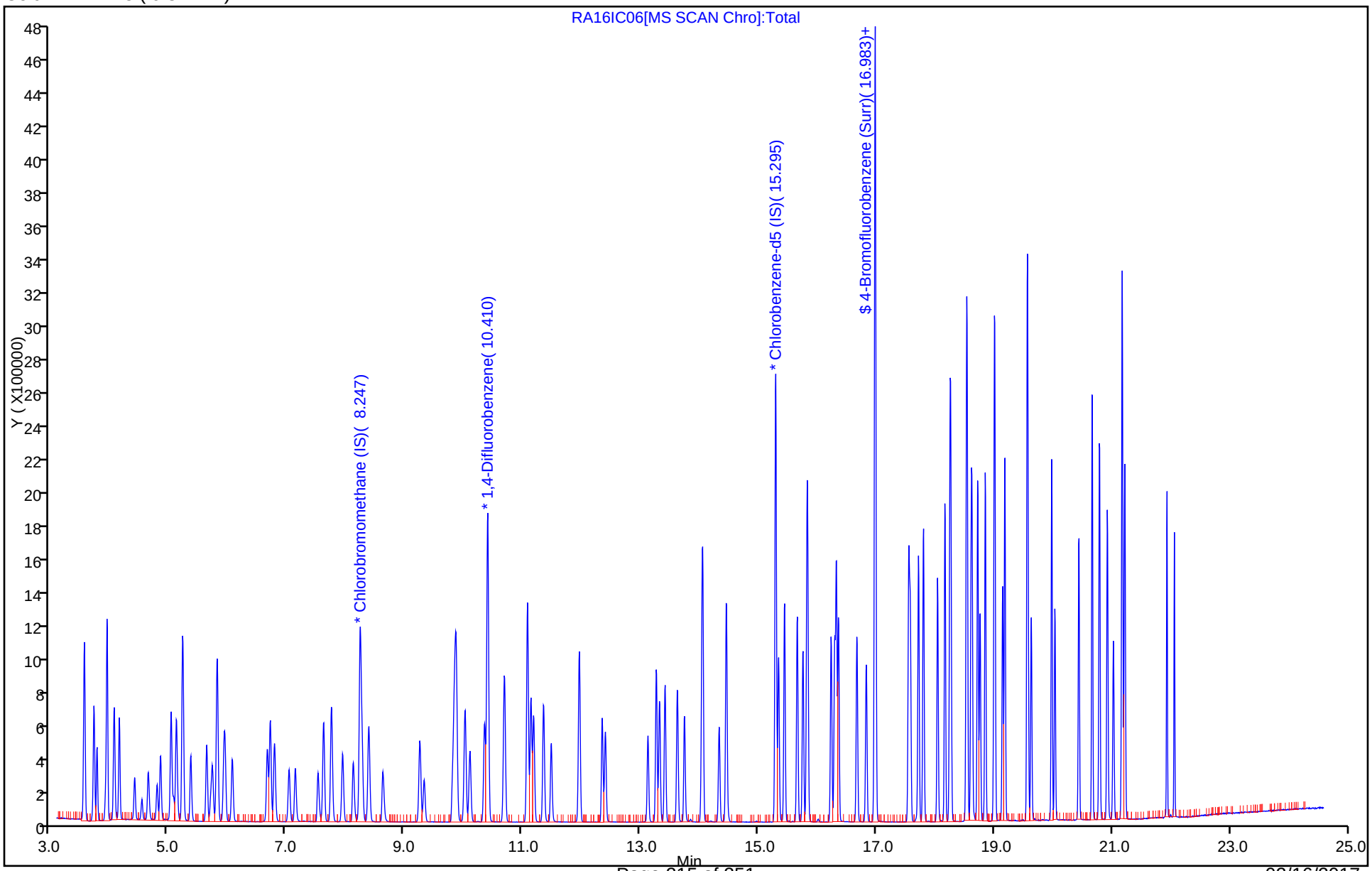
Report Date: 17-Jan-2017 14:55:28 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC06.D

Injection Date:	16-Jan-2017 21:26:30	Instrument ID:	MR	Operator ID:	
Lims ID:	ICIS L6			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

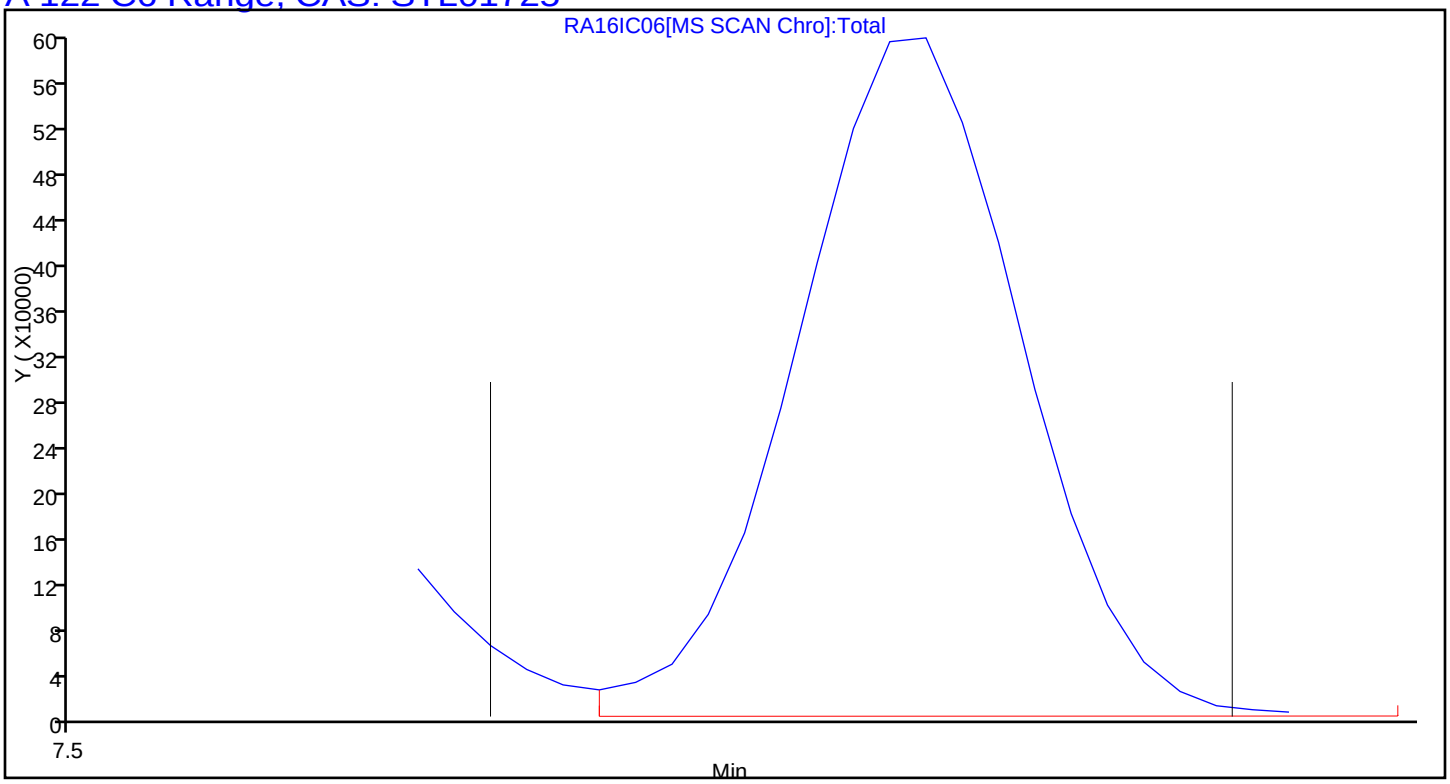


Report Date: 17-Jan-2017 14:55:28 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC06.D				
Injection Date:	16-Jan-2017 21:26:30	Instrument ID:	MR		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC07.D
Lims ID: IC L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 16-Jan-2017 22:14:30 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003844-009
Misc. Info.: 073141
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jan-2017 14:55:31 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: barlozhetskayaa Date: 17-Jan-2017 10:16:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.253	8.242	0.011	92	434092	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.410	10.407	0.003	93	2120884	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.295	15.293	0.002	85	1806991	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.983	16.984	-0.001	96	1182570	4.00	4.18	
6 Chlorodifluoromethane	67	3.718	3.724	-0.006	96	95528	4.00	3.97	
7 Propene	41	3.723	3.728	-0.005	97	455692	4.00	4.04	
8 Dichlorodifluoromethane	85	3.772	3.776	-0.004	99	789485	4.00	4.02	
9 Chloromethane	52	3.923	3.923	0.000	99	146075	4.00	3.96	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.950	3.951	-0.001	90	844447	4.00	3.79	
11 Acetaldehyde	44	4.068	4.070	-0.002	99	597951	20.0	18.1	
12 Vinyl chloride	62	4.074	4.075	-0.001	98	379730	4.00	3.59	
13 Butadiene	54	4.155	4.155	0.000	96	256462	4.00	3.43	
14 Butane	43	4.155	4.158	-0.003	92	488808	4.00	3.64	
15 Bromomethane	94	4.413	4.416	-0.003	97	337645	4.00	3.65	
16 Chloroethane	64	4.543	4.541	0.002	98	160420	4.00	3.85	
17 Ethanol	31	4.656	4.651	0.005	97	518594	20.0	18.7	
18 Vinyl bromide	106	4.802	4.797	0.005	99	334058	4.00	3.87	
19 2-Methylbutane	43	4.856	4.856	0.000	90	304726	4.00	3.75	
20 Acrolein	56	5.034	5.033	0.001	95	107246	4.00	3.43	
21 Trichlorofluoromethane	101	5.039	5.036	0.003	98	1037976	4.00	3.85	
22 Acetonitrile	40	5.088	5.083	0.005	99	182904	4.00	3.90	
23 Acetone	58	5.131	5.133	-0.002	97	567636	12.0	11.4	
24 Isopropyl alcohol	45	5.239	5.232	0.006	93	1865554	12.0	12.7	
25 Pentane	72	5.239	5.238	0.000	91	85310	4.00	4.04	
26 Ethyl ether	31	5.373	5.377	-0.004	94	527904	4.00	4.30	
27 1,1-Dichloroethene	96	5.643	5.639	0.004	97	458052	4.00	3.83	
28 Acrylonitrile	53	5.713	5.712	0.001	94	320898	4.00	4.19	
29 2-Methyl-2-propanol	59	5.745	5.746	-0.001	96	672816	4.00	4.19	
30 1,1,2-Trichloro-1,2,2-trif	101	5.821	5.819	0.002	94	911407	4.00	3.98	
31 Methylene Chloride	84	5.940	5.931	0.009	95	403392	4.00	3.59	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.956	5.952	0.004	92	346245	4.00	4.09	
33 Carbon disulfide	76	6.074	6.072	0.002	98	1240384	4.00	4.03	
34 trans-1,2-Dichloroethene	96	6.673	6.667	0.006	97	479340	4.00	3.77	
35 2-Methylpentane	43	6.721	6.719	0.002	96	985644	4.00	4.22	
36 Methyl tert-butyl ether	73	6.792	6.797	-0.005	97	1094582	4.00	4.08	
37 1,1-Dichloroethane	63	7.045	7.035	0.010	99	790113	4.00	3.95	
38 Vinyl acetate	43	7.147	7.147	0.000	100	1258365	4.00	4.44	
39 2-Butanone (MEK)	72	7.530	7.536	-0.006	99	215237	4.00	4.11	
40 Hexane	56	7.627	7.622	0.005	92	334174	4.00	4.07	
41 Isopropyl ether	45	7.762	7.761	0.001	98	1592277	4.00	4.24	
42 cis-1,2-Dichloroethene	96	7.951	7.944	0.007	91	499668	4.00	3.78	
43 Ethyl acetate	43	8.129	8.132	-0.003	99	1040805	4.00	4.36	
44 Chloroform	83	8.280	8.274	0.006	95	868630	4.00	3.84	
45 Tert-butyl ethyl ether	59	8.393	8.396	-0.003	94	1156354	4.00	4.23	
46 Tetrahydrofuran	42	8.630	8.639	-0.009	97	546503	4.00	4.21	
47 1,1,1-Trichloroethane	97	9.261	9.254	0.007	95	881154	4.00	3.91	
48 1,2-Dichloroethane	62	9.331	9.328	0.003	96	504175	4.00	3.95	
49 n-Butanol	31	9.811	9.825	-0.014	89	196047	4.00	4.57	
50 Benzene	78	9.844	9.838	0.006	95	1418818	4.00	3.85	
51 Cyclohexane	69	9.865	9.866	-0.001	95	222381	4.00	4.22	
52 Carbon tetrachloride	117	9.881	9.878	0.003	98	934318	4.00	4.14	
53 2,3-Dimethylpentane	71	10.027	10.026	0.001	93	318046	4.00	4.07	
54 Thiophene	84	10.113	10.107	0.006	93	774783	4.00	4.05	
55 Tert-amyl methyl ether	73	10.356	10.361	-0.005	98	1240524	4.00	4.41	
56 Isooctane	57	10.696	10.692	0.004	99	2125744	4.00	4.23	
57 1,2-Dichloropropane	63	11.084	11.078	0.006	92	535380	4.00	4.20	
58 n-Heptane	71	11.089	11.086	0.003	91	502236	4.00	4.18	
59 Trichloroethene	130	11.143	11.141	0.002	94	641583	4.00	3.85	
60 Dibromomethane	93	11.192	11.186	0.006	86	522746	4.00	4.08	
61 Dichlorobromomethane	83	11.359	11.354	0.005	99	899835	4.00	4.22	
62 1,4-Dioxane	88	11.359	11.365	-0.006	41	229087	4.00	3.88	
63 Methyl methacrylate	41	11.488	11.488	0.000	92	614457	4.00	4.62	
64 Methylcyclohexane	83	11.968	11.963	0.005	96	1012881	4.00	4.14	
65 4-Methyl-2-pentanone (MIBK	43	12.351	12.355	-0.004	97	1119558	4.00	4.50	
66 cis-1,3-Dichloropropene	75	12.410	12.405	0.005	92	765394	4.00	4.15	
67 trans-1,3-Dichloropropene	75	13.128	13.126	0.002	98	673680	4.00	4.20	
68 Toluene	91	13.273	13.269	0.004	93	1616062	4.00	4.09	
69 1,1,2-Trichloroethane	83	13.322	13.323	-0.001	95	484227	4.00	3.89	
70 2-Methylthiophene	97	13.419	13.417	0.002	97	1416277	4.00	4.12	
71 3-Methylthiophene	97	13.629	13.625	0.004	99	1404868	4.00	4.15	
72 2-Hexanone	58	13.748	13.752	-0.004	91	521509	4.00	4.48	
73 Chlorodibromomethane	129	14.044	14.042	0.002	97	1031168	4.00	4.53	
74 n-Octane	85	14.060	14.060	0.000	94	526170	4.00	4.19	
75 Ethylene Dibromide	107	14.335	14.336	-0.001	98	924538	4.00	4.25	
76 Tetrachloroethene	129	14.459	14.456	0.003	95	584686	4.00	3.86	
77 Chlorobenzene	112	15.344	15.342	0.002	96	1306533	4.00	4.02	
78 2,3-Dimethylheptane	43	15.446	15.444	0.002	98	1494597	4.00	4.38	
79 Ethylbenzene	91	15.662	15.660	0.002	97	2108922	4.00	3.98	
80 2-Ethylthiophene	97	15.759	15.758	0.001	97	1657834	4.00	4.25	
81 m-Xylene & p-Xylene	91	15.829	15.830	-0.001	99	3273024	8.00	8.22	
82 Bromoform	173	16.234	16.235	-0.001	98	1398733	4.00	4.78	
83 Styrene	104	16.298	16.296	0.002	97	1249828	4.00	4.42	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.325	16.324	0.001	95	1026919	4.00	4.48	
85 o-Xylene	91	16.358	16.359	-0.001	99	1642978	4.00	3.94	
86 1,1,2,2-Tetrachloroethane	83	16.670	16.671	-0.001	98	1283721	4.00	4.05	
87 1,2,3-Trichloropropane	110	16.832	16.831	0.001	98	362915	4.00	4.07	
88 Isopropylbenzene	105	16.978	16.977	0.001	95	2438291	4.00	4.15	
89 N-Propylbenzene	120	17.549	17.552	-0.003	99	694201	4.00	4.26	
90 2-Chlorotoluene	126	17.582	17.578	0.004	95	637350	4.00	4.16	
91 4-Ethyltoluene	105	17.716	17.718	-0.002	99	2510766	4.00	4.26	
92 1,3,5-Trimethylbenzene	120	17.803	17.802	0.001	93	1148204	4.00	4.01	
93 Alpha Methyl Styrene	118	18.040	18.042	-0.002	91	1057771	4.00	4.66	
94 n-Decane	57	18.164	18.166	-0.002	88	1333389	4.00	4.57	
95 tert-Butylbenzene	119	18.250	18.251	-0.001	94	2142114	4.00	4.25	
96 1,2,4-Trimethylbenzene	105	18.266	18.267	-0.001	96	2112255	4.00	4.12	
97 1,3-Dichlorobenzene	146	18.531	18.531	0.000	96	1546869	4.00	4.26	
98 sec-Butylbenzene	105	18.541	18.543	-0.002	99	3124184	4.00	4.34	
99 Benzyl chloride	91	18.606	18.607	-0.001	99	1832699	4.00	4.63	
100 1,4-Dichlorobenzene	146	18.628	18.625	0.003	95	1571693	4.00	4.26	
101 4-Isopropyltoluene	119	18.719	18.720	-0.001	97	2531332	4.00	4.30	
102 1,2,3-Trimethylbenzene	105	18.763	18.762	0.001	96	1628428	4.00	3.99	
103 Butylcyclohexane	83	18.849	18.851	-0.002	96	1608626	4.00	4.23	
104 1,2-Dichlorobenzene	146	19.005	19.003	0.002	98	1511871	4.00	4.27	
105 2,3-Dihydroindene	117	19.011	19.012	-0.001	96	1995040	4.00	4.38	
106 Indene	116	19.145	19.146	-0.001	92	1588890	4.00	3.83	
107 n-Butylbenzene	91	19.183	19.183	0.000	98	2475180	4.00	4.36	
108 Undecane	57	19.561	19.561	0.000	97	1553035	4.00	4.70	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.571	19.574	-0.003	98	1944399	4.00	3.97	
110 1,2-Dibromo-3-Chloropropan	157	19.631	19.631	0.000	89	868224	4.00	4.67	
111 1,2,4,5-Tetramethylbenzene	119	19.976	19.977	-0.001	98	2267880	4.00	4.38	
112 1,2,3,5-Tetramethylbenzene	119	20.030	20.031	-0.001	97	1410963	4.00	4.34	
113 1,2,3,4-Tetramethylbenzene	119	20.440	20.439	0.001	98	1914011	4.00	4.36	
114 Dodecane	57	20.666	20.664	0.002	95	1661177	4.00	4.82	
115 1,2,4-Trichlorobenzene	180	20.790	20.788	0.002	93	1739115	4.00	4.13	
116 Naphthalene	128	20.920	20.922	-0.002	100	3177551	4.00	4.08	
117 Benzo(b)thiophene	134	21.022	21.024	-0.002	100	1870974	4.00	4.38	
118 Hexachlorobutadiene	225	21.173	21.173	0.000	93	1567346	4.00	4.17	
119 1,2,3-Trichlorobenzene	180	21.216	21.217	-0.001	95	1667019	4.00	4.35	
120 2-Methylnaphthalene	142	21.933	21.933	0.000	98	1392307	12.5	15.2	
121 1-Methylnaphthalene	142	22.057	22.057	0.000	98	1075620	12.5	12.5	
A 122 C6 Range	1	7.631	(7.563-7.673)		0	2975398	4.00	4.11	
S 124 Xylenes, Total	100				0		12.0	12.2	
S 125 1,2-Dichloroethene, Total	1				0		8.00	7.55	

Reagents:

40L7DNP_00009	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

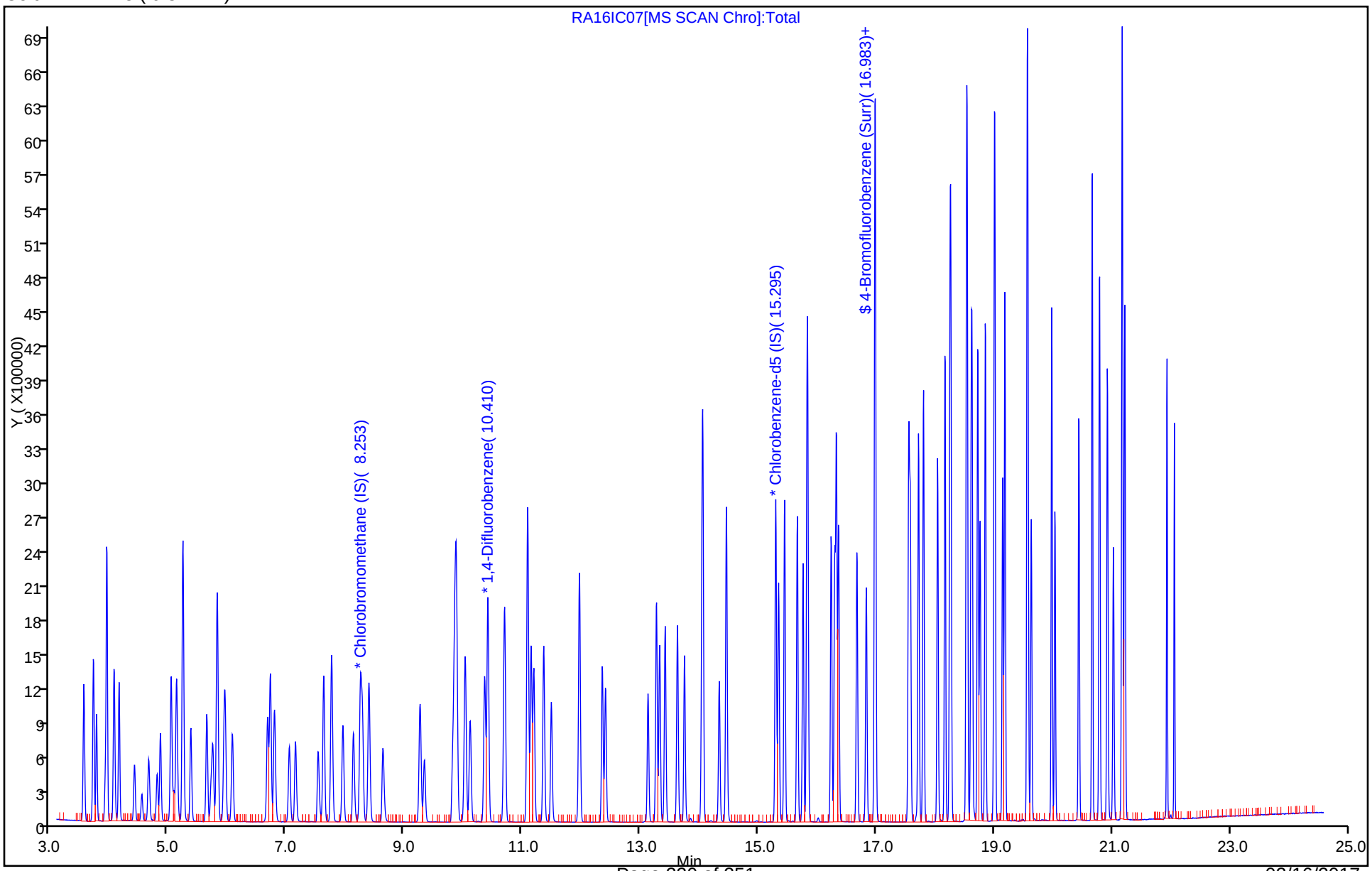
Report Date: 17-Jan-2017 14:55:32 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC07.D

Injection Date:	16-Jan-2017 22:14:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L7			Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

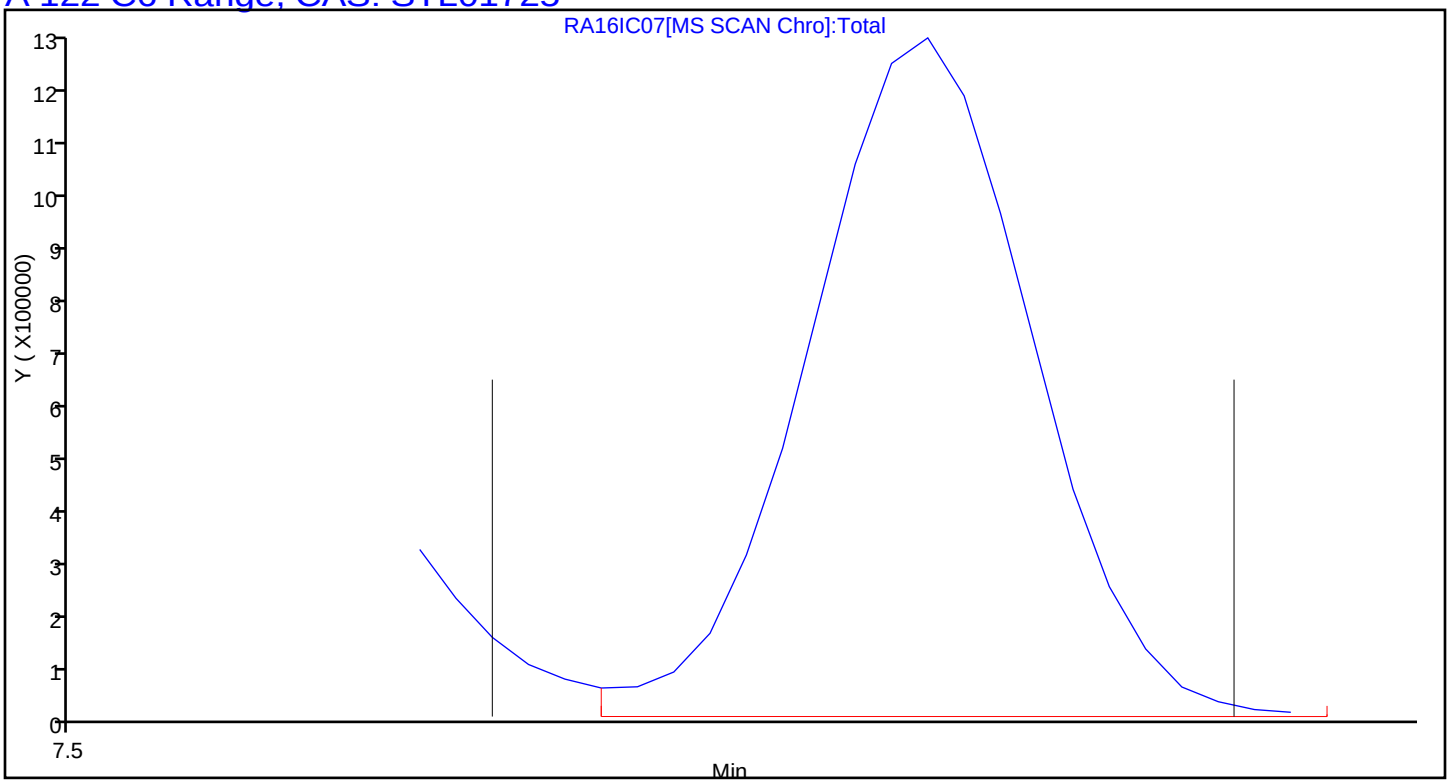


Report Date: 17-Jan-2017 14:55:32 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC07.D				
Injection Date:	16-Jan-2017 22:14:30	Instrument ID:	MR		
Lims ID:	IC L7				
Client ID:					
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC08.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 16-Jan-2017 23:01:30 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003844-010
Misc. Info.: 073140
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jan-2017 14:55:34 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: barlozhetskayaa Date: 17-Jan-2017 11:20:46

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.253	8.242	0.011	91	450508	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.415	10.407	0.008	93	2209311	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.295	15.293	0.002	85	1909501	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.988	16.984	0.004	95	1250364	4.00	4.19	
6 Chlorodifluoromethane	67	3.718	3.724	-0.006	96	200958	8.00	8.04	
7 Propene	41	3.723	3.728	-0.005	96	911591	8.00	7.78	
8 Dichlorodifluoromethane	85	3.772	3.776	-0.004	99	1570542	8.00	7.70	
9 Chloromethane	52	3.923	3.923	0.000	99	289828	8.00	7.57	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.950	3.951	-0.001	98	1666341	8.00	7.22	
11 Acetaldehyde	44	4.074	4.070	0.004	97	1128284	40.0	32.8	
12 Vinyl chloride	62	4.074	4.075	-0.001	70	714433	8.00	6.51	
13 Butadiene	54	4.155	4.155	0.000	91	494386	8.00	6.37	
14 Butane	43	4.160	4.158	0.002	91	927124	8.00	6.65	
15 Bromomethane	94	4.419	4.416	0.003	96	649522	8.00	6.76	
16 Chloroethane	64	4.548	4.541	0.007	97	304357	8.00	7.03	
17 Ethanol	31	4.667	4.651	0.016	98	974530	40.0	33.8	
18 Vinyl bromide	106	4.807	4.797	0.010	98	630026	8.00	7.03	
19 2-Methylbutane	43	4.856	4.856	0.000	88	560541	8.00	6.64	
20 Acrolein	56	5.039	5.033	0.006	96	219248	8.00	6.76	
21 Trichlorofluoromethane	101	5.044	5.036	0.008	99	2126205	8.00	7.59	
22 Acetonitrile	40	5.087	5.083	0.004	99	400939	8.00	8.24	
23 Acetone	58	5.136	5.133	0.003	97	1187796	24.0	22.9	
24 Isopropyl alcohol	45	5.244	5.232	0.012	93	3746271	24.0	24.6	
25 Pentane	72	5.244	5.238	0.006	95	180510	8.00	8.23	
26 Ethyl ether	31	5.373	5.377	-0.004	95	1089447	8.00	8.55	
27 1,1-Dichloroethene	96	5.648	5.639	0.009	97	967528	8.00	7.80	
28 Acrylonitrile	53	5.718	5.712	0.006	95	689539	8.00	8.67	
29 2-Methyl-2-propanol	59	5.751	5.746	0.005	96	1475064	8.00	8.85	
30 1,1,2-Trichloro-1,2,2-trif	101	5.826	5.819	0.007	95	1912665	8.00	8.04	
31 Methylene Chloride	84	5.945	5.931	0.014	95	835002	8.00	7.15	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.961	5.952	0.009	93	727739	8.00	8.29	
33 Carbon disulfide	76	6.080	6.072	0.008	98	2698758	8.00	8.44	
34 trans-1,2-Dichloroethene	96	6.678	6.667	0.011	98	1020192	8.00	7.74	
35 2-Methylpentane	43	6.727	6.719	0.008	96	2062991	8.00	8.51	
36 Methyl tert-butyl ether	73	6.797	6.797	0.000	97	2428743	8.00	8.72	
37 1,1-Dichloroethane	63	7.050	7.035	0.015	100	1692604	8.00	8.15	
38 Vinyl acetate	43	7.153	7.147	0.006	100	2710284	8.00	9.21	
39 2-Butanone (MEK)	72	7.536	7.536	0.000	99	468077	8.00	8.62	
40 Hexane	56	7.633	7.622	0.011	91	720175	8.00	8.44	
41 Isopropyl ether	45	7.762	7.761	0.001	98	3356833	8.00	8.62	
42 cis-1,2-Dichloroethene	96	7.956	7.944	0.012	91	1055779	8.00	7.69	
43 Ethyl acetate	43	8.134	8.132	0.002	100	2238695	8.00	9.03	
44 Chloroform	83	8.285	8.274	0.011	97	1869398	8.00	7.97	
45 Tert-butyl ethyl ether	59	8.398	8.396	0.002	93	2515911	8.00	8.86	
46 Tetrahydrofuran	42	8.636	8.639	-0.003	97	1169335	8.00	8.67	
47 1,1,1-Trichloroethane	97	9.267	9.254	0.013	94	1948514	8.00	8.33	
48 1,2-Dichloroethane	62	9.337	9.328	0.009	96	1107907	8.00	8.33	
49 n-Butanol	31	9.811	9.825	-0.014	89	422395	8.00	9.46	
50 Benzene	78	9.849	9.838	0.011	95	2983633	8.00	7.77	
51 Cyclohexane	69	9.871	9.866	0.005	95	461730	8.00	8.41	
52 Carbon tetrachloride	117	9.887	9.878	0.009	97	2080493	8.00	8.85	
53 2,3-Dimethylpentane	71	10.032	10.026	0.006	92	679988	8.00	8.34	
54 Thiophene	84	10.113	10.107	0.006	93	1647044	8.00	8.26	
55 Tert-amyl methyl ether	73	10.361	10.361	0.000	98	2670160	8.00	9.11	
56 Isooctane	57	10.696	10.692	0.004	99	4513728	8.00	8.61	
57 1,2-Dichloropropane	63	11.084	11.078	0.006	91	1131282	8.00	8.52	
58 n-Heptane	71	11.095	11.086	0.009	91	1070503	8.00	8.56	
59 Trichloroethene	130	11.149	11.141	0.008	94	1337924	8.00	7.70	
60 Dibromomethane	93	11.197	11.186	0.011	88	1142397	8.00	8.55	
61 Dichlorobromomethane	83	11.364	11.354	0.010	98	1986552	8.00	8.94	
62 1,4-Dioxane	88	11.359	11.365	-0.006	84	483811	8.00	7.86	
63 Methyl methacrylate	41	11.488	11.488	0.000	92	1313409	8.00	9.48	
64 Methylcyclohexane	83	11.968	11.963	0.005	97	2157606	8.00	8.46	
65 4-Methyl-2-pentanone (MIBK	43	12.356	12.355	0.001	97	2370240	8.00	9.14	
66 cis-1,3-Dichloropropene	75	12.410	12.405	0.005	92	1666244	8.00	8.68	
67 trans-1,3-Dichloropropene	75	13.133	13.126	0.007	98	1522679	8.00	8.99	
68 Toluene	91	13.273	13.269	0.004	93	3434233	8.00	8.23	
69 1,1,2-Trichloroethane	83	13.327	13.323	0.004	94	1035226	8.00	7.88	
70 2-Methylthiophene	97	13.424	13.417	0.007	97	3023751	8.00	8.32	
71 3-Methylthiophene	97	13.629	13.625	0.004	98	2998597	8.00	8.38	
72 2-Hexanone	58	13.748	13.752	-0.004	92	1144315	8.00	9.30	
73 Chlorodibromomethane	129	14.044	14.042	0.002	97	2208273	8.00	9.19	
74 n-Octane	85	14.066	14.060	0.006	93	1082269	8.00	8.15	
75 Ethylene Dibromide	107	14.341	14.336	0.005	98	1978394	8.00	8.61	
76 Tetrachloroethene	129	14.459	14.456	0.003	96	1244199	8.00	7.77	
77 Chlorobenzene	112	15.344	15.342	0.002	95	2742751	8.00	7.98	
78 2,3-Dimethylheptane	43	15.446	15.444	0.002	97	3092749	8.00	8.58	
79 Ethylbenzene	91	15.662	15.660	0.002	97	4519837	8.00	8.07	
80 2-Ethylthiophene	97	15.759	15.758	0.001	97	3572042	8.00	8.67	
81 m-Xylene & p-Xylene	91	15.834	15.830	0.004	99	6738733	16.0	16.0	
82 Bromoform	173	16.239	16.235	0.004	98	3037906	8.00	9.82	
83 Styrene	104	16.298	16.296	0.002	98	2646737	8.00	8.86	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.325	16.324	0.001	94	2128023	8.00	8.78	
85 o-Xylene	91	16.363	16.359	0.004	99	3550963	8.00	8.06	
86 1,1,2,2-Tetrachloroethane	83	16.676	16.671	0.005	99	2740331	8.00	8.19	
87 1,2,3-Trichloropropane	110	16.832	16.831	0.001	98	795101	8.00	8.45	
88 Isopropylbenzene	105	16.978	16.977	0.001	96	5035195	8.00	8.10	
89 N-Propylbenzene	120	17.555	17.552	0.003	100	1452626	8.00	8.44	
90 2-Chlorotoluene	126	17.582	17.578	0.004	96	1343683	8.00	8.29	
91 4-Ethyltoluene	105	17.722	17.718	0.004	99	5400070	8.00	8.66	
92 1,3,5-Trimethylbenzene	120	17.803	17.802	0.001	93	2394702	8.00	7.92	
93 Alpha Methyl Styrene	118	18.045	18.042	0.003	91	2321622	8.00	9.68	
94 n-Decane	57	18.169	18.166	0.003	91	2666611	8.00	8.65	
95 tert-Butylbenzene	119	18.256	18.251	0.005	91	4307394	8.00	8.09	
96 1,2,4-Trimethylbenzene	105	18.272	18.267	0.005	96	4302436	8.00	7.94	
97 1,3-Dichlorobenzene	146	18.531	18.531	0.000	96	3065047	8.00	7.99	
98 sec-Butylbenzene	105	18.547	18.543	0.004	99	6163445	8.00	8.10	
99 Benzyl chloride	91	18.612	18.607	0.005	99	3926456	8.00	9.39	
100 1,4-Dichlorobenzene	146	18.628	18.625	0.003	95	3205771	8.00	8.22	
101 4-Isopropyltoluene	119	18.725	18.720	0.005	96	5298681	8.00	8.53	
102 1,2,3-Trimethylbenzene	105	18.763	18.762	0.001	97	3534922	8.00	8.19	
103 Butylcyclohexane	83	18.854	18.851	0.003	97	3335838	8.00	8.30	
104 1,2-Dichlorobenzene	146	19.005	19.003	0.002	96	2971893	8.00	7.94	
105 2,3-Dihydroindene	117	19.016	19.012	0.004	94	3897507	8.00	8.10	
106 Indene	116	19.145	19.146	-0.001	92	3448800	8.00	8.29	
107 n-Butylbenzene	91	19.183	19.183	0.000	98	5141734	8.00	8.58	
108 Undecane	57	19.561	19.561	0.000	96	2778444	8.00	7.96	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.577	19.574	0.003	98	3774698	8.00	8.14	
110 1,2-Dibromo-3-Chloropropan	157	19.631	19.631	0.000	90	1842254	8.00	9.37	
111 1,2,4,5-Tetramethylbenzene	119	19.981	19.977	0.004	97	4741194	8.00	8.66	
112 1,2,3,5-Tetramethylbenzene	119	20.035	20.031	0.004	96	2994841	8.00	8.72	
113 1,2,3,4-Tetramethylbenzene	119	20.440	20.439	0.001	97	4074204	8.00	8.78	
114 Dodecane	57	20.666	20.664	0.002	95	3144288	8.00	8.64	
115 1,2,4-Trichlorobenzene	180	20.790	20.788	0.002	93	3614528	8.00	8.11	
116 Naphthalene	128	20.925	20.922	0.003	99	6621298	8.00	8.05	
117 Benzo(b)thiophene	134	21.027	21.024	0.003	100	4044337	8.00	8.97	
118 Hexachlorobutadiene	225	21.173	21.173	0.000	91	3510409	8.00	8.83	
119 1,2,3-Trichlorobenzene	180	21.216	21.217	-0.001	95	3469925	8.00	8.56	
120 2-Methylnaphthalene	142	21.933	21.933	0.000	98	2839351	25.0	29.3	
121 1-Methylnaphthalene	142	22.057	22.057	0.000	98	2232500	25.0	24.6	
A 122 C6 Range	1	7.628	(7.568-7.667)		0	6229109	8.00	8.27	
S 124 Xylenes, Total	100				0		24.0	24.1	
S 125 1,2-Dichloroethene, Total	1				0		16.0	15.4	

Reagents:

40L8DNP_00009	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

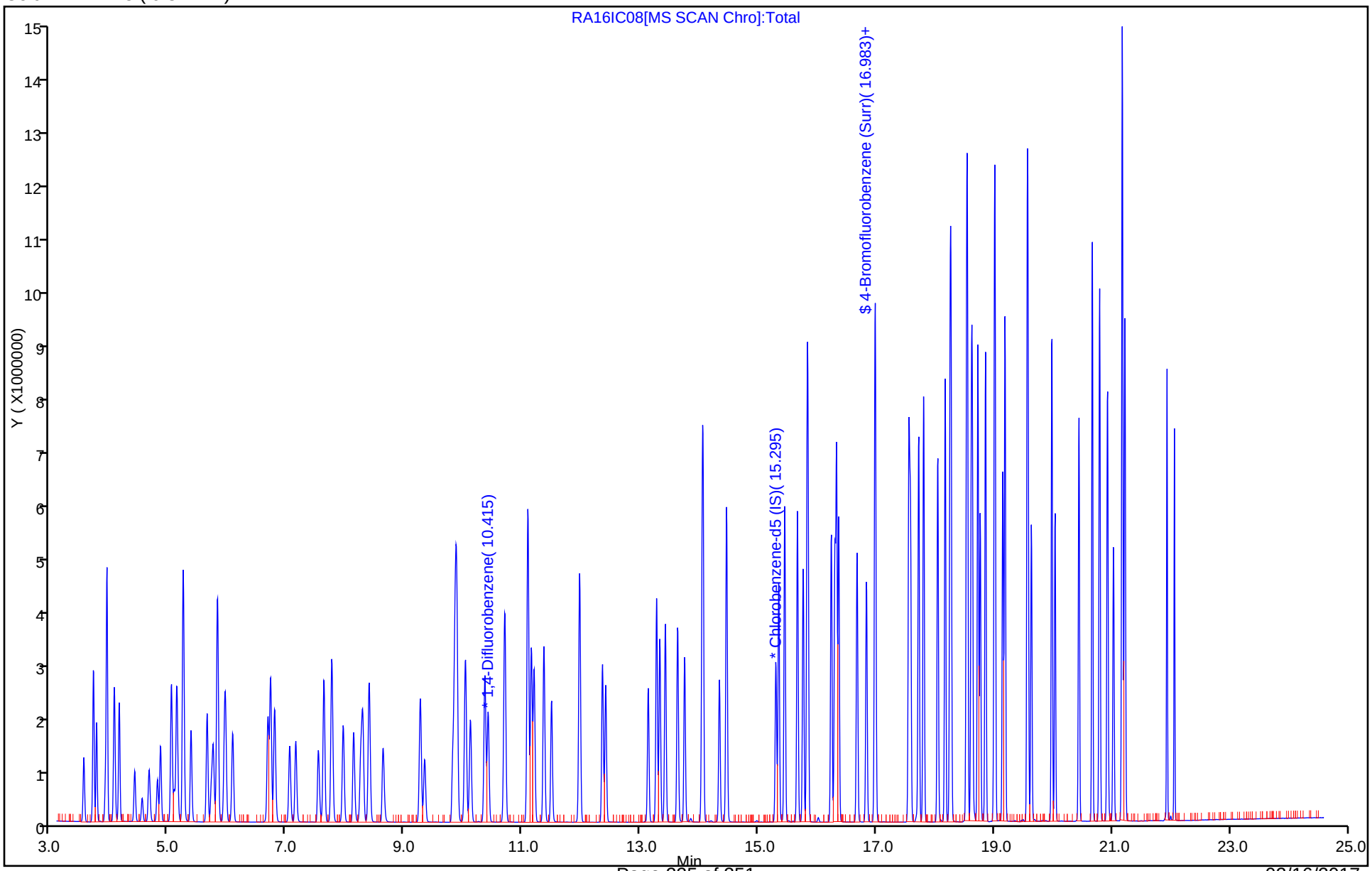
Report Date: 17-Jan-2017 14:55:35 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC08.D

Injection Date:	16-Jan-2017 23:01:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L8			Worklist Smp#:	10
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

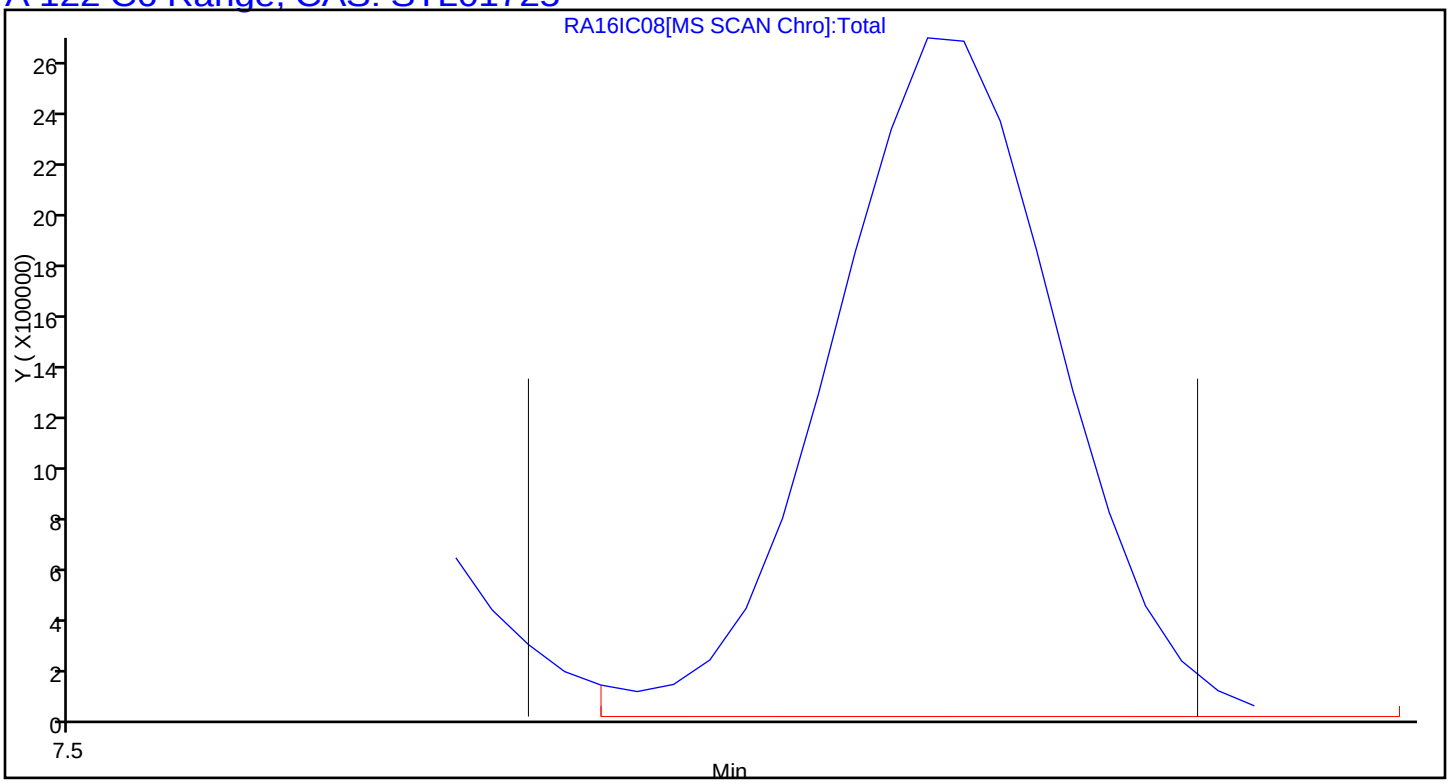


Report Date: 17-Jan-2017 14:55:35 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC08.D				
Injection Date:	16-Jan-2017 23:01:30	Instrument ID:	MR		
Lims ID:	IC L8				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC09.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 16-Jan-2017 23:49:30 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003844-011
Misc. Info.: 073138
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jan-2017 14:55:38 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: barlozhetskayaa Date: 17-Jan-2017 11:21:04

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.258	8.242	0.016	91	477090	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.420	10.407	0.013	93	2365749	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.300	15.293	0.007	85	2067393	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.988	16.984	0.004	94	1198131	4.00	3.70	
6 Chlorodifluoromethane	67	3.718	3.724	-0.006	96	408661	16.0	15.4	
7 Propene	41	3.723	3.728	-0.005	97	1629703	16.0	13.1	
8 Dichlorodifluoromethane	85	3.772	3.776	-0.004	99	3412348	16.0	15.8	
9 Chloromethane	52	3.923	3.923	0.000	100	494899	16.0	12.2	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.950	3.951	-0.001	90	3070600	16.0	12.6	
11 Acetaldehyde	44	4.079	4.070	0.009	95	1966956	80.0	54.0	
12 Vinyl chloride	62	4.074	4.075	-0.001	67	1282078	16.0	11.0	
13 Butadiene	54	4.160	4.155	0.005	90	874525	16.0	10.6	
14 Butane	43	4.160	4.158	0.002	92	1637500	16.0	11.1	
15 Bromomethane	94	4.424	4.416	0.008	96	1195161	16.0	11.7	
16 Chloroethane	64	4.553	4.541	0.012	95	554082	16.0	12.1	
17 Ethanol	31	4.672	4.651	0.021	99	1726674	80.0	56.6	
18 Vinyl bromide	106	4.812	4.797	0.015	98	1163867	16.0	12.3	
19 2-Methylbutane	43	4.861	4.856	0.005	88	1015242	16.0	11.4	
20 Acrolein	56	5.039	5.033	0.006	98	420060	16.0	12.2	
21 Trichlorofluoromethane	101	5.044	5.036	0.008	99	4195509	16.0	14.2	
22 Acetonitrile	40	5.098	5.083	0.015	99	785119	16.0	15.2	
23 Acetone	58	5.141	5.133	0.008	97	2377763	48.0	43.3	
24 Isopropyl alcohol	45	5.254	5.232	0.022	96	7272319	48.0	45.0	
25 Pentane	72	5.244	5.238	0.006	97	354459	16.0	15.3	
26 Ethyl ether	31	5.379	5.377	0.001	95	2035713	16.0	15.1	
27 1,1-Dichloroethene	96	5.654	5.639	0.015	97	2044882	16.0	15.6	
28 Acrylonitrile	53	5.724	5.712	0.012	95	1415761	16.0	16.8	
29 2-Methyl-2-propanol	59	5.756	5.746	0.010	95	3065580	16.0	17.4	
30 1,1,2-Trichloro-1,2,2-trif	101	5.826	5.819	0.007	94	3833335	16.0	15.2	
31 Methylene Chloride	84	5.950	5.931	0.019	94	1741347	16.0	14.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.966	5.952	0.014	94	1492611	16.0	16.1	
33 Carbon disulfide	76	6.085	6.072	0.013	98	5567432	16.0	16.4	
34 trans-1,2-Dichloroethene	96	6.683	6.667	0.016	98	2145105	16.0	15.4	
35 2-Methylpentane	43	6.727	6.719	0.008	95	4018277	16.0	15.7	
36 Methyl tert-butyl ether	73	6.797	6.797	0.000	97	5153893	16.0	17.5	
37 1,1-Dichloroethane	63	7.050	7.035	0.015	100	3550291	16.0	16.1	
38 Vinyl acetate	43	7.158	7.147	0.011	100	5577891	16.0	17.9	
39 2-Butanone (MEK)	72	7.541	7.536	0.005	99	1003055	16.0	17.4	
40 Hexane	56	7.633	7.622	0.011	90	1465350	16.0	16.2	
41 Isopropyl ether	45	7.767	7.761	0.006	97	6516624	16.0	15.8	
42 cis-1,2-Dichloroethene	96	7.961	7.944	0.017	91	2259890	16.0	15.5	
43 Ethyl acetate	43	8.139	8.132	0.007	100	4517125	16.0	17.2	
44 Chloroform	83	8.290	8.274	0.016	96	4012562	16.0	16.2	
45 Tert-butyl ethyl ether	59	8.398	8.396	0.002	93	5289215	16.0	17.6	
46 Tetrahydrofuran	42	8.636	8.639	-0.003	95	2337928	16.0	16.4	
47 1,1,1-Trichloroethane	97	9.266	9.254	0.012	94	4291452	16.0	17.3	
48 1,2-Dichloroethane	62	9.342	9.328	0.014	97	2409618	16.0	16.9	
49 n-Butanol	31	9.822	9.825	-0.003	87	815757	16.0	17.1	
50 Benzene	78	9.854	9.838	0.016	95	5626343	16.0	13.7	
51 Cyclohexane	69	9.870	9.866	0.004	92	817744	16.0	13.9	
52 Carbon tetrachloride	117	9.887	9.878	0.009	98	4378793	16.0	17.4	
53 2,3-Dimethylpentane	71	10.032	10.026	0.006	91	1400028	16.0	16.0	
54 Thiophene	84	10.118	10.107	0.011	93	3486321	16.0	16.3	
55 Tert-amyl methyl ether	73	10.361	10.361	0.000	98	5591059	16.0	17.8	
56 Isooctane	57	10.701	10.692	0.009	99	8671845	16.0	15.5	
57 1,2-Dichloropropane	63	11.089	11.078	0.011	91	2015496	16.0	14.2	
58 n-Heptane	71	11.100	11.086	0.014	90	1948044	16.0	14.6	
59 Trichloroethene	130	11.154	11.141	0.013	96	2689565	16.0	14.5	
60 Dibromomethane	93	11.197	11.186	0.011	87	2313341	16.0	16.2	
61 Dichlorobromomethane	83	11.364	11.354	0.010	98	4159657	16.0	17.5	
62 1,4-Dioxane	88	11.364	11.365	-0.001	91	925447	16.0	14.0	
63 Methyl methacrylate	41	11.493	11.488	0.005	89	2639577	16.0	17.8	
64 Methylcyclohexane	83	11.968	11.963	0.005	96	4182340	16.0	15.3	
65 4-Methyl-2-pentanone (MIBK	43	12.356	12.355	0.001	96	4528099	16.0	16.3	
66 cis-1,3-Dichloropropene	75	12.416	12.405	0.011	92	3524574	16.0	17.1	
67 trans-1,3-Dichloropropene	75	13.133	13.126	0.007	97	3277150	16.0	17.9	
68 Toluene	91	13.278	13.269	0.009	94	6856744	16.0	15.2	
69 1,1,2-Trichloroethane	83	13.332	13.323	0.009	95	2043617	16.0	14.4	
70 2-Methylthiophene	97	13.424	13.417	0.007	96	6073558	16.0	15.4	
71 3-Methylthiophene	97	13.634	13.625	0.009	98	5988983	16.0	15.5	
72 2-Hexanone	58	13.753	13.752	0.001	93	2233901	16.0	16.8	
73 Chlorodibromomethane	129	14.049	14.042	0.007	96	4180918	16.0	16.1	
74 n-Octane	85	14.066	14.060	0.006	91	1850963	16.0	12.9	
75 Ethylene Dibromide	107	14.341	14.336	0.005	97	4001584	16.0	16.1	
76 Tetrachloroethene	129	14.465	14.456	0.009	95	2375762	16.0	13.7	
77 Chlorobenzene	112	15.349	15.342	0.007	96	5354812	16.0	14.4	
78 2,3-Dimethylheptane	43	15.446	15.444	0.002	93	5096793	16.0	13.1	
79 Ethylbenzene	91	15.667	15.660	0.007	98	8589676	16.0	14.2	
80 2-Ethylthiophene	97	15.764	15.758	0.006	98	6997219	16.0	15.7	
81 m-Xylene & p-Xylene	91	15.840	15.830	0.010	99	11917796	32.0	26.1	
82 Bromoform	173	16.239	16.235	0.004	98	6153703	16.0	18.4	
83 Styrene	104	16.298	16.296	0.002	98	5020713	16.0	15.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.330	16.324	0.006	91	3420328	16.0	13.0	
85 o-Xylene	91	16.363	16.359	0.004	99	6800409	16.0	14.3	
86 1,1,2,2-Tetrachloroethane	83	16.676	16.671	0.005	100	5070297	16.0	14.0	
87 1,2,3-Trichloropropane	110	16.837	16.831	0.006	97	1654343	16.0	16.2	
88 Isopropylbenzene	105	16.978	16.977	0.001	97	9381159	16.0	13.9	
89 N-Propylbenzene	120	17.554	17.552	0.002	99	2635364	16.0	14.1	
90 2-Chlorotoluene	126	17.581	17.578	0.003	96	2441631	16.0	13.9	
91 4-Ethyltoluene	105	17.722	17.718	0.004	99	10029684	16.0	14.9	
92 1,3,5-Trimethylbenzene	120	17.808	17.802	0.006	92	4364039	16.0	13.3	
93 Alpha Methyl Styrene	118	18.045	18.042	0.003	90	4413169	16.0	17.0	
94 n-Decane	57	18.175	18.166	0.009	93	4527461	16.0	13.6	
95 tert-Butylbenzene	119	18.255	18.251	0.004	94	7434970	16.0	12.9	
96 1,2,4-Trimethylbenzene	105	18.272	18.267	0.005	97	7495827	16.0	12.8	
97 1,3-Dichlorobenzene	146	18.536	18.531	0.005	97	5323509	16.0	12.8	
98 sec-Butylbenzene	105	18.552	18.543	0.009	98	10282209	16.0	12.5	
99 Benzyl chloride	91	18.611	18.607	0.004	99	7358133	16.0	16.2	
100 1,4-Dichlorobenzene	146	18.633	18.625	0.008	95	5694211	16.0	13.5	
101 4-Isopropyltoluene	119	18.725	18.720	0.005	95	9338084	16.0	13.9	
102 1,2,3-Trimethylbenzene	105	18.768	18.762	0.006	97	6800840	16.0	14.5	
103 Butylcyclohexane	83	18.859	18.851	0.008	95	5762440	16.0	13.2	
104 1,2-Dichlorobenzene	146	19.005	19.003	0.002	96	5132316	16.0	12.7	
105 2,3-Dihydroindene	117	19.021	19.012	0.009	94	6504175	16.0	12.5	
106 Indene	116	19.151	19.146	0.005	92	6501047	16.0	15.9	
107 n-Butylbenzene	91	19.183	19.183	0.000	98	8997517	16.0	13.9	
108 Undecane	57	19.560	19.561	-0.001	92	4122448	16.0	10.9	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.582	19.574	0.008	97	6266512	16.0	15.9	
110 1,2-Dibromo-3-Chloropropan	157	19.636	19.631	0.005	92	3521605	16.0	16.5	
111 1,2,4,5-Tetramethylbenzene	119	19.981	19.977	0.004	97	8444468	16.0	14.2	
112 1,2,3,5-Tetramethylbenzene	119	20.035	20.031	0.004	96	5707097	16.0	15.4	
113 1,2,3,4-Tetramethylbenzene	119	20.439	20.439	0.000	97	7409018	16.0	14.8	
114 Dodecane	57	20.666	20.664	0.002	92	4919118	16.0	12.5	
115 1,2,4-Trichlorobenzene	180	20.790	20.788	0.002	93	6674555	16.0	13.8	
116 Naphthalene	128	20.925	20.922	0.003	99	11584991	16.0	13.0	
117 Benzo(b)thiophene	134	21.027	21.024	0.003	99	7689569	16.0	15.7	
118 Hexachlorobutadiene	225	21.178	21.173	0.005	91	6889790	16.0	16.0	
119 1,2,3-Trichlorobenzene	180	21.221	21.217	0.004	95	6426986	16.0	14.7	
120 2-Methylnaphthalene	142	21.933	21.933	0.000	98	5188631	50.0	49.4	
121 1-Methylnaphthalene	142	22.057	22.057	0.000	98	4077774	50.0	41.5	
A 122 C6 Range	1	7.636	(7.573-7.673)		0	12330332	16.0	15.3	
S 124 Xylenes, Total	100				0		48.0	40.4	
S 125 1,2-Dichloroethene, Total	1				0		32.0	30.9	

Reagents:

40L9DNP_00012	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

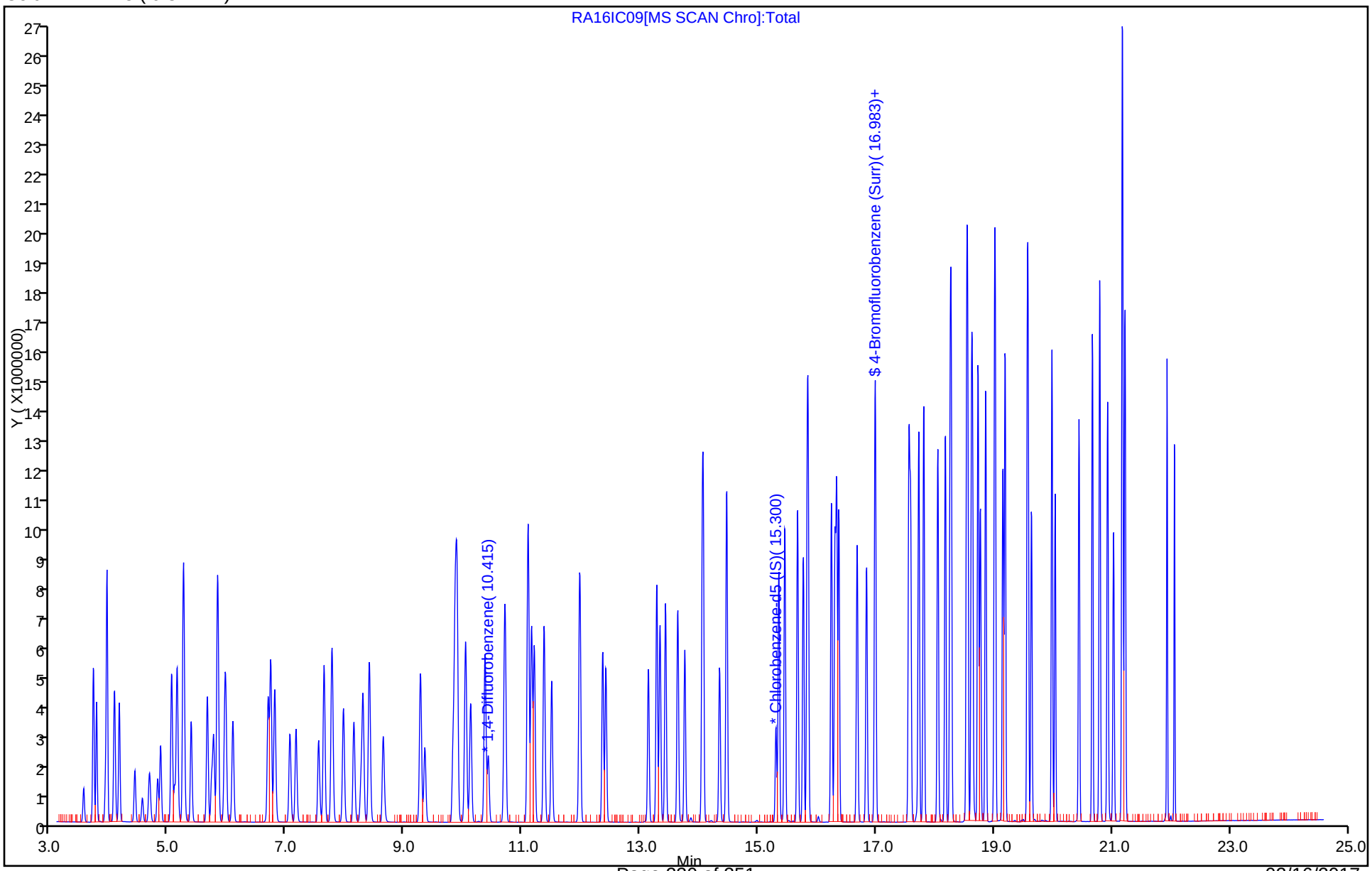
Report Date: 17-Jan-2017 14:55:38 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC09.D

Injection Date:	16-Jan-2017 23:49:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L9			Worklist Smp#:	11
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

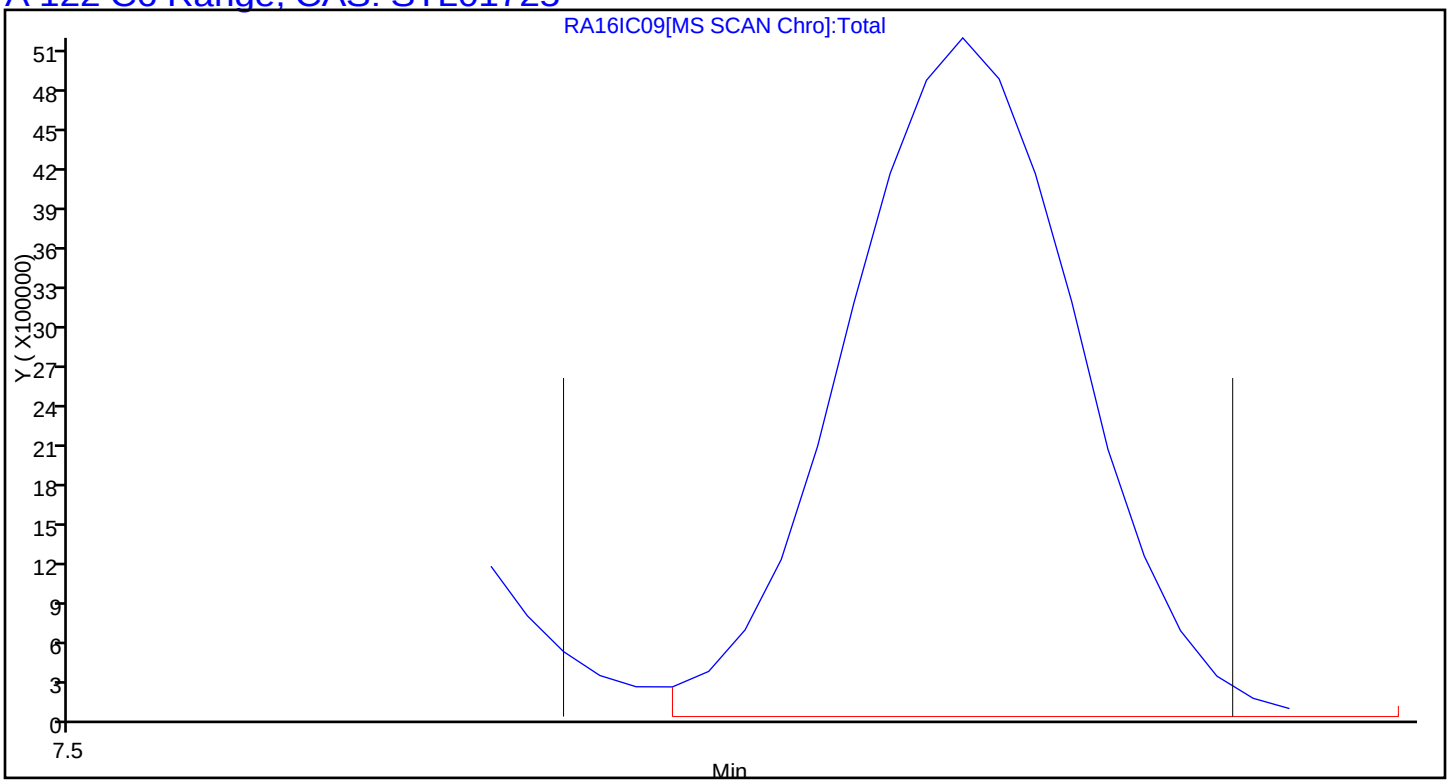


Report Date: 17-Jan-2017 14:55:39 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC09.D				
Injection Date:	16-Jan-2017 23:49:30	Instrument ID:	MR		
Lims ID:	IC L9				
Client ID:					
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 17-Jan-2017 10:29:30 ALS Bottle#: 2 Worklist Smp#: 24
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003844-003
Misc. Info.: 073145
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jan-2017 14:55:41 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: barlozhetskayaa Date: 17-Jan-2017 11:10:44

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.226	8.242	-0.016	89	403216	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.399	10.407	-0.008	93	1959565	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.290	15.293	-0.003	85	1655158	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.983	16.984	-0.001	95	1051035	4.00	4.06	
6 Chlorodifluoromethane	67	3.728	3.724	0.004	95	1272	0.0392	0.0569	
7 Propene	41	3.728	3.728	0.000	74	7577	0.0392	0.0723	
8 Dichlorodifluoromethane	85	3.777	3.776	0.001	99	11457	0.0392	0.0628	
9 Chloromethane	52	3.923	3.923	-0.001	99	1674	0.0392	0.0488	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.949	3.951	-0.002	87	10733	0.0392	0.0519	
11 Acetaldehyde	44	4.068	4.070	-0.002	93	14974	0.1960	0.4867	
12 Vinyl chloride	62	4.073	4.075	-0.002	46	3960	0.0392	0.0403	
13 Butadiene	54	4.149	4.155	-0.006	69	3255	0.0392	0.0469	
14 Butane	43	4.154	4.158	-0.004	83	6315	0.0392	0.0506	
15 Bromomethane	94	4.413	4.416	-0.003	98	4821	0.0392	0.0561	
16 Chloroethane	64	4.532	4.541	-0.009	51	1858	0.0392	0.0479	
17 Ethanol	31	4.640	4.651	-0.011	94	7799	0.1960	0.3023	
18 Vinyl bromide	106	4.785	4.797	-0.012	94	4091	0.0392	0.0510	
19 2-Methylbutane	43	4.850	4.856	-0.006	92	4787	0.0392	0.0634	
20 Acrolein	56	5.028	5.033	-0.005	33	2738	0.0392	0.0944	
21 Trichlorofluoromethane	101	5.028	5.036	-0.008	96	11674	0.0392	0.0466	
23 Acetone	58	5.130	5.133	-0.003	97	9410	0.1176	0.2027	
24 Isopropyl alcohol	45	5.222	5.232	-0.010	86	26966	0.1176	0.1975	
25 Pentane	72	5.233	5.238	-0.005	69	891	0.0392	0.0454	
26 Ethyl ether	31	5.384	5.377	0.007	95	6507	0.0392	0.0571	
27 1,1-Dichloroethene	96	5.626	5.639	-0.013	95	5320	0.0392	0.0479	
28 Acrylonitrile	53	5.707	5.712	-0.005	88	4003	0.0392	0.0562	
29 2-Methyl-2-propanol	59	5.751	5.746	0.004	96	8728	0.0392	0.0585	
30 1,1,2-Trichloro-1,2,2-trif	101	5.810	5.819	-0.009	91	10810	0.0392	0.0508	
31 Methylene Chloride	84	5.918	5.931	-0.013	94	12665	0.0392	0.1212	
32 3-Chloro-1-propene	39	5.934	5.952	-0.018	92	4948	0.0392	0.0630	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.058	6.072	-0.014	99	14281	0.0392	0.0499	
34 trans-1,2-Dichloroethene	96	6.656	6.667	-0.011	93	5900	0.0392	0.0500	
35 2-Methylpentane	43	6.710	6.719	-0.009	93	11826	0.0392	0.0545	
36 Methyl tert-butyl ether	73	6.802	6.797	0.005	96	13500	0.0392	0.0542	
37 1,1-Dichloroethane	63	7.012	7.035	-0.023	99	9512	0.0392	0.0512	
38 Vinyl acetate	43	7.142	7.147	-0.005	99	14427	0.0392	0.0548	
39 2-Butanone (MEK)	72	7.535	7.536	-0.001	98	2617	0.0392	0.0538	
40 Hexane	56	7.611	7.622	-0.011	90	4305	0.0392	0.0564	
41 Isopropyl ether	45	7.767	7.761	0.006	96	19838	0.0392	0.0569	
42 cis-1,2-Dichloroethene	96	7.934	7.944	-0.010	88	6306	0.0392	0.0513	
43 Ethyl acetate	43	8.134	8.132	0.002	99	12773	0.0392	0.0576	
44 Chloroform	83	8.263	8.274	-0.011	91	10569	0.0392	0.0504	
45 Tert-butyl ethyl ether	59	8.398	8.396	0.002	93	14238	0.0392	0.0560	
46 Tetrahydrofuran	42	8.652	8.639	0.013	91	6444	0.0392	0.0534	
47 1,1,1-Trichloroethane	97	9.245	9.254	-0.009	94	10963	0.0392	0.0523	
48 1,2-Dichloroethane	62	9.315	9.328	-0.013	94	5803	0.0392	0.0492	
49 n-Butanol	31	9.849	9.825	0.024	70	2466	0.0392	0.0622	
50 Benzene	78	9.827	9.838	-0.011	95	18024	0.0392	0.0529	
51 Cyclohexane	69	9.865	9.866	-0.001	93	2706	0.0392	0.0556	
52 Carbon tetrachloride	117	9.865	9.878	-0.013	97	9338	0.0392	0.0448	
53 2,3-Dimethylpentane	71	10.016	10.026	-0.010	94	3908	0.0392	0.0541	
54 Thiophene	84	10.091	10.107	-0.016	91	9121	0.0392	0.0516	
55 Tert-amyl methyl ether	73	10.377	10.361	0.016	47	17664	0.0392	0.0679	
56 Isooctane	57	10.685	10.692	-0.007	99	25576	0.0392	0.0550	
57 1,2-Dichloropropane	63	11.067	11.078	-0.011	72	6389	0.0392	0.0543	
58 n-Heptane	71	11.078	11.086	-0.008	88	5918	0.0392	0.0534	
59 Trichloroethene	130	11.127	11.141	-0.014	85	8089	0.0392	0.0525	
60 Dibromomethane	93	11.175	11.186	-0.011	82	6462	0.0392	0.0545	
61 Dichlorobromomethane	83	11.342	11.354	-0.012	97	9159	0.0392	0.0465	
62 1,4-Dioxane	88	11.369	11.365	0.004	72	3109	0.0392	0.0569	
63 Methyl methacrylate	41	11.488	11.488	0.000	90	7298	0.0392	0.0594	
64 Methylcyclohexane	83	11.952	11.963	-0.011	95	12097	0.0392	0.0535	
65 4-Methyl-2-pentanone (MIBK	43	12.362	12.355	0.007	96	13688	0.0392	0.0595	
66 cis-1,3-Dichloropropene	75	12.394	12.405	-0.011	95	8151	0.0392	0.0479	
67 trans-1,3-Dichloropropene	75	13.116	13.126	-0.010	98	7298	0.0392	0.0497	
68 Toluene	91	13.262	13.269	-0.007	92	20790	0.0392	0.0575	
69 1,1,2-Trichloroethane	83	13.321	13.323	-0.002	95	6192	0.0392	0.0543	
70 2-Methylthiophene	97	13.418	13.417	0.001	97	17052	0.0392	0.0542	
71 3-Methylthiophene	97	13.618	13.625	-0.007	97	16974	0.0392	0.0547	
72 2-Hexanone	58	13.753	13.752	0.001	93	5289	0.0392	0.0496	
73 Chlorodibromomethane	129	14.039	14.042	-0.003	96	9397	0.0392	0.0451	
74 n-Octane	85	14.055	14.060	-0.005	95	5631	0.0392	0.0489	
75 Ethylene Dibromide	107	14.330	14.336	-0.006	97	10472	0.0392	0.0526	
76 Tetrachloroethene	129	14.454	14.456	-0.002	92	7610	0.0392	0.0548	
77 Chlorobenzene	112	15.338	15.342	-0.004	98	19315	0.0392	0.0649	
78 2,3-Dimethylheptane	43	15.446	15.444	0.002	97	19272	0.0392	0.0617	
79 Ethylbenzene	91	15.656	15.660	-0.004	97	27613	0.0392	0.0568	
80 2-Ethylthiophene	97	15.759	15.758	0.001	97	20491	0.0392	0.0574	
81 m-Xylene & p-Xylene	91	15.823	15.830	-0.007	98	40874	0.0784	0.1120	
82 Bromoform	173	16.233	16.235	-0.002	98	11129	0.0392	0.0415	
83 Styrene	104	16.293	16.296	-0.003	98	12575	0.0392	0.0486	
84 n-Nonane	57	16.325	16.324	0.001	92	13198	0.0392	0.0628	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	16.357	16.359	-0.002	98	21175	0.0392	0.0555	
86 1,1,2,2-Tetrachloroethane	83	16.670	16.671	-0.001	98	15283	0.0392	0.0527	
87 1,2,3-Trichloropropane	110	16.832	16.831	0.001	97	4448	0.0392	0.0545	
88 Isopropylbenzene	105	16.977	16.977	0.000	47	32889	0.0392	0.0611	
89 N-Propylbenzene	120	17.554	17.552	0.002	99	8851	0.0392	0.0593	
90 2-Chlorotoluene	126	17.576	17.578	-0.002	91	9006	0.0392	0.0641	
91 4-Ethyltoluene	105	17.716	17.718	-0.002	100	31303	0.0392	0.0579	
92 1,3,5-Trimethylbenzene	120	17.797	17.802	-0.005	94	15234	0.0392	0.0581	
93 Alpha Methyl Styrene	118	18.040	18.042	-0.002	91	9576	0.0392	0.0461	
94 n-Decane	57	18.164	18.166	-0.002	89	14041	0.0392	0.0525	
95 tert-Butylbenzene	119	18.250	18.251	-0.001	95	27995	0.0392	0.0607	
96 1,2,4-Trimethylbenzene	105	18.266	18.267	-0.001	94	26327	0.0392	0.0561	
97 1,3-Dichlorobenzene	146	18.530	18.531	-0.001	94	22748	0.0392	0.0684	
98 sec-Butylbenzene	105	18.541	18.543	-0.002	99	39958	0.0392	0.0606	
99 Benzyl chloride	91	18.606	18.607	-0.001	100	20327	0.0392	0.0561	
100 1,4-Dichlorobenzene	146	18.622	18.625	-0.003	95	22707	0.0392	0.0672	
101 4-Isopropyltoluene	119	18.719	18.720	-0.001	96	30360	0.0392	0.0564	
102 1,2,3-Trimethylbenzene	105	18.762	18.762	0.000	96	21140	0.0392	0.0565	
103 Butylcyclohexane	83	18.849	18.851	-0.002	97	20618	0.0392	0.0592	
104 1,2-Dichlorobenzene	146	19.000	19.003	-0.003	98	22567	0.0392	0.0695	
105 2,3-Dihydroindene	117	19.010	19.012	-0.002	94	25536	0.0392	0.0612	
106 Indene	116	19.145	19.146	-0.001	89	17799	0.0392	0.0448	
107 n-Butylbenzene	91	19.183	19.183	0.000	97	29593	0.0392	0.0569	
108 Undecane	57	19.560	19.561	-0.001	96	16395	0.0392	0.0542	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.577	19.574	0.003	98	24347	0.0392	0.0495	
110 1,2-Dibromo-3-Chloropropan	157	19.630	19.631	-0.001	90	8013	0.0392	0.0470	
111 1,2,4,5-Tetramethylbenzene	119	19.976	19.977	-0.001	99	27503	0.0392	0.0579	
112 1,2,3,5-Tetramethylbenzene	119	20.030	20.031	-0.001	98	17130	0.0392	0.0575	
113 1,2,3,4-Tetramethylbenzene	119	20.439	20.439	0.000	99	23092	0.0392	0.0574	
114 Dodecane	57	20.660	20.664	-0.004	93	13103	0.0392	0.0415	
115 1,2,4-Trichlorobenzene	180	20.790	20.788	0.002	92	23496	0.0392	0.0608	
116 Naphthalene	128	20.925	20.922	0.003	99	42548	0.0392	0.0597	
117 Benzo(b)thiophene	134	21.022	21.024	-0.002	99	28196	0.0392	0.0721	
118 Hexachlorobutadiene	225	21.173	21.173	0.000	94	18186	0.0392	0.0528	
119 1,2,3-Trichlorobenzene	180	21.216	21.217	-0.001	93	23145	0.0392	0.0659	
120 2-Methylnaphthalene	142	21.933	21.933	0.000	96	7017	0.1225	0.0834	
121 1-Methylnaphthalene	142	22.057	22.057	0.000	94	5887	0.1225	0.0749	
A 122 C6 Range	1	7.609	(7.573-7.629)		0	38605	0.0392	0.0578	
S 124 Xylenes, Total	100				0		0.1176	0.1675	
S 125 1,2-Dichloroethene, Total	1				0		0.0784	0.1013	

Reagents:

40L12DNP_00009	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

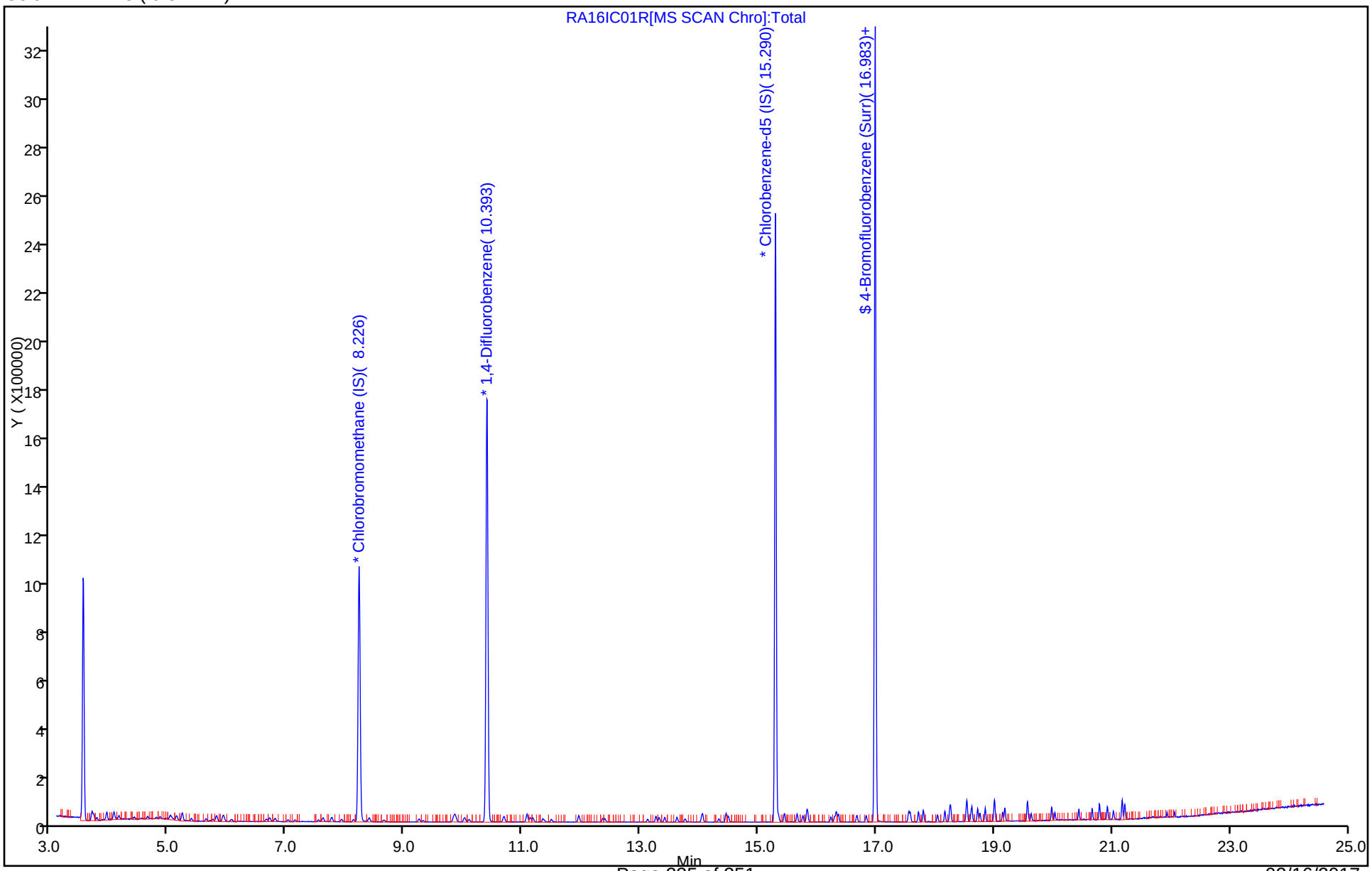
Report Date: 17-Jan-2017 14:55:42 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Injection Date:	17-Jan-2017 10:29:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L1			Worklist Smp#:	24
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



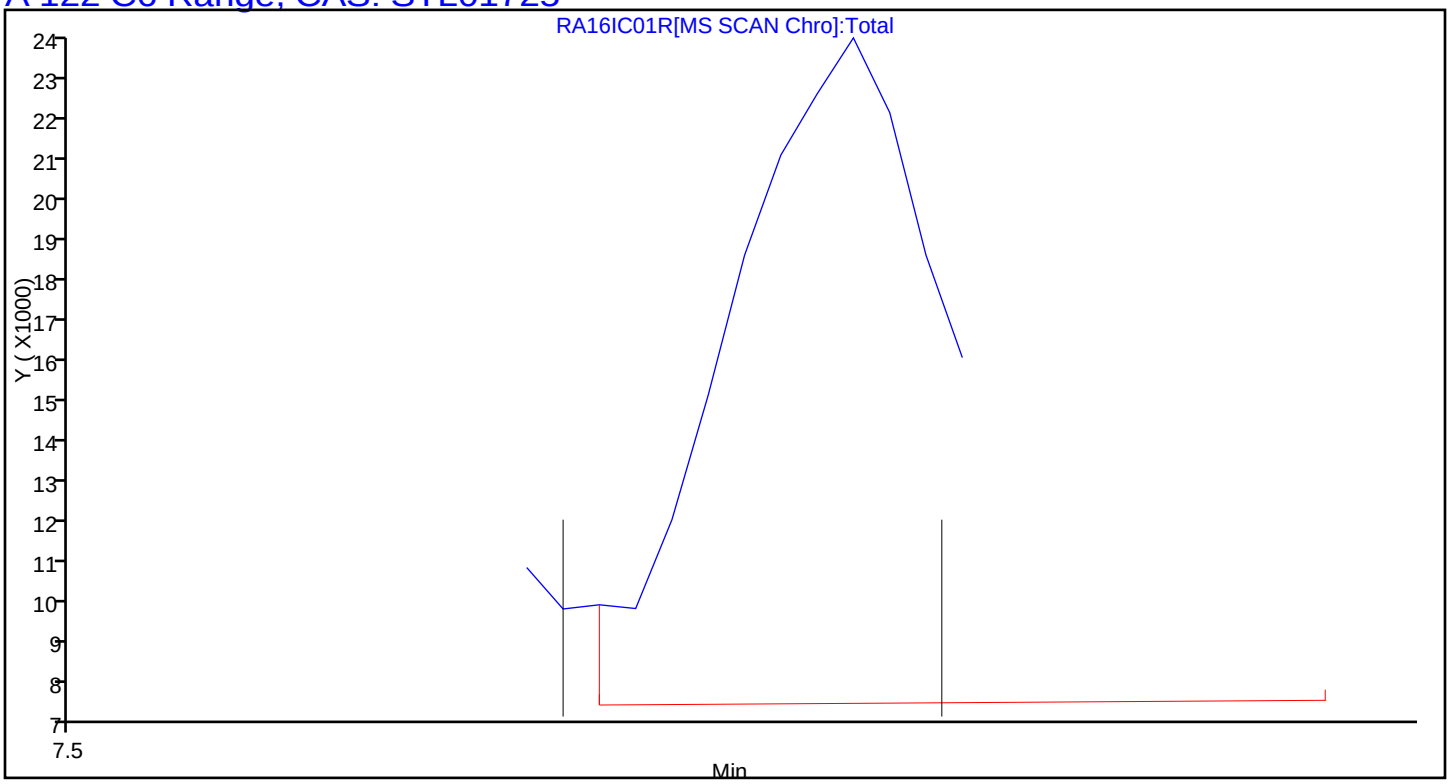
02/16/2017

Report Date: 17-Jan-2017 14:55:42 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D				
Injection Date:	17-Jan-2017 10:29:30	Instrument ID:	MR		
Lims ID:	IC L1				
Client ID:					
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 122 C6 Range, CAS: STL01725



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Lab Sample ID: ICV 140-7241/23 Calibration Date: 11/26/2016 12:43

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JK25ICVX.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3608	0.3705		5.14	5.00	2.7	35.0
Propene	Ave	1.245	1.241		4.99	5.00	-0.3	35.0
Dichlorodifluoromethane	Ave	3.239	3.419		5.28	5.00	5.6	35.0
Chloromethane	Ave	0.4618	0.4743		5.14	5.00	2.7	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	1.790	1.884		5.27	5.00	5.3	35.0
Acetaldehyde	Ave	0.4989	0.3583		18.0	25.0	-28.2	35.0
Vinyl chloride	Ave	1.385	1.509		5.45	5.00	8.9	35.0
1,3-Butadiene	Ave	1.112	1.176		5.29	5.00	5.8	35.0
Butane	Ave	2.414	2.507		5.20	5.00	3.9	35.0
Bromomethane	Ave	1.232	1.311		5.32	5.00	6.4	35.0
Chloroethane	Ave	0.6570	0.7069		5.38	5.00	7.6	35.0
Ethanol	Ave	0.5282	0.5157		24.4	25.0	-2.4	35.0
Vinyl bromide	Ave	1.206	1.358		5.63	5.00	12.6	35.0
2-Methylbutane	Ave	1.767	1.965		5.56	5.00	11.2	35.0
Trichlorofluoromethane	Ave	3.295	3.456		5.25	5.00	4.9	35.0
Acrolein	Ave	0.3877	0.2724		3.52	5.00	-29.7	35.0
Acetonitrile	Ave	0.4770	0.4058		4.26	5.00	-14.9	35.0
Acetone	Ave	0.4144	0.3857		14.0	15.0	-6.9	35.0
Isopropyl alcohol	Ave	1.928	1.788		13.9	15.0	-7.3	35.0
Pentane	Ave	0.1852	0.2026		5.47	5.00	9.4	35.0
Ethyl ether	Ave	1.358	1.081		3.98	5.00	-20.4	35.0
1,1-Dichloroethene	Ave	1.204	1.241		5.16	5.00	3.1	35.0
tert-Butyl alcohol	Ave	1.944	2.069		5.32	5.00	6.4	35.0
Acrylonitrile	Ave	0.7642	0.5954		3.90	5.00	-22.1	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.668	2.817		5.28	5.00	5.6	35.0
Methylene Chloride	Ave	1.179	1.175		4.98	5.00	-0.4	35.0
3-Chloropropene	Ave	1.388	1.376		4.96	5.00	-0.8	35.0
Carbon disulfide	Ave	3.546	3.662		5.17	5.00	3.2	35.0
trans-1,2-Dichloroethene	Ave	1.210	1.236		5.11	5.00	2.1	35.0
2-Methylpentane	Ave	3.129	3.555		5.68	5.00	13.6	35.0
Methyl tert-butyl ether	Ave	2.474	2.133		4.31	5.00	-13.8	35.0
1,1-Dichloroethane	Ave	2.301	2.250		4.89	5.00	-2.2	35.0
Vinyl acetate	Ave	2.833	2.267		4.00	5.00	-20.0	35.0
2-Butanone (MEK)	Ave	0.3626	0.3534		4.88	5.00	-2.5	35.0
Hexane	Ave	1.065	1.065		5.00	5.00	0.0	35.0
Isopropyl ether	Ave	3.770	3.246		4.31	5.00	-13.9	35.0
cis-1,2-Dichloroethene	Ave	1.193	1.143		4.79	5.00	-4.2	35.0
Ethyl acetate	Ave	2.116	1.904		4.50	5.00	-10.0	35.0
Chloroform	Ave	2.509	2.224		4.44	5.00	-11.3	35.0
Tert-butyl ethyl ether	Ave	2.895	2.951		5.10	5.00	1.9	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Lab Sample ID: ICV 140-7241/23 Calibration Date: 11/26/2016 12:43

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JK25ICVX.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.177	1.029		4.37	5.00	-12.6	35.0
1,1,1-Trichloroethane	Ave	2.589	2.431		4.70	5.00	-6.1	35.0
1,2-Dichloroethane	Ave	0.3728	0.3331		4.47	5.00	-10.6	35.0
1-Butanol	Ave	0.1194	0.1320		5.53	5.00	10.5	35.0
Benzene	Ave	0.7266	0.6472		4.46	5.00	-10.9	35.0
Cyclohexane	Ave	0.1325	0.1354		5.11	5.00	2.2	35.0
Carbon tetrachloride	Ave	0.6405	0.5383		4.20	5.00	-16.0	35.0
2,3-Dimethylpentane	Ave	0.1667	0.1469		4.41	5.00	-11.9	35.0
Thiophene	Ave	0.4153	0.3865		4.66	5.00	-6.9	35.0
Tert-amyl methyl ether	Ave	0.6219	0.6301		5.07	5.00	1.3	35.0
2,2,4-Trimethylpentane	Ave	1.378	1.272		4.62	5.00	-7.7	35.0
Heptane	Ave	0.2546	0.2203		4.33	5.00	-13.5	35.0
1,2-Dichloropropane	Ave	0.2944	0.2593		4.41	5.00	-11.9	35.0
Trichloroethene	Ave	0.3420	0.3070		4.49	5.00	-10.2	35.0
Dibromomethane	Ave	0.3248	0.2893		4.46	5.00	-10.9	35.0
Bromodichloromethane	Ave	0.5654	0.4828		4.27	5.00	-14.6	35.0
1,4-Dioxane	Ave	0.0770	0.0788		5.12	5.00	2.3	35.0
Methyl methacrylate	Ave	0.2784	0.2524		4.53	5.00	-9.4	35.0
Methylcyclohexane	Ave	0.5528	0.4249		3.84	5.00	-23.1	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5507	0.5440		4.94	5.00	-1.2	35.0
cis-1,3-Dichloropropene	Ave	0.3821	0.3480		4.56	5.00	-8.9	35.0
trans-1,3-Dichloropropene	Ave	0.3443	0.2824		4.10	5.00	-18.0	35.0
Toluene	Ave	0.8601	0.7365		4.28	5.00	-14.4	35.0
1,1,2-Trichloroethane	Ave	0.2704	0.2321		4.29	5.00	-14.1	35.0
2-Methylthiophene	Ave	0.7217	0.6585		4.56	5.00	-8.8	35.0
3-Methylthiophene	Ave	0.6890	0.6262		4.55	5.00	-9.1	35.0
2-Hexanone	Ave	0.2511	0.2749		5.48	5.00	9.5	35.0
Octane	Ave	0.2880	0.2562		4.45	5.00	-11.0	35.0
Dibromochloromethane	Ave	0.6304	0.5684		4.51	5.00	-9.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.4549	0.4014		4.41	5.00	-11.8	35.0
Tetrachloroethene	Ave	0.3768	0.3388		4.50	5.00	-10.1	35.0
Chlorobenzene	Ave	0.6754	0.5874		4.35	5.00	-13.0	35.0
2,3-Dimethylheptane	Ave	1.076	1.001		4.66	5.00	-6.9	35.0
Ethylbenzene	Ave	1.020	0.8619		4.23	5.00	-15.5	35.0
2-Ethylthiophene	Ave	0.7628	0.6393		4.19	5.00	-16.2	35.0
m-Xylene & p-Xylene	Ave	0.7527	0.6661		8.85	10.0	-11.5	35.0
Nonane	Ave	0.6435	0.5289		4.11	5.00	-17.8	35.0
Bromoform	Ave	0.6005	0.4851		4.04	5.00	-19.2	35.0
Styrene	Ave	0.5352	0.4649		4.35	5.00	-13.1	35.0
o-Xylene	Ave	0.8117	0.6937		4.28	5.00	-14.5	35.0
1,1,2,2-Tetrachloroethane	Ave	0.5908	0.5430		4.60	5.00	-8.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Lab Sample ID: ICV 140-7241/23 Calibration Date: 11/26/2016 12:43

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JK25ICVX.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1356	0.1254		4.63	5.00	-7.5	35.0
Isopropylbenzene	Ave	1.098	0.9755		4.44	5.00	-11.2	35.0
Propylbenzene	Ave	0.2584	0.2385		4.62	5.00	-7.7	35.0
2-Chlorotoluene	Ave	0.2744	0.2388		4.35	5.00	-13.0	35.0
4-Ethyltoluene	Ave	0.9183	0.8030		4.37	5.00	-12.6	35.0
1,3,5-Trimethylbenzene	Ave	0.4630	0.4348		4.70	5.00	-6.1	35.0
Alpha Methyl Styrene	Ave	0.3575	0.3290		4.60	5.00	-8.0	35.0
Decane	Ave	0.6508	0.5684		4.37	5.00	-12.7	35.0
tert-Butylbenzene	Ave	0.9343	0.8580		4.59	5.00	-8.2	35.0
1,2,4-Trimethylbenzene	Ave	0.7988	0.7413		4.64	5.00	-7.2	35.0
sec-Butylbenzene	Ave	1.225	1.102		4.50	5.00	-10.1	35.0
1,3-Dichlorobenzene	Ave	0.4476	0.3966		4.43	5.00	-11.4	35.0
Benzyl chloride	Ave	0.3881	0.4276		5.51	5.00	10.2	35.0
1,4-Dichlorobenzene	Ave	0.3490	0.3506		5.03	5.00	0.5	35.0
4-Isopropyltoluene	Ave	0.9555	0.8776		4.59	5.00	-8.2	35.0
1,2,3-Trimethylbenzene	Ave	0.6004	0.6092		5.08	5.00	1.5	35.0
Butylcyclohexane	Ave	0.7729	0.6164		3.99	5.00	-20.2	35.0
1,2-Dichlorobenzene	Ave	0.4533	0.4131		4.56	5.00	-8.9	35.0
Indane	Ave	0.6991	0.6137		4.39	5.00	-12.2	35.0
Indene	Ave	0.4345	0.5118		5.89	5.00	17.8	35.0
Butylbenzene	Ave	0.8017	0.7838		4.89	5.00	-2.2	35.0
Undecane	Ave	0.5842	0.6440		5.51	5.00	10.2	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.5891	0.7608		6.46	5.00	29.1	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.1560	0.1383		4.44	5.00	-11.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	0.6898	0.8152		5.91	5.00	18.2	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.4240	0.5148		6.07	5.00	21.4	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.5362	0.6309		5.89	5.00	17.7	35.0
Dodecane	Ave	0.4832	0.5920		6.13	5.00	22.5	35.0
1,2,4-Trichlorobenzene	Ave	0.1304	0.1647		6.32	5.00	26.3	35.0
Naphthalene	Ave	0.3491	0.3828		5.49	5.00	9.7	35.0
Benzo(b)thiophene	Ave	0.1359	0.1714		6.31	5.00	26.1	35.0
Hexachlorobutadiene	Ave	0.5047	0.4629		4.59	5.00	-8.3	35.0
1,2,3-Trichlorobenzene	Ave	0.1705	0.1957		5.74	5.00	14.7	35.0
2-Methylnaphthalene	Ave	0.0343	0.0305		13.9	15.6	-11.1	50.0
1-Methylnaphthalene	Ave	0.0381	0.0373		15.3	15.6	-2.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6334	0.6342		10.0	10.0	0.1	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25ICVX.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 26-Nov-2016 12:43:30 ALS Bottle#: 9 Worklist Smp#: 23
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003656-023
Misc. Info.: 059230/S19
Operator ID: 007126 Instrument ID: MJ
Sublist:

Method: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 28-Nov-2016 15:29:56 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: liul Date: 28-Nov-2016 15:29:56

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.633	8.640	-0.007	98	319485	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.833	10.843	-0.010	96	1407958	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.605	15.609	-0.004	89	1180826	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.246	17.244	-0.008	96	748927	4.00	4.01	
6 Chlorodifluoromethane	67	3.566	3.566	-0.002	98	59211	2.00	2.05	
7 Propene	41	3.577	3.575	-0.001	98	198415	2.00	1.99	
8 Dichlorodifluoromethane	85	3.625	3.625	-0.002	99	546467	2.00	2.11	
9 Chloromethane	52	3.803	3.803	-0.004	99	75811	2.00	2.06	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.808	3.807	-0.002	92	301091	2.00	2.11	
11 Acetaldehyde	44	3.953	3.950	0.000	95	286311	10.0	7.18	
12 Vinyl chloride	62	3.969	3.966	0.000	99	241188	2.00	2.18	
13 Butane	43	4.055	4.052	0.000	86	400729	2.00	2.08	
14 Butadiene	54	4.055	4.054	-0.002	66	187991	2.00	2.12	
15 Bromomethane	94	4.367	4.364	0.000	99	209548	2.00	2.13	
16 Chloroethane	64	4.502	4.501	-0.002	88	112981	2.00	2.15	
17 Ethanol	31	4.593	4.599	-0.009	97	412136	10.0	9.77	
18 Vinyl bromide	106	4.792	4.794	-0.005	98	217122	2.00	2.25	
19 2-Methylbutane	43	4.841	4.841	-0.004	94	314019	2.00	2.22	
20 Trichlorofluoromethane	101	5.056	5.056	-0.004	100	552338	2.00	2.10	
21 Acrolein	56	5.067	5.070	-0.007	96	43541	2.00	1.41	
22 Acetonitrile	40	5.131	5.134	-0.007	98	64852	2.00	1.70	
23 Acetone	58	5.185	5.188	-0.007	99	184956	6.00	5.59	
24 Isopropyl alcohol	45	5.260	5.269	-0.013	94	857317	6.00	5.57	
25 Pentane	72	5.276	5.275	-0.003	97	32388	2.00	2.19	
26 Ethyl ether	31	5.443	5.446	-0.008	90	172764	2.00	1.59	
27 1,1-Dichloroethene	96	5.755	5.754	-0.003	95	198329	2.00	2.06	
29 Acrylonitrile	53	5.863	5.860	-0.002	93	95160	2.00	1.56	
28 2-Methyl-2-propanol	59	5.852	5.863	-0.016	95	330611	2.00	2.13	
30 1,1,2-Trichloro-1,2,2-trif	101	5.927	5.927	-0.004	97	450262	2.00	2.11	
31 Methylene Chloride	84	6.100	6.100	-0.005	95	187740	2.00	1.99	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.116	6.116	-0.005	95	219994	2.00	1.98	
33 Carbon disulfide	76	6.261	6.259	-0.003	100	585225	2.00	2.07	
34 trans-1,2-Dichloroethene	96	6.901	6.902	-0.007	95	197533	2.00	2.04	
35 2-Methylpentane	43	6.917	6.917	-0.006	96	568210	2.00	2.27	
36 Methyl tert-butyl ether	73	7.036	7.043	-0.013	97	340973	2.00	1.73	
37 1,1-Dichloroethane	63	7.321	7.320	-0.005	99	359668	2.00	1.96	
38 Vinyl acetate	43	7.428	7.429	-0.007	100	362320	2.00	1.60	
39 2-Butanone (MEK)	72	7.886	7.888	-0.009	95	56477	2.00	1.95	
40 Hexane	56	7.891	7.894	-0.010	82	170287	2.00	2.00	
41 Isopropyl ether	45	8.058	8.065	-0.014	97	518893	2.00	1.72	
42 cis-1,2-Dichloroethene	96	8.300	8.301	-0.007	98	182628	2.00	1.92	
43 Ethyl acetate	43	8.499	8.501	-0.009	97	304374	2.00	1.80	
44 Chloroform	83	8.644	8.645	-0.007	97	355453	2.00	1.77	
45 Tert-butyl ethyl ether	59	8.735	8.743	-0.015	97	471765	2.00	2.04	
46 Tetrahydrofuran	42	9.069	9.076	-0.014	93	164428	2.00	1.75	
47 1,1,1-Trichloroethane	97	9.672	9.671	-0.007	97	388517	2.00	1.88	
48 1,2-Dichloroethane	62	9.784	9.784	-0.008	96	234633	2.00	1.79	
49 n-Butanol	31	10.247	10.263	-0.025	92	92991	2.00	2.21	
50 Cyclohexane	69	10.279	10.276	-0.006	84	95347	2.00	2.04	
51 Benzene	78	10.279	10.277	-0.006	98	455865	2.00	1.78	
52 Carbon tetrachloride	117	10.301	10.300	-0.007	96	379159	2.00	1.68	
53 2,3-Dimethylpentane	71	10.398	10.398	-0.009	91	103462	2.00	1.76	
54 Thiophene	84	10.559	10.556	-0.006	96	272232	2.00	1.86	
55 Tert-amyl methyl ether	73	10.769	10.784	-0.022	95	372270	2.00	2.03	
56 Isooctane	57	11.049	11.049	-0.009	98	895651	2.00	1.85	
57 n-Heptane	71	11.436	11.431	-0.005	95	155166	2.00	1.73	
58 1,2-Dichloropropane	63	11.517	11.517	-0.009	89	182644	2.00	1.76	
59 Trichloroethene	130	11.554	11.551	-0.007	96	216204	2.00	1.80	
60 Dibromomethane	93	11.640	11.638	-0.008	95	203751	2.00	1.78	
62 Dichlorobromomethane	83	11.791	11.785	-0.004	98	340048	2.00	1.71	
61 1,4-Dioxane	88	11.818	11.825	-0.017	96	55490	2.00	2.05	
63 Methyl methacrylate	41	11.893	11.892	-0.009	93	177747	2.00	1.81	
64 Methylcyclohexane	83	12.329	12.325	-0.007	91	299244	2.00	1.54	
65 4-Methyl-2-pentanone (MIBK	43	12.754	12.753	-0.010	97	383197	2.00	1.98	
66 cis-1,3-Dichloropropene	75	12.802	12.798	-0.006	98	245081	2.00	1.82	
67 trans-1,3-Dichloropropene	75	13.502	13.501	-0.007	96	166812	2.00	1.64	
68 Toluene	91	13.625	13.622	-0.005	92	435080	2.00	1.71	
69 1,1,2-Trichloroethane	83	13.701	13.699	-0.008	98	137125	2.00	1.72	
70 2-Methylthiophene	97	13.776	13.776	-0.008	98	389010	2.00	1.83	
71 3-Methylthiophene	97	13.980	13.977	-0.005	99	369898	2.00	1.82	
72 2-Hexanone	58	14.093	14.097	-0.013	91	162397	2.00	2.19	
73 n-Octane	85	14.319	14.314	-0.003	97	151351	2.00	1.78	
74 Chlorodibromomethane	129	14.405	14.403	-0.007	98	335786	2.00	1.80	
75 Ethylene Dibromide	107	14.701	14.697	-0.005	98	237110	2.00	1.77	
76 Tetrachloroethene	129	14.771	14.769	-0.006	95	200145	2.00	1.80	
78 Chlorobenzene	112	15.653	15.649	-0.005	94	346978	2.00	1.74	
77 2,3-Dimethylheptane	43	15.670	15.668	-0.007	94	591586	2.00	1.86	
79 Ethylbenzene	91	15.939	15.938	-0.008	99	509142	2.00	1.69	
80 2-Ethylthiophene	97	16.041	16.041	-0.009	98	377633	2.00	1.68	
81 m-Xylene & p-Xylene	91	16.100	16.100	-0.010	100	786998	4.00	3.54	
82 n-Nonane	57	16.520	16.518	-0.008	94	312450	2.00	1.64	
83 Bromoform	173	16.552	16.549	-0.007	96	286564	2.00	1.62	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.568	16.565	-0.007	98	274640	2.00	1.74	
85 o-Xylene	91	16.627	16.625	-0.007	99	409811	2.00	1.71	
86 1,1,2,2-Tetrachloroethane	83	16.955	16.952	-0.007	99	320773	2.00	1.84	
87 1,2,3-Trichloropropane	110	17.117	17.112	-0.005	96	74078	2.00	1.85	
88 Isopropylbenzene	105	17.214	17.211	-0.007	97	576277	2.00	1.78	
89 N-Propylbenzene	120	17.762	17.757	-0.005	99	140866	2.00	1.85	
90 2-Chlorotoluene	126	17.805	17.803	-0.008	98	141077	2.00	1.74	
91 4-Ethyltoluene	105	17.913	17.911	-0.008	98	474329	2.00	1.75	
92 1,3,5-Trimethylbenzene	120	17.988	17.985	-0.007	92	256851	2.00	1.88	
93 Alpha Methyl Styrene	118	18.225	18.218	-0.004	86	194376	2.00	1.84	
94 n-Decane	57	18.279	18.276	-0.008	87	335757	2.00	1.75	
95 tert-Butylbenzene	119	18.413	18.411	-0.009	92	506869	2.00	1.84	
96 1,2,4-Trimethylbenzene	105	18.429	18.425	-0.007	96	437933	2.00	1.86	
97 sec-Butylbenzene	105	18.687	18.683	-0.007	98	650880	2.00	1.80	
98 1,3-Dichlorobenzene	146	18.704	18.699	-0.006	98	234301	2.00	1.77	
99 Benzyl chloride	91	18.779	18.775	-0.007	98	252607	2.00	2.20	
100 1,4-Dichlorobenzene	146	18.795	18.788	-0.004	95	207093	2.00	2.01	
101 4-Isopropyltoluene	119	18.854	18.846	-0.003	97	518443	2.00	1.84	
102 1,2,3-Trimethylbenzene	105	18.908	18.901	-0.004	99	359883	2.00	2.03	
103 Butylcyclohexane	83	18.962	18.953	-0.002	89	364150	2.00	1.60	
104 2,3-Dihydroindene	117	19.156	19.147	-0.003	93	362541	2.00	1.76	
105 1,2-Dichlorobenzene	146	19.156	19.148	-0.003	80	244034	2.00	1.82	
107 Indene	116	19.285	19.279	-0.005	89	302317	2.00	2.36	
106 n-Butylbenzene	91	19.290	19.282	-0.004	98	463024	2.00	1.96	
108 Undecane	57	19.602	19.594	-0.003	92	380441	2.00	2.21	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.661	19.656	-0.006	98	449409	2.00	2.58	
110 1,2-Dibromo-3-Chloropropan	157	19.758	19.754	-0.007	95	81710	2.00	1.77	
111 1,2,4,5-Tetramethylbenzene	119	20.049	20.041	-0.004	97	481566	2.00	2.36	
112 1,2,3,5-Tetramethylbenzene	119	20.102	20.096	-0.006	95	304107	2.00	2.43	
113 1,2,3,4-Tetramethylbenzene	119	20.500	20.493	-0.005	98	372670	2.00	2.35	
114 Dodecane	57	20.662	20.653	-0.003	91	349716	2.00	2.45	
115 1,2,4-Trichlorobenzene	180	20.861	20.853	-0.004	94	97280	2.00	2.53	
116 Naphthalene	128	21.001	20.995	-0.006	99	226137	2.00	2.19	
117 Benzo(b)thiophene	134	21.108	21.100	-0.004	99	101236	2.00	2.52	
118 Hexachlorobutadiene	225	21.221	21.213	-0.004	95	273423	2.00	1.83	
119 1,2,3-Trichlorobenzene	180	21.291	21.285	-0.006	94	115595	2.00	2.30	
120 2-Methylnaphthalene	142	21.964	21.955	-0.003	99	56246	6.25	5.56	
121 1-Methylnaphthalene	142	22.093	22.082	-0.002	99	68794	6.25	6.11	
A 124 Toluene Range	1	13.630	(13.608-13.653)		0	1111076	2.00	1.67	
A 125 C8 Range	1	14.314	(14.282-14.345)		0	1705597	2.00	1.88	
S 126 Xylenes, Total	100				0		6.00	5.25	
S 127 1,2-Dichloroethene, Total	1				0		4.00	3.96	

Reagents:

40CV101S_00019	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

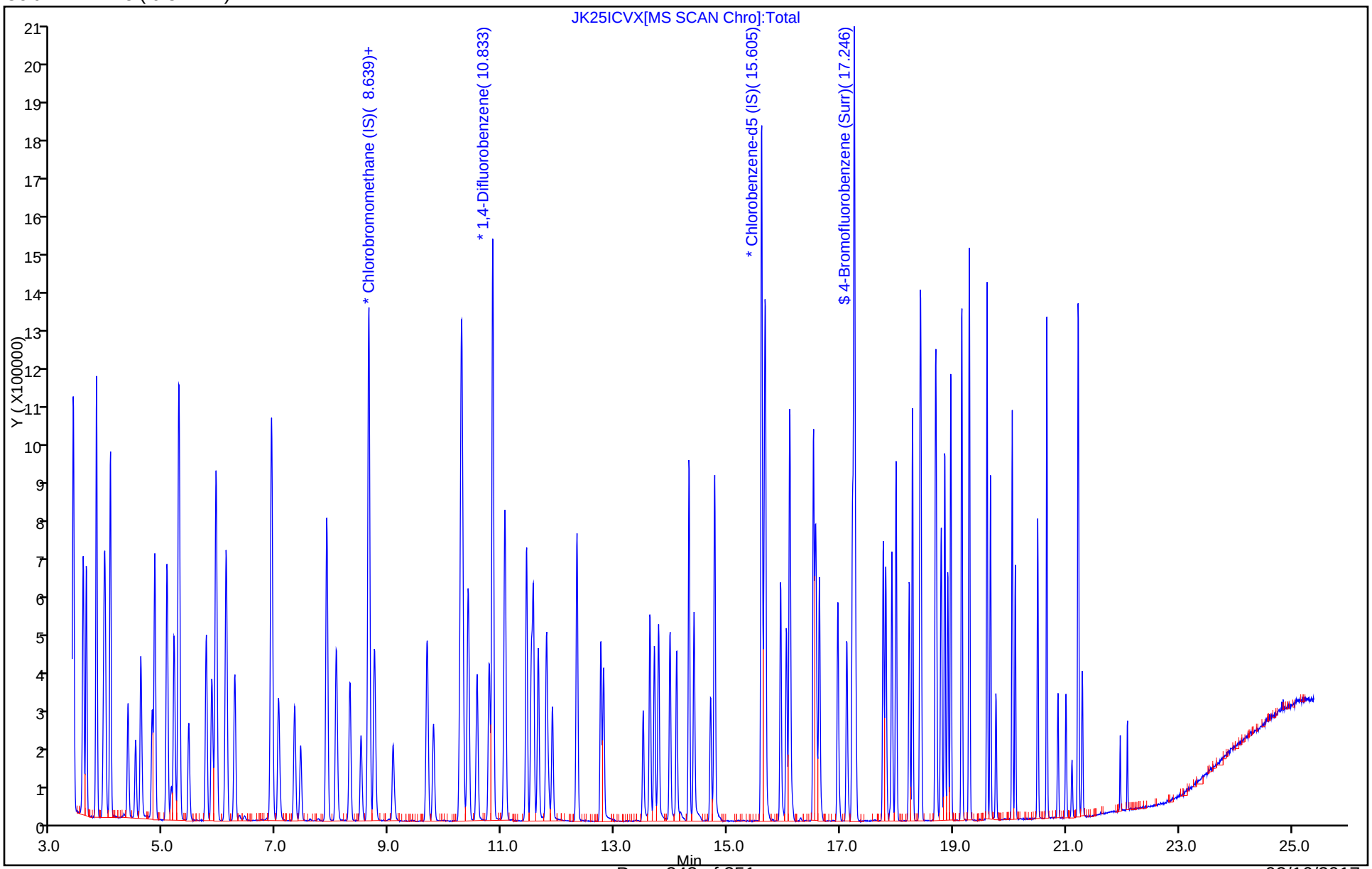
Report Date: 28-Nov-2016 15:29:57 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25ICVX.D

Injection Date:	26-Nov-2016 12:43:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	ICV			Worklist Smp#:	23
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Lab Sample ID: CCVIS 140-8433/2 Calibration Date: 02/10/2017 08:27

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JCCVB10Z.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3608	0.2803		1.55	2.00	-22.3	30.0
Propene	Ave	1.245	1.190		1.91	2.00	-4.5	30.0
Dichlorodifluoromethane	Ave	3.239	2.894		1.79	2.00	-10.7	30.0
Chloromethane	Ave	0.4618	0.4516		1.96	2.00	-2.2	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	1.790	2.083		2.33	2.00	16.4	30.0
Acetaldehyde	Ave	0.4989	0.3654		7.32	10.0	-26.8	30.0
Vinyl chloride	Ave	1.385	1.282		1.85	2.00	-7.4	30.0
1,3-Butadiene	Ave	1.112	1.039		1.87	2.00	-6.5	30.0
Butane	Ave	2.414	2.210		1.83	2.00	-8.4	30.0
Bromomethane	Ave	1.232	1.122		1.82	2.00	-9.0	30.0
Chloroethane	Ave	0.6570	0.5932		1.81	2.00	-9.7	30.0
Ethanol	Ave	0.5282	0.4023		7.62	10.0	-23.8	30.0
Vinyl bromide	Ave	1.206	1.093		1.81	2.00	-9.4	30.0
2-Methylbutane	Ave	1.767	1.681		1.90	2.00	-4.9	30.0
Trichlorofluoromethane	Ave	3.295	3.003		1.82	2.00	-8.8	30.0
Acrolein	Ave	0.3877	0.2746		1.42	2.00	-29.2	30.0
Acetonitrile	Ave	0.4770	0.3931		1.65	2.00	-17.6	30.0
Acetone	Ave	0.4144	0.3684		5.33	6.00	-11.1	30.0
Isopropyl alcohol	Ave	1.928	1.442		4.49	6.00	-25.2	30.0
Pentane	Ave	0.1852	0.1691		1.83	2.00	-8.7	30.0
Ethyl ether	Ave	1.358	1.035		1.52	2.00	-23.8	30.0
1,1-Dichloroethene	Ave	1.204	1.136		1.89	2.00	-5.6	30.0
tert-Butyl alcohol	Ave	1.944	1.633		1.68	2.00	-16.0	30.0
Acrylonitrile	Ave	0.7642	0.6173		1.62	2.00	-19.2	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.668	2.490		1.87	2.00	-6.7	30.0
Methylene Chloride	Ave	1.179	1.024		1.74	2.00	-13.2	30.0
3-Chloropropene	Ave	1.388	1.109		1.60	2.00	-20.1	30.0
Carbon disulfide	Ave	3.546	3.301		1.86	2.00	-6.9	30.0
trans-1,2-Dichloroethene	Ave	1.210	1.134		1.87	2.00	-6.3	30.0
2-Methylpentane	Ave	3.129	2.968		1.90	2.00	-5.1	30.0
Methyl tert-butyl ether	Ave	2.474	1.945		1.57	2.00	-21.4	30.0
1,1-Dichloroethane	Ave	2.301	2.013		1.75	2.00	-12.5	30.0
Vinyl acetate	Ave	2.833	2.313		1.63	2.00	-18.4	30.0
2-Butanone (MEK)	Ave	0.3626	0.3314		1.83	2.00	-8.6	30.0
Hexane	Ave	1.065	0.9561		1.80	2.00	-10.2	30.0
Isopropyl ether	Ave	3.770	3.361		1.78	2.00	-10.8	30.0
cis-1,2-Dichloroethene	Ave	1.193	1.052		1.76	2.00	-11.8	30.0
Ethyl acetate	Ave	2.116	1.910		1.81	2.00	-9.7	30.0
Chloroform	Ave	2.509	2.076		1.66	2.00	-17.2	30.0
Tert-butyl ethyl ether	Ave	2.895	2.506		1.73	2.00	-13.4	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Lab Sample ID: CCVIS 140-8433/2 Calibration Date: 02/10/2017 08:27

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JCCVB10Z.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.177	1.036		1.76	2.00	-12.0	30.0
1,1,1-Trichloroethane	Ave	2.589	2.210		1.71	2.00	-14.6	30.0
1,2-Dichloroethane	Ave	0.3728	0.2999		1.61	2.00	-19.6	30.0
1-Butanol	Ave	0.1194	0.0877		1.47	2.00	-26.6	30.0
Cyclohexane	Ave	0.1325	0.1131		1.71	2.00	-14.7	30.0
Benzene	Ave	0.7266	0.5997		1.65	2.00	-17.5	30.0
Carbon tetrachloride	Ave	0.6405	0.5944		1.86	2.00	-7.2	30.0
2,3-Dimethylpentane	Ave	0.1667	0.1490		1.79	2.00	-10.7	30.0
Thiophene	Ave	0.4153	0.3662		1.76	2.00	-11.8	30.0
Tert-amyl methyl ether	Ave	0.6219	0.6025		1.94	2.00	-3.1	30.0
2,2,4-Trimethylpentane	Ave	1.378	1.284		1.86	2.00	-6.8	30.0
Heptane	Ave	0.2546	0.2134		1.68	2.00	-16.2	30.0
1,2-Dichloropropane	Ave	0.2944	0.2472		1.68	2.00	-16.0	30.0
Trichloroethene	Ave	0.3420	0.3096		1.81	2.00	-9.5	30.0
Dibromomethane	Ave	0.3248	0.2677		1.65	2.00	-17.6	30.0
Bromodichloromethane	Ave	0.5654	0.4506		1.59	2.00	-20.3	30.0
1,4-Dioxane	Ave	0.0770	0.0731		1.90	2.00	-5.0	30.0
Methyl methacrylate	Ave	0.2784	0.2449		1.76	2.00	-12.0	30.0
Methylcyclohexane	Ave	0.5528	0.5076		1.84	2.00	-8.2	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5507	0.4851		1.76	2.00	-11.9	30.0
cis-1,3-Dichloropropene	Ave	0.3821	0.2953		1.55	2.00	-22.7	30.0
trans-1,3-Dichloropropene	Ave	0.3443	0.2725		1.58	2.00	-20.9	30.0
Toluene	Ave	0.8601	0.7479		1.74	2.00	-13.0	30.0
1,1,2-Trichloroethane	Ave	0.2704	0.2244		1.66	2.00	-17.0	30.0
2-Methylthiophene	Ave	0.7217	0.6383		1.77	2.00	-11.6	30.0
3-Methylthiophene	Ave	0.6890	0.6005		1.74	2.00	-12.8	30.0
2-Hexanone	Ave	0.2511	0.2373		1.89	2.00	-5.5	30.0
Octane	Ave	0.2880	0.2498		1.73	2.00	-13.3	30.0
Dibromochloromethane	Ave	0.6304	0.5733		1.82	2.00	-9.1	30.0
1,2-Dibromoethane (EDB)	Ave	0.4549	0.3831		1.68	2.00	-15.8	30.0
Tetrachloroethene	Ave	0.3768	0.3355		1.78	2.00	-11.0	30.0
Chlorobenzene	Ave	0.6754	0.5898		1.75	2.00	-12.7	30.0
2,3-Dimethylheptane	Ave	1.076	0.9910		1.84	2.00	-7.9	30.0
Ethylbenzene	Ave	1.020	0.8638		1.69	2.00	-15.3	30.0
2-Ethylthiophene	Ave	0.7628	0.6492		1.70	2.00	-14.9	30.0
m-Xylene & p-Xylene	Ave	0.7527	0.6445		3.42	4.00	-14.4	30.0
Nonane	Ave	0.6435	0.5509		1.71	2.00	-14.4	30.0
Bromoform	Ave	0.6005	0.5246		1.75	2.00	-12.6	30.0
Styrene	Ave	0.5352	0.4572		1.71	2.00	-14.6	30.0
o-Xylene	Ave	0.8117	0.6795		1.67	2.00	-16.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5908	0.5205		1.76	2.00	-11.9	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Lab Sample ID: CCVIS 140-8433/2 Calibration Date: 02/10/2017 08:27

Instrument ID: MJ Calib Start Date: 11/25/2016 18:47

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 11/26/2016 01:58

Lab File ID: JCCVB10Z.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1356	0.1213		1.79	2.00	-10.5	30.0
Isopropylbenzene	Ave	1.098	0.9536		1.74	2.00	-13.2	30.0
Propylbenzene	Ave	0.2584	0.2427		1.88	2.00	-6.0	30.0
2-Chlorotoluene	Ave	0.2744	0.2464		1.80	2.00	-10.2	30.0
4-Ethyltoluene	Ave	0.9183	0.8487		1.85	2.00	-7.6	30.0
1,3,5-Trimethylbenzene	Ave	0.4630	0.4274		1.85	2.00	-7.7	30.0
Alpha Methyl Styrene	Ave	0.3575	0.3143		1.76	2.00	-12.1	30.0
Decane	Ave	0.6508	0.5516		1.70	2.00	-15.2	30.0
tert-Butylbenzene	Ave	0.9343	0.8474		1.81	2.00	-9.3	30.0
1,2,4-Trimethylbenzene	Ave	0.7988	0.7038		1.76	2.00	-11.9	30.0
sec-Butylbenzene	Ave	1.225	1.081		1.76	2.00	-11.8	30.0
1,3-Dichlorobenzene	Ave	0.4476	0.4000		1.79	2.00	-10.6	30.0
Benzyl chloride	Ave	0.3881	0.3853		1.99	2.00	-0.7	30.0
1,4-Dichlorobenzene	Ave	0.3490	0.3523		2.02	2.00	0.9	30.0
4-Isopropyltoluene	Ave	0.9555	0.8612		1.80	2.00	-9.9	30.0
1,2,3-Trimethylbenzene	Ave	0.6004	0.5338		1.78	2.00	-11.1	30.0
Butylcyclohexane	Ave	0.7729	0.6122		1.58	2.00	-20.8	30.0
1,2-Dichlorobenzene	Ave	0.4533	0.4023		1.78	2.00	-11.2	30.0
Indane	Ave	0.6991	0.6214		1.78	2.00	-11.1	30.0
Indene	Ave	0.4345	0.3736		1.72	2.00	-14.0	30.0
Butylbenzene	Ave	0.8017	0.6637		1.66	2.00	-17.2	30.0
Undecane	Ave	0.5842	0.5101		1.75	2.00	-12.7	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.5891	0.5091		1.73	2.00	-13.6	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.1560	0.1491		1.91	2.00	-4.4	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.6898	0.5791		1.68	2.00	-16.1	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.4240	0.3696		1.74	2.00	-12.8	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.5362	0.4510		1.68	2.00	-15.9	30.0
Dodecane	Ave	0.4832	0.4788		1.98	2.00	-0.9	30.0
1,2,4-Trichlorobenzene	Ave	0.1304	0.1753		2.69	2.00	34.4*	30.0
Naphthalene	Ave	0.3491	0.3500		2.01	2.00	0.3	30.0
Benzo(b)thiophene	Ave	0.1359	0.1714		2.52	2.00	26.1	30.0
Hexachlorobutadiene	Ave	0.5047	0.4397		1.74	2.00	-12.9	30.0
1,2,3-Trichlorobenzene	Ave	0.1705	0.1936		2.27	2.00	13.5	30.0
2-Methylnaphthalene	Ave	0.0343	0.0375		6.84	6.25	9.4	50.0
1-Methylnaphthalene	Ave	0.0381	0.0363		5.95	6.25	-4.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6334	0.5793		3.66	4.00	-8.5	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JCCVB10Z.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 10-Feb-2017 08:27:30 ALS Bottle#: 15 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003999-014
Misc. Info.: P33
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Feb-2017 12:31:14 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh Date: 13-Feb-2017 12:09:24

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.579	8.579	0.000	99	384593	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.779	10.779	0.000	95	1646942	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.556	15.556	0.000	87	1340454	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.202	17.202	0.000	95	776572	4.00	3.66	
6 Chlorodifluoromethane	67	3.560	3.560	0.000	96	53908	2.00	1.55	
7 Propene	41	3.570	3.570	0.000	98	228753	2.00	1.91	
8 Dichlorodifluoromethane	85	3.619	3.619	0.000	100	556440	2.00	1.79	
9 Chloromethane	52	3.796	3.796	0.000	99	86836	2.00	1.96	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.802	3.802	0.000	90	400647	2.00	2.33	
11 Acetaldehyde	44	3.942	3.942	0.000	100	351335	10.0	7.32	
12 Vinyl chloride	62	3.958	3.958	0.000	99	246529	2.00	1.85	
14 Butadiene	54	4.044	4.044	0.000	65	199805	2.00	1.87	
13 Butane	43	4.044	4.044	0.000	86	425049	2.00	1.83	
15 Bromomethane	94	4.350	4.350	0.000	98	215686	2.00	1.82	
16 Chloroethane	64	4.485	4.485	0.000	91	114066	2.00	1.81	
17 Ethanol	31	4.571	4.571	0.000	95	386784	10.0	7.62	
18 Vinyl bromide	106	4.770	4.770	0.000	99	210176	2.00	1.81	
19 2-Methylbutane	43	4.818	4.818	0.000	94	323333	2.00	1.90	
20 Trichlorofluoromethane	101	5.034	5.034	0.000	100	577497	2.00	1.82	
21 Acrolein	56	5.039	5.039	0.000	92	52812	2.00	1.42	
22 Acetonitrile	40	5.109	5.109	0.000	97	75587	2.00	1.65	
23 Acetone	58	5.157	5.157	0.000	98	212516	6.00	5.33	
24 Isopropyl alcohol	45	5.233	5.233	0.000	94	831871	6.00	4.49	
25 Pentane	72	5.254	5.254	0.000	95	32512	2.00	1.83	
26 Ethyl ether	31	5.416	5.416	0.000	92	199076	2.00	1.52	
27 1,1-Dichloroethene	96	5.722	5.722	0.000	95	218511	2.00	1.89	
28 2-Methyl-2-propanol	59	5.814	5.814	0.000	95	313969	2.00	1.68	
29 Acrylonitrile	53	5.824	5.824	0.000	93	118695	2.00	1.62	
30 1,1,2-Trichloro-1,2,2-trif	101	5.894	5.894	0.000	97	478879	2.00	1.87	
31 Methylene Chloride	84	6.067	6.067	0.000	95	196838	2.00	1.74	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.083	6.083	0.000	93	213344	2.00	1.60	
33 Carbon disulfide	76	6.223	6.223	0.000	100	634814	2.00	1.86	
34 trans-1,2-Dichloroethene	96	6.863	6.863	0.000	96	218007	2.00	1.87	
35 2-Methylpentane	43	6.879	6.879	0.000	98	570755	2.00	1.90	
36 Methyl tert-butyl ether	73	6.997	6.997	0.000	97	373977	2.00	1.57	
37 1,1-Dichloroethane	63	7.282	7.282	0.000	99	387066	2.00	1.75	
38 Vinyl acetate	43	7.384	7.384	0.000	100	444717	2.00	1.63	
39 2-Butanone (MEK)	72	7.836	7.836	0.000	95	63730	2.00	1.83	
40 Hexane	56	7.847	7.847	0.000	83	183854	2.00	1.80	
41 Isopropyl ether	45	8.014	8.014	0.000	98	646371	2.00	1.78	
42 cis-1,2-Dichloroethene	96	8.256	8.256	0.000	97	202250	2.00	1.76	
43 Ethyl acetate	43	8.450	8.450	0.000	98	367296	2.00	1.81	
44 Chloroform	83	8.595	8.595	0.000	97	399220	2.00	1.66	
45 Tert-butyl ethyl ether	59	8.686	8.686	0.000	96	481947	2.00	1.73	
46 Tetrahydrofuran	42	9.014	9.014	0.000	94	199145	2.00	1.76	
47 1,1,1-Trichloroethane	97	9.617	9.617	0.000	97	425015	2.00	1.71	
48 1,2-Dichloroethane	62	9.725	9.725	0.000	96	246950	2.00	1.61	
49 n-Butanol	31	10.193	10.193	0.000	91	72218	2.00	1.47	
50 Cyclohexane	69	10.219	10.219	0.000	84	93097	2.00	1.71	
51 Benzene	78	10.225	10.225	0.000	96	493824	2.00	1.65	
52 Carbon tetrachloride	117	10.246	10.246	0.000	96	489458	2.00	1.86	
53 2,3-Dimethylpentane	71	10.349	10.349	0.000	92	122652	2.00	1.79	
54 Thiophene	84	10.499	10.499	0.000	96	301571	2.00	1.76	
55 Tert-amyl methyl ether	73	10.720	10.720	0.000	95	403802	2.00	1.94	
56 Isooctane	57	10.999	10.999	0.000	99	1057241	2.00	1.86	
57 n-Heptane	71	11.387	11.387	0.000	95	175728	2.00	1.68	
58 1,2-Dichloropropane	63	11.467	11.467	0.000	92	203524	2.00	1.68	
59 Trichloroethene	130	11.500	11.500	0.000	98	254916	2.00	1.81	
60 Dibromomethane	93	11.586	11.586	0.000	92	220409	2.00	1.65	
62 Dichlorobromomethane	83	11.731	11.731	0.000	98	371027	2.00	1.59	
61 1,4-Dioxane	88	11.763	11.763	0.000	98	60227	2.00	1.90	
63 Methyl methacrylate	41	11.844	11.844	0.000	95	201677	2.00	1.76	
64 Methylcyclohexane	83	12.280	12.280	0.000	92	417986	2.00	1.84	
65 4-Methyl-2-pentanone (MIBK	43	12.699	12.699	0.000	96	399429	2.00	1.76	
66 cis-1,3-Dichloropropene	75	12.753	12.753	0.000	95	243151	2.00	1.55	
67 trans-1,3-Dichloropropene	75	13.453	13.453	0.000	98	182634	2.00	1.58	
68 Toluene	91	13.571	13.571	0.000	93	501259	2.00	1.74	
69 1,1,2-Trichloroethane	83	13.652	13.652	0.000	98	150384	2.00	1.66	
70 2-Methylthiophene	97	13.727	13.727	0.000	98	427811	2.00	1.77	
71 3-Methylthiophene	97	13.931	13.931	0.000	100	402451	2.00	1.74	
72 2-Hexanone	58	14.050	14.050	0.000	91	159028	2.00	1.89	
73 n-Octane	85	14.270	14.270	0.000	97	167397	2.00	1.73	
74 Chlorodibromomethane	129	14.356	14.356	0.000	98	384222	2.00	1.82	
75 Ethylene Dibromide	107	14.647	14.647	0.000	98	256746	2.00	1.68	
76 Tetrachloroethene	129	14.722	14.722	0.000	96	224833	2.00	1.78	
78 Chlorobenzene	112	15.604	15.604	0.000	96	395287	2.00	1.75	
77 2,3-Dimethylheptane	43	15.626	15.626	0.000	94	664225	2.00	1.84	
79 Ethylbenzene	91	15.895	15.895	0.000	98	578921	2.00	1.69	
80 2-Ethylthiophene	97	15.997	15.997	0.000	98	435088	2.00	1.70	
81 m-Xylene & p-Xylene	91	16.056	16.056	0.000	99	863859	4.00	3.42	
82 n-Nonane	57	16.481	16.481	0.000	96	369222	2.00	1.71	
83 Bromoform	173	16.503	16.503	0.000	98	351573	2.00	1.75	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.524	16.524	0.000	97	306402	2.00	1.71	
85 o-Xylene	91	16.583	16.583	0.000	98	455400	2.00	1.67	
86 1,1,2,2-Tetrachloroethane	83	16.912	16.912	0.000	99	348875	2.00	1.76	
87 1,2,3-Trichloropropane	110	17.068	17.068	0.000	97	81305	2.00	1.79	
88 Isopropylbenzene	105	17.170	17.170	0.000	96	639104	2.00	1.74	
89 N-Propylbenzene	120	17.718	17.718	0.000	99	162683	2.00	1.88	
90 2-Chlorotoluene	126	17.761	17.761	0.000	96	165142	2.00	1.80	
91 4-Ethyltoluene	105	17.874	17.874	0.000	99	568797	2.00	1.85	
92 1,3,5-Trimethylbenzene	120	17.950	17.950	0.000	93	286436	2.00	1.85	
93 Alpha Methyl Styrene	118	18.181	18.181	0.000	89	210681	2.00	1.76	
94 n-Decane	57	18.240	18.240	0.000	87	369687	2.00	1.70	
95 tert-Butylbenzene	119	18.375	18.375	0.000	94	567973	2.00	1.81	
96 1,2,4-Trimethylbenzene	105	18.391	18.391	0.000	96	471714	2.00	1.76	
97 sec-Butylbenzene	105	18.649	18.649	0.000	98	724713	2.00	1.76	
98 1,3-Dichlorobenzene	146	18.665	18.665	0.000	96	268098	2.00	1.79	
99 Benzyl chloride	91	18.741	18.741	0.000	98	258222	2.00	1.99	
100 1,4-Dichlorobenzene	146	18.751	18.751	0.000	96	236091	2.00	2.02	
101 4-Isopropyltoluene	119	18.816	18.816	0.000	98	577187	2.00	1.80	
102 1,2,3-Trimethylbenzene	105	18.864	18.864	0.000	98	357749	2.00	1.78	
103 Butylcyclohexane	83	18.918	18.918	0.000	93	410313	2.00	1.58	
104 2,3-Dihydroindene	117	19.112	19.112	0.000	94	416496	2.00	1.78	
105 1,2-Dichlorobenzene	146	19.112	19.112	0.000	79	269659	2.00	1.78	
107 Indene	116	19.246	19.246	0.000	91	250386	2.00	1.72	
106 n-Butylbenzene	91	19.252	19.252	0.000	98	444859	2.00	1.66	
108 Undecane	57	19.569	19.569	0.000	94	341871	2.00	1.75	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.623	19.623	0.000	99	341191	2.00	1.73	
110 1,2-Dibromo-3-Chloropropan	157	19.720	19.720	0.000	95	99954	2.00	1.91	
111 1,2,4,5-Tetramethylbenzene	119	20.010	20.010	0.000	98	388098	2.00	1.68	
112 1,2,3,5-Tetramethylbenzene	119	20.064	20.064	0.000	96	247699	2.00	1.74	
113 1,2,3,4-Tetramethylbenzene	119	20.462	20.462	0.000	98	302271	2.00	1.68	
114 Dodecane	57	20.629	20.629	0.000	92	320931	2.00	1.98	
115 1,2,4-Trichlorobenzene	180	20.822	20.822	0.000	92	117487	2.00	2.69	
116 Naphthalene	128	20.962	20.962	0.000	99	234558	2.00	2.01	
117 Benzo(b)thiophene	134	21.064	21.064	0.000	99	114897	2.00	2.52	
118 Hexachlorobutadiene	225	21.183	21.183	0.000	93	294683	2.00	1.74	
119 1,2,3-Trichlorobenzene	180	21.253	21.253	0.000	94	129739	2.00	2.27	
120 2-Methylnaphthalene	142	21.936	21.936	0.000	99	78528	6.25	6.84	
121 1-Methylnaphthalene	142	22.065	22.065	0.000	99	76080	6.25	5.95	
A 124 Toluene Range	1	13.571	(13.541-13.601)		0	1226267	2.00	1.62	
A 125 C8 Range	1	14.255	(14.232-14.279)		0	1865293	2.00	1.81	
S 126 Xylenes, Total	100				0		6.00	5.10	
S 127 1,2-Dichloroethene, Total	1				0		4.00	3.64	

Reagents:

40CV101P_00033	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

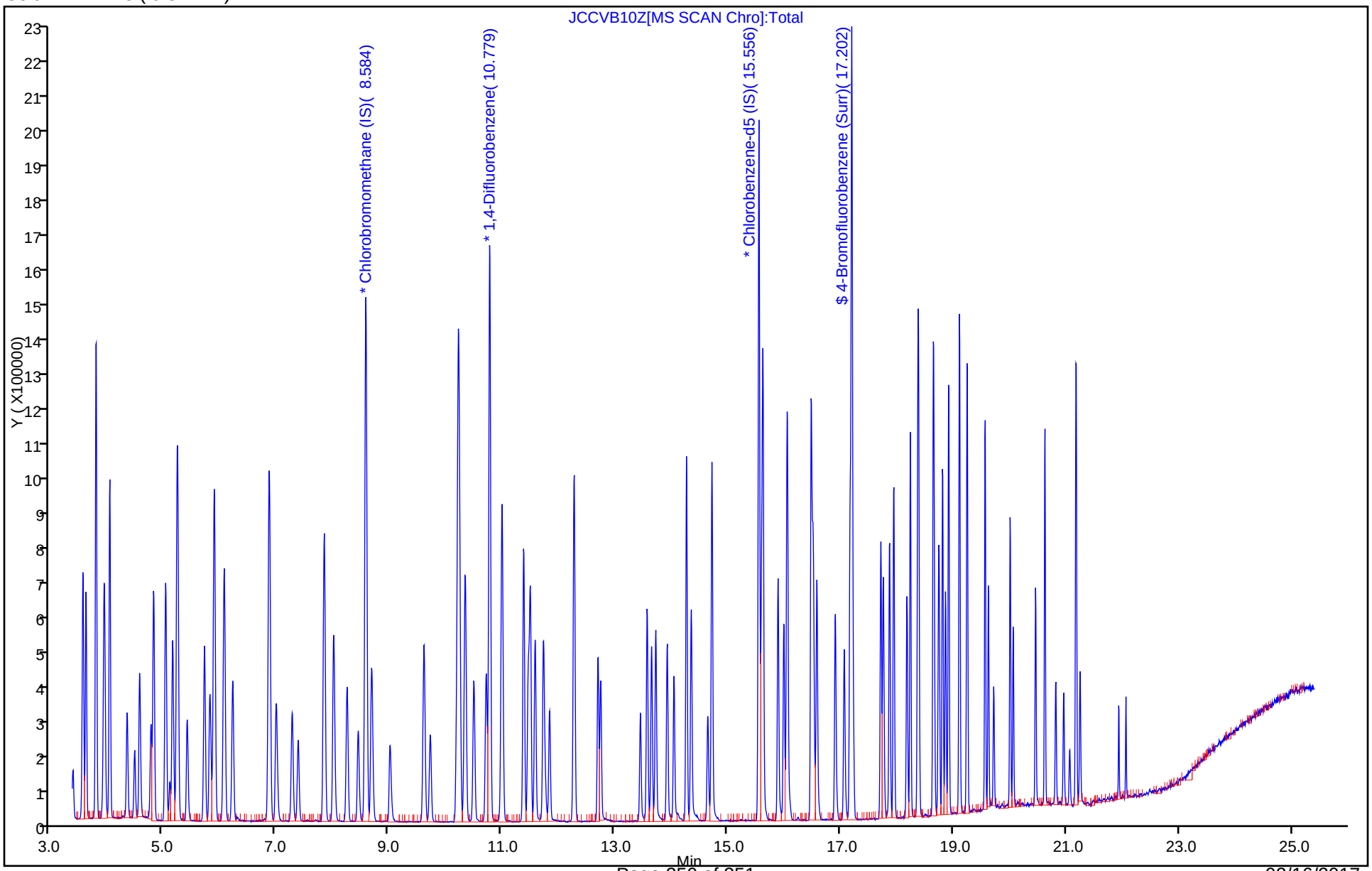
Report Date: 13-Feb-2017 12:31:15 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JCCVB10Z.D

Injection Date:	10-Feb-2017 08:27:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Lab Sample ID: ICV 140-7852/13 Calibration Date: 01/17/2017 01:21

Instrument ID: MR Calib Start Date: 01/16/2017 18:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/17/2017 10:29

Lab File ID: RA16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.2219	0.2158		1.95	2.00	-2.7	35.0
Propene	Ave	1.040	0.9631		1.85	2.00	-7.4	35.0
Dichlorodifluoromethane	Ave	1.811	2.114		2.33	2.00	16.7	35.0
Chloromethane	Ave	0.3400	0.3118		1.83	2.00	-8.3	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.050	2.027		1.98	2.00	-1.1	35.0
Acetaldehyde	Ave	0.3052	0.2223		7.28	10.0	-27.2	35.0
Vinyl chloride	Ave	0.9750	0.7575		1.55	2.00	-22.3	35.0
1,3-Butadiene	Ave	0.6890	0.5065		1.47	2.00	-26.5	35.0
Butane	Ave	1.237	1.012		1.64	2.00	-18.2	35.0
Bromomethane	Ave	0.8530	0.6901		1.62	2.00	-19.1	35.0
Chloroethane	Ave	0.3844	0.3209		1.67	2.00	-16.5	35.0
Ethanol	Ave	0.2559	0.2067		8.08	10.0	-19.2	35.0
Vinyl bromide	Ave	0.7956	0.7430		1.87	2.00	-6.6	35.0
2-Methylbutane	Ave	0.7496	0.6215		1.66	2.00	-17.1	35.0
Acrolein	Ave	0.2879	0.2292		1.59	2.00	-20.4	35.0
Trichlorofluoromethane	Ave	2.486	2.169		1.75	2.00	-12.7	35.0
Acetonitrile	Ave	0.4318	0.3463		1.60	2.00	-19.8	35.0
Acetone	Ave	0.4605	0.4149		5.41	6.00	-9.9	35.0
Isopropyl alcohol	Ave	1.354	1.423		6.31	6.00	5.1	35.0
Pentane	Ave	0.1947	0.1946		2.00	2.00	-0.0	35.0
Ethyl ether	Ave	1.131	1.173		2.07	2.00	3.7	35.0
1,1-Dichloroethene	Ave	1.101	1.039		1.89	2.00	-5.6	35.0
Acrylonitrile	Ave	0.7062	0.7334		2.08	2.00	3.8	35.0
tert-Butyl alcohol	Ave	1.480	1.471		1.99	2.00	-0.6	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.112	2.048		1.94	2.00	-3.0	35.0
Methylene Chloride	Ave	1.036	0.9226		1.78	2.00	-11.0	35.0
3-Chloropropene	Ave	0.7792	0.7703		1.98	2.00	-1.1	35.0
Carbon disulfide	Ave	2.839	2.781		1.96	2.00	-2.1	35.0
trans-1,2-Dichloroethene	Ave	1.170	1.082		1.85	2.00	-7.5	35.0
2-Methylpentane	Ave	2.152	2.384		2.22	2.00	10.8	35.0
Methyl tert-butyl ether	Ave	2.472	2.496		2.02	2.00	1.0	35.0
1,1-Dichloroethane	Ave	1.844	1.804		1.96	2.00	-2.2	35.0
Vinyl acetate	Ave	2.613	2.691		2.06	2.00	3.0	35.0
2-Butanone (MEK)	Ave	0.4822	0.4902		2.03	2.00	1.7	35.0
Hexane	Ave	0.7573	0.7638		2.02	2.00	0.9	35.0
Isopropyl ether	Ave	3.457	3.344		1.93	2.00	-3.3	35.0
cis-1,2-Dichloroethene	Ave	1.219	1.166		1.91	2.00	-4.4	35.0
Ethyl acetate	Ave	2.200	2.176		1.98	2.00	-1.1	35.0
Chloroform	Ave	2.082	1.999		1.92	2.00	-4.0	35.0
Tert-butyl ethyl ether	Ave	2.521	2.738		2.17	2.00	8.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Lab Sample ID: ICV 140-7852/13 Calibration Date: 01/17/2017 01:21

Instrument ID: MR Calib Start Date: 01/16/2017 18:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/17/2017 10:29

Lab File ID: RA16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.197	1.215		2.03	2.00	1.5	35.0
1,1,1-Trichloroethane	Ave	2.078	2.016		1.94	2.00	-3.0	35.0
1,2-Dichloroethane	Ave	0.2408	0.2392		1.99	2.00	-0.7	35.0
1-Butanol	Ave	0.0809	0.0657		1.62	2.00	-18.8	35.0
Benzene	Ave	0.6956	0.6884		1.98	2.00	-1.0	35.0
Cyclohexane	Ave	0.0994	0.1031		2.08	2.00	3.8	35.0
Carbon tetrachloride	Ave	0.4255	0.4418		2.08	2.00	3.8	35.0
2,3-Dimethylpentane	Ave	0.1475	0.1395		1.89	2.00	-5.5	35.0
Thiophene	Ave	0.3612	0.3817		2.11	2.00	5.7	35.0
Tert-amyl methyl ether	Ave	0.5308	0.6073		2.29	2.00	14.4	35.0
2,2,4-Trimethylpentane	Ave	0.9488	1.024		2.16	2.00	8.0	35.0
1,2-Dichloropropane	Ave	0.2404	0.2562		2.13	2.00	6.6	35.0
Heptane	Ave	0.2264	0.2358		2.08	2.00	4.2	35.0
Trichloroethene	Ave	0.3144	0.3112		1.98	2.00	-1.0	35.0
Dibromomethane	Ave	0.2419	0.2530		2.09	2.00	4.6	35.0
Bromodichloromethane	Ave	0.4021	0.4188		2.08	2.00	4.2	35.0
1,4-Dioxane	Ave	0.1115	0.1032		1.85	2.00	-7.4	35.0
Methyl methacrylate	Ave	0.2508	0.2686		2.14	2.00	7.1	35.0
Methylcyclohexane	Ave	0.4619	0.3851		1.67	2.00	-16.6	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4695	0.4814		2.05	2.00	2.5	35.0
cis-1,3-Dichloropropene	Ave	0.3476	0.3704		2.13	2.00	6.6	35.0
trans-1,3-Dichloropropene	Ave	0.3550	0.3709		2.09	2.00	4.5	35.0
Toluene	Ave	0.8739	0.9194		2.10	2.00	5.2	35.0
1,1,2-Trichloroethane	Ave	0.2754	0.2680		1.95	2.00	-2.7	35.0
2-Methylthiophene	Ave	0.7609	0.8261		2.17	2.00	8.6	35.0
3-Methylthiophene	Ave	0.7494	0.8438		2.25	2.00	12.6	35.0
2-Hexanone	Ave	0.2576	0.2626		2.04	2.00	1.9	35.0
Dibromochloromethane	Ave	0.5036	0.5478		2.18	2.00	8.8	35.0
Octane	Ave	0.2781	0.2906		2.09	2.00	4.5	35.0
1,2-Dibromoethane (EDB)	Ave	0.4814	0.4977		2.07	2.00	3.4	35.0
Tetrachloroethene	Ave	0.3356	0.3273		1.95	2.00	-2.5	35.0
Chlorobenzene	Ave	0.7195	0.7401		2.06	2.00	2.8	35.0
2,3-Dimethylheptane	Ave	0.7552	0.8374		2.22	2.00	10.9	35.0
Ethylbenzene	Ave	1.174	1.158		1.97	2.00	-1.3	35.0
2-Ethylthiophene	Ave	0.8633	0.8995		2.08	2.00	4.2	35.0
m-Xylene & p-Xylene	Ave	0.8819	0.8917		4.04	4.00	1.1	35.0
Bromoform	Ave	0.6483	0.7152		2.21	2.00	10.3	35.0
Styrene	Ave	0.6255	0.6625		2.12	2.00	5.9	35.0
Nonane	Ave	0.5076	0.5627		2.22	2.00	10.9	35.0
o-Xylene	Ave	0.9227	0.8995		1.95	2.00	-2.5	35.0
1,1,2,2-Tetrachloroethane	Ave	0.7011	0.6623		1.89	2.00	-5.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Lab Sample ID: ICV 140-7852/13 Calibration Date: 01/17/2017 01:21

Instrument ID: MR Calib Start Date: 01/16/2017 18:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/17/2017 10:29

Lab File ID: RA16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1972	0.1917		1.94	2.00	-2.8	35.0
Isopropylbenzene	Ave	1.302	1.363		2.09	2.00	4.7	35.0
Propylbenzene	Ave	0.3605	0.3824		2.12	2.00	6.1	35.0
2-Chlorotoluene	Ave	0.3395	0.3583		2.11	2.00	5.5	35.0
4-Ethyltoluene	Ave	1.306	1.292		1.98	2.00	-1.1	35.0
1,3,5-Trimethylbenzene	Ave	0.6336	0.6247		1.97	2.00	-1.4	35.0
Alpha Methyl Styrene	Ave	0.5024	0.5018		2.00	2.00	-0.1	35.0
Decane	Ave	0.6458	0.7206		2.23	2.00	11.6	35.0
tert-Butylbenzene	Ave	1.115	1.170		2.10	2.00	4.9	35.0
1,2,4-Trimethylbenzene	Ave	1.135	1.132		2.00	2.00	-0.2	35.0
1,3-Dichlorobenzene	Ave	0.8032	0.8426		2.10	2.00	4.9	35.0
sec-Butylbenzene	Ave	1.594	1.692		2.12	2.00	6.1	35.0
Benzyl chloride	Ave	0.8762	0.9065		2.07	2.00	3.5	35.0
1,4-Dichlorobenzene	Ave	0.8171	0.8439		2.07	2.00	3.3	35.0
4-Isopropyltoluene	Ave	1.302	1.357		2.09	2.00	4.3	35.0
1,2,3-Trimethylbenzene	Ave	0.9045	0.9301		2.06	2.00	2.8	35.0
Butylcyclohexane	Ave	0.8419	0.8526		2.03	2.00	1.3	35.0
1,2-Dichlorobenzene	Ave	0.7845	0.8157		2.08	2.00	4.0	35.0
Indane	Ave	1.008	1.008		2.00	2.00	0.0	35.0
Indene	QuaF		0.9943		2.12	2.00	6.0	35.0
Butylbenzene	Ave	1.256	1.300		2.07	2.00	3.5	35.0
Undecane	Ave	0.7309	0.8215		2.25	2.00	12.4	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		1.262		2.23	2.00	11.6	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.4119	0.3721		1.81	2.00	-9.7	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.147	1.264		2.20	2.00	10.2	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.7194	0.7995		2.22	2.00	11.1	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.9719	1.035		2.13	2.00	6.5	35.0
Dodecane	Ave	0.7623	0.7211		1.89	2.00	-5.4	35.0
1,2,4-Trichlorobenzene	Ave	0.9333	0.8666		1.86	2.00	-7.1	35.0
Naphthalene	Ave	1.723	1.533		1.78	2.00	-11.0	35.0
Benzo(b)thiophene	Ave	0.9449	0.8971		1.90	2.00	-5.1	35.0
Hexachlorobutadiene	Ave	0.8326	0.7864		1.89	2.00	-5.5	35.0
1,2,3-Trichlorobenzene	Ave	0.8487	0.8107		1.91	2.00	-4.5	35.0
2-Methylnaphthalene	Ave	0.2033	0.0959		2.95	6.25	-52.8*	50.0
1-Methylnaphthalene	Ave	0.1899	0.0920		3.03	6.25	-51.5*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6257	0.6564		4.20	4.00	4.9	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16ICV.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 17-Jan-2017 01:21:30 ALS Bottle#: 10 Worklist Smp#: 13
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003844-013
Misc. Info.: 073137
Operator ID: Instrument ID: MR
Sublist:

Method: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jan-2017 15:13:49 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: barlozhetskayaa Date: 17-Jan-2017 15:13:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.242	8.242	0.000	92	453735	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.410	10.407	0.003	93	2225824	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.295	15.293	0.002	85	1915858	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.983	16.987	-0.001	96	1257547	4.00	4.20	
6 Chlorodifluoromethane	67	3.718	3.727	-0.006	96	48966	2.00	1.95	
7 Propene	41	3.723	3.730	-0.005	97	218486	2.00	1.85	
8 Dichlorodifluoromethane	85	3.772	3.779	-0.004	99	479500	2.00	2.33	
9 Chloromethane	52	3.923	3.926	0.000	100	70745	2.00	1.83	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.950	3.953	-0.001	90	459941	2.00	1.98	
11 Acetaldehyde	44	4.068	4.073	-0.002	98	252102	10.0	7.28	
12 Vinyl chloride	62	4.074	4.077	-0.001	99	171851	2.00	1.55	
13 Butadiene	54	4.154	4.158	-0.001	94	114912	2.00	1.47	
14 Butane	43	4.154	4.161	-0.004	92	229561	2.00	1.64	
15 Bromomethane	94	4.413	4.419	-0.003	96	156549	2.00	1.62	
16 Chloroethane	64	4.537	4.544	-0.004	99	72794	2.00	1.67	
17 Ethanol	31	4.651	4.654	0.000	97	234432	10.0	8.08	
18 Vinyl bromide	106	4.796	4.801	-0.001	99	168563	2.00	1.87	
19 2-Methylbutane	43	4.855	4.859	-0.001	88	141007	2.00	1.66	
20 Acrolein	56	5.033	5.037	0.000	31	52003	2.00	1.59	
21 Trichlorofluoromethane	101	5.039	5.040	0.003	98	492065	2.00	1.75	
22 Acetonitrile	40	5.082	5.086	-0.001	97	78558	2.00	1.60	
23 Acetone	58	5.125	5.136	-0.008	97	282399	6.00	5.41	
24 Isopropyl alcohol	45	5.233	5.236	0.001	93	968901	6.00	6.31	
25 Pentane	72	5.233	5.242	-0.005	93	44151	2.00	2.00	
26 Ethyl ether	31	5.368	5.380	-0.009	94	266078	2.00	2.07	
27 1,1-Dichloroethene	96	5.637	5.643	-0.002	96	235775	2.00	1.89	
28 Acrylonitrile	53	5.713	5.716	0.001	96	166389	2.00	2.08	
29 2-Methyl-2-propanol	59	5.740	5.750	-0.006	96	333805	2.00	1.99	
30 1,1,2-Trichloro-1,2,2-trif	101	5.815	5.823	-0.004	93	464659	2.00	1.94	
31 Methylene Chloride	84	5.934	5.935	0.003	95	209308	2.00	1.78	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.950	5.956	-0.002	92	174754	2.00	1.98	
33 Carbon disulfide	76	6.074	6.076	0.002	98	630904	2.00	1.96	
34 trans-1,2-Dichloroethene	96	6.667	6.671	0.000	97	245570	2.00	1.85	
35 2-Methylpentane	43	6.721	6.724	0.002	96	540865	2.00	2.22	
36 Methyl tert-butyl ether	73	6.791	6.802	-0.006	97	566164	2.00	2.02	
37 1,1-Dichloroethane	63	7.039	7.039	0.004	100	409321	2.00	1.96	
38 Vinyl acetate	43	7.142	7.152	-0.005	100	610558	2.00	2.06	
39 2-Butanone (MEK)	72	7.530	7.541	-0.006	99	111209	2.00	2.03	
40 Hexane	56	7.622	7.627	0.000	91	173287	2.00	2.02	
41 Isopropyl ether	45	7.757	7.766	-0.004	98	758770	2.00	1.93	
42 cis-1,2-Dichloroethene	96	7.945	7.949	0.001	90	264476	2.00	1.91	
43 Ethyl acetate	43	8.129	8.137	-0.003	100	493689	2.00	1.98	
44 Chloroform	83	8.274	8.280	0.000	94	453412	2.00	1.92	
45 Tert-butyl ethyl ether	59	8.393	8.402	-0.003	93	621121	2.00	2.17	
46 Tetrahydrofuran	42	8.630	8.645	-0.009	97	275614	2.00	2.03	
47 1,1,1-Trichloroethane	97	9.256	9.261	0.002	94	457411	2.00	1.94	
48 1,2-Dichloroethane	62	9.331	9.325	0.003	95	266185	2.00	1.99	
49 n-Butanol	31	9.816	9.823	-0.009	63	73078	2.00	1.62	
50 Benzene	78	9.843	9.836	0.005	95	766130	2.00	1.98	
51 Cyclohexane	69	9.865	9.863	-0.001	95	114768	2.00	2.08	
52 Carbon tetrachloride	117	9.876	9.875	-0.002	97	491673	2.00	2.08	
53 2,3-Dimethylpentane	71	10.021	10.024	-0.005	93	155218	2.00	1.89	
54 Thiophene	84	10.108	10.105	0.001	93	424832	2.00	2.11	
55 Tert-amyl methyl ether	73	10.356	10.358	-0.005	98	675918	2.00	2.29	
56 Isooctane	57	10.690	10.689	-0.002	99	1139963	2.00	2.16	
57 1,2-Dichloropropane	63	11.078	11.076	0.000	91	285141	2.00	2.13	
58 n-Heptane	71	11.084	11.084	-0.002	92	262459	2.00	2.08	
59 Trichloroethene	130	11.143	11.139	0.002	91	346283	2.00	1.98	
60 Dibromomethane	93	11.186	11.184	0.000	87	281551	2.00	2.09	
61 Dichlorobromomethane	83	11.353	11.351	-0.001	99	466131	2.00	2.08	
62 1,4-Dioxane	88	11.359	11.362	-0.006	60	114858	2.00	1.85	
63 Methyl methacrylate	41	11.488	11.485	0.000	92	298943	2.00	2.14	
64 Methylcyclohexane	83	11.963	11.960	0.000	97	428550	2.00	1.67	
65 4-Methyl-2-pentanone (MIBK	43	12.351	12.352	-0.004	96	535703	2.00	2.05	
66 cis-1,3-Dichloropropene	75	12.405	12.402	0.000	91	412241	2.00	2.13	
67 trans-1,3-Dichloropropene	75	13.127	13.128	0.001	97	355302	2.00	2.09	
68 Toluene	91	13.268	13.271	-0.001	93	880673	2.00	2.10	
69 1,1,2-Trichloroethane	83	13.327	13.331	0.004	95	256703	2.00	1.95	
70 2-Methylthiophene	97	13.419	13.419	0.002	97	791351	2.00	2.17	
71 3-Methylthiophene	97	13.629	13.627	0.004	98	808296	2.00	2.25	
72 2-Hexanone	58	13.748	13.754	-0.004	92	251592	2.00	2.04	
73 Chlorodibromomethane	129	14.044	14.044	0.002	97	524720	2.00	2.18	
74 n-Octane	85	14.060	14.062	0.000	93	278392	2.00	2.09	
75 Ethylene Dibromide	107	14.335	14.338	-0.001	98	476790	2.00	2.07	
76 Tetrachloroethene	129	14.459	14.459	0.003	94	313571	2.00	1.95	
77 Chlorobenzene	112	15.344	15.345	0.002	96	708912	2.00	2.06	
78 2,3-Dimethylheptane	43	15.441	15.446	-0.003	98	802148	2.00	2.22	
79 Ethylbenzene	91	15.662	15.662	0.002	97	1109513	2.00	1.97	
80 2-Ethylthiophene	97	15.759	15.760	0.001	97	861686	2.00	2.08	
81 m-Xylene & p-Xylene	91	15.829	15.833	-0.001	98	1708280	4.00	4.04	
82 Bromoform	173	16.233	16.237	-0.002	98	685066	2.00	2.21	
83 Styrene	104	16.298	16.298	0.002	97	634593	2.00	2.12	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.320	16.326	-0.004	94	538981	2.00	2.22	
85 o-Xylene	91	16.357	16.361	-0.002	99	861675	2.00	1.95	
86 1,1,2,2-Tetrachloroethane	83	16.670	16.674	-0.001	98	634456	2.00	1.89	
87 1,2,3-Trichloropropane	110	16.832	16.834	0.001	98	183634	2.00	1.94	
88 Isopropylbenzene	105	16.978	16.980	0.001	95	1305721	2.00	2.09	
89 N-Propylbenzene	120	17.549	17.555	-0.003	99	366291	2.00	2.12	
90 2-Chlorotoluene	126	17.576	17.581	-0.002	96	343198	2.00	2.11	
91 4-Ethyltoluene	105	17.716	17.721	-0.002	100	1237263	2.00	1.98	
92 1,3,5-Trimethylbenzene	120	17.803	17.805	0.001	93	598452	2.00	1.97	
93 Alpha Methyl Styrene	118	18.040	18.045	-0.002	92	480702	2.00	2.00	
94 n-Decane	57	18.164	18.168	-0.002	89	690254	2.00	2.23	
95 tert-Butylbenzene	119	18.250	18.254	-0.001	93	1120533	2.00	2.10	
96 1,2,4-Trimethylbenzene	105	18.266	18.270	-0.001	96	1084378	2.00	2.00	
97 1,3-Dichlorobenzene	146	18.531	18.534	0.000	95	807126	2.00	2.10	
98 sec-Butylbenzene	105	18.541	18.546	-0.002	99	1620803	2.00	2.12	
99 Benzyl chloride	91	18.606	18.610	-0.001	100	868368	2.00	2.07	
100 1,4-Dichlorobenzene	146	18.628	18.628	0.003	96	808361	2.00	2.07	
101 4-Isopropyltoluene	119	18.719	18.723	-0.001	98	1300079	2.00	2.09	
102 1,2,3-Trimethylbenzene	105	18.762	18.765	0.000	96	890933	2.00	2.06	
103 Butylcyclohexane	83	18.849	18.853	-0.002	97	816712	2.00	2.03	
104 1,2-Dichlorobenzene	146	19.005	19.006	0.002	97	781348	2.00	2.08	
105 2,3-Dihydroindene	117	19.010	19.015	-0.002	95	966022	2.00	2.00	
106 Indene	116	19.145	19.149	-0.001	92	952459	2.00	2.12	
107 n-Butylbenzene	91	19.183	19.186	0.000	97	1245659	2.00	2.07	
108 Undecane	57	19.560	19.564	-0.001	98	786959	2.00	2.25	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.571	19.577	-0.003	98	1208649	2.00	2.23	
110 1,2-Dibromo-3-Chloropropan	157	19.631	19.634	0.000	89	356445	2.00	1.81	
111 1,2,4,5-Tetramethylbenzene	119	19.976	19.980	-0.001	98	1211117	2.00	2.20	
112 1,2,3,5-Tetramethylbenzene	119	20.030	20.034	-0.001	97	765858	2.00	2.22	
113 1,2,3,4-Tetramethylbenzene	119	20.434	20.442	-0.005	98	991569	2.00	2.13	
114 Dodecane	57	20.661	20.667	-0.003	95	690788	2.00	1.89	
115 1,2,4-Trichlorobenzene	180	20.790	20.791	0.002	92	830183	2.00	1.86	
116 Naphthalene	128	20.919	20.925	-0.003	100	1468661	2.00	1.78	
117 Benzo(b)thiophene	134	21.022	21.027	-0.002	100	859317	2.00	1.90	
118 Hexachlorobutadiene	225	21.173	21.177	0.000	93	753356	2.00	1.89	
119 1,2,3-Trichlorobenzene	180	21.216	21.220	-0.001	95	776614	2.00	1.91	
120 2-Methylnaphthalene	142	21.933	21.937	0.000	97	287137	6.25	2.95	
121 1-Methylnaphthalene	142	22.057	22.061	0.000	97	275508	6.25	3.03	
A 122 C6 Range	1	7.609	(7.589-7.629)		0	1506787	2.00	1.98	
S 124 Xylenes, Total	100				0		6.00	5.99	
S 125 1,2-Dichloroethene, Total	1				0		4.00	3.76	

Reagents:

40CV101S_00033	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

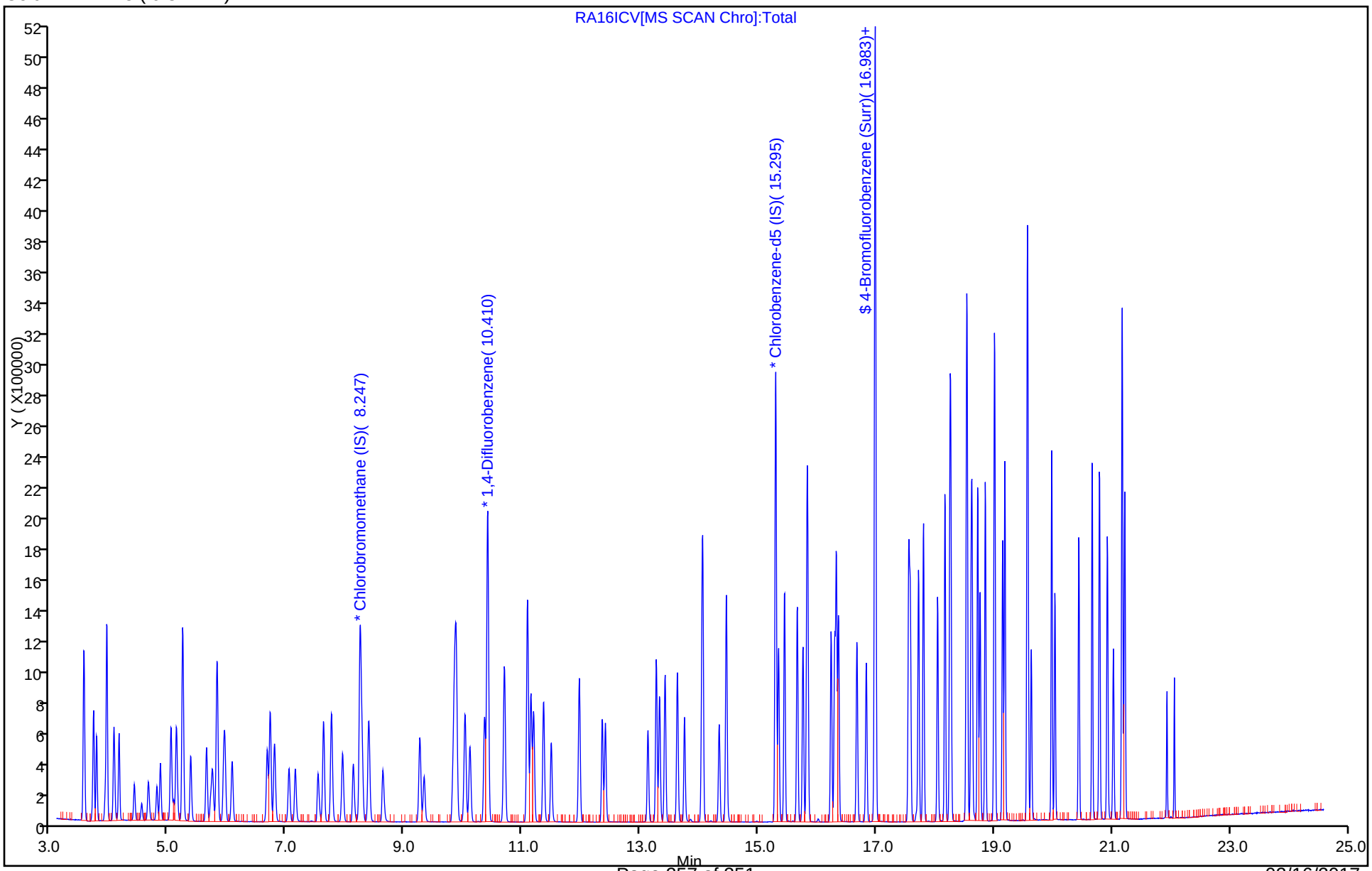
Report Date: 17-Jan-2017 15:13:50 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16ICV.D

Injection Date:	17-Jan-2017 01:21:30	Instrument ID:	MR	Operator ID:	
Lims ID:	ICV			Worklist Smp#:	13
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Lab Sample ID: CCVIS 140-8477/6 Calibration Date: 02/13/2017 12:44

Instrument ID: MR Calib Start Date: 01/16/2017 18:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/17/2017 10:29

Lab File ID: RB13CCVa.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.2219	0.2718		2.45	2.00	22.5	30.0
Propene	Ave	1.040	0.9615		1.85	2.00	-7.6	30.0
Dichlorodifluoromethane	Ave	1.811	1.918		2.12	2.00	6.0	30.0
Chloromethane	Ave	0.3400	0.3116		1.83	2.00	-8.3	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.050	2.461		2.40	2.00	20.0	30.0
Acetaldehyde	Ave	0.3052	0.3387		11.1	10.0	11.0	30.0
Vinyl chloride	Ave	0.9750	0.9902		2.03	2.00	1.6	30.0
1,3-Butadiene	Ave	0.6890	0.6687		1.94	2.00	-2.9	30.0
Butane	Ave	1.237	1.324		2.14	2.00	7.0	30.0
Bromomethane	Ave	0.8530	0.8859		2.08	2.00	3.8	30.0
Chloroethane	Ave	0.3844	0.3592		1.87	2.00	-6.6	30.0
Ethanol	Ave	0.2559	0.2623		10.2	10.0	2.5	30.0
Vinyl bromide	Ave	0.7956	0.8807		2.21	2.00	10.7	30.0
2-Methylbutane	Ave	0.7496	0.6930		1.85	2.00	-7.6	30.0
Acrolein	Ave	0.2879	0.2351		1.63	2.00	-18.3	30.0
Trichlorofluoromethane	Ave	2.486	3.082		2.48	2.00	24.0	30.0
Acetonitrile	Ave	0.4318	0.4064		1.88	2.00	-5.9	30.0
Acetone	Ave	0.4605	0.4229		5.51	6.00	-8.2	30.0
Isopropyl alcohol	Ave	1.354	1.315		5.82	6.00	-2.9	30.0
Pentane	Ave	0.1947	0.1957		2.01	2.00	0.5	30.0
Ethyl ether	Ave	1.131	1.112		1.97	2.00	-1.7	30.0
1,1-Dichloroethene	Ave	1.101	1.122		2.04	2.00	1.9	30.0
Acrylonitrile	Ave	0.7062	0.7014		1.99	2.00	-0.7	30.0
tert-Butyl alcohol	Ave	1.480	1.563		2.11	2.00	5.6	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.112	2.305		2.18	2.00	9.1	30.0
Methylene Chloride	Ave	1.036	0.9672		1.87	2.00	-6.7	30.0
3-Chloropropene	Ave	0.7792	0.8831		2.27	2.00	13.3	30.0
Carbon disulfide	Ave	2.839	2.869		2.02	2.00	1.0	30.0
trans-1,2-Dichloroethene	Ave	1.170	1.182		2.02	2.00	1.0	30.0
2-Methylpentane	Ave	2.152	2.077		1.93	2.00	-3.5	30.0
Methyl tert-butyl ether	Ave	2.472	2.689		2.18	2.00	8.8	30.0
1,1-Dichloroethane	Ave	1.844	1.817		1.97	2.00	-1.5	30.0
Vinyl acetate	Ave	2.613	2.661		2.04	2.00	1.8	30.0
2-Butanone (MEK)	Ave	0.4822	0.5054		2.10	2.00	4.8	30.0
Hexane	Ave	0.7573	0.7253		1.92	2.00	-4.2	30.0
Isopropyl ether	Ave	3.457	3.442		1.99	2.00	-0.4	30.0
cis-1,2-Dichloroethene	Ave	1.219	1.222		2.00	2.00	0.2	30.0
Ethyl acetate	Ave	2.200	2.262		2.06	2.00	2.8	30.0
Chloroform	Ave	2.082	2.189		2.10	2.00	5.1	30.0
Tert-butyl ethyl ether	Ave	2.521	2.573		2.04	2.00	2.1	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Lab Sample ID: CCVIS 140-8477/6 Calibration Date: 02/13/2017 12:44

Instrument ID: MR Calib Start Date: 01/16/2017 18:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/17/2017 10:29

Lab File ID: RB13CCVa.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.197	1.134		1.89	2.00	-5.3	30.0
1,1,1-Trichloroethane	Ave	2.078	2.376		2.29	2.00	14.4	30.0
1,2-Dichloroethane	Ave	0.2408	0.2679		2.23	2.00	11.3	30.0
1-Butanol	Ave	0.0809	0.0788		1.95	2.00	-2.5	30.0
Benzene	Ave	0.6956	0.6733		1.94	2.00	-3.2	30.0
Cyclohexane	Ave	0.0994	0.0976		1.96	2.00	-1.8	30.0
Carbon tetrachloride	Ave	0.4255	0.5119		2.41	2.00	20.3	30.0
2,3-Dimethylpentane	Ave	0.1475	0.1451		1.97	2.00	-1.7	30.0
Thiophene	Ave	0.3612	0.3672		2.03	2.00	1.7	30.0
Tert-amyl methyl ether	Ave	0.5308	0.5937		2.24	2.00	11.9	30.0
2,2,4-Trimethylpentane	Ave	0.9488	0.9296		1.96	2.00	-2.0	30.0
1,2-Dichloropropane	Ave	0.2404	0.2382		1.98	2.00	-0.9	30.0
Heptane	Ave	0.2264	0.2281		2.01	2.00	0.7	30.0
Trichloroethene	Ave	0.3144	0.3179		2.02	2.00	1.1	30.0
Dibromomethane	Ave	0.2419	0.2701		2.23	2.00	11.6	30.0
Bromodichloromethane	Ave	0.4021	0.4524		2.25	2.00	12.5	30.0
1,4-Dioxane	Ave	0.1115	0.1021		1.83	2.00	-8.4	30.0
Methyl methacrylate	Ave	0.2508	0.2650		2.11	2.00	5.7	30.0
Methylcyclohexane	Ave	0.4619	0.4730		2.05	2.00	2.4	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4695	0.4743		2.02	2.00	1.0	30.0
cis-1,3-Dichloropropene	Ave	0.3476	0.3572		2.06	2.00	2.8	30.0
trans-1,3-Dichloropropene	Ave	0.3550	0.3951		2.23	2.00	11.3	30.0
Toluene	Ave	0.8739	0.9732		2.23	2.00	11.4	30.0
1,1,2-Trichloroethane	Ave	0.2754	0.2895		2.10	2.00	5.1	30.0
2-Methylthiophene	Ave	0.7609	0.8568		2.25	2.00	12.6	30.0
3-Methylthiophene	Ave	0.7494	0.8586		2.29	2.00	14.6	30.0
2-Hexanone	Ave	0.2576	0.2772		2.15	2.00	7.6	30.0
Dibromochloromethane	Ave	0.5036	0.6291		2.50	2.00	24.9	30.0
Octane	Ave	0.2781	0.2944		2.12	2.00	5.9	30.0
1,2-Dibromoethane (EDB)	Ave	0.4814	0.5625		2.34	2.00	16.9	30.0
Tetrachloroethene	Ave	0.3356	0.3800		2.26	2.00	13.2	30.0
Chlorobenzene	Ave	0.7195	0.7729		2.15	2.00	7.4	30.0
2,3-Dimethylheptane	Ave	0.7552	0.7882		2.09	2.00	4.4	30.0
Ethylbenzene	Ave	1.174	1.198		2.04	2.00	2.0	30.0
2-Ethylthiophene	Ave	0.8633	0.9647		2.23	2.00	11.7	30.0
m-Xylene & p-Xylene	Ave	0.8819	0.9279		4.21	4.00	5.2	30.0
Bromoform	Ave	0.6483	0.7175		2.21	2.00	10.7	30.0
Styrene	Ave	0.6255	0.6785		2.17	2.00	8.5	30.0
Nonane	Ave	0.5076	0.5326		2.10	2.00	4.9	30.0
o-Xylene	Ave	0.9227	0.9361		2.03	2.00	1.5	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7011	0.7216		2.06	2.00	2.9	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Lab Sample ID: CCVIS 140-8477/6 Calibration Date: 02/13/2017 12:44

Instrument ID: MR Calib Start Date: 01/16/2017 18:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/17/2017 10:29

Lab File ID: RB13CCVa.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1972	0.2107		2.14	2.00	6.9	30.0
Isopropylbenzene	Ave	1.302	1.395		2.14	2.00	7.2	30.0
Propylbenzene	Ave	0.3605	0.3886		2.16	2.00	7.8	30.0
2-Chlorotoluene	Ave	0.3395	0.3448		2.03	2.00	1.5	30.0
4-Ethyltoluene	Ave	1.306	1.473		2.26	2.00	12.9	30.0
1,3,5-Trimethylbenzene	Ave	0.6336	0.6683		2.11	2.00	5.5	30.0
Alpha Methyl Styrene	Ave	0.5024	0.5778		2.30	2.00	15.0	30.0
Decane	Ave	0.6458	0.7215		2.23	2.00	11.7	30.0
tert-Butylbenzene	Ave	1.115	1.343		2.41	2.00	20.5	30.0
1,2,4-Trimethylbenzene	Ave	1.135	1.284		2.26	2.00	13.2	30.0
1,3-Dichlorobenzene	Ave	0.8032	0.9324		2.32	2.00	16.1	30.0
sec-Butylbenzene	Ave	1.594	1.961		2.46	2.00	23.0	30.0
Benzyl chloride	Ave	0.8762	1.070		2.44	2.00	22.1	30.0
1,4-Dichlorobenzene	Ave	0.8171	0.9497		2.32	2.00	16.2	30.0
4-Isopropyltoluene	Ave	1.302	1.612		2.48	2.00	23.9	30.0
1,2,3-Trimethylbenzene	Ave	0.9045	0.9880		2.18	2.00	9.2	30.0
Butylcyclohexane	Ave	0.8419	0.9706		2.31	2.00	15.3	30.0
1,2-Dichlorobenzene	Ave	0.7845	0.9380		2.39	2.00	19.6	30.0
Indane	Ave	1.008	1.136		2.25	2.00	12.7	30.0
Indene	QuaF		0.9068		1.93	2.00	-3.5	30.0
Butylbenzene	Ave	1.256	1.587		2.53	2.00	26.4	30.0
Undecane	Ave	0.7309	0.8623		2.36	2.00	18.0	30.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		1.235		2.18	2.00	9.1	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.4119	0.4923		2.39	2.00	19.5	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.147	1.461		2.55	2.00	27.4	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.7194	0.8840		2.46	2.00	22.9	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.9719	1.201		2.47	2.00	23.6	30.0
Dodecane	Ave	0.7623	0.8786		2.31	2.00	15.3	30.0
1,2,4-Trichlorobenzene	Ave	0.9333	1.018		2.18	2.00	9.1	30.0
Naphthalene	Ave	1.723	1.919		2.23	2.00	11.4	30.0
Benzo(b)thiophene	Ave	0.9449	1.081		2.29	2.00	14.3	30.0
Hexachlorobutadiene	Ave	0.8326	0.8934		2.15	2.00	7.3	30.0
1,2,3-Trichlorobenzene	Ave	0.8487	0.9865		2.32	2.00	16.2	30.0
2-Methylnaphthalene	Ave	0.2033	0.2554		7.85	6.25	25.7	50.0
1-Methylnaphthalene	Ave	0.1899	0.2082		6.85	6.25	9.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6257	0.5747		3.67	4.00	-8.2	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13CCVa.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 13-Feb-2017 12:44:30 ALS Bottle#: 15 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004028-002
Misc. Info.: S32
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Feb-2017 13:28:51 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: tajh Date: 14-Feb-2017 13:28:51

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.231	8.231	0.000	85	358308	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.393	10.393	0.000	93	1763771	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.284	15.284	0.000	84	1420577	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.972	16.972	0.000	94	816358	4.00	3.67	
6 Chlorodifluoromethane	67	3.718	3.718	0.000	98	48694	2.00	2.45	
7 Propene	41	3.728	3.728	0.000	98	172247	2.00	1.85	
8 Dichlorodifluoromethane	85	3.777	3.777	0.000	99	343697	2.00	2.12	
9 Chloromethane	52	3.923	3.923	0.000	100	55827	2.00	1.83	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.950	3.950	0.000	87	440863	2.00	2.40	
11 Acetaldehyde	44	4.063	4.063	0.000	97	303415	10.0	11.1	
12 Vinyl chloride	62	4.074	4.074	0.000	99	177400	2.00	2.03	
13 Butadiene	54	4.154	4.154	0.000	89	119807	2.00	1.94	
14 Butane	43	4.154	4.154	0.000	93	237183	2.00	2.14	
15 Bromomethane	94	4.413	4.413	0.000	96	158704	2.00	2.08	
16 Chloroethane	64	4.537	4.537	0.000	91	64353	2.00	1.87	
17 Ethanol	31	4.651	4.651	0.000	99	234914	10.0	10.2	
18 Vinyl bromide	106	4.796	4.796	0.000	97	157784	2.00	2.21	
19 2-Methylbutane	43	4.855	4.855	0.000	89	124144	2.00	1.85	
20 Acrolein	56	5.028	5.028	0.000	32	42117	2.00	1.63	
21 Trichlorofluoromethane	101	5.033	5.033	0.000	99	552233	2.00	2.48	
22 Acetonitrile	40	5.077	5.077	0.000	99	72799	2.00	1.88	
23 Acetone	58	5.120	5.120	0.000	98	227317	6.00	5.51	
24 Isopropyl alcohol	45	5.228	5.228	0.000	93	706620	6.00	5.82	
25 Pentane	72	5.238	5.238	0.000	95	35053	2.00	2.01	
26 Ethyl ether	31	5.362	5.362	0.000	94	199138	2.00	1.97	
27 1,1-Dichloroethene	96	5.632	5.632	0.000	97	200950	2.00	2.04	
28 Acrylonitrile	53	5.707	5.707	0.000	94	125650	2.00	1.99	
29 2-Methyl-2-propanol	59	5.729	5.729	0.000	97	280087	2.00	2.11	
30 1,1,2-Trichloro-1,2,2-trif	101	5.810	5.810	0.000	94	412866	2.00	2.18	
31 Methylene Chloride	84	5.923	5.923	0.000	94	173280	2.00	1.87	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.945	5.945	0.000	97	158206	2.00	2.27	
33 Carbon disulfide	76	6.069	6.069	0.000	99	513959	2.00	2.02	
34 trans-1,2-Dichloroethene	96	6.662	6.662	0.000	94	211797	2.00	2.02	
35 2-Methylpentane	43	6.710	6.710	0.000	94	372084	2.00	1.93	
36 Methyl tert-butyl ether	73	6.781	6.781	0.000	96	481806	2.00	2.18	
37 1,1-Dichloroethane	63	7.029	7.029	0.000	100	325498	2.00	1.97	
38 Vinyl acetate	43	7.136	7.136	0.000	100	476703	2.00	2.04	
39 2-Butanone (MEK)	72	7.519	7.519	0.000	100	90545	2.00	2.10	
40 Hexane	56	7.616	7.616	0.000	91	129946	2.00	1.92	
41 Isopropyl ether	45	7.746	7.746	0.000	96	616586	2.00	1.99	
42 cis-1,2-Dichloroethene	96	7.935	7.935	0.000	89	218865	2.00	2.00	
43 Ethyl acetate	43	8.118	8.118	0.000	99	405266	2.00	2.06	
44 Chloroform	83	8.263	8.263	0.000	94	392119	2.00	2.10	
45 Tert-butyl ethyl ether	59	8.377	8.377	0.000	93	460961	2.00	2.04	
46 Tetrahydrofuran	42	8.614	8.614	0.000	94	203088	2.00	1.89	
47 1,1,1-Trichloroethane	97	9.245	9.245	0.000	94	425745	2.00	2.29	
48 1,2-Dichloroethane	62	9.315	9.315	0.000	97	236248	2.00	2.23	
49 n-Butanol	31	9.800	9.800	0.000	89	69514	2.00	1.95	
50 Benzene	78	9.827	9.827	0.000	94	593756	2.00	1.94	
51 Cyclohexane	69	9.849	9.849	0.000	94	86071	2.00	1.96	
52 Carbon tetrachloride	117	9.865	9.865	0.000	98	451425	2.00	2.41	
53 2,3-Dimethylpentane	71	10.011	10.011	0.000	91	127921	2.00	1.97	
54 Thiophene	84	10.091	10.091	0.000	92	323782	2.00	2.03	
55 Tert-amyl methyl ether	73	10.340	10.340	0.000	98	523603	2.00	2.24	
56 Isooctane	57	10.679	10.679	0.000	98	819823	2.00	1.96	
57 1,2-Dichloropropane	63	11.067	11.067	0.000	91	210078	2.00	1.98	
58 n-Heptane	71	11.073	11.073	0.000	86	201127	2.00	2.01	
59 Trichloroethene	130	11.132	11.132	0.000	92	280390	2.00	2.02	
60 Dibromomethane	93	11.175	11.175	0.000	87	238170	2.00	2.23	
61 Dichlorobromomethane	83	11.342	11.342	0.000	98	398986	2.00	2.25	
62 1,4-Dioxane	88	11.348	11.348	0.000	61	90021	2.00	1.83	
63 Methyl methacrylate	41	11.472	11.472	0.000	89	233706	2.00	2.11	
64 Methylcyclohexane	83	11.952	11.952	0.000	94	417162	2.00	2.05	
65 4-Methyl-2-pentanone (MIBK	43	12.340	12.340	0.000	97	418262	2.00	2.02	
66 cis-1,3-Dichloropropene	75	12.394	12.394	0.000	93	314975	2.00	2.06	
67 trans-1,3-Dichloropropene	75	13.117	13.117	0.000	98	280618	2.00	2.23	
68 Toluene	91	13.257	13.257	0.000	93	691284	2.00	2.23	
69 1,1,2-Trichloroethane	83	13.311	13.311	0.000	94	205618	2.00	2.10	
70 2-Methylthiophene	97	13.402	13.402	0.000	97	608602	2.00	2.25	
71 3-Methylthiophene	97	13.613	13.613	0.000	99	609815	2.00	2.29	
72 2-Hexanone	58	13.737	13.737	0.000	92	196915	2.00	2.15	
73 Chlorodibromomethane	129	14.028	14.028	0.000	97	446868	2.00	2.50	
74 n-Octane	85	14.049	14.049	0.000	94	209130	2.00	2.12	
75 Ethylene Dibromide	107	14.324	14.324	0.000	96	399523	2.00	2.34	
76 Tetrachloroethene	129	14.443	14.443	0.000	95	269923	2.00	2.26	
77 Chlorobenzene	112	15.333	15.333	0.000	97	548955	2.00	2.15	
78 2,3-Dimethylheptane	43	15.435	15.435	0.000	95	559856	2.00	2.09	
79 Ethylbenzene	91	15.651	15.651	0.000	97	850814	2.00	2.04	
80 2-Ethylthiophene	97	15.748	15.748	0.000	97	685192	2.00	2.23	
81 m-Xylene & p-Xylene	91	15.818	15.818	0.000	99	1318164	4.00	4.21	
82 Bromoform	173	16.223	16.223	0.000	97	509625	2.00	2.21	
83 Styrene	104	16.287	16.287	0.000	97	481936	2.00	2.17	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.314	16.314	0.000	93	378323	2.00	2.10	
85 o-Xylene	91	16.347	16.347	0.000	99	664912	2.00	2.03	
86 1,1,2,2-Tetrachloroethane	83	16.659	16.659	0.000	99	512522	2.00	2.06	
87 1,2,3-Trichloropropane	110	16.821	16.821	0.000	96	149682	2.00	2.14	
88 Isopropylbenzene	105	16.967	16.967	0.000	96	991156	2.00	2.14	
89 N-Propylbenzene	120	17.544	17.544	0.000	100	276012	2.00	2.16	
90 2-Chlorotoluene	126	17.565	17.565	0.000	97	244882	2.00	2.03	
91 4-Ethyltoluene	105	17.705	17.705	0.000	100	1046553	2.00	2.26	
92 1,3,5-Trimethylbenzene	120	17.792	17.792	0.000	93	474668	2.00	2.11	
93 Alpha Methyl Styrene	118	18.034	18.034	0.000	91	410436	2.00	2.30	
94 n-Decane	57	18.158	18.158	0.000	91	512438	2.00	2.23	
95 tert-Butylbenzene	119	18.239	18.239	0.000	93	953705	2.00	2.41	
96 1,2,4-Trimethylbenzene	105	18.256	18.256	0.000	96	912060	2.00	2.26	
97 1,3-Dichlorobenzene	146	18.520	18.520	0.000	95	662298	2.00	2.32	
98 sec-Butylbenzene	105	18.531	18.531	0.000	99	1393217	2.00	2.46	
99 Benzyl chloride	91	18.601	18.601	0.000	99	759820	2.00	2.44	
100 1,4-Dichlorobenzene	146	18.617	18.617	0.000	96	674571	2.00	2.32	
101 4-Isopropyltoluene	119	18.714	18.714	0.000	97	1145266	2.00	2.48	
102 1,2,3-Trimethylbenzene	105	18.752	18.752	0.000	98	701752	2.00	2.18	
103 Butylcyclohexane	83	18.843	18.843	0.000	97	689389	2.00	2.31	
104 1,2-Dichlorobenzene	146	18.994	18.994	0.000	97	666274	2.00	2.39	
105 2,3-Dihydroindene	117	19.005	19.005	0.000	94	807101	2.00	2.25	
106 Indene	116	19.134	19.134	0.000	91	644118	2.00	1.93	
107 n-Butylbenzene	91	19.172	19.172	0.000	97	1127185	2.00	2.53	
108 Undecane	57	19.555	19.555	0.000	94	612488	2.00	2.36	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.566	19.566	0.000	99	877486	2.00	2.18	
110 1,2-Dibromo-3-Chloropropan	157	19.625	19.625	0.000	90	349668	2.00	2.39	
111 1,2,4,5-Tetramethylbenzene	119	19.970	19.970	0.000	98	1038056	2.00	2.55	
112 1,2,3,5-Tetramethylbenzene	119	20.024	20.024	0.000	97	627883	2.00	2.46	
113 1,2,3,4-Tetramethylbenzene	119	20.429	20.429	0.000	98	853356	2.00	2.47	
114 Dodecane	57	20.655	20.655	0.000	93	624087	2.00	2.31	
115 1,2,4-Trichlorobenzene	180	20.779	20.779	0.000	93	723027	2.00	2.18	
116 Naphthalene	128	20.914	20.914	0.000	100	1363079	2.00	2.23	
117 Benzo(b)thiophene	134	21.016	21.016	0.000	100	767467	2.00	2.29	
118 Hexachlorobutadiene	225	21.167	21.167	0.000	95	634595	2.00	2.15	
119 1,2,3-Trichlorobenzene	180	21.211	21.211	0.000	95	700671	2.00	2.32	
120 2-Methylnaphthalene	142	21.928	21.928	0.000	97	566928	6.25	7.85	
121 1-Methylnaphthalene	142	22.052	22.052	0.000	97	462049	6.25	6.85	
A 122 C6 Range	1	7.612	(7.557-7.646)		0	1189602	2.00	1.98	
S 124 Xylenes, Total	100				0		6.00	6.24	
S 125 1,2-Dichloroethene, Total	1				0		4.00	4.02	

Reagents:

40CV101P_00033	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

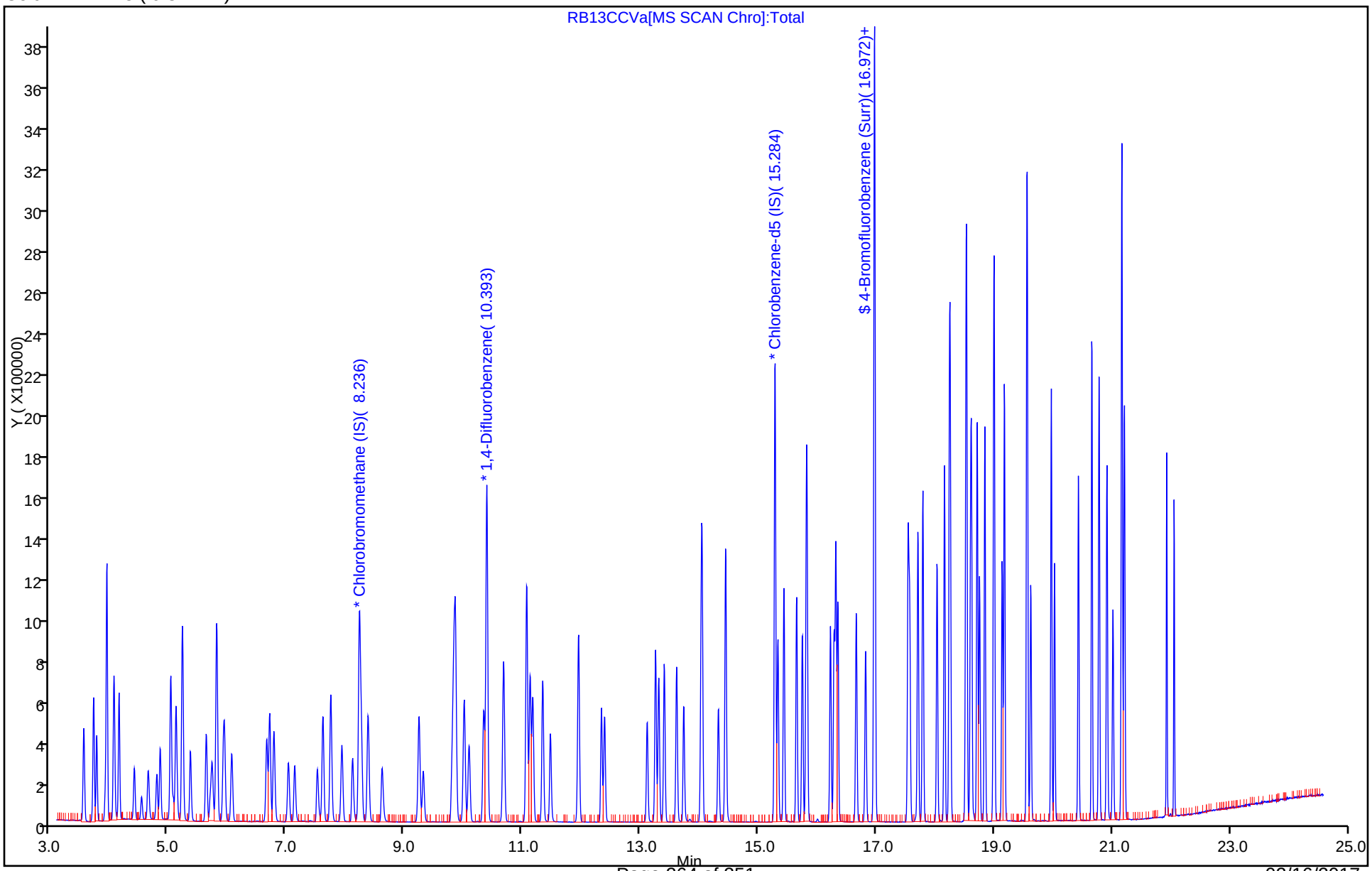
Report Date: 14-Feb-2017 13:28:53 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13CCVa.D

Injection Date:	13-Feb-2017 12:44:30	Instrument ID:	MR	Operator ID:	
Lims ID:	CCVIS			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Lab Sample ID: CCVIS 140-8578/2 Calibration Date: 02/14/2017 12:02

Instrument ID: MR Calib Start Date: 01/16/2017 18:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/17/2017 10:29

Lab File ID: RB14CCVa.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.2219	0.2900		2.61	2.00	30.7*	30.0
Propene	Ave	1.040	1.074		2.06	2.00	3.2	30.0
Dichlorodifluoromethane	Ave	1.811	1.906		2.11	2.00	5.3	30.0
Chloromethane	Ave	0.3400	0.3618		2.13	2.00	6.4	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.050	2.605		2.54	2.00	27.0	30.0
Acetaldehyde	Ave	0.3052	0.3634		11.9	10.0	19.1	30.0
Vinyl chloride	Ave	0.9750	1.117		2.29	2.00	14.5	30.0
1,3-Butadiene	Ave	0.6890	0.7688		2.23	2.00	11.6	30.0
Butane	Ave	1.237	1.554		2.51	2.00	25.6	30.0
Bromomethane	Ave	0.8530	1.055		2.47	2.00	23.7	30.0
Chloroethane	Ave	0.3844	0.4419		2.30	2.00	14.9	30.0
Ethanol	Ave	0.2559	0.3191		12.5	10.0	24.7	30.0
Vinyl bromide	Ave	0.7956	1.060		2.66	2.00	33.2*	30.0
2-Methylbutane	Ave	0.7496	0.8882		2.37	2.00	18.5	30.0
Acrolein	Ave	0.2879	0.2734		1.90	2.00	-5.0	30.0
Trichlorofluoromethane	Ave	2.486	3.388		2.73	2.00	36.3*	30.0
Acetonitrile	Ave	0.4318	0.4425		2.05	2.00	2.5	30.0
Acetone	Ave	0.4605	0.4777		6.22	6.00	3.7	30.0
Isopropyl alcohol	Ave	1.354	1.459		6.46	6.00	7.7	30.0
Pentane	Ave	0.1947	0.2245		2.31	2.00	15.3	30.0
Ethyl ether	Ave	1.131	1.186		2.10	2.00	4.9	30.0
1,1-Dichloroethene	Ave	1.101	1.206		2.19	2.00	9.5	30.0
Acrylonitrile	Ave	0.7062	0.7761		2.20	2.00	9.9	30.0
tert-Butyl alcohol	Ave	1.480	1.695		2.29	2.00	14.5	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.112	2.466		2.33	2.00	16.7	30.0
Methylene Chloride	Ave	1.036	1.074		2.07	2.00	3.7	30.0
3-Chloropropene	Ave	0.7792	0.9719		2.49	2.00	24.7	30.0
Carbon disulfide	Ave	2.839	3.176		2.24	2.00	11.8	30.0
trans-1,2-Dichloroethene	Ave	1.170	1.282		2.19	2.00	9.5	30.0
2-Methylpentane	Ave	2.152	2.346		2.18	2.00	9.0	30.0
Methyl tert-butyl ether	Ave	2.472	2.912		2.36	2.00	17.8	30.0
1,1-Dichloroethane	Ave	1.844	2.044		2.22	2.00	10.8	30.0
Vinyl acetate	Ave	2.613	2.948		2.26	2.00	12.8	30.0
2-Butanone (MEK)	Ave	0.4822	0.5500		2.28	2.00	14.1	30.0
Hexane	Ave	0.7573	0.8265		2.18	2.00	9.1	30.0
Isopropyl ether	Ave	3.457	3.877		2.24	2.00	12.1	30.0
cis-1,2-Dichloroethene	Ave	1.219	1.341		2.20	2.00	10.0	30.0
Ethyl acetate	Ave	2.200	2.591		2.36	2.00	17.8	30.0
Chloroform	Ave	2.082	2.393		2.30	2.00	14.9	30.0
Tert-butyl ethyl ether	Ave	2.521	2.906		2.31	2.00	15.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Lab Sample ID: CCVIS 140-8578/2 Calibration Date: 02/14/2017 12:02

Instrument ID: MR Calib Start Date: 01/16/2017 18:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/17/2017 10:29

Lab File ID: RB14CCVa.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.197	1.306		2.18	2.00	9.1	30.0
1,1,1-Trichloroethane	Ave	2.078	2.517		2.42	2.00	21.1	30.0
1,2-Dichloroethane	Ave	0.2408	0.2890		2.40	2.00	20.0	30.0
1-Butanol	Ave	0.0809	0.0872		2.16	2.00	7.8	30.0
Benzene	Ave	0.6956	0.7363		2.12	2.00	5.9	30.0
Cyclohexane	Ave	0.0994	0.1083		2.18	2.00	9.0	30.0
Carbon tetrachloride	Ave	0.4255	0.5256		2.47	2.00	23.5	30.0
2,3-Dimethylpentane	Ave	0.1475	0.1623		2.20	2.00	10.0	30.0
Thiophene	Ave	0.3612	0.4000		2.22	2.00	10.8	30.0
Tert-amyl methyl ether	Ave	0.5308	0.6533		2.46	2.00	23.1	30.0
2,2,4-Trimethylpentane	Ave	0.9488	1.040		2.19	2.00	9.6	30.0
1,2-Dichloropropane	Ave	0.2404	0.2684		2.23	2.00	11.7	30.0
Heptane	Ave	0.2264	0.2534		2.24	2.00	12.0	30.0
Trichloroethene	Ave	0.3144	0.3326		2.12	2.00	5.8	30.0
Dibromomethane	Ave	0.2419	0.2866		2.37	2.00	18.5	30.0
1,4-Dioxane	Ave	0.1115	0.1130		2.03	2.00	1.4	30.0
Bromodichloromethane	Ave	0.4021	0.4842		2.41	2.00	20.4	30.0
Methyl methacrylate	Ave	0.2508	0.3001		2.39	2.00	19.6	30.0
Methylcyclohexane	Ave	0.4619	0.5216		2.26	2.00	12.9	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4695	0.5436		2.32	2.00	15.8	30.0
cis-1,3-Dichloropropene	Ave	0.3476	0.3925		2.26	2.00	12.9	30.0
trans-1,3-Dichloropropene	Ave	0.3550	0.4212		2.37	2.00	18.7	30.0
Toluene	Ave	0.8739	1.032		2.36	2.00	18.2	30.0
1,1,2-Trichloroethane	Ave	0.2754	0.3069		2.23	2.00	11.5	30.0
2-Methylthiophene	Ave	0.7609	0.9019		2.37	2.00	18.5	30.0
3-Methylthiophene	Ave	0.7494	0.8929		2.38	2.00	19.1	30.0
2-Hexanone	Ave	0.2576	0.3090		2.40	2.00	19.9	30.0
Dibromochloromethane	Ave	0.5036	0.6558		2.60	2.00	30.2*	30.0
Octane	Ave	0.2781	0.3232		2.32	2.00	16.2	30.0
1,2-Dibromoethane (EDB)	Ave	0.4814	0.5912		2.46	2.00	22.8	30.0
Tetrachloroethene	Ave	0.3356	0.3822		2.28	2.00	13.9	30.0
Chlorobenzene	Ave	0.7195	0.8125		2.26	2.00	12.9	30.0
2,3-Dimethylheptane	Ave	0.7552	0.8726		2.31	2.00	15.5	30.0
Ethylbenzene	Ave	1.174	1.291		2.20	2.00	10.0	30.0
2-Ethylthiophene	Ave	0.8633	1.014		2.35	2.00	17.4	30.0
m-Xylene & p-Xylene	Ave	0.8819	0.9878		4.48	4.00	12.0	30.0
Bromoform	Ave	0.6483	0.7379		2.28	2.00	13.8	30.0
Styrene	Ave	0.6255	0.7243		2.32	2.00	15.8	30.0
Nonane	Ave	0.5076	0.5825		2.30	2.00	14.8	30.0
o-Xylene	Ave	0.9227	0.998		2.16	2.00	8.1	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7011	0.7968		2.27	2.00	13.6	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Lab Sample ID: CCVIS 140-8578/2 Calibration Date: 02/14/2017 12:02

Instrument ID: MR Calib Start Date: 01/16/2017 18:15

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 01/17/2017 10:29

Lab File ID: RB14CCVa.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1972	0.2298		2.33	2.00	16.6	30.0
Isopropylbenzene	Ave	1.302	1.514		2.33	2.00	16.3	30.0
Propylbenzene	Ave	0.3605	0.4215		2.34	2.00	16.9	30.0
2-Chlorotoluene	Ave	0.3395	0.3706		2.18	2.00	9.2	30.0
4-Ethyltoluene	Ave	1.306	1.574		2.41	2.00	20.6	30.0
1,3,5-Trimethylbenzene	Ave	0.6336	0.7149		2.26	2.00	12.8	30.0
Alpha Methyl Styrene	Ave	0.5024	0.6291		2.50	2.00	25.2	30.0
Decane	Ave	0.6458	0.7938		2.46	2.00	22.9	30.0
tert-Butylbenzene	Ave	1.115	1.410		2.53	2.00	26.5	30.0
1,2,4-Trimethylbenzene	Ave	1.135	1.370		2.41	2.00	20.7	30.0
1,3-Dichlorobenzene	Ave	0.8032	0.9916		2.47	2.00	23.5	30.0
sec-Butylbenzene	Ave	1.594	2.121		2.66	2.00	33.0*	30.0
Benzyl chloride	Ave	0.8762	1.168		2.67	2.00	33.3*	30.0
1,4-Dichlorobenzene	Ave	0.8171	1.006		2.46	2.00	23.1	30.0
4-Isopropyltoluene	Ave	1.302	1.725		2.65	2.00	32.5*	30.0
1,2,3-Trimethylbenzene	Ave	0.9045	1.084		2.40	2.00	19.9	30.0
Butylcyclohexane	Ave	0.8419	1.052		2.50	2.00	25.0	30.0
1,2-Dichlorobenzene	Ave	0.7845	0.999		2.55	2.00	27.3	30.0
Indane	Ave	1.008	1.239		2.46	2.00	22.8	30.0
Indene	QuaF		0.9903		2.11	2.00	5.6	30.0
Butylbenzene	Ave	1.256	1.708		2.72	2.00	36.0*	30.0
Undecane	Ave	0.7309	0.9337		2.56	2.00	27.8	30.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		1.323		2.35	2.00	17.4	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.4119	0.5094		2.47	2.00	23.7	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.147	1.535		2.68	2.00	33.9*	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.7194	0.9300		2.59	2.00	29.3	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.9719	1.268		2.61	2.00	30.4*	30.0
Dodecane	Ave	0.7623	0.9503		2.49	2.00	24.7	30.0
1,2,4-Trichlorobenzene	Ave	0.9333	1.024		2.20	2.00	9.8	30.0
Naphthalene	Ave	1.723	2.029		2.36	2.00	17.8	30.0
Benzo(b)thiophene	Ave	0.9449	1.112		2.35	2.00	17.7	30.0
Hexachlorobutadiene	Ave	0.8326	0.8824		2.12	2.00	6.0	30.0
1,2,3-Trichlorobenzene	Ave	0.8487	0.9905		2.33	2.00	16.7	30.0
2-Methylnaphthalene	Ave	0.2033	0.2537		7.80	6.25	24.8	50.0
1-Methylnaphthalene	Ave	0.1899	0.1967		6.47	6.25	3.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6257	0.5919		3.78	4.00	-5.4	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\RB14CCVa.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 14-Feb-2017 12:02:30 ALS Bottle#: 15 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004043-002
Misc. Info.: P33
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Feb-2017 10:55:56 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: tajh Date: 14-Feb-2017 15:11:27

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.231	8.231	0.000	89	319976	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.393	10.393	0.000	93	1604826	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.284	15.284	0.000	85	1311982	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.972	16.972	0.000	94	776568	4.00	3.78	
6 Chlorodifluoromethane	67	3.718	3.718	0.000	98	46391	2.00	2.61	
7 Propene	41	3.723	3.723	0.000	99	171786	2.00	2.06	
8 Dichlorodifluoromethane	85	3.772	3.772	0.000	99	304966	2.00	2.11	
9 Chloromethane	52	3.923	3.923	0.000	100	57875	2.00	2.13	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.944	3.944	0.000	94	416702	2.00	2.54	
11 Acetaldehyde	44	4.063	4.063	0.000	98	290699	10.0	11.9	
12 Vinyl chloride	62	4.074	4.074	0.000	99	178681	2.00	2.29	
13 Butadiene	54	4.149	4.149	0.000	97	123000	2.00	2.23	
14 Butane	43	4.155	4.155	0.000	93	248594	2.00	2.51	
15 Bromomethane	94	4.413	4.413	0.000	94	168756	2.00	2.47	
16 Chloroethane	64	4.532	4.532	0.000	93	70694	2.00	2.30	
17 Ethanol	31	4.651	4.651	0.000	100	255274	10.0	12.5	
18 Vinyl bromide	106	4.796	4.796	0.000	98	169601	2.00	2.66	
19 2-Methylbutane	43	4.850	4.850	0.000	89	142093	2.00	2.37	
20 Acrolein	56	5.028	5.028	0.000	30	43736	2.00	1.90	
21 Trichlorofluoromethane	101	5.033	5.033	0.000	99	542093	2.00	2.73	
22 Acetonitrile	40	5.077	5.077	0.000	98	70800	2.00	2.05	
23 Acetone	58	5.120	5.120	0.000	98	229279	6.00	6.22	
24 Isopropyl alcohol	45	5.228	5.228	0.000	93	700462	6.00	6.46	
25 Pentane	72	5.233	5.233	0.000	95	35910	2.00	2.31	
26 Ethyl ether	31	5.362	5.362	0.000	94	189815	2.00	2.10	
27 1,1-Dichloroethene	96	5.632	5.632	0.000	98	192991	2.00	2.19	
28 Acrylonitrile	53	5.702	5.702	0.000	94	124163	2.00	2.20	
29 2-Methyl-2-propanol	59	5.734	5.734	0.000	97	271135	2.00	2.29	
30 1,1,2-Trichloro-1,2,2-trif	101	5.810	5.810	0.000	94	394476	2.00	2.33	
31 Methylene Chloride	84	5.923	5.923	0.000	94	171874	2.00	2.07	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.945	5.945	0.000	97	155490	2.00	2.49	
33 Carbon disulfide	76	6.063	6.063	0.000	99	508050	2.00	2.24	
34 trans-1,2-Dichloroethene	96	6.662	6.662	0.000	95	205092	2.00	2.19	
35 2-Methylpentane	43	6.711	6.711	0.000	95	375273	2.00	2.18	
36 Methyl tert-butyl ether	73	6.781	6.781	0.000	97	465857	2.00	2.36	
37 1,1-Dichloroethane	63	7.029	7.029	0.000	100	327049	2.00	2.22	
38 Vinyl acetate	43	7.131	7.131	0.000	100	471573	2.00	2.26	
39 2-Butanone (MEK)	72	7.519	7.519	0.000	100	87995	2.00	2.28	
40 Hexane	56	7.616	7.616	0.000	91	132222	2.00	2.18	
41 Isopropyl ether	45	7.746	7.746	0.000	96	620283	2.00	2.24	
42 cis-1,2-Dichloroethene	96	7.940	7.940	0.000	90	214560	2.00	2.20	
43 Ethyl acetate	43	8.118	8.118	0.000	99	414521	2.00	2.36	
44 Chloroform	83	8.264	8.264	0.000	95	382800	2.00	2.30	
45 Tert-butyl ethyl ether	59	8.382	8.382	0.000	94	464928	2.00	2.31	
46 Tetrahydrofuran	42	8.619	8.619	0.000	95	209002	2.00	2.18	
47 1,1,1-Trichloroethane	97	9.245	9.245	0.000	95	402697	2.00	2.42	
48 1,2-Dichloroethane	62	9.315	9.315	0.000	97	231923	2.00	2.40	
49 n-Butanol	31	9.790	9.790	0.000	91	69981	2.00	2.16	
50 Benzene	78	9.827	9.827	0.000	95	590775	2.00	2.12	
51 Cyclohexane	69	9.849	9.849	0.000	91	86930	2.00	2.18	
52 Carbon tetrachloride	117	9.865	9.865	0.000	97	421731	2.00	2.47	
53 2,3-Dimethylpentane	71	10.005	10.005	0.000	91	130238	2.00	2.20	
54 Thiophene	84	10.092	10.092	0.000	93	321000	2.00	2.22	
55 Tert-amyl methyl ether	73	10.340	10.340	0.000	98	524184	2.00	2.46	
56 Isooctane	57	10.679	10.679	0.000	98	834415	2.00	2.19	
57 1,2-Dichloropropane	63	11.062	11.062	0.000	90	215349	2.00	2.23	
58 n-Heptane	71	11.073	11.073	0.000	92	203365	2.00	2.24	
59 Trichloroethene	130	11.127	11.127	0.000	93	266912	2.00	2.12	
60 Dibromomethane	93	11.170	11.170	0.000	89	229968	2.00	2.37	
61 Dichlorobromomethane	83	11.343	11.343	0.000	98	388521	2.00	2.41	
62 1,4-Dioxane	88	11.343	11.343	0.000	70	90678	2.00	2.03	
63 Methyl methacrylate	41	11.472	11.472	0.000	90	240774	2.00	2.39	
64 Methylcyclohexane	83	11.952	11.952	0.000	95	418514	2.00	2.26	
65 4-Methyl-2-pentanone (MIBK	43	12.335	12.335	0.000	96	436149	2.00	2.32	
66 cis-1,3-Dichloropropene	75	12.389	12.389	0.000	93	314957	2.00	2.26	
67 trans-1,3-Dichloropropene	75	13.117	13.117	0.000	98	276303	2.00	2.37	
68 Toluene	91	13.257	13.257	0.000	93	677303	2.00	2.36	
69 1,1,2-Trichloroethane	83	13.311	13.311	0.000	94	201338	2.00	2.23	
70 2-Methylthiophene	97	13.402	13.402	0.000	97	591632	2.00	2.37	
71 3-Methylthiophene	97	13.613	13.613	0.000	99	585708	2.00	2.38	
72 2-Hexanone	58	13.731	13.731	0.000	91	202708	2.00	2.40	
73 Chlorodibromomethane	129	14.028	14.028	0.000	97	430175	2.00	2.60	
74 n-Octane	85	14.044	14.044	0.000	95	212035	2.00	2.32	
75 Ethylene Dibromide	107	14.325	14.325	0.000	97	387833	2.00	2.46	
76 Tetrachloroethene	129	14.443	14.443	0.000	95	250697	2.00	2.28	
77 Chlorobenzene	112	15.333	15.333	0.000	97	532999	2.00	2.26	
78 2,3-Dimethylheptane	43	15.435	15.435	0.000	96	572426	2.00	2.31	
79 Ethylbenzene	91	15.651	15.651	0.000	97	847126	2.00	2.20	
80 2-Ethylthiophene	97	15.748	15.748	0.000	96	664914	2.00	2.35	
81 m-Xylene & p-Xylene	91	15.818	15.818	0.000	99	1295909	4.00	4.48	
82 Bromoform	173	16.223	16.223	0.000	96	484046	2.00	2.28	
83 Styrene	104	16.282	16.282	0.000	97	475160	2.00	2.32	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	16.314	16.314	0.000	95	382096	2.00	2.30	
85 o-Xylene	91	16.347	16.347	0.000	99	654430	2.00	2.16	
86 1,1,2,2-Tetrachloroethane	83	16.659	16.659	0.000	99	522712	2.00	2.27	
87 1,2,3-Trichloropropane	110	16.821	16.821	0.000	96	150760	2.00	2.33	
88 Isopropylbenzene	105	16.967	16.967	0.000	96	992937	2.00	2.33	
89 N-Propylbenzene	120	17.544	17.544	0.000	100	276496	2.00	2.34	
90 2-Chlorotoluene	126	17.565	17.565	0.000	97	243119	2.00	2.18	
91 4-Ethyltoluene	105	17.711	17.711	0.000	99	1032837	2.00	2.41	
92 1,3,5-Trimethylbenzene	120	17.792	17.792	0.000	93	468955	2.00	2.26	
93 Alpha Methyl Styrene	118	18.034	18.034	0.000	91	412652	2.00	2.50	
94 n-Decane	57	18.159	18.159	0.000	91	520696	2.00	2.46	
95 tert-Butylbenzene	119	18.245	18.245	0.000	94	924949	2.00	2.53	
96 1,2,4-Trimethylbenzene	105	18.256	18.256	0.000	96	898415	2.00	2.41	
97 1,3-Dichlorobenzene	146	18.520	18.520	0.000	96	650473	2.00	2.47	
98 sec-Butylbenzene	105	18.536	18.536	0.000	99	1391059	2.00	2.66	
99 Benzyl chloride	91	18.601	18.601	0.000	99	766337	2.00	2.67	
100 1,4-Dichlorobenzene	146	18.617	18.617	0.000	96	659774	2.00	2.46	
101 4-Isopropyltoluene	119	18.714	18.714	0.000	97	1131700	2.00	2.65	
102 1,2,3-Trimethylbenzene	105	18.752	18.752	0.000	97	711229	2.00	2.40	
103 Butylcyclohexane	83	18.843	18.843	0.000	97	690281	2.00	2.50	
104 1,2-Dichlorobenzene	146	18.994	18.994	0.000	97	655070	2.00	2.55	
105 2,3-Dihydroindene	117	19.005	19.005	0.000	94	812515	2.00	2.46	
106 Indene	116	19.135	19.135	0.000	91	649597	2.00	2.11	
107 n-Butylbenzene	91	19.172	19.172	0.000	97	1120741	2.00	2.72	
108 Undecane	57	19.555	19.555	0.000	94	612517	2.00	2.56	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.566	19.566	0.000	98	868173	2.00	2.35	
110 1,2-Dibromo-3-Chloropropan	157	19.625	19.625	0.000	93	334153	2.00	2.47	
111 1,2,4,5-Tetramethylbenzene	119	19.970	19.970	0.000	98	1007211	2.00	2.68	
112 1,2,3,5-Tetramethylbenzene	119	20.024	20.024	0.000	96	610066	2.00	2.59	
113 1,2,3,4-Tetramethylbenzene	119	20.429	20.429	0.000	98	831592	2.00	2.61	
114 Dodecane	57	20.661	20.661	0.000	93	623394	2.00	2.49	
115 1,2,4-Trichlorobenzene	180	20.779	20.779	0.000	93	671921	2.00	2.20	
116 Naphthalene	128	20.914	20.914	0.000	99	1331246	2.00	2.36	
117 Benzo(b)thiophene	134	21.016	21.016	0.000	100	729490	2.00	2.35	
118 Hexachlorobutadiene	225	21.167	21.167	0.000	95	578828	2.00	2.12	
119 1,2,3-Trichlorobenzene	180	21.211	21.211	0.000	95	649766	2.00	2.33	
120 2-Methylnaphthalene	142	21.928	21.928	0.000	97	519954	6.25	7.80	
121 1-Methylnaphthalene	142	22.052	22.052	0.000	97	403235	6.25	6.47	
A 122 C6 Range	1	7.612	(7.557-7.646)		0	1200358	2.00	2.19	
S 124 Xylenes, Total	100				0		6.00	6.64	
S 125 1,2-Dichloroethene, Total	1				0		4.00	4.39	

Reagents:

40CV101P_00033	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

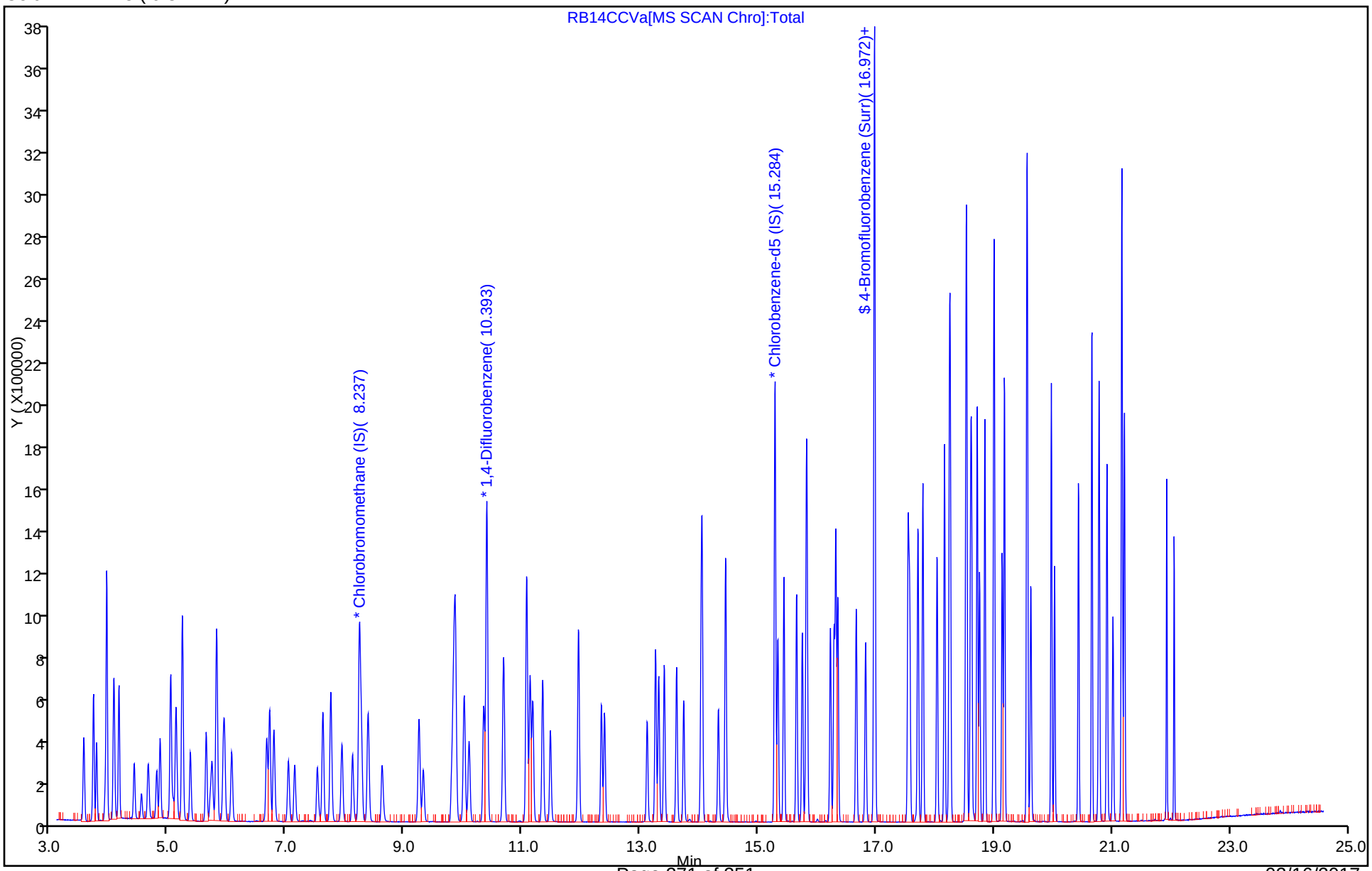
Report Date: 15-Feb-2017 10:55:57 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\RB14CCVa.D

Injection Date:	14-Feb-2017 12:02:30	Instrument ID:	MR	Operator ID:	
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JBFBK25X.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	25-Nov-2016 18:19:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003656-001				
Misc. Info.:	BFB				
Operator ID:	007126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	28-Nov-2016 14:14:29	Calib Date:	26-Nov-2016 01:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK025				
First Level Reviewer: barlozhetskayaa		Date:	26-Nov-2016 10:31:38		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	3.674	3.584	0.090	0	501199	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

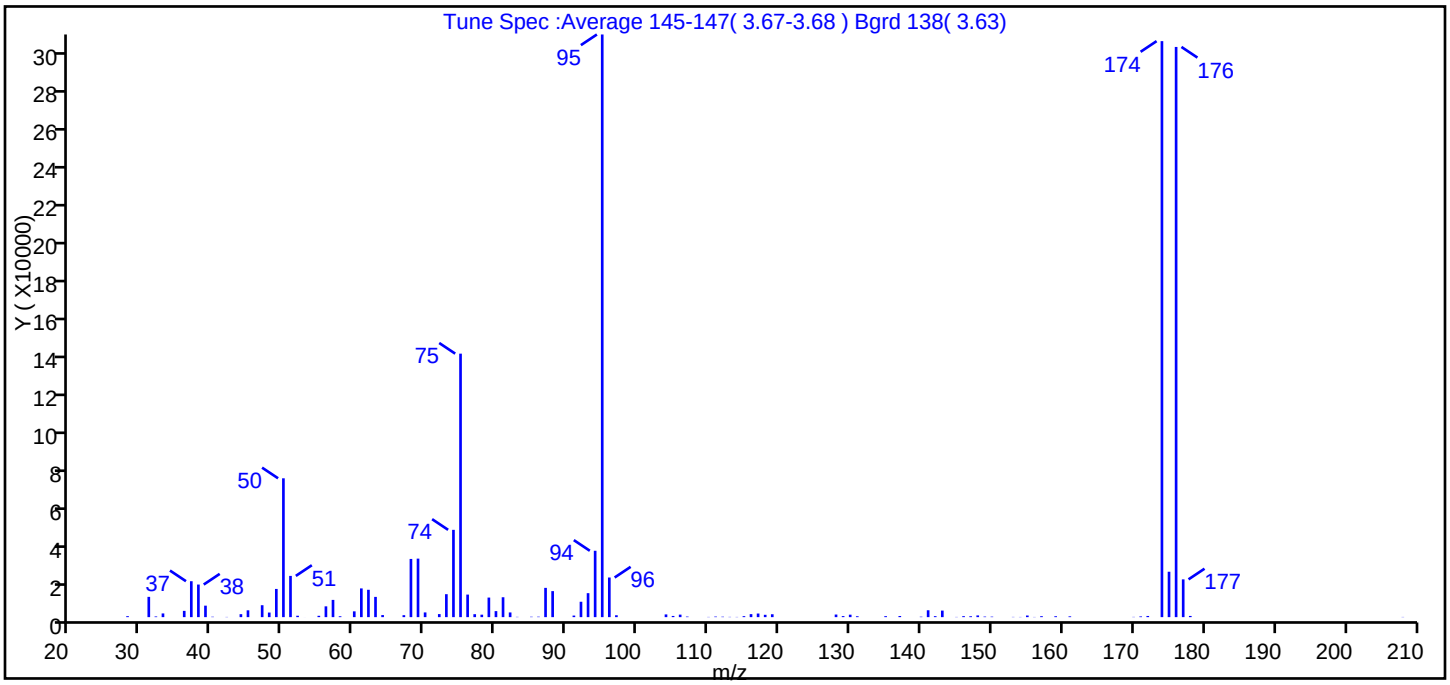
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JBFBK25X.D
Injection Date: 25-Nov-2016 18:19:30 Instrument ID: MJ
Lims ID: BFB
Client ID:
Operator ID: 007126 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	23.8
75	30 to 60% of m/z 95	45.2
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	98.9
175	5 to 9% of m/z 174	7.8 (7.9)
176	Greater than 95% but less than 101% of m/z 174	97.9 (99.0)
177	5 to 9% of m/z 176	6.5 (6.6)

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JBFBK25X.D\MJ_TO15.rslt\spectra.d
Injection Date: 25-Nov-2016 18:19:30
Spectrum: Tune Spec :Average 145-147(3.67-3.68) Bgrd 138(3.63)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 102

m/z	Y	m/z	Y	m/z	Y	m/z	Y
28.00	514	62.00	14471	94.00	35096	142.00	519
31.00	10722	63.00	10708	95.00	308096	143.00	3467
32.00	366	64.00	1094	96.00	20960	145.00	112
33.00	1961	67.00	1035	97.00	1001	146.00	513
36.00	3318	68.00	30776	104.00	1445	147.00	466
37.00	19000	69.00	30944	105.00	631	148.00	905
38.00	17240	70.00	2496	106.00	1333	149.00	293
39.00	6072	72.00	1614	107.00	296	150.00	264
40.00	214	73.00	12143	110.00	114	153.00	124
42.00	111	74.00	46168	111.00	301	154.00	104
44.00	1571	75.00	139328	112.00	230	155.00	853
45.00	3614	76.00	11930	113.00	136	156.00	101
47.00	6308	77.00	1565	114.00	111	157.00	496
48.00	2431	78.00	1305	115.00	519	159.00	480
49.00	14915	79.00	10349	116.00	1587	161.00	419
50.00	73416	80.00	3185	117.00	1910	170.00	131
51.00	21808	81.00	10521	118.00	1239	171.00	381
52.00	741	82.00	2486	119.00	1532	172.00	623
53.00	14	83.00	145	128.00	1380	174.00	304576
54.00	2	85.00	213	129.00	554	175.00	24008
55.00	712	86.00	243	130.00	1306	176.00	301504
56.00	5713	87.00	15477	131.00	472	177.00	19976
57.00	9119	88.00	13759	135.00	519	178.00	637
58.00	454	91.00	833	137.00	594	208.00	106
60.00	3065	92.00	8139	140.00	236		
61.00	15193	93.00	12681	141.00	3641		

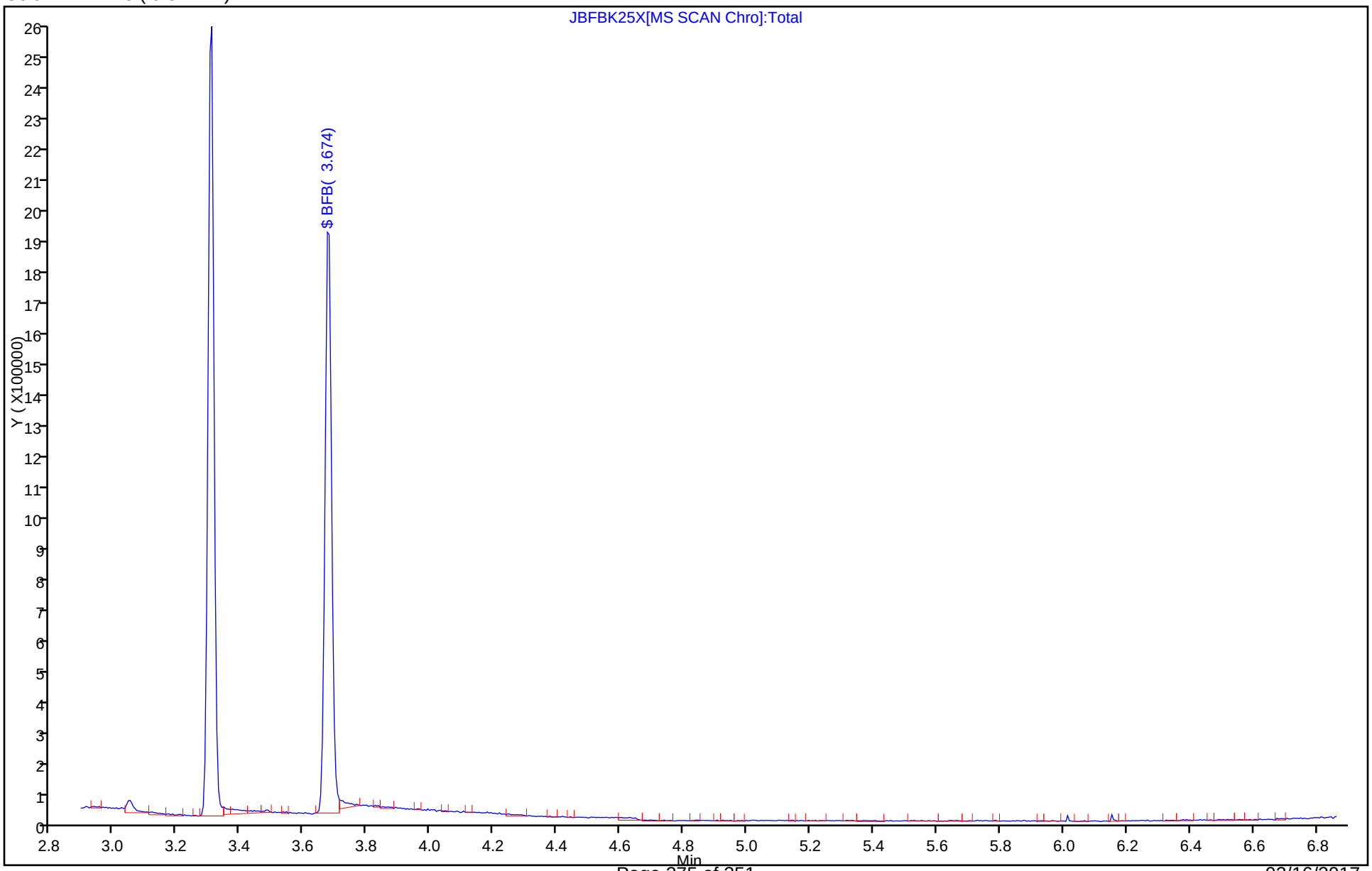
Report Date: 28-Nov-2016 14:14:30 Chrom Revision: 2.2 14-Nov-2016 08:15:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JBFBK25X.D

Injection Date:	25-Nov-2016 18:19:30	Instrument ID:	MJ	Operator ID:	007126
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JBFBB10Z.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	10-Feb-2017 08:01:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003999-013				
Misc. Info.:	BFB				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Feb-2017 12:31:12	Calib Date:	26-Nov-2016 01:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK025				

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	3.641	3.641	0.000	0	347821	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

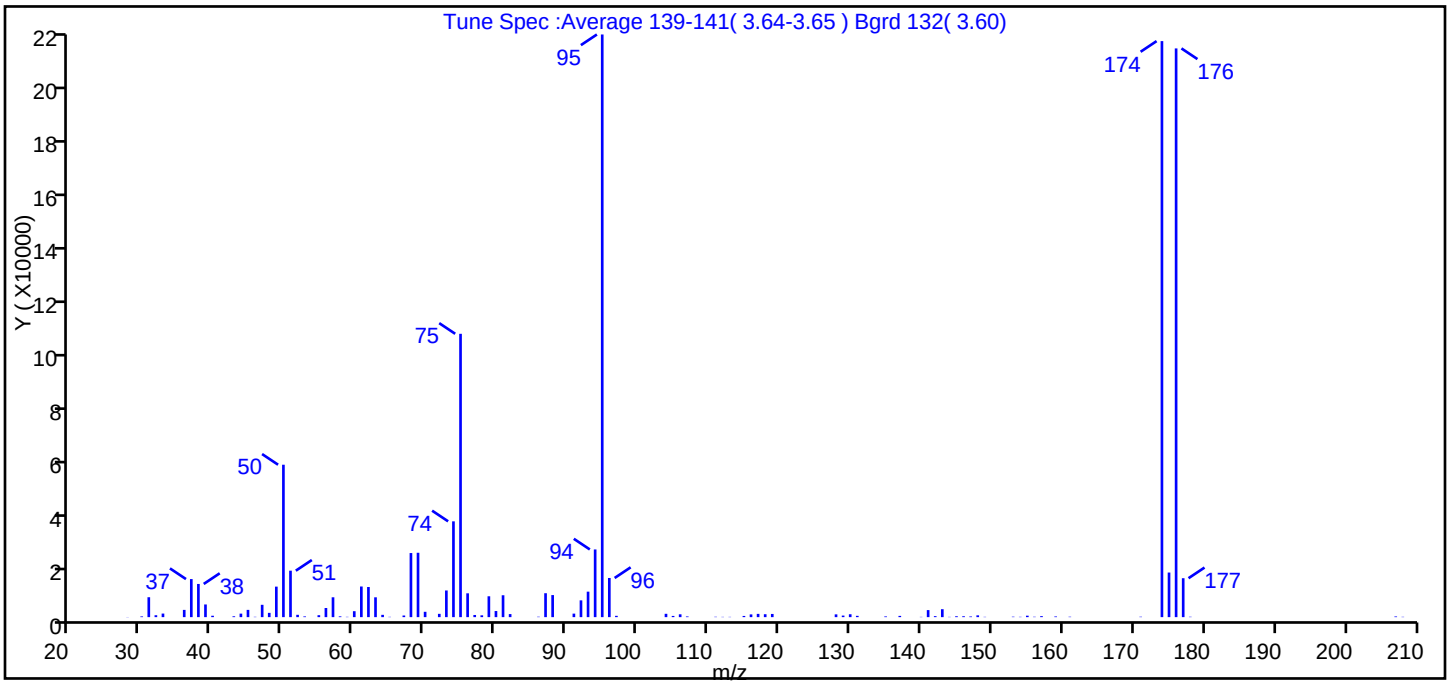
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JBFBB10Z.D
Injection Date: 10-Feb-2017 08:01:30 Instrument ID: MJ
Lims ID: BFB
Client ID:
Operator ID: 7126 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	26.2
75	30 to 60% of m/z 95	48.6
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	98.9
175	5 to 9% of m/z 174	7.7 (7.7)
176	Greater than 95% but less than 101% of m/z 174	97.6 (98.7)
177	5 to 9% of m/z 176	6.7 (6.8)

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JBFBB10Z.D\MJ_TO15.rslt\spectra.d
Injection Date: 10-Feb-2017 08:01:30
Spectrum: Tune Spec :Average 139-141(3.64-3.65) Bgrd 132(3.60)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 100

m/z	Y	m/z	Y	m/z	Y	m/z	Y
28.00	56	59.00	116	91.00	1324	140.00	100
30.00	272	60.00	2237	92.00	6320	141.00	2651
31.00	7496	61.00	11535	93.00	9592	142.00	377
32.00	720	62.00	11342	94.00	25480	143.00	2990
33.00	1348	63.00	7466	95.00	219328	144.00	103
36.00	2731	64.00	869	96.00	14740	145.00	333
37.00	14328	65.00	112	97.00	497	146.00	333
38.00	12493	67.00	613	104.00	1256	147.00	251
39.00	4773	68.00	24128	105.00	456	148.00	678
40.00	524	69.00	24232	106.00	1069	149.00	112
43.00	319	70.00	2013	107.00	259	153.00	173
44.00	1322	72.00	1244	111.00	140	154.00	122
45.00	2733	73.00	10037	112.00	103	155.00	545
46.00	123	74.00	36064	113.00	102	156.00	147
47.00	4645	75.00	106656	115.00	449	157.00	370
48.00	1612	76.00	8968	116.00	1035	159.00	256
49.00	11486	77.00	810	117.00	1231	161.00	159
50.00	57376	78.00	683	118.00	1102	171.00	157
51.00	17488	79.00	7855	119.00	1202	174.00	216832
52.00	877	80.00	2300	128.00	1048	175.00	16792
53.00	273	81.00	8241	129.00	589	176.00	214080
55.00	732	82.00	1153	130.00	1090	177.00	14655
56.00	3439	86.00	159	131.00	489	178.00	143
57.00	7475	87.00	9005	135.00	271	207.00	257
58.00	290	88.00	8308	137.00	473	208.00	121

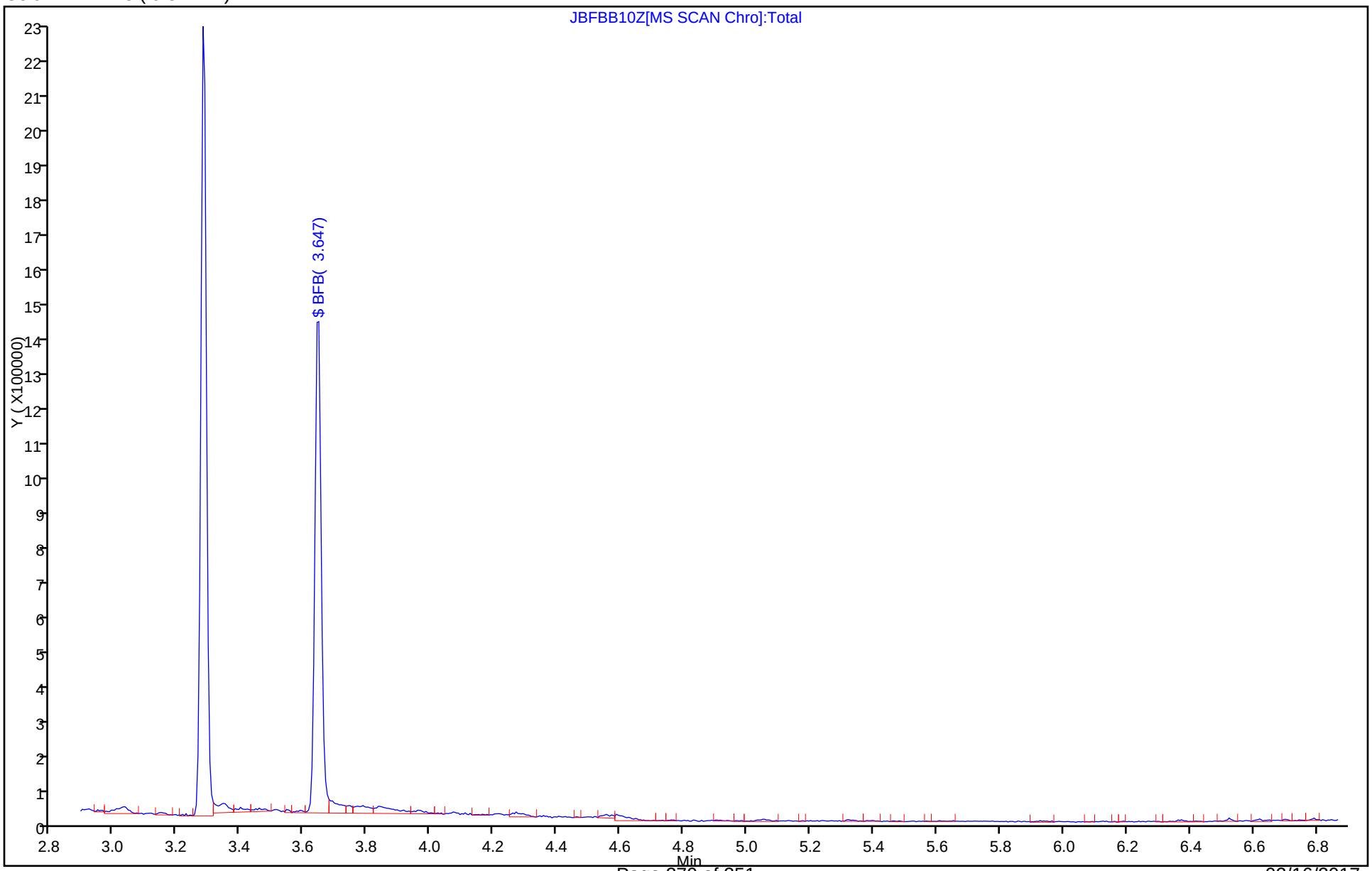
Report Date: 13-Feb-2017 12:31:12 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JBFBB10Z.D

Injection Date:	10-Feb-2017 08:01:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RBFBA16.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 16-Jan-2017 16:55:30 ALS Bottle#: 16 Worklist Smp#: 2
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Sample Info: 140-0003844-002
Misc. Info.: TUNE
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 17-Jan-2017 14:55:10 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: barlozhetskayaa Date: 16-Jan-2017 17:50:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.563	4.563	0.000	0	786159	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

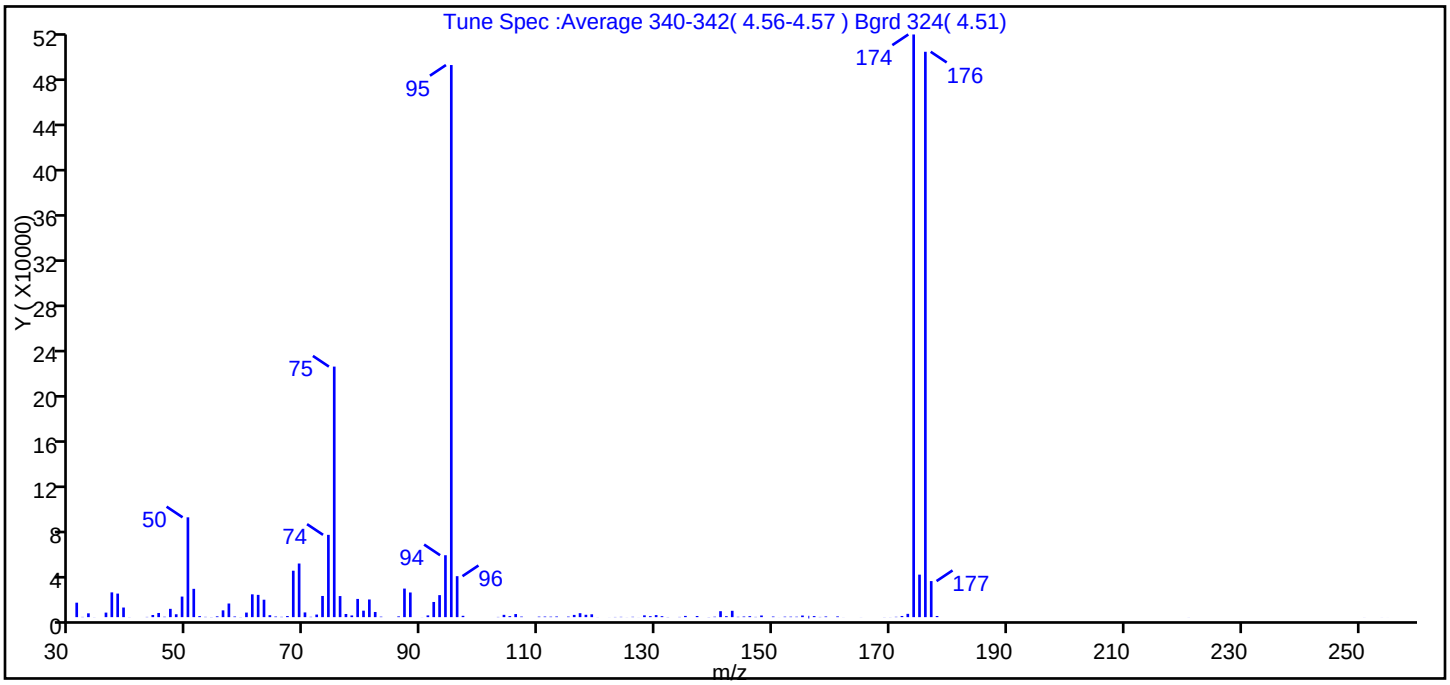
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RBFBA16.D
Injection Date: 16-Jan-2017 16:55:30 Instrument ID: MR
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 16 Worklist Smp#: 2
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.1
75	30 to 60% of m/z 95	45.4
96	5 to 9% of m/z 95	7.4
173	Less than 2% of m/z 174	0.6 (0.6)
174	50 to 120% of m/z 95	105.5
175	5 to 9% of m/z 174	7.7 (7.3)
176	Greater than 95% but less than 101% of m/z 174	102.4 (97.0)
177	5 to 9% of m/z 176	6.5 (6.4)

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RBFBA16.D\MR_TO15.rslt\spectra.d
Injection Date: 16-Jan-2017 16:55:30
Spectrum: Tune Spec :Average 340-342(4.56-4.57) Bgrd 324(4.51)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 127

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	12899	66.00	266	106.00	2755	145.00	565
32.00	203	67.00	982	107.00	494	146.00	873
33.00	3408	68.00	41424	110.00	467	147.00	216
34.00	77	69.00	47840	111.00	527	148.00	1465
36.00	4052	70.00	4206	112.00	435	150.00	530
37.00	22096	71.00	290	113.00	585	151.00	33
38.00	21016	72.00	2305	115.00	487	152.00	431
39.00	8578	73.00	18888	116.00	1987	153.00	429
40.00	86	74.00	73416	117.00	3536	154.00	387
43.00	204	75.00	223488	118.00	2106	155.00	1441
44.00	1921	76.00	18808	119.00	2539	156.00	1
45.00	3720	77.00	2811	120.00	51	157.00	937
46.00	346	78.00	1501	122.00	38	158.00	188
47.00	7410	79.00	16247	123.00	164	159.00	601
48.00	2563	80.00	5776	124.00	256	161.00	666
49.00	18344	81.00	15756	125.00	56	162.00	44
50.00	89040	82.00	4604	126.00	295	165.00	50
51.00	25256	83.00	421	127.00	43	169.00	87
52.00	905	86.00	671	128.00	1605	170.00	71
53.00	251	87.00	25480	129.00	853	171.00	296
54.00	122	88.00	22000	130.00	1812	172.00	1032
55.00	715	90.00	57	131.00	866	173.00	2947
56.00	6067	91.00	1548	132.00	135	174.00	519744
57.00	12164	92.00	13530	134.00	196	175.00	37912
58.00	573	93.00	19632	135.00	1093	176.00	504320
59.00	119	94.00	55232	137.00	1010	177.00	32168
60.00	4067	95.00	492480	139.00	119	178.00	1010
61.00	20344	96.00	36552	140.00	392	221.00	45
62.00	19872	97.00	1193	141.00	5306	251.00	39
63.00	15557	103.00	193	142.00	849	254.00	32
64.00	1751	104.00	2056	143.00	5660	255.00	17
65.00	544	105.00	899	144.00	301		

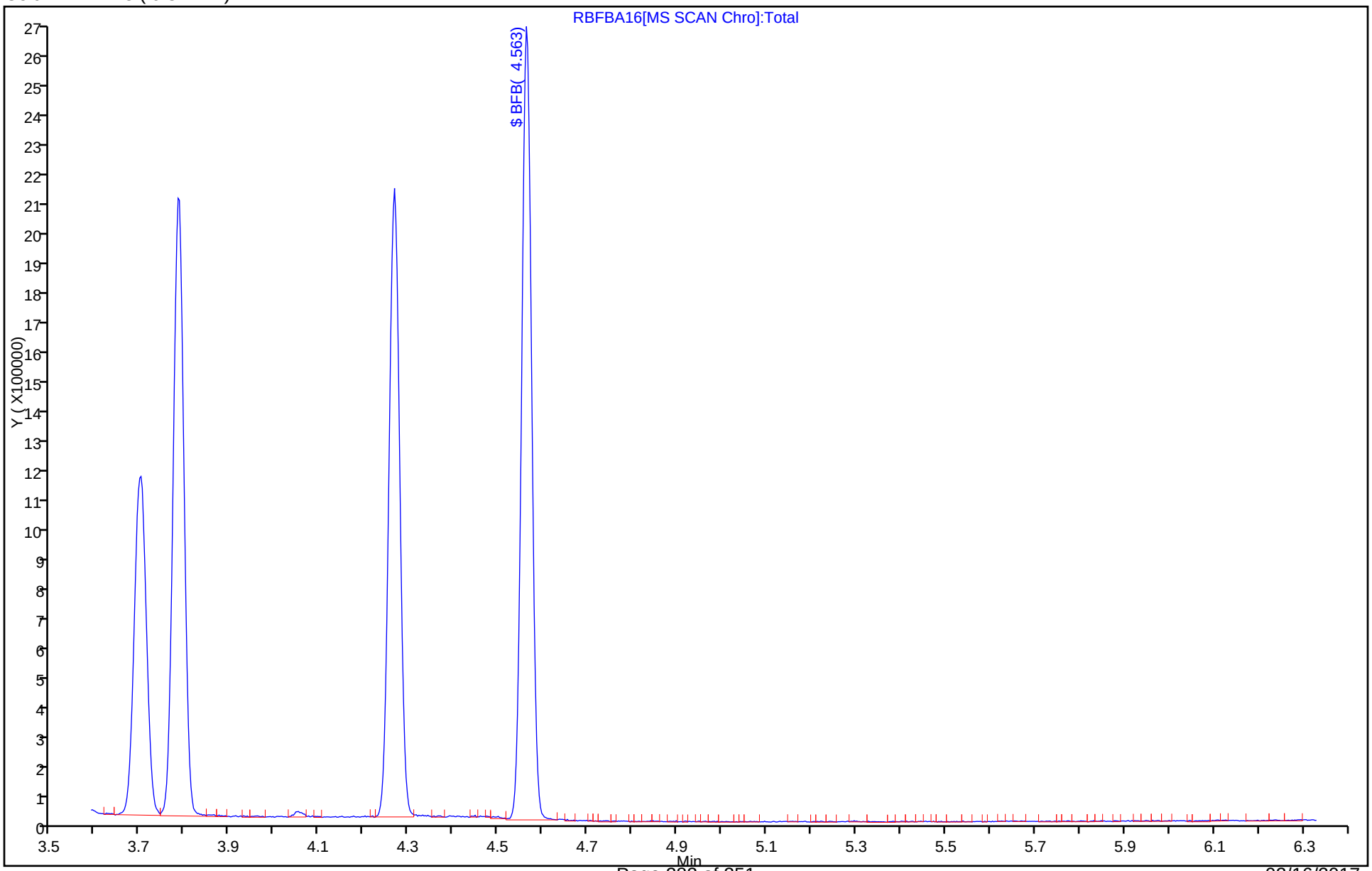
Report Date: 17-Jan-2017 14:55:10 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RBFBA16.D

Injection Date:	16-Jan-2017 16:55:30	Instrument ID:	MR	Operator ID:	
Lims ID:	BFB			Worklist Smp#:	2
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13BFBa.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	13-Feb-2017 12:12:30	ALS Bottle#:	16	Worklist Smp#:	5
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004028-001				
Misc. Info.:	TUNE				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	14-Feb-2017 13:20:24	Calib Date:	17-Jan-2017 10:29:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK008				

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.566	4.566	0.000	0	889975	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

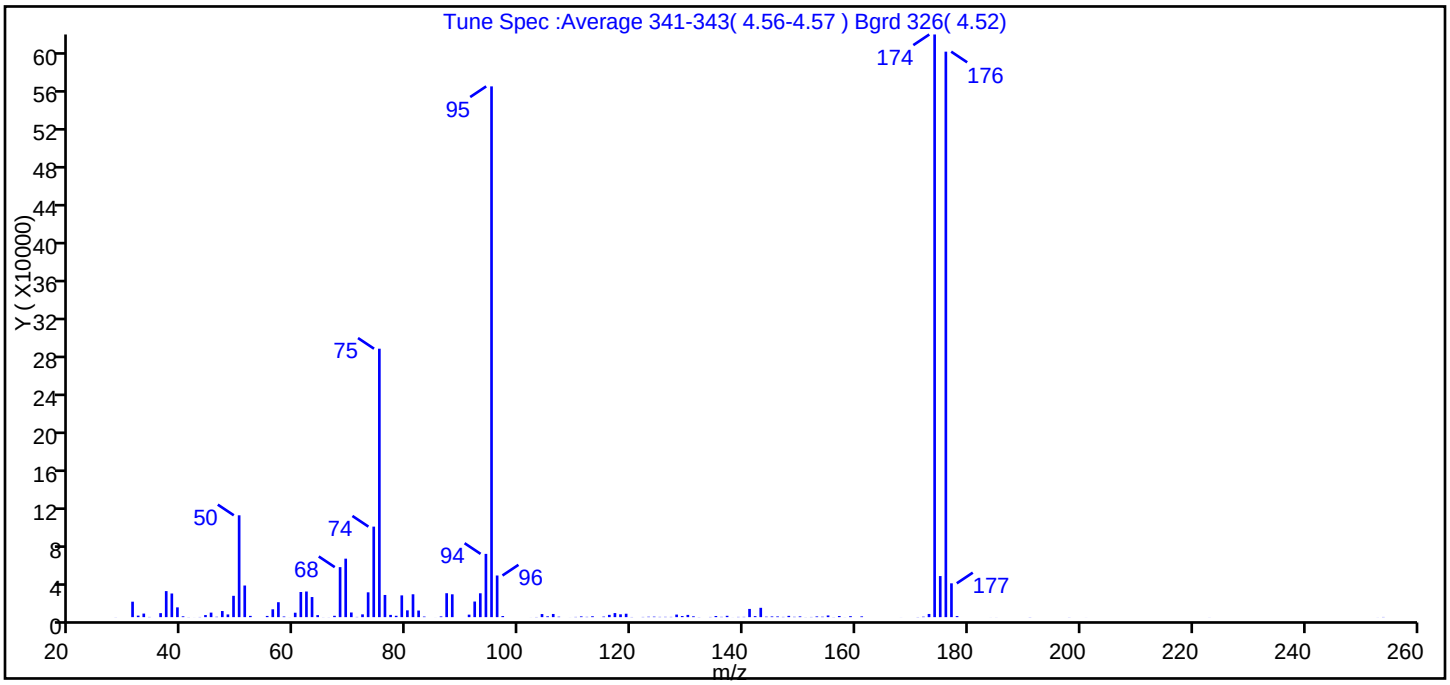
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13BFBa.D
Injection Date: 13-Feb-2017 12:12:30 Instrument ID: MR
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 16 Worklist Smp#: 5
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	19.2
75	30 to 60% of m/z 95	50.6
96	5 to 9% of m/z 95	7.8
173	Less than 2% of m/z 174	0.6 (0.5)
174	50 to 120% of m/z 95	109.8
175	5 to 9% of m/z 174	7.7 (7.1)
176	Greater than 95% but less than 101% of m/z 174	106.5 (97.1)
177	5 to 9% of m/z 176	6.4 (6.0)

Data File: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13BFBa.D\MR_TO15.rslt\spectra.d
Injection Date: 13-Feb-2017 12:12:30
Spectrum: Tune Spec :Average 341-343(4.56-4.57) Bgrd 326(4.52)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 134

m/z	Y	m/z	Y	m/z	Y	m/z	Y
28.00	81	67.00	1426	109.00	39	146.00	760
31.00	16351	68.00	52912	110.00	242	147.00	263
32.00	1604	69.00	61880	111.00	809	148.00	1357
33.00	3777	70.00	4924	112.00	305	149.00	348
34.00	211	71.00	235	113.00	935	150.00	802
36.00	4236	72.00	2948	115.00	567	151.00	90
37.00	27552	73.00	26272	116.00	2411	152.00	204
38.00	25024	74.00	95784	117.00	4316	153.00	776
39.00	10347	75.00	284032	118.00	2990	154.00	441
40.00	878	76.00	23464	119.00	3619	155.00	1771
41.00	113	77.00	2373	120.00	172	156.00	121
42.00	37	78.00	1449	122.00	224	157.00	1187
43.00	190	79.00	23032	123.00	423	158.00	63
44.00	2187	80.00	7206	124.00	527	159.00	1024
45.00	4788	81.00	24200	125.00	278	161.00	807
46.00	385	82.00	6981	126.00	313	168.00	43
47.00	6459	83.00	625	127.00	262	171.00	158
48.00	2876	85.00	35	128.00	2723	172.00	479
49.00	22568	86.00	775	129.00	1166	173.00	3360
50.00	107760	87.00	25312	130.00	2370	174.00	616512
51.00	33464	88.00	24168	131.00	880	175.00	43472
52.00	1348	91.00	2644	132.00	127	176.00	598336
55.00	1282	92.00	16512	134.00	211	177.00	35792
56.00	8311	93.00	25256	135.00	1212	178.00	1096
57.00	15802	94.00	66936	136.00	306	184.00	37
58.00	672	95.00	561600	137.00	1420	185.00	52
59.00	48	96.00	44064	138.00	37	191.00	137
60.00	4677	97.00	1156	139.00	245	198.00	93
61.00	26600	102.00	37	140.00	298	201.00	34
62.00	27120	103.00	174	141.00	8700	223.00	53
63.00	21264	104.00	3284	142.00	1097	253.00	51
64.00	2123	105.00	872	143.00	9876	254.00	197
65.00	77	106.00	3359	144.00	512		

Report Date: 14-Feb-2017 13:20:25 Chrom Revision: 2.2 03-Feb-2017 15:35:04
Data File: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13BFBa.D\MR_TO15.rslt\spectra.d
Injection Date: 13-Feb-2017 12:12:30
Spectrum: Tune Spec :Average 341-343(4.56-4.57) Bgrd 326(4.52)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 134

m/z	Y	m/z	Y	m/z	Y	m/z	Y
66.00	83	107.00	475	145.00	752		

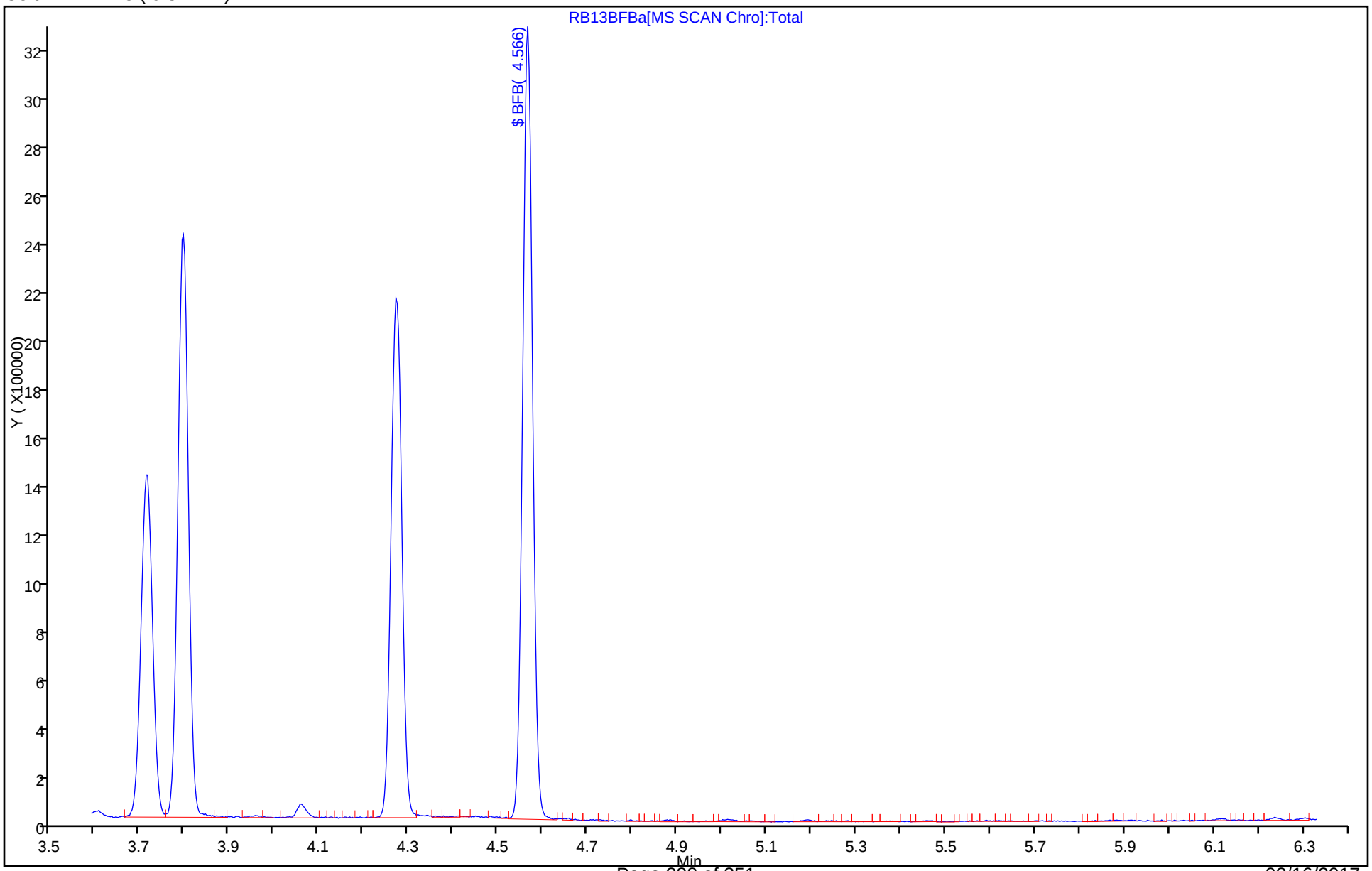
Report Date: 14-Feb-2017 13:20:25 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13BFBa.D

Injection Date:	13-Feb-2017 12:12:30	Instrument ID:	MR	Operator ID:	
Lims ID:	BFB			Worklist Smp#:	5
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\RB14BFBa.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	14-Feb-2017 11:30:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004043-001				
Misc. Info.:	TUNE				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	15-Feb-2017 10:55:54	Calib Date:	17-Jan-2017 10:29:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK006				

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.566	4.566	0.000	0	813378	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

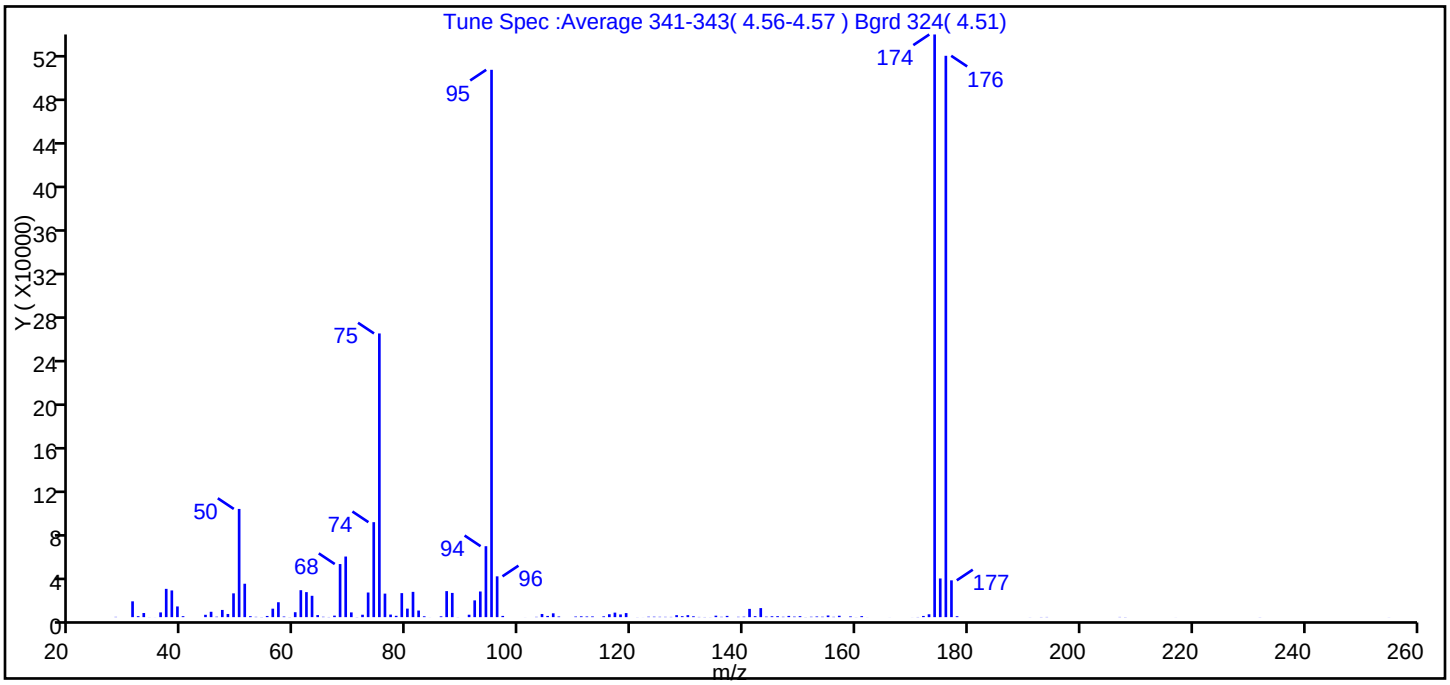
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\RB14BFBa.D
Injection Date: 14-Feb-2017 11:30:30 Instrument ID: MR
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	19.8
75	30 to 60% of m/z 95	51.8
96	5 to 9% of m/z 95	7.5
173	Less than 2% of m/z 174	0.5 (0.5)
174	50 to 120% of m/z 95	106.5
175	5 to 9% of m/z 174	7.1 (6.6)
176	Greater than 95% but less than 101% of m/z 174	102.6 (96.3)
177	5 to 9% of m/z 176	6.7 (6.6)

Data File: \\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\RB14BFBa.D\MR_TO15.rslt\spectra.d
Injection Date: 14-Feb-2017 11:30:30
Spectrum: Tune Spec :Average 341-343(4.56-4.57) Bgrd 324(4.51)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 136

m/z	Y	m/z	Y	m/z	Y	m/z	Y
28.00	251	67.00	1400	107.00	609	146.00	900
31.00	14577	68.00	48952	110.00	568	147.00	344
32.00	878	69.00	55880	111.00	776	148.00	1141
33.00	3814	70.00	4374	112.00	624	149.00	507
34.00	65	71.00	118	113.00	657	150.00	915
35.00	38	72.00	2225	115.00	751	151.00	99
36.00	4367	73.00	22720	116.00	2668	152.00	364
37.00	26080	74.00	87560	117.00	4166	153.00	631
38.00	24624	75.00	261568	118.00	2479	154.00	383
39.00	9868	76.00	21696	119.00	3750	155.00	1521
40.00	893	77.00	2356	121.00	75	156.00	294
44.00	2170	78.00	1237	122.00	35	157.00	1282
45.00	4955	79.00	22144	123.00	406	159.00	684
46.00	406	80.00	7868	124.00	410	160.00	71
47.00	6641	81.00	23312	125.00	321	161.00	932
48.00	2926	82.00	6091	126.00	271	162.00	36
49.00	21936	83.00	799	127.00	218	166.00	33
50.00	99768	84.00	40	128.00	1822	170.00	39
51.00	30800	86.00	756	129.00	879	171.00	147
52.00	873	87.00	23992	130.00	1832	172.00	1104
53.00	283	88.00	22336	131.00	793	173.00	2642
54.00	129	89.00	85	132.00	195	174.00	537216
55.00	1089	91.00	2230	133.00	143	175.00	35664
56.00	7810	92.00	15463	134.00	69	176.00	517568
57.00	13746	93.00	23648	135.00	1355	177.00	33936
58.00	552	94.00	65416	136.00	300	178.00	828
59.00	107	95.00	504640	137.00	1167	191.00	61
60.00	4537	96.00	37624	139.00	302	193.00	144
61.00	24848	97.00	1142	140.00	443	194.00	177
62.00	23072	101.00	37	141.00	7621	207.00	190
63.00	19680	103.00	270	142.00	921	208.00	129
64.00	1894	104.00	2917	143.00	8342	217.00	37
65.00	338	105.00	1112	144.00	463	232.00	86

Report Date: 15-Feb-2017 10:55:55 Chrom Revision: 2.2 03-Feb-2017 15:35:04
Data File: \\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\RB14BFBa.D\MR_TO15.rslt\spectra.d
Injection Date: 14-Feb-2017 11:30:30
Spectrum: Tune Spec :Average 341-343(4.56-4.57) Bgrd 324(4.51)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 136

m/z	Y	m/z	Y	m/z	Y	m/z	Y
66.00	154	106.00	3527	145.00	814	255.00	54

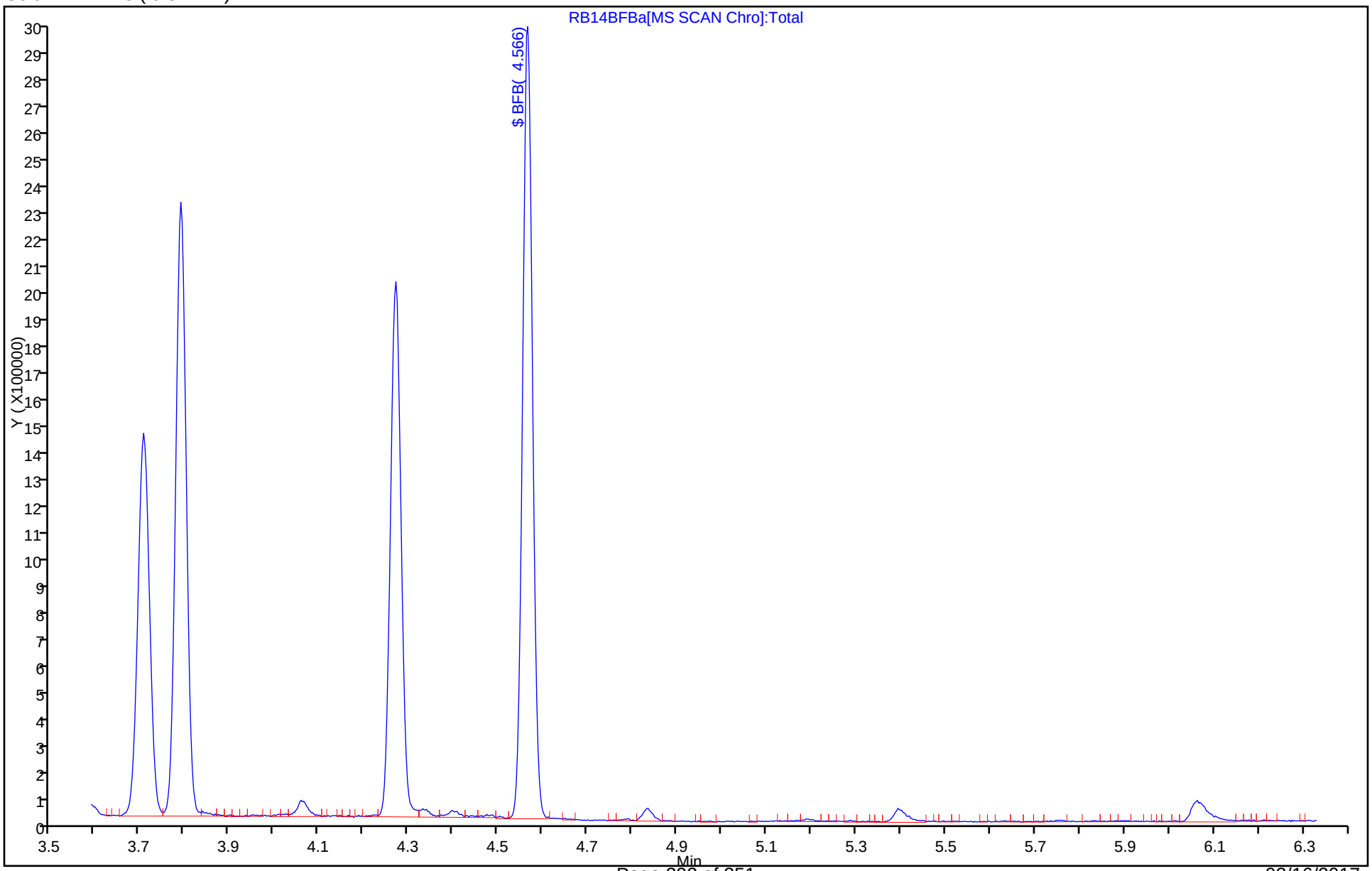
Report Date: 15-Feb-2017 10:55:55 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\RB14BFBa.D

Injection Date:	14-Feb-2017 11:30:30	Instrument ID:	MR	Operator ID:	
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-8433/4

Matrix: Air Lab File ID: J500BB10.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 02/10/2017 10:45

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8433 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-8433/4

Matrix: Air Lab File ID: J500BB10.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 02/10/2017 10:45

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8433 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\J500BB10.D
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 10-Feb-2017 10:45:30 ALS Bottle#: 16 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004010-004
Misc. Info.: 500ml blk
Operator ID: 7126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Feb-2017 12:31:14 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh Date: 10-Feb-2017 11:37:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.579	8.579	0.000	99	410296	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.779	10.779	0.000	94	1712407	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.556	15.556	0.000	87	1395760	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.202	17.202	0.000	95	754343	4.00	3.41	
31 Methylene Chloride	84	6.061	6.067	-0.005	95	8989		0.0743	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

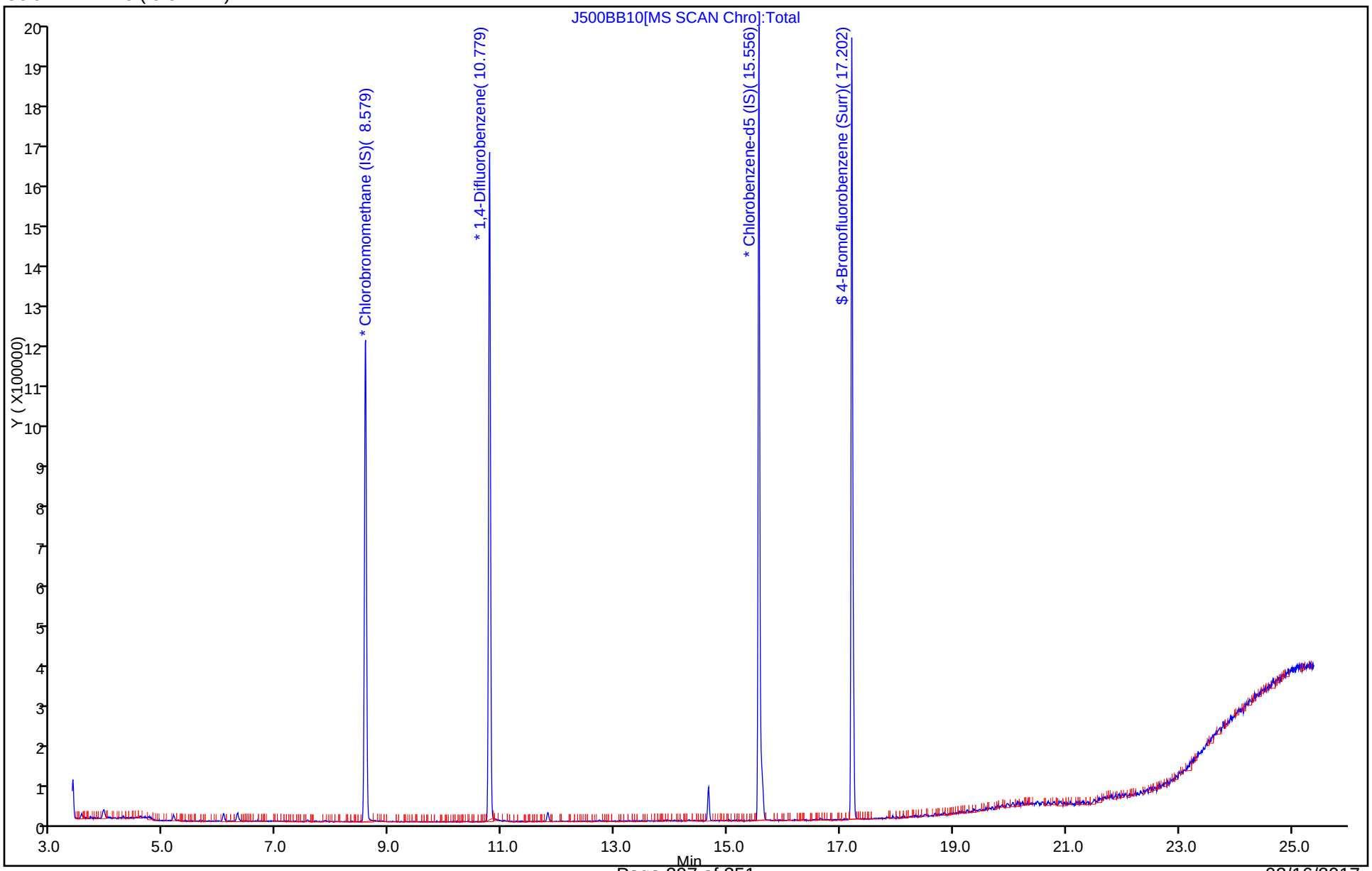
Report Date: 13-Feb-2017 12:31:24 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\J500BB10.D

Injection Date:	10-Feb-2017 10:45:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	mb			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\J500BB10.D				
Lims ID:	mb				
Client ID:					
Sample Type:	MB				
Inject. Date:	10-Feb-2017 10:45:30	ALS Bottle#:	16	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004010-004				
Misc. Info.:	500ml blk				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Feb-2017 12:31:14	Calib Date:	26-Nov-2016 01:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK025				

First Level Reviewer: tajh Date: 10-Feb-2017 11:37:37

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.41	85.33

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-8477/13

Matrix: Air Lab File ID: RB13mb500R.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 02/14/2017 01:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8477 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-8477/13

Matrix: Air Lab File ID: RB13mb500R.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 02/14/2017 01:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8477 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13mb500R.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 14-Feb-2017 01:00:30 ALS Bottle#: 16 Worklist Smp#: 13
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004028-013
Misc. Info.: mb500mL
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Feb-2017 13:20:26 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: barlozhetskayaa Date: 14-Feb-2017 09:36:01

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.220	8.231	-0.011	89	283446	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.383	10.393	-0.010	93	1424221	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.279	15.284	-0.005	86	1140886	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.972	16.972	0.000	94	670343	4.00	3.76	
31 Methylene Chloride	84	5.923	5.923	0.000	96	5465		0.0744	
65 4-Methyl-2-pentanone (MIBK	43	12.356	12.340	0.016	81	4003		0.0239	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

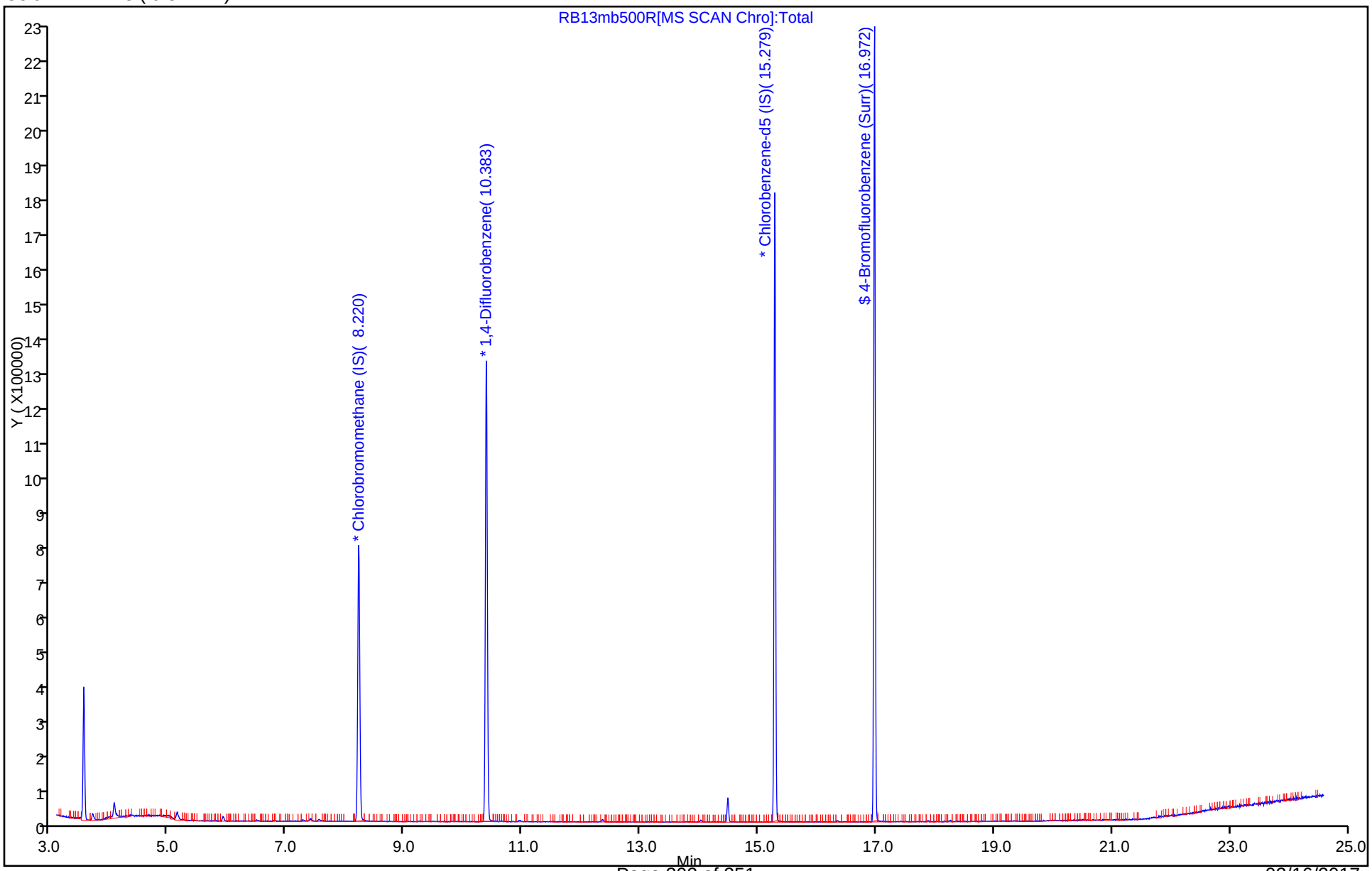
Report Date: 14-Feb-2017 13:20:50 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13mb500R.D

Injection Date:	14-Feb-2017 01:00:30	Instrument ID:	MR	Operator ID:	
Lims ID:	MB			Worklist Smp#:	13
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13mb500R.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	14-Feb-2017 01:00:30	ALS Bottle#:	16	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004028-013				
Misc. Info.:	mb500mL				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	14-Feb-2017 13:20:26	Calib Date:	17-Jan-2017 10:29:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK008				

First Level Reviewer: barlozhetskayaa Date: 14-Feb-2017 09:36:01

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.76	93.90

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-8578/6

Matrix: Air Lab File ID: RB14MB500.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 02/14/2017 15:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8578 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	ND		0.040	0.014

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-8578/6

Matrix: Air Lab File ID: RB14MB500.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 02/14/2017 15:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8578 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	ND		0.21	0.075

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\RB14MB500.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 14-Feb-2017 15:46:30 ALS Bottle#: 16 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004043-006
Misc. Info.: MB500mL
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Feb-2017 10:55:56 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: barlozhetskayaa Date: 14-Feb-2017 16:30:34

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.215	8.231	-0.016	86	335708	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.383	10.393	-0.010	93	1636694	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.279	15.284	-0.005	85	1303396	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.972	16.972	0.000	94	775312	4.00	3.80	
31 Methylene Chloride	84	5.912	5.923	-0.011	96	7031		0.0808	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

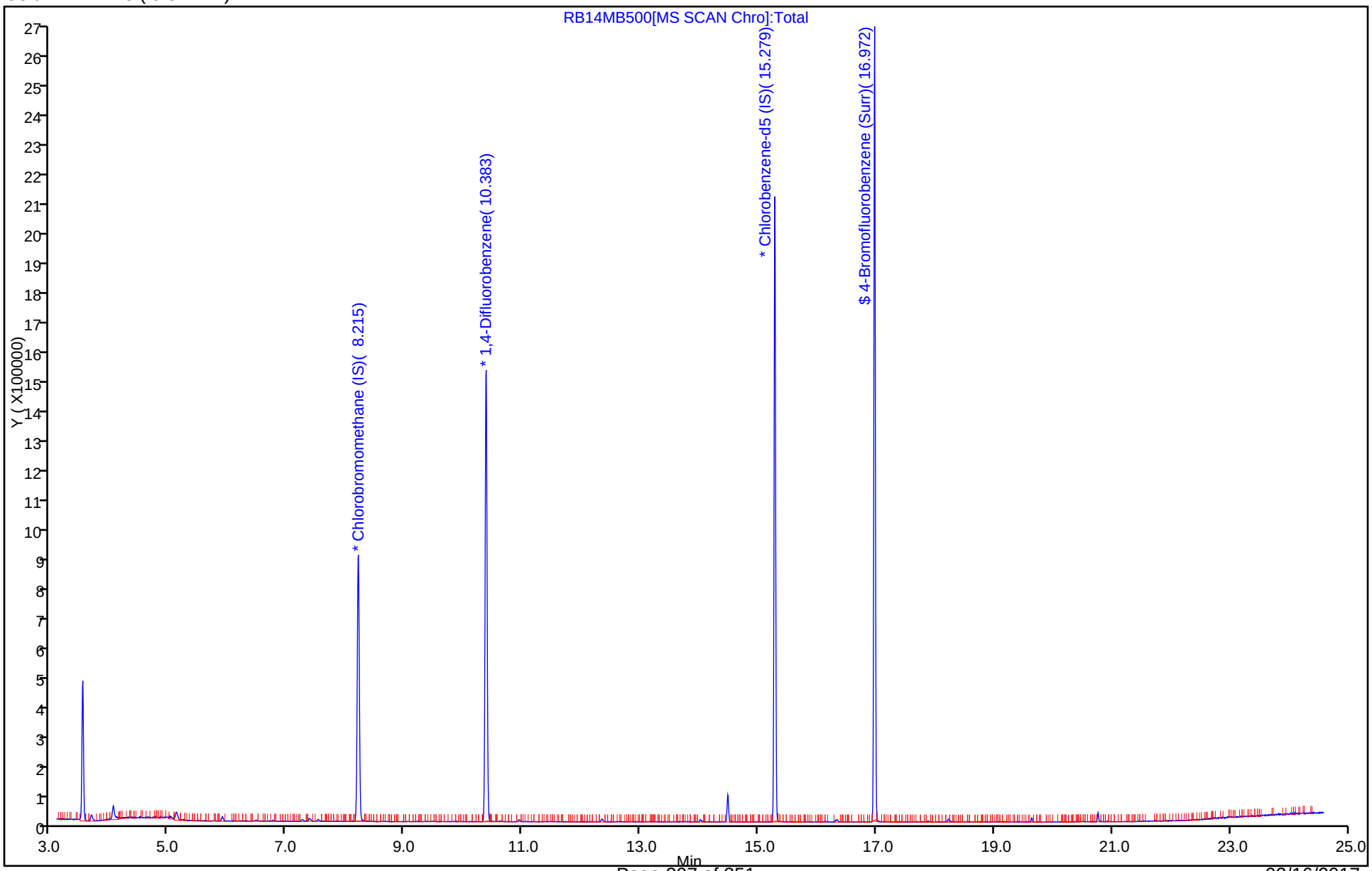
Report Date: 15-Feb-2017 10:56:01 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\RB14MB500.D

Injection Date:	14-Feb-2017 15:46:30	Instrument ID:	MR	Operator ID:	
Lims ID:	MB			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\RB14MB500.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	14-Feb-2017 15:46:30	ALS Bottle#:	16	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004043-006				
Misc. Info.:	MB500mL				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	15-Feb-2017 10:55:56	Calib Date:	17-Jan-2017 10:29:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK006				
First Level Reviewer: barlozhetskayaa		Date:	14-Feb-2017 16:30:34		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.80	95.07

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 140-8433/1002

Matrix: Air Lab File ID: JCCVB10Z-LCS.d

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 02/10/2017 08:27

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8433 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.65		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	1.86		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	1.55		0.080	0.015
67-66-3	Chloroform	119.38	1.66		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.76		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	1.79		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.75		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	1.61		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	1.89		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.69		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.74		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.57		0.40	0.068
91-20-3	Naphthalene	128.17	2.01		0.040	0.040
127-18-4	Tetrachloroethene	165.83	1.78		0.080	0.016
108-88-3	Toluene	92.14	1.74		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.87		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	2.69		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	1.71		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.66		0.080	0.021
79-01-6	Trichloroethene	131.39	1.81		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	1.78		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.76		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.85		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.85		0.040	0.029
1330-20-7	Xylenes, Total	106.17	5.09		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	91		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JCCVB10Z-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 10-Feb-2017 08:27:30 ALS Bottle#: 15 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003999-014
Misc. Info.: P33
Operator ID: 7126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Feb-2017 12:31:14 Calib Date: 26-Nov-2016 01:58:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh Date: 13-Feb-2017 12:09:24

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.579	8.579	0.000	99	384593	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.779	10.779	0.000	95	1646942	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.556	15.556	0.000	87	1340454	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.202	17.202	0.000	95	776572	4.00	3.66	
6 Chlorodifluoromethane	67	3.560	3.560	0.000	96	53908	2.00	1.55	
7 Propene	41	3.570	3.570	0.000	98	228753	2.00	1.91	
8 Dichlorodifluoromethane	85	3.619	3.619	0.000	100	556440	2.00	1.79	
9 Chloromethane	52	3.796	3.796	0.000	99	86836	2.00	1.96	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.802	3.802	0.000	90	400647	2.00	2.33	
11 Acetaldehyde	44	3.942	3.942	0.000	100	351335	10.0	7.32	
12 Vinyl chloride	62	3.958	3.958	0.000	99	246529	2.00	1.85	
14 Butadiene	54	4.044	4.044	0.000	65	199805	2.00	1.87	
13 Butane	43	4.044	4.044	0.000	86	425049	2.00	1.83	
15 Bromomethane	94	4.350	4.350	0.000	98	215686	2.00	1.82	
16 Chloroethane	64	4.485	4.485	0.000	91	114066	2.00	1.81	
17 Ethanol	31	4.571	4.571	0.000	95	386784	10.0	7.62	
18 Vinyl bromide	106	4.770	4.770	0.000	99	210176	2.00	1.81	
19 2-Methylbutane	43	4.818	4.818	0.000	94	323333	2.00	1.90	
20 Trichlorofluoromethane	101	5.034	5.034	0.000	100	577497	2.00	1.82	
21 Acrolein	56	5.039	5.039	0.000	92	52812	2.00	1.42	
22 Acetonitrile	40	5.109	5.109	0.000	97	75587	2.00	1.65	
23 Acetone	58	5.157	5.157	0.000	98	212516	6.00	5.33	
24 Isopropyl alcohol	45	5.233	5.233	0.000	94	831871	6.00	4.49	
25 Pentane	72	5.254	5.254	0.000	95	32512	2.00	1.83	
26 Ethyl ether	31	5.416	5.416	0.000	92	199076	2.00	1.52	
27 1,1-Dichloroethene	96	5.722	5.722	0.000	95	218511	2.00	1.89	
28 2-Methyl-2-propanol	59	5.814	5.814	0.000	95	313969	2.00	1.68	
29 Acrylonitrile	53	5.824	5.824	0.000	93	118695	2.00	1.62	
30 1,1,2-Trichloro-1,2,2-trif	101	5.894	5.894	0.000	97	478879	2.00	1.87	
31 Methylene Chloride	84	6.067	6.067	0.000	95	196838	2.00	1.74	
32 3-Chloro-1-propene	39	6.083	6.083	0.000	93	213344	2.00	1.60	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.223	6.223	0.000	100	634814	2.00	1.86	
34 trans-1,2-Dichloroethene	96	6.863	6.863	0.000	96	218007	2.00	1.87	
35 2-Methylpentane	43	6.879	6.879	0.000	98	570755	2.00	1.90	
36 Methyl tert-butyl ether	73	6.997	6.997	0.000	97	373977	2.00	1.57	
37 1,1-Dichloroethane	63	7.282	7.282	0.000	99	387066	2.00	1.75	
38 Vinyl acetate	43	7.384	7.384	0.000	100	444717	2.00	1.63	
39 2-Butanone (MEK)	72	7.836	7.836	0.000	95	63730	2.00	1.83	
40 Hexane	56	7.847	7.847	0.000	83	183854	2.00	1.80	
41 Isopropyl ether	45	8.014	8.014	0.000	98	646371	2.00	1.78	
42 cis-1,2-Dichloroethene	96	8.256	8.256	0.000	97	202250	2.00	1.76	
43 Ethyl acetate	43	8.450	8.450	0.000	98	367296	2.00	1.81	
44 Chloroform	83	8.595	8.595	0.000	97	399220	2.00	1.66	
45 Tert-butyl ethyl ether	59	8.686	8.686	0.000	96	481947	2.00	1.73	
46 Tetrahydrofuran	42	9.014	9.014	0.000	94	199145	2.00	1.76	
47 1,1,1-Trichloroethane	97	9.617	9.617	0.000	97	425015	2.00	1.71	
48 1,2-Dichloroethane	62	9.725	9.725	0.000	96	246950	2.00	1.61	
49 n-Butanol	31	10.193	10.193	0.000	91	72218	2.00	1.47	
50 Cyclohexane	69	10.219	10.219	0.000	84	93097	2.00	1.71	
51 Benzene	78	10.225	10.225	0.000	96	493824	2.00	1.65	
52 Carbon tetrachloride	117	10.246	10.246	0.000	96	489458	2.00	1.86	
53 2,3-Dimethylpentane	71	10.349	10.349	0.000	92	122652	2.00	1.79	
54 Thiophene	84	10.499	10.499	0.000	96	301571	2.00	1.76	
55 Tert-amyl methyl ether	73	10.720	10.720	0.000	95	403802	2.00	1.94	
56 Isooctane	57	10.999	10.999	0.000	99	1057241	2.00	1.86	
57 n-Heptane	71	11.387	11.387	0.000	95	175728	2.00	1.68	
58 1,2-Dichloropropane	63	11.467	11.467	0.000	92	203524	2.00	1.68	
59 Trichloroethene	130	11.500	11.500	0.000	98	254916	2.00	1.81	
60 Dibromomethane	93	11.586	11.586	0.000	92	220409	2.00	1.65	
62 Dichlorobromomethane	83	11.731	11.731	0.000	98	371027	2.00	1.59	
61 1,4-Dioxane	88	11.763	11.763	0.000	98	60227	2.00	1.90	
63 Methyl methacrylate	41	11.844	11.844	0.000	95	201677	2.00	1.76	
64 Methylcyclohexane	83	12.280	12.280	0.000	92	417986	2.00	1.84	
65 4-Methyl-2-pentanone (MIBK	43	12.699	12.699	0.000	96	399429	2.00	1.76	
66 cis-1,3-Dichloropropene	75	12.753	12.753	0.000	95	243151	2.00	1.55	
67 trans-1,3-Dichloropropene	75	13.453	13.453	0.000	98	182634	2.00	1.58	
68 Toluene	91	13.571	13.571	0.000	93	501259	2.00	1.74	
69 1,1,2-Trichloroethane	83	13.652	13.652	0.000	98	150384	2.00	1.66	
70 2-Methylthiophene	97	13.727	13.727	0.000	98	427811	2.00	1.77	
71 3-Methylthiophene	97	13.931	13.931	0.000	100	402451	2.00	1.74	
72 2-Hexanone	58	14.050	14.050	0.000	91	159028	2.00	1.89	
73 n-Octane	85	14.270	14.270	0.000	97	167397	2.00	1.73	
74 Chlorodibromomethane	129	14.356	14.356	0.000	98	384222	2.00	1.82	
75 Ethylene Dibromide	107	14.647	14.647	0.000	98	256746	2.00	1.68	
76 Tetrachloroethene	129	14.722	14.722	0.000	96	224833	2.00	1.78	
78 Chlorobenzene	112	15.604	15.604	0.000	96	395287	2.00	1.75	
77 2,3-Dimethylheptane	43	15.626	15.626	0.000	94	664225	2.00	1.84	
79 Ethylbenzene	91	15.895	15.895	0.000	98	578921	2.00	1.69	
80 2-Ethylthiophene	97	15.997	15.997	0.000	98	435088	2.00	1.70	
81 m-Xylene & p-Xylene	91	16.056	16.056	0.000	99	863859	4.00	3.42	
82 n-Nonane	57	16.481	16.481	0.000	96	369222	2.00	1.71	
83 Bromoform	173	16.503	16.503	0.000	98	351573	2.00	1.75	
84 Styrene	104	16.524	16.524	0.000	97	306402	2.00	1.71	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	16.583	16.583	0.000	98	455400	2.00	1.67	
86 1,1,2,2-Tetrachloroethane	83	16.912	16.912	0.000	99	348875	2.00	1.76	
87 1,2,3-Trichloropropane	110	17.068	17.068	0.000	97	81305	2.00	1.79	
88 Isopropylbenzene	105	17.170	17.170	0.000	96	639104	2.00	1.74	
89 N-Propylbenzene	120	17.718	17.718	0.000	99	162683	2.00	1.88	
90 2-Chlorotoluene	126	17.761	17.761	0.000	96	165142	2.00	1.80	
91 4-Ethyltoluene	105	17.874	17.874	0.000	99	568797	2.00	1.85	
92 1,3,5-Trimethylbenzene	120	17.950	17.950	0.000	93	286436	2.00	1.85	
93 Alpha Methyl Styrene	118	18.181	18.181	0.000	89	210681	2.00	1.76	
94 n-Decane	57	18.240	18.240	0.000	87	369687	2.00	1.70	
95 tert-Butylbenzene	119	18.375	18.375	0.000	94	567973	2.00	1.81	
96 1,2,4-Trimethylbenzene	105	18.391	18.391	0.000	96	471714	2.00	1.76	
97 sec-Butylbenzene	105	18.649	18.649	0.000	98	724713	2.00	1.76	
98 1,3-Dichlorobenzene	146	18.665	18.665	0.000	96	268098	2.00	1.79	
99 Benzyl chloride	91	18.741	18.741	0.000	98	258222	2.00	1.99	
100 1,4-Dichlorobenzene	146	18.751	18.751	0.000	96	236091	2.00	2.02	
101 4-Isopropyltoluene	119	18.816	18.816	0.000	98	577187	2.00	1.80	
102 1,2,3-Trimethylbenzene	105	18.864	18.864	0.000	98	357749	2.00	1.78	
103 Butylcyclohexane	83	18.918	18.918	0.000	93	410313	2.00	1.58	
104 2,3-Dihydroindene	117	19.112	19.112	0.000	94	416496	2.00	1.78	
105 1,2-Dichlorobenzene	146	19.112	19.112	0.000	79	269659	2.00	1.78	
107 Indene	116	19.246	19.246	0.000	91	250386	2.00	1.72	
106 n-Butylbenzene	91	19.252	19.252	0.000	98	444859	2.00	1.66	
108 Undecane	57	19.569	19.569	0.000	94	341871	2.00	1.75	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.623	19.623	0.000	99	341191	2.00	1.73	
110 1,2-Dibromo-3-Chloropropan	157	19.720	19.720	0.000	95	99954	2.00	1.91	
111 1,2,4,5-Tetramethylbenzene	119	20.010	20.010	0.000	98	388098	2.00	1.68	
112 1,2,3,5-Tetramethylbenzene	119	20.064	20.064	0.000	96	247699	2.00	1.74	
113 1,2,3,4-Tetramethylbenzene	119	20.462	20.462	0.000	98	302271	2.00	1.68	
114 Dodecane	57	20.629	20.629	0.000	92	320931	2.00	1.98	
115 1,2,4-Trichlorobenzene	180	20.822	20.822	0.000	92	117487	2.00	2.69	
116 Naphthalene	128	20.962	20.962	0.000	99	234558	2.00	2.01	
117 Benzo(b)thiophene	134	21.064	21.064	0.000	99	114897	2.00	2.52	
118 Hexachlorobutadiene	225	21.183	21.183	0.000	93	294683	2.00	1.74	
119 1,2,3-Trichlorobenzene	180	21.253	21.253	0.000	94	129739	2.00	2.27	
120 2-Methylnaphthalene	142	21.936	21.936	0.000	99	78528	6.25	6.84	
121 1-Methylnaphthalene	142	22.065	22.065	0.000	99	76080	6.25	5.95	
A 124 Toluene Range	1	13.571	(13.541-13.601)		0	1226267	2.00	1.62	
A 125 C8 Range	1	14.255	(14.232-14.279)		0	1865293	2.00	1.81	
S 126 Xylenes, Total	100				0		6.00	5.10	
S 127 1,2-Dichloroethene, Total	1				0		4.00	3.64	

Reagents:

40CV101P_00033	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

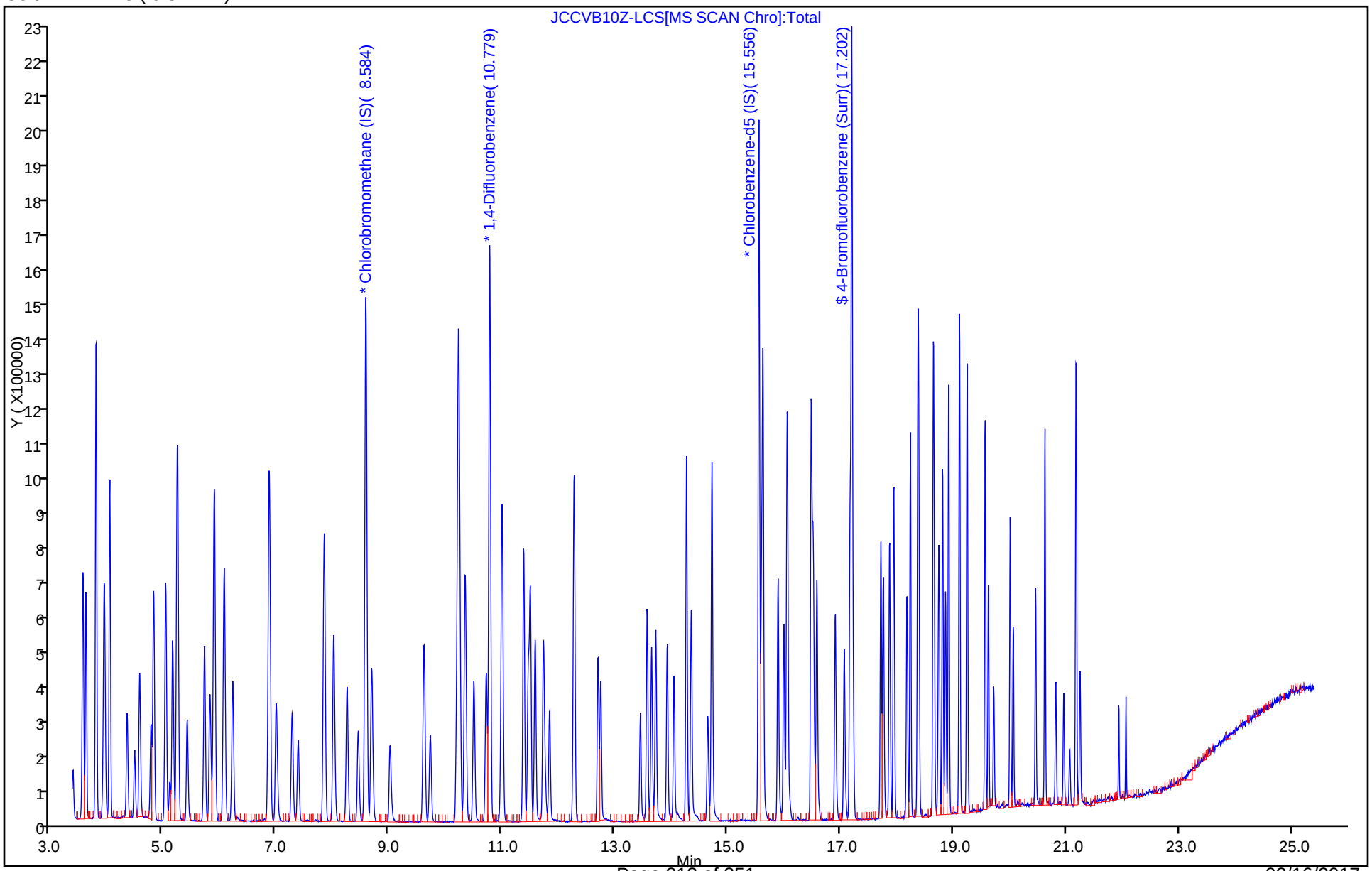
Report Date: 13-Feb-2017 12:31:20 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JCCVB10Z-LCS.d

Injection Date:	10-Feb-2017 08:27:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	LCS			Worklist Smp#:	1002
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\JCCVB10Z-LCS.d				
Lims ID:	LCS				
Client ID:					
Sample Type:	LCS				
Inject. Date:	10-Feb-2017 08:27:30	ALS Bottle#:	15	Worklist Smp#:	1002
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003999-014				
Misc. Info.:	P33				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20170209-4010.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Feb-2017 12:31:14	Calib Date:	26-Nov-2016 01:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK025				

First Level Reviewer: tajh Date: 13-Feb-2017 12:09:24

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.66	91.47

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 140-8477/1006

Matrix: Air Lab File ID: RB13CCVa-LCS.d

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 02/13/2017 12:44

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8477 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.94		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.41		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.45		0.080	0.015
67-66-3	Chloroform	119.38	2.10		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.00		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.12		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.97		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.23		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.04		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.04		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.87		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	2.18		0.40	0.068
91-20-3	Naphthalene	128.17	2.23		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.26		0.080	0.016
108-88-3	Toluene	92.14	2.23		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.02		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	2.18		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.29		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.10		0.080	0.021
79-01-6	Trichloroethene	131.39	2.02		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.18		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.26		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	2.11		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.03		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.24		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	92		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13CCVa-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 13-Feb-2017 12:44:30 ALS Bottle#: 15 Worklist Smp#: 1006
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004028-002
Misc. Info.: S32
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Feb-2017 13:28:51 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: tajh Date: 14-Feb-2017 13:28:51

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.231	8.231	0.000	85	358308	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.393	10.393	0.000	93	1763771	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.284	15.284	0.000	84	1420577	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.972	16.972	0.000	94	816358	4.00	3.67	
6 Chlorodifluoromethane	67	3.718	3.718	0.000	98	48694	2.00	2.45	
7 Propene	41	3.728	3.728	0.000	98	172247	2.00	1.85	
8 Dichlorodifluoromethane	85	3.777	3.777	0.000	99	343697	2.00	2.12	
9 Chloromethane	52	3.923	3.923	0.000	100	55827	2.00	1.83	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.950	3.950	0.000	87	440863	2.00	2.40	
11 Acetaldehyde	44	4.063	4.063	0.000	97	303415	10.0	11.1	
12 Vinyl chloride	62	4.074	4.074	0.000	99	177400	2.00	2.03	
13 Butadiene	54	4.154	4.154	0.000	89	119807	2.00	1.94	
14 Butane	43	4.154	4.154	0.000	93	237183	2.00	2.14	
15 Bromomethane	94	4.413	4.413	0.000	96	158704	2.00	2.08	
16 Chloroethane	64	4.537	4.537	0.000	91	64353	2.00	1.87	
17 Ethanol	31	4.651	4.651	0.000	99	234914	10.0	10.2	
18 Vinyl bromide	106	4.796	4.796	0.000	97	157784	2.00	2.21	
19 2-Methylbutane	43	4.855	4.855	0.000	89	124144	2.00	1.85	
20 Acrolein	56	5.028	5.028	0.000	32	42117	2.00	1.63	
21 Trichlorofluoromethane	101	5.033	5.033	0.000	99	552233	2.00	2.48	
22 Acetonitrile	40	5.077	5.077	0.000	99	72799	2.00	1.88	
23 Acetone	58	5.120	5.120	0.000	98	227317	6.00	5.51	
24 Isopropyl alcohol	45	5.228	5.228	0.000	93	706620	6.00	5.82	
25 Pentane	72	5.238	5.238	0.000	95	35053	2.00	2.01	
26 Ethyl ether	31	5.362	5.362	0.000	94	199138	2.00	1.97	
27 1,1-Dichloroethene	96	5.632	5.632	0.000	97	200950	2.00	2.04	
28 Acrylonitrile	53	5.707	5.707	0.000	94	125650	2.00	1.99	
29 2-Methyl-2-propanol	59	5.729	5.729	0.000	97	280087	2.00	2.11	
30 1,1,2-Trichloro-1,2,2-trif	101	5.810	5.810	0.000	94	412866	2.00	2.18	
31 Methylene Chloride	84	5.923	5.923	0.000	94	173280	2.00	1.87	
32 3-Chloro-1-propene	39	5.945	5.945	0.000	97	158206	2.00	2.27	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.069	6.069	0.000	99	513959	2.00	2.02	
34 trans-1,2-Dichloroethene	96	6.662	6.662	0.000	94	211797	2.00	2.02	
35 2-Methylpentane	43	6.710	6.710	0.000	94	372084	2.00	1.93	
36 Methyl tert-butyl ether	73	6.781	6.781	0.000	96	481806	2.00	2.18	
37 1,1-Dichloroethane	63	7.029	7.029	0.000	100	325498	2.00	1.97	
38 Vinyl acetate	43	7.136	7.136	0.000	100	476703	2.00	2.04	
39 2-Butanone (MEK)	72	7.519	7.519	0.000	100	90545	2.00	2.10	
40 Hexane	56	7.616	7.616	0.000	91	129946	2.00	1.92	
41 Isopropyl ether	45	7.746	7.746	0.000	96	616586	2.00	1.99	
42 cis-1,2-Dichloroethene	96	7.935	7.935	0.000	89	218865	2.00	2.00	
43 Ethyl acetate	43	8.118	8.118	0.000	99	405266	2.00	2.06	
44 Chloroform	83	8.263	8.263	0.000	94	392119	2.00	2.10	
45 Tert-butyl ethyl ether	59	8.377	8.377	0.000	93	460961	2.00	2.04	
46 Tetrahydrofuran	42	8.614	8.614	0.000	94	203088	2.00	1.89	
47 1,1,1-Trichloroethane	97	9.245	9.245	0.000	94	425745	2.00	2.29	
48 1,2-Dichloroethane	62	9.315	9.315	0.000	97	236248	2.00	2.23	
49 n-Butanol	31	9.800	9.800	0.000	89	69514	2.00	1.95	
50 Benzene	78	9.827	9.827	0.000	94	593756	2.00	1.94	
51 Cyclohexane	69	9.849	9.849	0.000	94	86071	2.00	1.96	
52 Carbon tetrachloride	117	9.865	9.865	0.000	98	451425	2.00	2.41	
53 2,3-Dimethylpentane	71	10.011	10.011	0.000	91	127921	2.00	1.97	
54 Thiophene	84	10.091	10.091	0.000	92	323782	2.00	2.03	
55 Tert-amyl methyl ether	73	10.340	10.340	0.000	98	523603	2.00	2.24	
56 Isooctane	57	10.679	10.679	0.000	98	819823	2.00	1.96	
57 1,2-Dichloropropane	63	11.067	11.067	0.000	91	210078	2.00	1.98	
58 n-Heptane	71	11.073	11.073	0.000	86	201127	2.00	2.01	
59 Trichloroethene	130	11.132	11.132	0.000	92	280390	2.00	2.02	
60 Dibromomethane	93	11.175	11.175	0.000	87	238170	2.00	2.23	
61 Dichlorobromomethane	83	11.342	11.342	0.000	98	398986	2.00	2.25	
62 1,4-Dioxane	88	11.348	11.348	0.000	61	90021	2.00	1.83	
63 Methyl methacrylate	41	11.472	11.472	0.000	89	233706	2.00	2.11	
64 Methylcyclohexane	83	11.952	11.952	0.000	94	417162	2.00	2.05	
65 4-Methyl-2-pentanone (MIBK	43	12.340	12.340	0.000	97	418262	2.00	2.02	
66 cis-1,3-Dichloropropene	75	12.394	12.394	0.000	93	314975	2.00	2.06	
67 trans-1,3-Dichloropropene	75	13.117	13.117	0.000	98	280618	2.00	2.23	
68 Toluene	91	13.257	13.257	0.000	93	691284	2.00	2.23	
69 1,1,2-Trichloroethane	83	13.311	13.311	0.000	94	205618	2.00	2.10	
70 2-Methylthiophene	97	13.402	13.402	0.000	97	608602	2.00	2.25	
71 3-Methylthiophene	97	13.613	13.613	0.000	99	609815	2.00	2.29	
72 2-Hexanone	58	13.737	13.737	0.000	92	196915	2.00	2.15	
73 Chlorodibromomethane	129	14.028	14.028	0.000	97	446868	2.00	2.50	
74 n-Octane	85	14.049	14.049	0.000	94	209130	2.00	2.12	
75 Ethylene Dibromide	107	14.324	14.324	0.000	96	399523	2.00	2.34	
76 Tetrachloroethene	129	14.443	14.443	0.000	95	269923	2.00	2.26	
77 Chlorobenzene	112	15.333	15.333	0.000	97	548955	2.00	2.15	
78 2,3-Dimethylheptane	43	15.435	15.435	0.000	95	559856	2.00	2.09	
79 Ethylbenzene	91	15.651	15.651	0.000	97	850814	2.00	2.04	
80 2-Ethylthiophene	97	15.748	15.748	0.000	97	685192	2.00	2.23	
81 m-Xylene & p-Xylene	91	15.818	15.818	0.000	99	1318164	4.00	4.21	
82 Bromoform	173	16.223	16.223	0.000	97	509625	2.00	2.21	
83 Styrene	104	16.287	16.287	0.000	97	481936	2.00	2.17	
84 n-Nonane	57	16.314	16.314	0.000	93	378323	2.00	2.10	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	16.347	16.347	0.000	99	664912	2.00	2.03	
86 1,1,2,2-Tetrachloroethane	83	16.659	16.659	0.000	99	512522	2.00	2.06	
87 1,2,3-Trichloropropane	110	16.821	16.821	0.000	96	149682	2.00	2.14	
88 Isopropylbenzene	105	16.967	16.967	0.000	96	991156	2.00	2.14	
89 N-Propylbenzene	120	17.544	17.544	0.000	100	276012	2.00	2.16	
90 2-Chlorotoluene	126	17.565	17.565	0.000	97	244882	2.00	2.03	
91 4-Ethyltoluene	105	17.705	17.705	0.000	100	1046553	2.00	2.26	
92 1,3,5-Trimethylbenzene	120	17.792	17.792	0.000	93	474668	2.00	2.11	
93 Alpha Methyl Styrene	118	18.034	18.034	0.000	91	410436	2.00	2.30	
94 n-Decane	57	18.158	18.158	0.000	91	512438	2.00	2.23	
95 tert-Butylbenzene	119	18.239	18.239	0.000	93	953705	2.00	2.41	
96 1,2,4-Trimethylbenzene	105	18.256	18.256	0.000	96	912060	2.00	2.26	
97 1,3-Dichlorobenzene	146	18.520	18.520	0.000	95	662298	2.00	2.32	
98 sec-Butylbenzene	105	18.531	18.531	0.000	99	1393217	2.00	2.46	
99 Benzyl chloride	91	18.601	18.601	0.000	99	759820	2.00	2.44	
100 1,4-Dichlorobenzene	146	18.617	18.617	0.000	96	674571	2.00	2.32	
101 4-Isopropyltoluene	119	18.714	18.714	0.000	97	1145266	2.00	2.48	
102 1,2,3-Trimethylbenzene	105	18.752	18.752	0.000	98	701752	2.00	2.18	
103 Butylcyclohexane	83	18.843	18.843	0.000	97	689389	2.00	2.31	
104 1,2-Dichlorobenzene	146	18.994	18.994	0.000	97	666274	2.00	2.39	
105 2,3-Dihydroindene	117	19.005	19.005	0.000	94	807101	2.00	2.25	
106 Indene	116	19.134	19.134	0.000	91	644118	2.00	1.93	
107 n-Butylbenzene	91	19.172	19.172	0.000	97	1127185	2.00	2.53	
108 Undecane	57	19.555	19.555	0.000	94	612488	2.00	2.36	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.566	19.566	0.000	99	877486	2.00	2.18	
110 1,2-Dibromo-3-Chloropropan	157	19.625	19.625	0.000	90	349668	2.00	2.39	
111 1,2,4,5-Tetramethylbenzene	119	19.970	19.970	0.000	98	1038056	2.00	2.55	
112 1,2,3,5-Tetramethylbenzene	119	20.024	20.024	0.000	97	627883	2.00	2.46	
113 1,2,3,4-Tetramethylbenzene	119	20.429	20.429	0.000	98	853356	2.00	2.47	
114 Dodecane	57	20.655	20.655	0.000	93	624087	2.00	2.31	
115 1,2,4-Trichlorobenzene	180	20.779	20.779	0.000	93	723027	2.00	2.18	
116 Naphthalene	128	20.914	20.914	0.000	100	1363079	2.00	2.23	
117 Benzo(b)thiophene	134	21.016	21.016	0.000	100	767467	2.00	2.29	
118 Hexachlorobutadiene	225	21.167	21.167	0.000	95	634595	2.00	2.15	
119 1,2,3-Trichlorobenzene	180	21.211	21.211	0.000	95	700671	2.00	2.32	
120 2-Methylnaphthalene	142	21.928	21.928	0.000	97	566928	6.25	7.85	
121 1-Methylnaphthalene	142	22.052	22.052	0.000	97	462049	6.25	6.85	
A 122 C6 Range	1	7.612	(7.557-7.646)		0	1189602	2.00	1.98	
S 124 Xylenes, Total	100				0		6.00	6.24	
S 125 1,2-Dichloroethene, Total	1				0		4.00	4.02	

Reagents:

40CV101P_00033	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

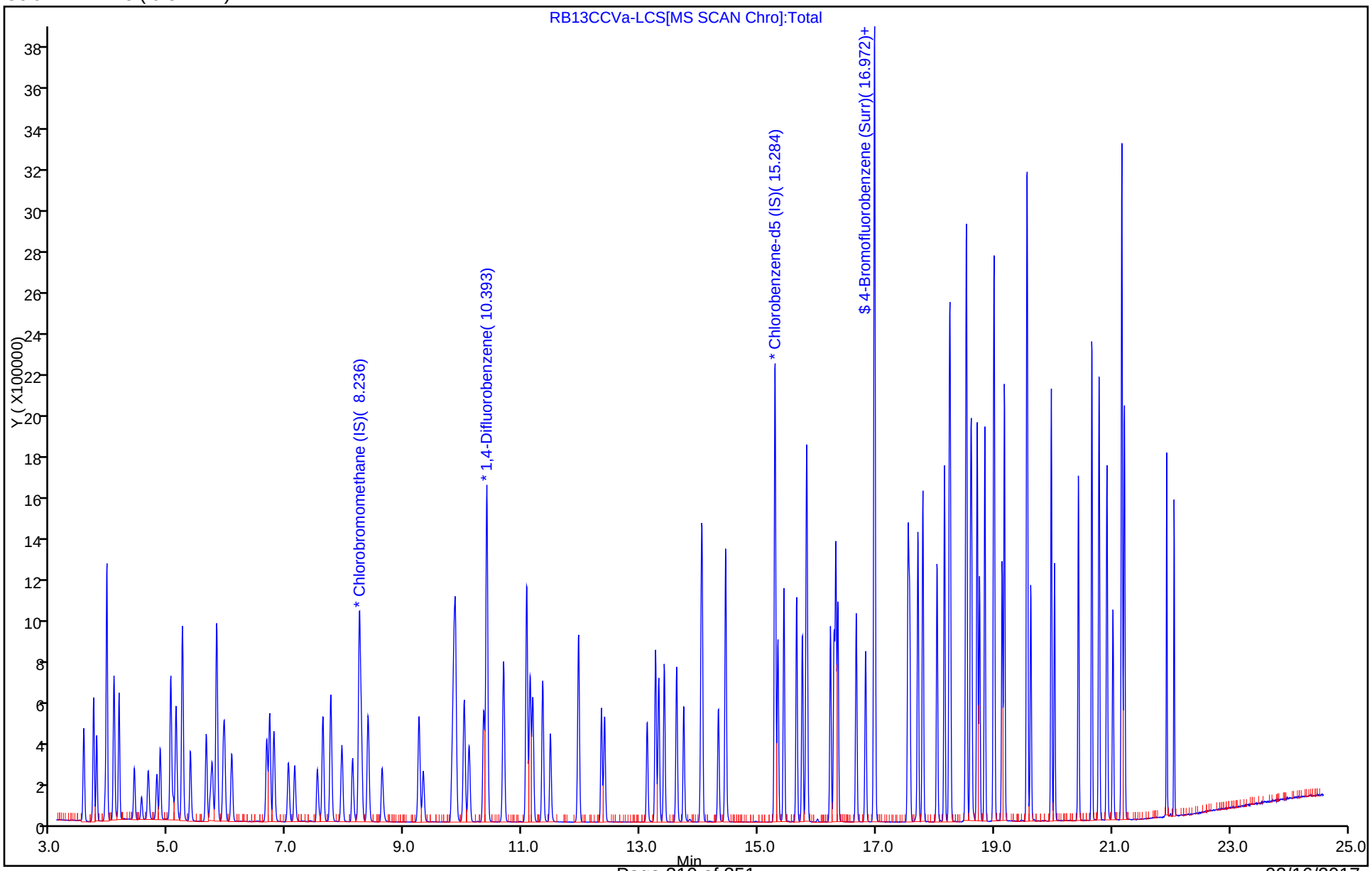
Report Date: 14-Feb-2017 13:28:55 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13CCVa-LCS.d

Injection Date:	13-Feb-2017 12:44:30	Instrument ID:	MR	Operator ID:	
Lims ID:	LCS			Worklist Smp#:	1006
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13CCVa-LCS.d				
Lims ID:	LCS				
Client ID:					
Sample Type:	LCS				
Inject. Date:	13-Feb-2017 12:44:30	ALS Bottle#:	15	Worklist Smp#:	1006
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004028-002				
Misc. Info.:	S32				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	14-Feb-2017 13:28:51	Calib Date:	17-Jan-2017 10:29:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK008				
First Level Reviewer: tajh		Date:	14-Feb-2017 13:28:51		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.67	91.84

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 140-8578/1002

Matrix: Air Lab File ID: RB14CCVa-LCS.d

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 02/14/2017 12:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8578 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	2.12		0.040	0.014

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\RB14CCVa-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 14-Feb-2017 12:02:30 ALS Bottle#: 15 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004043-002
Misc. Info.: P33
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Feb-2017 10:55:56 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: tajh Date: 14-Feb-2017 15:11:27

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.231	8.231	0.000	89	319976	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.393	10.393	0.000	93	1604826	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.284	15.284	0.000	85	1311982	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.972	16.972	0.000	94	776568	4.00	3.78	
6 Chlorodifluoromethane	67	3.718	3.718	0.000	98	46391	2.00	2.61	
7 Propene	41	3.723	3.723	0.000	99	171786	2.00	2.06	
8 Dichlorodifluoromethane	85	3.772	3.772	0.000	99	304966	2.00	2.11	
9 Chloromethane	52	3.923	3.923	0.000	100	57875	2.00	2.13	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.944	3.944	0.000	94	416702	2.00	2.54	
11 Acetaldehyde	44	4.063	4.063	0.000	98	290699	10.0	11.9	
12 Vinyl chloride	62	4.074	4.074	0.000	99	178681	2.00	2.29	
13 Butadiene	54	4.149	4.149	0.000	97	123000	2.00	2.23	
14 Butane	43	4.155	4.155	0.000	93	248594	2.00	2.51	
15 Bromomethane	94	4.413	4.413	0.000	94	168756	2.00	2.47	
16 Chloroethane	64	4.532	4.532	0.000	93	70694	2.00	2.30	
17 Ethanol	31	4.651	4.651	0.000	100	255274	10.0	12.5	
18 Vinyl bromide	106	4.796	4.796	0.000	98	169601	2.00	2.66	
19 2-Methylbutane	43	4.850	4.850	0.000	89	142093	2.00	2.37	
20 Acrolein	56	5.028	5.028	0.000	30	43736	2.00	1.90	
21 Trichlorofluoromethane	101	5.033	5.033	0.000	99	542093	2.00	2.73	
22 Acetonitrile	40	5.077	5.077	0.000	98	70800	2.00	2.05	
23 Acetone	58	5.120	5.120	0.000	98	229279	6.00	6.22	
24 Isopropyl alcohol	45	5.228	5.228	0.000	93	700462	6.00	6.46	
25 Pentane	72	5.233	5.233	0.000	95	35910	2.00	2.31	
26 Ethyl ether	31	5.362	5.362	0.000	94	189815	2.00	2.10	
27 1,1-Dichloroethene	96	5.632	5.632	0.000	98	192991	2.00	2.19	
28 Acrylonitrile	53	5.702	5.702	0.000	94	124163	2.00	2.20	
29 2-Methyl-2-propanol	59	5.734	5.734	0.000	97	271135	2.00	2.29	
30 1,1,2-Trichloro-1,2,2-trif	101	5.810	5.810	0.000	94	394476	2.00	2.33	
31 Methylene Chloride	84	5.923	5.923	0.000	94	171874	2.00	2.07	
32 3-Chloro-1-propene	39	5.945	5.945	0.000	97	155490	2.00	2.49	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.063	6.063	0.000	99	508050	2.00	2.24	
34 trans-1,2-Dichloroethene	96	6.662	6.662	0.000	95	205092	2.00	2.19	
35 2-Methylpentane	43	6.711	6.711	0.000	95	375273	2.00	2.18	
36 Methyl tert-butyl ether	73	6.781	6.781	0.000	97	465857	2.00	2.36	
37 1,1-Dichloroethane	63	7.029	7.029	0.000	100	327049	2.00	2.22	
38 Vinyl acetate	43	7.131	7.131	0.000	100	471573	2.00	2.26	
39 2-Butanone (MEK)	72	7.519	7.519	0.000	100	87995	2.00	2.28	
40 Hexane	56	7.616	7.616	0.000	91	132222	2.00	2.18	
41 Isopropyl ether	45	7.746	7.746	0.000	96	620283	2.00	2.24	
42 cis-1,2-Dichloroethene	96	7.940	7.940	0.000	90	214560	2.00	2.20	
43 Ethyl acetate	43	8.118	8.118	0.000	99	414521	2.00	2.36	
44 Chloroform	83	8.264	8.264	0.000	95	382800	2.00	2.30	
45 Tert-butyl ethyl ether	59	8.382	8.382	0.000	94	464928	2.00	2.31	
46 Tetrahydrofuran	42	8.619	8.619	0.000	95	209002	2.00	2.18	
47 1,1,1-Trichloroethane	97	9.245	9.245	0.000	95	402697	2.00	2.42	
48 1,2-Dichloroethane	62	9.315	9.315	0.000	97	231923	2.00	2.40	
49 n-Butanol	31	9.790	9.790	0.000	91	69981	2.00	2.16	
50 Benzene	78	9.827	9.827	0.000	95	590775	2.00	2.12	
51 Cyclohexane	69	9.849	9.849	0.000	91	86930	2.00	2.18	
52 Carbon tetrachloride	117	9.865	9.865	0.000	97	421731	2.00	2.47	
53 2,3-Dimethylpentane	71	10.005	10.005	0.000	91	130238	2.00	2.20	
54 Thiophene	84	10.092	10.092	0.000	93	321000	2.00	2.22	
55 Tert-amyl methyl ether	73	10.340	10.340	0.000	98	524184	2.00	2.46	
56 Isooctane	57	10.679	10.679	0.000	98	834415	2.00	2.19	
57 1,2-Dichloropropane	63	11.062	11.062	0.000	90	215349	2.00	2.23	
58 n-Heptane	71	11.073	11.073	0.000	92	203365	2.00	2.24	
59 Trichloroethene	130	11.127	11.127	0.000	93	266912	2.00	2.12	
60 Dibromomethane	93	11.170	11.170	0.000	89	229968	2.00	2.37	
61 Dichlorobromomethane	83	11.343	11.343	0.000	98	388521	2.00	2.41	
62 1,4-Dioxane	88	11.343	11.343	0.000	70	90678	2.00	2.03	
63 Methyl methacrylate	41	11.472	11.472	0.000	90	240774	2.00	2.39	
64 Methylcyclohexane	83	11.952	11.952	0.000	95	418514	2.00	2.26	
65 4-Methyl-2-pentanone (MIBK	43	12.335	12.335	0.000	96	436149	2.00	2.32	
66 cis-1,3-Dichloropropene	75	12.389	12.389	0.000	93	314957	2.00	2.26	
67 trans-1,3-Dichloropropene	75	13.117	13.117	0.000	98	276303	2.00	2.37	
68 Toluene	91	13.257	13.257	0.000	93	677303	2.00	2.36	
69 1,1,2-Trichloroethane	83	13.311	13.311	0.000	94	201338	2.00	2.23	
70 2-Methylthiophene	97	13.402	13.402	0.000	97	591632	2.00	2.37	
71 3-Methylthiophene	97	13.613	13.613	0.000	99	585708	2.00	2.38	
72 2-Hexanone	58	13.731	13.731	0.000	91	202708	2.00	2.40	
73 Chlorodibromomethane	129	14.028	14.028	0.000	97	430175	2.00	2.60	
74 n-Octane	85	14.044	14.044	0.000	95	212035	2.00	2.32	
75 Ethylene Dibromide	107	14.325	14.325	0.000	97	387833	2.00	2.46	
76 Tetrachloroethene	129	14.443	14.443	0.000	95	250697	2.00	2.28	
77 Chlorobenzene	112	15.333	15.333	0.000	97	532999	2.00	2.26	
78 2,3-Dimethylheptane	43	15.435	15.435	0.000	96	572426	2.00	2.31	
79 Ethylbenzene	91	15.651	15.651	0.000	97	847126	2.00	2.20	
80 2-Ethylthiophene	97	15.748	15.748	0.000	96	664914	2.00	2.35	
81 m-Xylene & p-Xylene	91	15.818	15.818	0.000	99	1295909	4.00	4.48	
82 Bromoform	173	16.223	16.223	0.000	96	484046	2.00	2.28	
83 Styrene	104	16.282	16.282	0.000	97	475160	2.00	2.32	
84 n-Nonane	57	16.314	16.314	0.000	95	382096	2.00	2.30	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	16.347	16.347	0.000	99	654430	2.00	2.16	
86 1,1,2,2-Tetrachloroethane	83	16.659	16.659	0.000	99	522712	2.00	2.27	
87 1,2,3-Trichloropropane	110	16.821	16.821	0.000	96	150760	2.00	2.33	
88 Isopropylbenzene	105	16.967	16.967	0.000	96	992937	2.00	2.33	
89 N-Propylbenzene	120	17.544	17.544	0.000	100	276496	2.00	2.34	
90 2-Chlorotoluene	126	17.565	17.565	0.000	97	243119	2.00	2.18	
91 4-Ethyltoluene	105	17.711	17.711	0.000	99	1032837	2.00	2.41	
92 1,3,5-Trimethylbenzene	120	17.792	17.792	0.000	93	468955	2.00	2.26	
93 Alpha Methyl Styrene	118	18.034	18.034	0.000	91	412652	2.00	2.50	
94 n-Decane	57	18.159	18.159	0.000	91	520696	2.00	2.46	
95 tert-Butylbenzene	119	18.245	18.245	0.000	94	924949	2.00	2.53	
96 1,2,4-Trimethylbenzene	105	18.256	18.256	0.000	96	898415	2.00	2.41	
97 1,3-Dichlorobenzene	146	18.520	18.520	0.000	96	650473	2.00	2.47	
98 sec-Butylbenzene	105	18.536	18.536	0.000	99	1391059	2.00	2.66	
99 Benzyl chloride	91	18.601	18.601	0.000	99	766337	2.00	2.67	
100 1,4-Dichlorobenzene	146	18.617	18.617	0.000	96	659774	2.00	2.46	
101 4-Isopropyltoluene	119	18.714	18.714	0.000	97	1131700	2.00	2.65	
102 1,2,3-Trimethylbenzene	105	18.752	18.752	0.000	97	711229	2.00	2.40	
103 Butylcyclohexane	83	18.843	18.843	0.000	97	690281	2.00	2.50	
104 1,2-Dichlorobenzene	146	18.994	18.994	0.000	97	655070	2.00	2.55	
105 2,3-Dihydroindene	117	19.005	19.005	0.000	94	812515	2.00	2.46	
106 Indene	116	19.135	19.135	0.000	91	649597	2.00	2.11	
107 n-Butylbenzene	91	19.172	19.172	0.000	97	1120741	2.00	2.72	
108 Undecane	57	19.555	19.555	0.000	94	612517	2.00	2.56	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.566	19.566	0.000	98	868173	2.00	2.35	
110 1,2-Dibromo-3-Chloropropan	157	19.625	19.625	0.000	93	334153	2.00	2.47	
111 1,2,4,5-Tetramethylbenzene	119	19.970	19.970	0.000	98	1007211	2.00	2.68	
112 1,2,3,5-Tetramethylbenzene	119	20.024	20.024	0.000	96	610066	2.00	2.59	
113 1,2,3,4-Tetramethylbenzene	119	20.429	20.429	0.000	98	831592	2.00	2.61	
114 Dodecane	57	20.661	20.661	0.000	93	623394	2.00	2.49	
115 1,2,4-Trichlorobenzene	180	20.779	20.779	0.000	93	671921	2.00	2.20	
116 Naphthalene	128	20.914	20.914	0.000	99	1331246	2.00	2.36	
117 Benzo(b)thiophene	134	21.016	21.016	0.000	100	729490	2.00	2.35	
118 Hexachlorobutadiene	225	21.167	21.167	0.000	95	578828	2.00	2.12	
119 1,2,3-Trichlorobenzene	180	21.211	21.211	0.000	95	649766	2.00	2.33	
120 2-Methylnaphthalene	142	21.928	21.928	0.000	97	519954	6.25	7.80	
121 1-Methylnaphthalene	142	22.052	22.052	0.000	97	403235	6.25	6.47	
A 122 C6 Range	1	7.612	(7.557-7.646)		0	1200358	2.00	2.19	
S 124 Xylenes, Total	100				0		6.00	6.64	
S 125 1,2-Dichloroethene, Total	1				0		4.00	4.39	

Reagents:

40CV101P_00033	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

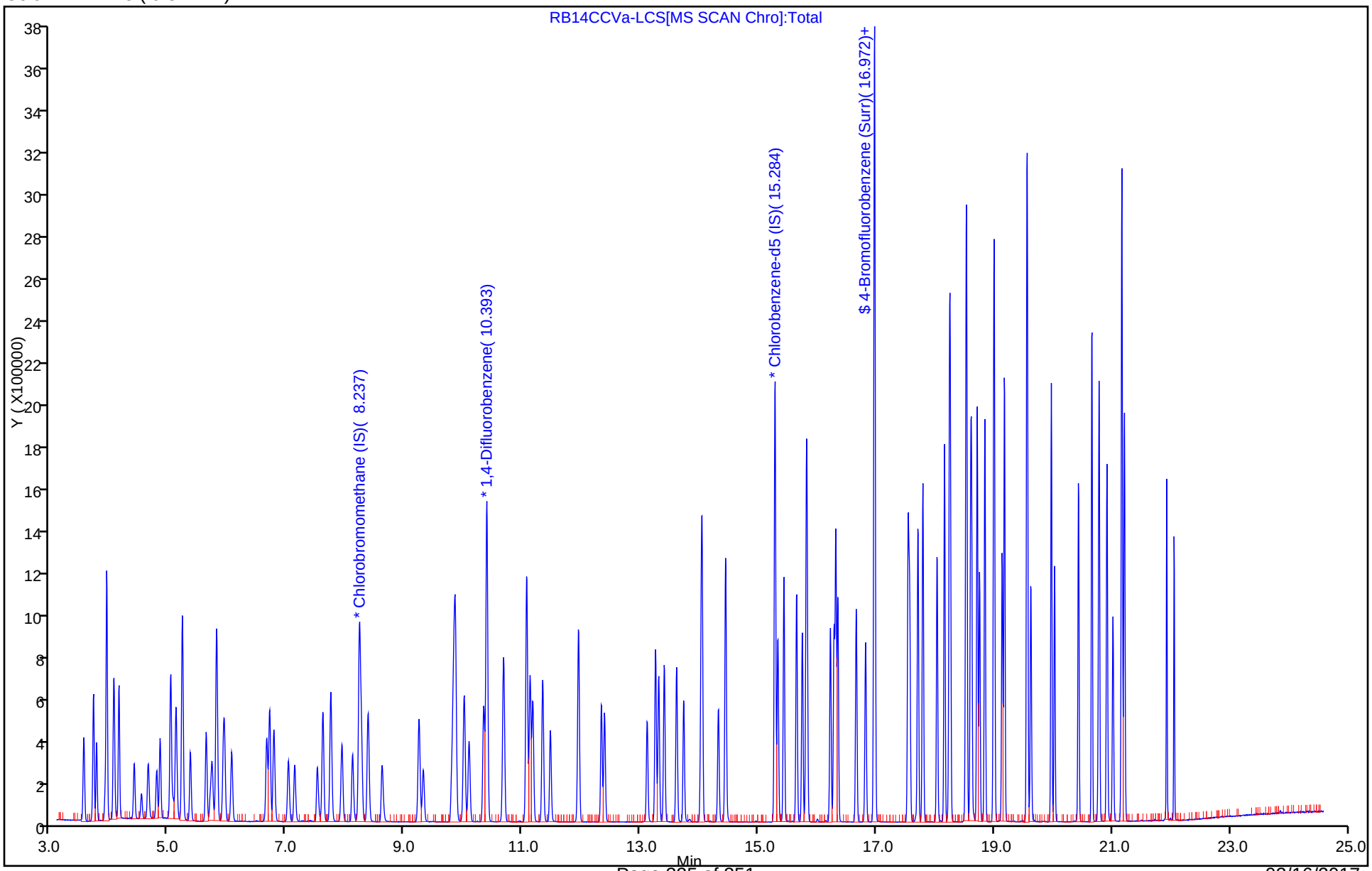
Report Date: 15-Feb-2017 10:55:59 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\RB14CCVa-LCS.d

Injection Date:	14-Feb-2017 12:02:30	Instrument ID:	MR	Operator ID:	
Lims ID:	LCS			Worklist Smp#:	1002
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\RB14CCVa-LCS.d				
Lims ID:	LCS				
Client ID:					
Sample Type:	LCS				
Inject. Date:	14-Feb-2017 12:02:30	ALS Bottle#:	15	Worklist Smp#:	1002
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004043-002				
Misc. Info.:	P33				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170213-4043.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	15-Feb-2017 10:55:56	Calib Date:	17-Jan-2017 10:29:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK006				
First Level Reviewer: tajh		Date:	14-Feb-2017 15:11:27		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.78	94.60

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Instrument ID: MJ Start Date: 11/25/2016 18:19

Analysis Batch Number: 7241 End Date: 11/26/2016 12:43

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-7241/1		11/25/2016 18:19	1	JBFBK25X.D	RTX-5 0.32(mm)
IC 140-7241/2		11/25/2016 18:47	1	JK25IC01X.D	RTX-5 0.32(mm)
140-6649-A-1 MDLV		11/25/2016 18:47	1		RTX-5 0.32(mm)
IC 140-7241/3		11/25/2016 19:41	1	JK25IC02X.D	RTX-5 0.32(mm)
140-6649-A-2 MDLV		11/25/2016 19:41	1		RTX-5 0.32(mm)
IC 140-7241/4		11/25/2016 20:34	1	JK25IC03X.D	RTX-5 0.32(mm)
140-6649-A-3 MDLV		11/25/2016 20:34	1		RTX-5 0.32(mm)
IC 140-7241/5		11/25/2016 21:29	1	JK25IC04X.D	RTX-5 0.32(mm)
140-6649-A-4 MDLV		11/25/2016 21:29	1		RTX-5 0.32(mm)
IC 140-7241/6		11/25/2016 22:23	1	JK25IC05X.D	RTX-5 0.32(mm)
140-6649-A-5 MDLV		11/25/2016 22:23	1		RTX-5 0.32(mm)
ICIS 140-7241/7		11/25/2016 23:17	1	JK25IC06X.D	RTX-5 0.32(mm)
IC 140-7241/8		11/26/2016 00:11	1	JK25IC07X.D	RTX-5 0.32(mm)
IC 140-7241/9		11/26/2016 01:05	1	JK25IC08X.D	RTX-5 0.32(mm)
IC 140-7241/10		11/26/2016 01:58	1	JK25IC09X.D	RTX-5 0.32(mm)
ZZZZZ		11/26/2016 05:05	1		RTX-5 0.32(mm)
ICV 140-7241/23		11/26/2016 12:43	1	JK25ICVX.D	RTX-5 0.32(mm)

161125

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 100 mL	28.1	11/25/2016	6:19:08 PM
IC01	1 - 100 mL	33.6	11/25/2016	6:47:30 PM
IC02	1 - 200 mL	33.3	11/25/2016	7:41:28 PM
IC03	2 - 200 mL	31.1	11/25/2016	8:34:52 PM
IC04	3 - 200 mL	31.1	11/25/2016	9:29:11 PM
IC05	4 - 201 mL	31.7	11/25/2016	10:23:29 PM
IC06	5 - 201 mL	32	11/25/2016	11:17:45 PM
IC07	6 - 201 mL	31.1	11/26/2016	12:11:34 AM
IC08	7 - 200 mL	26.6	11/26/2016	1:05:06 AM
IC09	8 - 202 mL	32.1	11/26/2016	1:58:52 AM
PRIME	9 - 100 mL	32.3	11/26/2016	2:53:07 AM
ICV	9 - 101 mL	31.4	11/26/2016	3:47:28 AM
DNU	16 - 101 mL	27.7	11/26/2016	4:35:30 AM
BLANK	16 - 501 mL	27.2	11/26/2016	5:05:42 AM
MDL	1 - 51 mL	32.9	11/26/2016	6:00:10 AM
LCS	10 - 100 mL	33.8	11/26/2016	6:53:55 AM
DNU	16 - 101 mL	27.2	11/26/2016	7:42:22 AM
6352-01	11 - 11 mL	12.1	11/26/2016	8:09:56 AM
6352-02	12 - 21 mL	9.5	11/26/2016	9:04:58 AM
6352-03	13 - 21 mL	11.6	11/26/2016	10:00:15 AM
6352-04	14 - 202 mL	2.1	11/26/2016	10:55:02 AM
6352-05	15 - 201 mL	1.9	11/26/2016	11:49:36 AM
ICV	7 - 101 mL	17.5	11/26/2016	12:43:04 PM

MJ ICAL WL 3656

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Analysis Date:	11/25/16	Instrument:	MJ	Chrom WL #:	3656	TALS Batch & Event #	TO14/15: 7241/ 790	AFCEE: 7285/ 793
							DOD: 7284 / 792	OHIO: 7283 / 791

Chrom/Worklist Review	1st	Comments	2nd
1. Re-read each Limit Group [method editor-limit groups]	✓		
2. Verify LODV in Chrom [method editor -> edit -> MDL]	✓		
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]	✓		✓
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]	✓		✓
5. Did BFB meet tune criteria? [F8]	✓		✓
6. Were all standards injected within 24 hr of BFB? [F7]	✓		✓
7. High point checked for saturation and point removed if so? [Chrom]	✓		✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]	✓	#55(a) level 2.	✓
9. RT for each IS ±20 sec avg. RT? [F6 IstdRec]	✓		✓
10. Area for each IS ± 40% avg. area? [F6 IstdRec]	✓		✓
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]	✓		✓
12. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4- and 1,2,3-trichlorobenzenes	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓		✓

ML G Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50% [F6 ∑]	✓	✓	✓	✓	naph hexa 2(6)	✓	✓	—	—
15. Were at least 5 levels of each compound analyzed? [F6]	✓	✓	✓	✓		✓	—	—	—
16. Is low level std at or <RL and are the remaining points consec.? [F6]	✓	✓	✓	✓		✓	—	—	—
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? Note: Ohio does not allow quad [F6]	M	→	→			ns	→	→	→
18. If curves were used, is correlation coefficient ≥0.990? [F6]	nt	→	→			ns	→	→	→
19. Is the intercept less than the RL for each curve? [F6]	nt	→	→			ns	→	→	→
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]	nt	→				ns	→		
21. Is the second source analysis within limits? [F8 - icv]	✓	✓	✓	✓		✓	✓	✓	✓
22. Analyst/Date: 11/28/16	2nd Level Reviewer/Date:								
Comments:									

TALS Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
23. Upload ICAL	✓								
24. Graphics uploaded? [Sample List Tab]	✓	✓	✓	✓		✓	✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events –'Fix ICAL linkage' if needed]	✓	✓	✓	✓		✓	✓	✓	✓
26. Runs linked to BFB? [QC Links]	✓	✓	✓	✓		✓	✓	✓	✓
27. If criteria not met, was a NCM generated?	nt	→	→	→		ns	→	→	→
28. After review in TALS, approve the method in TALS.									
29. After verifying TALS is correct, lock method in Chrom <resolve any error issues>									
30. Checklist & Entech report scanned, attached & assigned properly?									
Analyst: Date: 11/28/16	2nd Level Reviewer: Date: 11/28/16								
Comments:	Comments:								

MS017r41, 5/25/2016

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Instrument ID: MR Start Date: 01/16/2017 16:55

Analysis Batch Number: 7852 End Date: 01/17/2017 10:29

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-7852/2		01/16/2017 16:55	1	RBFBA16.D	RTX-5 0.32(mm)
IC 140-7852/4		01/16/2017 18:15	1	RA16IC02.D	RTX-5 0.32(mm)
IC 140-7852/5		01/16/2017 19:03	1	RA16IC03.D	RTX-5 0.32(mm)
IC 140-7852/6		01/16/2017 19:50	1	RA16IC04.D	RTX-5 0.32(mm)
IC 140-7852/7		01/16/2017 20:38	1	RA16IC05.D	RTX-5 0.32(mm)
ICIS 140-7852/8		01/16/2017 21:26	1	RA16IC06.D	RTX-5 0.32(mm)
IC 140-7852/9		01/16/2017 22:14	1	RA16IC07.D	RTX-5 0.32(mm)
IC 140-7852/10		01/16/2017 23:01	1	RA16IC08.D	RTX-5 0.32(mm)
IC 140-7852/11		01/16/2017 23:49	1	RA16IC09.D	RTX-5 0.32(mm)
ICV 140-7852/13		01/17/2017 01:21	1	RA16ICV.D	RTX-5 0.32(mm)
ZZZZZ		01/17/2017 08:00	1		RTX-5 0.32(mm)
ZZZZZ		01/17/2017 08:47	1		RTX-5 0.32(mm)
IC 140-7852/24		01/17/2017 10:29	1	RA16IC01R.D	RTX-5 0.32(mm)

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Analysis Date:	1/16/17	Instrument:	MR	Chrom WL #:	3844	TALS Batch & Event #	TO14/15: 7852/ 857	AFCEE: 7855/ 860
							DOD: 7854 / 859	OHIO: 7853 / 858

Chrom/Worklist Review	1st	Comments	2nd
1. Re-read each Limit Group [method editor-limit groups]	✓		
2. Verify LODV in Chrom [method editor -> edit -> MDL]	✓		
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]	✓	Bran Lv1 due to wrong volume checked on-screen	✓
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]	✓		✓
5. Did BFB meet tune criteria? [F8]	✓		✓
6. Were all standards injected within 24 hr of BFB? [F7]	✓		✓
7. High point checked for saturation and point removed if so? [Chrom]	✓		✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]	✓	#54 in Lv. 3 & 4	✓
9. RT for each IS ±20 sec avg. RT? [F6 IstdRec]	✓		✓
10. Area for each IS ± 40% avg. area? [F6 IstdRec]	✓		✓
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]	✓		✓
12. Elution order checked on isomeric pairs? [Chrom]			✓
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4- and 1,2,3-trichlorobenzenes	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓	CC only	✓

MLG Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50% [F6 Σ]	✓	✓	✓	✓		✓	✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]	✓	✓	✓	✓		✓	✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]	✓	✓	✓	✓		✓	✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? Note: Ohio does not allow quad [F6]	✓	✓	✓	✓		✓	✓	✓	✓
18. If curves were used, is correlation coefficient ≥0.990? [F6]	✓	✓	✓	✓		✓	✓	✓	✓
19. Is the intercept less than the RL for each curve? [F6]	✓	✓	✓	✓		✓	✓	✓	✓
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]	✓	✓	✓		#105 & 108	✓	✓	✓	
21. Is the second source analysis within limits? [F8 - icv]	✓	✓	✓	✓		✓	✓	✓	✓
22. Analyst/Date: JHS 1/17/17	2nd Level Reviewer/Date:								
Comments: DNU 1&2-methylnaphthalene									

TALS Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
23. Upload ICAL	✓								
24. Graphics uploaded? [Sample List Tab]	✓	✓	✓	✓		✓	✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events –'Fix ICAL linkage' if needed]	✓	✓	✓	✓		✓	✓	✓	✓
26. Runs linked to BFB? [QC Links]	✓	✓	✓	✓		✓	✓	✓	✓
27. If criteria not met, was a NCM generated?	N	→	→	→		NA	→	→	→
28. After review in TALS, approve the method in TALS.						✓	✓	✓	✓
29. After verifying TALS is correct, lock method in Chrom <resolve any error issues>								✓	
30. Checklist & Entech report scanned, attached & assigned properly?						✓	✓	✓	✓
Analyst: Date: 1/17/17	2nd Level Reviewer : Date: 1/17/17								
Comments:	Comments:								

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Instrument ID: MJ Start Date: 02/10/2017 08:01

Analysis Batch Number: 8433 End Date: 02/11/2017 05:33

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-8433/1		02/10/2017 08:01	1	JBFBB10Z.D	RTX-5 0.32(mm)
CCVIS 140-8433/2		02/10/2017 08:27	1	JCCVB10Z.D	RTX-5 0.32(mm)
LCS 140-8433/1002		02/10/2017 08:27	1	JCCVB10Z-LCS.d	RTX-5 0.32(mm)
MB 140-8433/4		02/10/2017 10:45	1	J500BB10.D	RTX-5 0.32(mm)
ZZZZZ		02/10/2017 11:29	1		RTX-5 0.32(mm)
ZZZZZ		02/10/2017 13:43	3.53		RTX-5 0.32(mm)
ZZZZZ		02/10/2017 14:27	1		RTX-5 0.32(mm)
ZZZZZ		02/10/2017 15:12	1		RTX-5 0.32(mm)
ZZZZZ		02/10/2017 16:41	1		RTX-5 0.32(mm)
ZZZZZ		02/10/2017 17:26	1		RTX-5 0.32(mm)
ZZZZZ		02/10/2017 18:56	4.07		RTX-5 0.32(mm)
ZZZZZ		02/10/2017 19:42	3.74		RTX-5 0.32(mm)
ZZZZZ		02/10/2017 20:30	1		RTX-5 0.32(mm)
140-7052-2		02/10/2017 22:01	1	JB10P111.D	RTX-5 0.32(mm)
140-7052-3		02/10/2017 22:47	1	JB10P112.D	RTX-5 0.32(mm)
ZZZZZ		02/10/2017 23:33	1		RTX-5 0.32(mm)
ZZZZZ		02/11/2017 00:19	1		RTX-5 0.32(mm)
ZZZZZ		02/11/2017 01:49	1		RTX-5 0.32(mm)
ZZZZZ		02/11/2017 02:34	11.48		RTX-5 0.32(mm)
ZZZZZ		02/11/2017 03:19	1		RTX-5 0.32(mm)
ZZZZZ		02/11/2017 04:48	1		RTX-5 0.32(mm)
ZZZZZ		02/11/2017 05:33	1		RTX-5 0.32(mm)

170210

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 21 mL	28.1	2/10/2017	8:01:20 AM
CCV	15 - 100 mL	20.7	2/10/2017	8:27:12 AM
dnuflush	16 - 101 mL	27.3	2/10/2017	9:35:06 AM
mb500	16 - 501 mL	25	2/10/2017	9:35:06 AM
dnuflush	16 - 101 mL	24.6	2/10/2017	10:15:58 AM
mb500	16 - 500 mL	21	2/10/2017	10:45:13 AM
mb200	16 - 200 mL	20.8	2/10/2017	11:29:53 AM
dnuflush	16 - 10 mL	7	2/10/2017	1:16:17 PM
7048-01	1 - 20 mL	11.4	2/10/2017	1:43:05 PM
7048-02	2 - 41 mL	2.8	2/10/2017	2:27:49 PM
7048-03	3 - 21 mL	7.1	2/10/2017	3:12:26 PM
7053-01	4 - 20 mL	8.7	2/10/2017	3:57:07 PM
7053-01	4 - 21 mL	9.7	2/10/2017	4:41:43 PM
7050-01	5 - 200 mL	2.4	2/10/2017	5:26:24 PM
7050-02	6 - 201 mL	7.7	2/10/2017	6:11:51 PM
7018-01	7 - 62 mL	10.5	2/10/2017	6:56:42 PM
7018-02	8 - 22 mL	11	2/10/2017	7:42:11 PM
7018-03	9 - 501 mL	2.4	2/10/2017	8:30:09 PM
7052-01	10 - 10 mL	9.4	2/10/2017	9:16:03 PM
7052-02	11 - 100 mL	6.1	2/10/2017	10:01:55 PM
7052-03	12 - 101 mL	6.8	2/10/2017	10:47:57 PM
7019-01	13 - 151 mL	2.4	2/10/2017	11:33:40 PM
7019-05	14 - 101 mL	2.4	2/11/2017	12:18:59 AM
7019-06	15 - 100 mL	4.3	2/11/2017	1:04:07 AM
7016-02	16 - 200 mL	2.2	2/11/2017	1:49:11 AM
7048-02DL	2 - 20 mL	12.7	2/11/2017	2:34:10 AM
7048-03R	3 - 21 mL	7.2	2/11/2017	3:19:01 AM
BLK	16 - 21 mL	3.1	2/11/2017	4:03:50 AM
7053-01R	4 - 21 mL	7.9	2/11/2017	4:48:44 AM
7050-02R	6 - 101 mL	5.8	2/11/2017	5:33:40 AM

MJ WL 4010

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Instrument/Date	MJ 2/10/17	Routine	AFCEE	DOD	OHIO
CCAL Chrom WL #	4010	CCAL Batch #	9433		
ICAL Chrom WL #	3656	ICAL Batch # / Event #	7241 / 790	/	/

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		✓
2. Did BFB meet tune criteria? [F8]	✓	☐ [Failed TO-14A, but passes TO-15] (NCM#)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
4. Is the %D ≤ 30% for all target analytes? [≤ 40% for AFCEE non-table analytes] [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab] RM TBF	✓	☐ CCV - %D - LCS criteria met (NCM# 6289) ☐ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#)	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	NA		NA
7. Has the RT been updated to the method?			
Analyst: **Date:** 2/13/18		**2nd Level Reviewer:** **Date:** 02/14/17	
Comments:		**Comments:**	
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓		✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	☐ Method Blank – Report, ND (NCM#) ☐ Method Blank – Report, 10X (NCM#)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample / Reason / Sample / Reason	✓	☐ (1) Surrogate – Matrix (NCM#) ☐ (2) Surrogate – High, ND (NCM#) ☐ (3) ISTD – RA/RA Concurs (NCM#) ☐ (4) Surrogate –RX concur. Report both (NCM#) ☐ (5) ISTD – Matrix, DL required (NCM#)	✓
15. Samples outside calibration range scheduled for dilution? *Samples:*	✓	☐ ICAL – Range Exceeded; Minimum Dilution	✓

Chrom Review	1st	If No, why is data reportable?	2nd
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample / Reason / Sample / Reason	✓	☐ (1) Reporting Limit – Dilution, Matrix (NCM#) ☐ (2) Reporting Limit – Dilution, Non-Target (NCM#) ☐ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	NA		NA
18. Obvious non-TPH peaks excluded?			✓

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

	1st	If No, why is data reportable?	2nd
19. Individual TPH peak area < octane high point area?	N		
TALS Review			
20. Graphics uploaded? [Sample List Tab]	✓		✓
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	✓		
22. Sample special instructions verified?	✓		✓
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	✓	□ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) □ LCS/LCSD - %R High (NCM#_____)	✓
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]	✓		✓
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	✓		✓
26. Analytes over calibration range set to secondary [Conditions Review Tab]	✓		✓
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	✓		✓
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*	✓		✓
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	✓	**500 mL blank ID:** N **200 mL blank ID:**	✓
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	✓		✓
31. Correct ICV linked to each MB? [QC Links]	✓		✓
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	✓		✓
33. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
34. QC checker run and items addressed?			✓
35. Checklist & Entech report scanned, attached & assigned properly?			✓

Analyst:	**Date:** 8/13/17
Comments:	
2nd Level Reviewer :	**Date:** 02/14/17
Comments:	

Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed
>90	5
71 - 90	4
51 - 70	3
31 - 50	2
11 - 30	1
< 11	0

Example Calculation: 7018-1 111

On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF

0.395 x 60mL x 4.07 = 13.4

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Instrument ID: MR Start Date: 02/13/2017 12:12

Analysis Batch Number: 8477 End Date: 02/14/2017 07:22

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-8477/5		02/13/2017 12:12	1	RB13BFBa.D	RTX-5 0.32(mm)
CCVIS 140-8477/6		02/13/2017 12:44	1	RB13CCVa.D	RTX-5 0.32(mm)
LCS 140-8477/1006		02/13/2017 12:44	1	RB13CCVa-LCS.d	RTX-5 0.32(mm)
ZZZZZ		02/13/2017 17:13	1		RTX-5 0.32(mm)
ZZZZZ		02/13/2017 18:00	385.71		RTX-5 0.32(mm)
ZZZZZ		02/13/2017 18:48	146.12		RTX-5 0.32(mm)
ZZZZZ		02/13/2017 19:36	1		RTX-5 0.32(mm)
ZZZZZ		02/13/2017 20:24	1		RTX-5 0.32(mm)
ZZZZZ		02/13/2017 21:11	1		RTX-5 0.32(mm)
ZZZZZ		02/13/2017 21:59	1		RTX-5 0.32(mm)
ZZZZZ		02/13/2017 22:47	1		RTX-5 0.32(mm)
ZZZZZ		02/13/2017 23:35	1		RTX-5 0.32(mm)
MB 140-8477/13		02/14/2017 01:00	1	RB13mb500R.D	RTX-5 0.32(mm)
ZZZZZ		02/14/2017 01:46	46.81		RTX-5 0.32(mm)
ZZZZZ		02/14/2017 02:33	4.03		RTX-5 0.32(mm)
ZZZZZ		02/14/2017 03:20	3.81		RTX-5 0.32(mm)
ZZZZZ		02/14/2017 04:07	10.86		RTX-5 0.32(mm)
ZZZZZ		02/14/2017 04:55	4.07		RTX-5 0.32(mm)
ZZZZZ		02/14/2017 05:49	1		RTX-5 0.32(mm)
ZZZZZ		02/14/2017 06:36	1		RTX-5 0.32(mm)
140-7052-1		02/14/2017 07:22	1	RB13p115.D	RTX-5 0.32(mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Instrument/Date	VMR 2/13/17		Routine	AFCEE	DOD	OHIO
CCAL Chrom WL #	4028	CCAL Batch #	8477			
ICAL Chrom WL #	3844	ICAL Batch # / Event #	7852/857	/	/	/

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		✓
2. Did BFB meet tune criteria? [F8]	✓	□ [Failed TO-14A, but passes TO-15] (NCM#_____)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
4. Is the %D ≤ 30% for all target analytes? [≤ 40% for AFCEE non-table analytes] [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	✓	□ CCV - %D - LCS criteria met (NCM#_____) □ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#_____)	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	NA		MS
7. Has the RT been updated to the method?	✓		✓
Analyst: Date: 2/14/17		2nd Level Reviewer: Date: 02/15/17	
Comments:		Comments:	
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓	Checked on sheet	✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#_____) □ Method Blank – Report, 10X (NCM#_____)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample / Reason / Sample / Reason	✓	□ (1) Surrogate – Matrix (NCM#_____) □ (2) Surrogate – High, ND (NCM#_____) □ (3) ISTD – RA/RA Concurs (NCM#_____) □ (4) Surrogate –RX concur, Report both (NCM#_____) □ (5) ISTD – Matrix, DL required (NCM#_____)	✓
15. Samples outside calibration range scheduled for dilution? *Samples:*	✓	□ ICAL – Range Exceeded; Minimum Dilution	✓
Chrom Review	**1st**	**If No, why is data reportable?**	**2nd**
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample / Reason / Sample / Reason	✓	□ (1) Reporting Limit – Dilution, Matrix (NCM#_____) □ (2) Reporting Limit – Dilution, Non-Target (NCM#_____) □ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	NA		MS
18. Obvious non-TPH peaks excluded?	✓		✓

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

19. Individual TPH peak area < octane high point area?	NA		NA
TALS Review	**1st**	**If No, why is data reportable?**	**2nd**
20. Graphics uploaded? [Sample List Tab]	✓		✓
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	✓		
22. Sample special instructions verified?	✓		✓
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	✓	☐ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) ☐ LCS/LCSD - %R High (NCM#_____)	✓
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]	✓		✓
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	✓		✓
26. Analytes over calibration range set to secondary [Conditions Review Tab]	✓		✓
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	✓		✓
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*	✓		✓
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	✓	**500 mL blank ID:** 13 **200 mL blank ID:** 8	✓
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	✓		✓
31. Correct ICV linked to each MB? [QC Links]	✓		✓
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	✓		✓
33. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
34. QC checker run and items addressed?			✓
35. Checklist & Entech report scanned, attached & assigned properly?	✓		✓

Analyst: [signature] **Date:** 2/9/17	**2nd Level Reviewer :** [signature] **Date:** 02/15/17
Comments:	**Comments:**

Example Calculation: 7082-1 DLO

On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF

5.1966 x 150 mL x 385.71 = 6681.27

Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed
>90	5
71 - 90	4
51 - 70	3
31 - 50	2
11 - 30	1
<11	0

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-7052-1

SDG No.:

Instrument ID: MR Start Date: 02/14/2017 11:30

Analysis Batch Number: 8578 End Date: 02/15/2017 11:01

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-8578/1		02/14/2017 11:30	1	RB14BFBa.D	RTX-5 0.32(mm)
CCVIS 140-8578/2		02/14/2017 12:02	1	RB14CCVa.D	RTX-5 0.32(mm)
LCS 140-8578/1002		02/14/2017 12:02	1	RB14CCVa-LCS.d	RTX-5 0.32(mm)
MB 140-8578/6		02/14/2017 15:46	1	RB14MB500.D	RTX-5 0.32(mm)
ZZZZZ		02/14/2017 16:39	1		RTX-5 0.32(mm)
ZZZZZ		02/14/2017 17:31	1		RTX-5 0.32(mm)
ZZZZZ		02/14/2017 18:23	1		RTX-5 0.32(mm)
ZZZZZ		02/14/2017 19:17	1		RTX-5 0.32(mm)
ZZZZZ		02/14/2017 20:11	1		RTX-5 0.32(mm)
ZZZZZ		02/14/2017 21:03	1		RTX-5 0.32(mm)
ZZZZZ		02/14/2017 21:55	1		RTX-5 0.32(mm)
ZZZZZ		02/14/2017 22:48	1		RTX-5 0.32(mm)
ZZZZZ		02/14/2017 23:43	1		RTX-5 0.32(mm)
ZZZZZ		02/15/2017 00:35	1		RTX-5 0.32(mm)
ZZZZZ		02/15/2017 01:22	1		RTX-5 0.32(mm)
ZZZZZ		02/15/2017 02:09	1		RTX-5 0.32(mm)
140-7052-1 DL		02/15/2017 02:55	1	RB14P113.D	RTX-5 0.32(mm)
ZZZZZ		02/15/2017 03:44	43.01		RTX-5 0.32(mm)
ZZZZZ		02/15/2017 04:36	1		RTX-5 0.32(mm)
ZZZZZ		02/15/2017 05:30	1		RTX-5 0.32(mm)
ZZZZZ		02/15/2017 06:23	1		RTX-5 0.32(mm)
ZZZZZ		02/15/2017 10:11	1		RTX-5 0.32(mm)
ZZZZZ		02/15/2017 11:01	1		RTX-5 0.32(mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Instrument/Date	MR 2/14/17	Routine	AFCEE	DOD	OHIO
CCAL Chrom WL #	4043	CCAL Batch #	8578	NA	→
ICAL Chrom WL #	3844	ICAL Batch # / Event #	7852 / 857	NA /	/ →

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		✓
2. Did BFB meet tune criteria? [F8]	✓	□ [Failed TO-14A, but passes TO-15] (NCM#_____)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
4. Is the %D ≤ 30% for all target analytes? #6 - 31 (Benz chlo) [≤ 40% for AFCEE non-table analytes] VB 33 [≤ 50% for 1&2 methylnaphthalene] TCFM 36 [Chrom-F8] [TALS-Sample Results Tab]	✓	□ CCV - %D - LCS criteria met (NCM# 6324 ✓) □ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#_____) others (NT)	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	NA		NA
7. Has the RT been updated to the method?	✓		✓
Analyst: **Date:** 2/14/17		**2nd Level Reviewer :** KB **Date:** 2/15/17	
Comments:		**Comments:**	
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓	Checked on screen	✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#____) □ Method Blank – Report, 10X (NCM#____)	✓
12. All runs - peaks ID'd correctly and false positives removed?			✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample / Reason / Sample / Reason	✓	□ (1) Surrogate – Matrix (NCM#____) □ (2) Surrogate – High, ND (NCM#____) □ (3) ISTD – RA/RA Concurs (NCM#____) □ (4) Surrogate –RX concur, Report both (NCM#____) □ (5) ISTD – Matrix, DL required (NCM#____)	✓
15. Samples outside calibration range scheduled for dilution? *Samples:*	✓	□ ICAL – Range Exceeded: Minimum Dilution	✓
Chrom Review	**1st**	**If No, why is data reportable?**	**2nd**
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample / Reason / Sample / Reason	✓	□ (1) Reporting Limit – Dilution, Matrix (NCM#____) □ (2) Reporting Limit – Dilution, Non-Target (NCM#____) □ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	NA		NA
18. Obvious non-TPH peaks excluded?	✓		NA

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

19. Individual TPH peak area < octane high point area?	NA		NA
TALS Review	1st	**If No, why is data reportable?**	2nd
20. Graphics uploaded? [Sample List Tab]	✓		✓
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	✓		✓
22. Sample special instructions verified?	✓		✓
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	✓	☑ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) 63M ☐ LCS/LCSD - %R High (NCM#_____) Benzl chloride 33 OKWL 4028 (M) Sbutylbenze, 4-IPT, n-butyl 1245	✓
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]	✓		✓
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	✓		✓
26. Analytes over calibration range set to secondary [Conditions Review Tab]	✓		✓
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	✓		✓
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*	✓	~~NA 5XRL - DCFM~~ 2/15/17	✓
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	✓	500 mL blank ID: 6 200 mL blank ID:	✓
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	✓		✓
31. Correct ICV linked to each MB? [QC Links]	✓	to all samples ✓	✓
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	✓		✓
33. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
34. QC checker run and items addressed?			✓
35. Checklist & Entech report scanned, attached & assigned properly?			✓

Analyst:	**Date:** 2/15/17	**2nd Level Reviewer :**	**Date:** 2/15/17
Comments:		**Comments:**	

Example Calculation: 7104-1 PU

On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF

4.1767 x 25mm x 43.01 = 3592.79

MS017r41, 5/25/2016

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6758-1

SDG No.:

Client Sample ID: 10737 Lab Sample ID: 140-6758-12

Matrix: Air Lab File ID: LOT6758R.D

Analysis Method: TO-15 Date Collected: 01/10/2017 07:45

Sample wt/vol: 200(mL) Date Analyzed: 01/11/2017 15:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7677 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-6758-1

SDG No.:

Client Sample ID: 10737 | Lab Sample ID: 140-6758-12

Matrix: Air | Lab File ID: LOT6758R.D

Analysis Method: TO-15 | Date Collected: 01/10/2017 07:45

Sample wt/vol: 200(mL) | Date Analyzed: 01/11/2017 15:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 7677 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6758-1

SDG No.:

Client Sample ID: 10737 Lab Sample ID: 140-6758-12

Matrix: Air Lab File ID: LOT6758R.D

Analysis Method: TO-15 Date Collected: 01/10/2017 07:45

Sample wt/vol: 200(mL) Date Analyzed: 01/11/2017 15:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7677 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-6758-1

SDG No.:

Client Sample ID: 10737 Lab Sample ID: 140-6758-12

Matrix: Air Lab File ID: LOT6758R.D

Analysis Method: TO-15 Date Collected: 01/10/2017 07:45

Sample wt/vol: 200(mL) Date Analyzed: 01/11/2017 15:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 7677 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20170105-3792.b\LOT6758R.D				
Lims ID:	140-6758-A-12				
Client ID:	10737				
Sample Type:	Client				
Inject. Date:	11-Jan-2017 15:47:30	ALS Bottle#:	15	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003792-008				
Misc. Info.:	10737				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20170105-3792.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Jan-2017 11:30:52	Calib Date:	26-Nov-2016 01:58:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20161121-3656.b\JK25IC09X.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK022				
First Level Reviewer: barlozhetskayaa		Date:	11-Jan-2017 16:59:40		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.602	8.601	0.001	98	307438	4.00	
* 2 1,4-Difluorobenzene	114	10.803	10.806	-0.003	95	1384980	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.574	15.578	-0.004	88	1151887	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.220	17.219	0.001	95	660048	3.62	
31 Methylene Chloride	84	6.079	6.078	0.001	96	11429	0.1261	
40 Hexane	56	7.865	7.869	-0.004	94	5872	0.0717	
47 1,1,1-Trichloroethane	97	9.630	9.639	-0.009	89	6126	0.0308	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

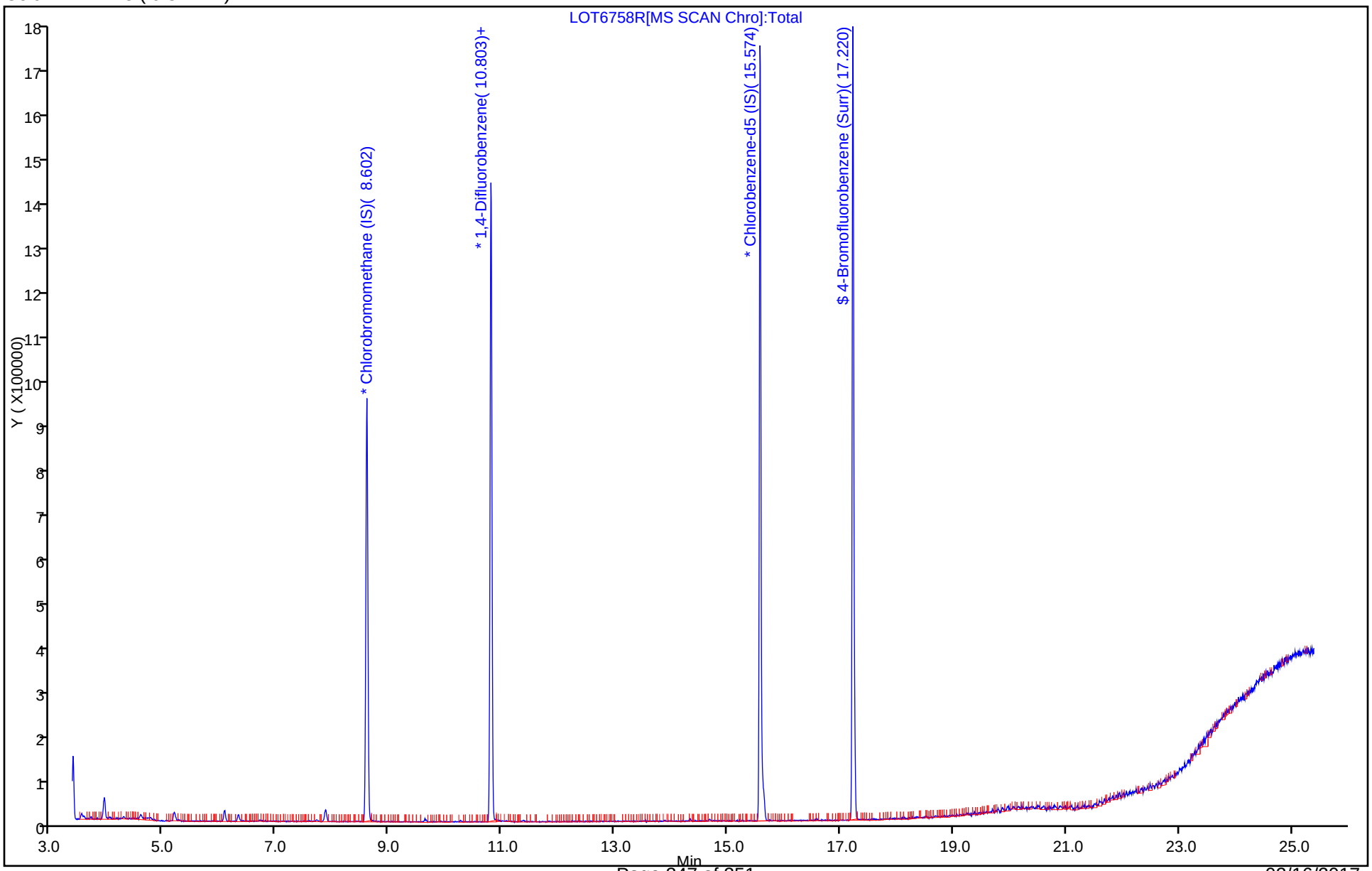
Report Date: 12-Jan-2017 11:30:58 Chrom Revision: 2.2 10-Jan-2017 11:26:10

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20170105-3792.b\LOT6758R.D

Injection Date:	11-Jan-2017 15:47:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-6758-A-12	Lab Sample ID:	140-6758-12	Worklist Smp#:	8
Client ID:	10737				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



Shipping and Receiving Documents

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

180325 BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: Tetra Tech Inc
Address: 51 Franklin st
City/State/Zip Annapolis MD / 21401
Phone: 410-990-4607
FAX:
Project Name: Lockheed Martin MRC
Site/location: BLDG-A / Middle River
PO #

Project Manager: Peter Rich
Phone: 410-990-4607
Site Contact:
TAL Contact:

Analysis Turnaround Time
Standard (Specify)
Rush (Specify)

Sampled By: J.M. Wilks

1 of 1 COCs

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
BLDG-A ~~EFFLUENT~~ INFLUENT	2-8-17	1440	1443	29.5	0	10930	11557	✓											
BLDG-A MIDGAC	2-8-17	1435	1439	29	0.5	09569	11165	✓											
BLDG-A ~~INFLUENT~~ EFFLUENT	2-8-17	1430	1433	28.5	0.5	10104	10496	✓											

Sampled by :

Temperature (Fahrenheit)

	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)

	Interior	Ambient	
Start			
Stop			

140-7052 Chain of Custody

Special Instructions/QC Requirements & Comments:

Recd Ambient
1 Custody Seal
Airbill # 7793859357 46
3-Canisters
3-Flows
1-Flow Kenny can

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by: J.M. Wilks	Date/Time: 2-8-17/1625	Received by: [signature]
Relinquished by: [signature]	Date/Time: 2-8-2017/1630	Received by: [signature] 2/9/17 9:45

02/16/2017

Loc: 140

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number: 7052

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	✓			☐ **Containers, Broken**
2. Were ambient air containers received intact?	✓			☐ Checked in lab
3. The coolers/containers custody seal if present, is it intact?	✓			☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			✓	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	✓			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	✓			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	✓			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	✓			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	✓			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	✓			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	✓			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	✓			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	✓			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	✓			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			✓	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:_____			✓	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			✓	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?				☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: _____ PM Instructions: _____

Sample Receiving Associate: _____ Date: 2/9/17.

QA026R30.doc, 080916

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 2/9/2017

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
AFB	140-7052-a-1	11557	6758	B	1	0	1305	
AFB	140-7052-a-2	11165	6758	B	1	0	1306	
AFB	140-7052-a-3	10496	6758	B	1	0	1307	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

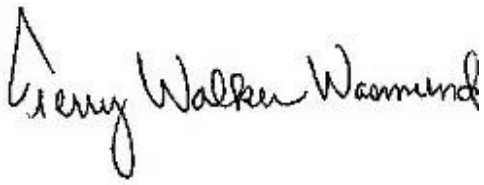
ANALYTICAL REPORT

Job Number: 140-7358-1

Job Description: LMMRC SSDS - Middle River

For:
Tetra Tech GEO
51 Franklin Street
Suite 400
Annapolis, MD 21401

Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
3/17/2017 10:00 AM

Terry Walker Wasmund, Project Manager II
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03/17/2017

cc: Belssi Chang
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Michael Wilks

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Table of Contents

Cover Title Page 1

Data Summaries 4

Definitions 4

Case Narrative 5

Detection Summary 6

Client Sample Results 10

Default Detection Limits 22

Surrogate Summary 23

QC Sample Results 24

QC Association 27

Chronicle 28

Method Summary 30

Sample Summary 31

Organic Sample Data 32

Air - GC/MS VOA 32

Method TO15 Low Level 32

Method TO15 Low Level QC Summary 33

Method TO15 Low Level Sample Data 40

Standards Data 157

Method TO15 Low Level ICAL Data 157

Method TO15 Low Level CCAL Data 229

Raw QC Data 243

Method TO15 Low Level Tune Data 243

Method TO15 Low Level Blank Data 251

Method TO15 Low Level LCS/LCSD Data 256

Method TO15 Low Level Run Logs 262

Table of Contents

Clean Canister Certification 269
Clean Canister Data 269
Shipping and Receiving Documents 341
Client Chain of Custody 342
Sample Receipt Checklist 344

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-7358-1

Receipt
The samples were received on 3/9/2017 at 10:00 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA
Methods TO 15 LL, TO-14A, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

Method TO 15 LL: The continuing calibration verification (CCV) associated with batch 140-9158 exhibited % difference of > 30% for 1,2,3-trimethylbenzene; however, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

Method TO 15 LL: 1,2,3-Trimethylbenzene recovered outside control limits for the LCS associated with analytical batch 140-9158. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Methods TO 15 LL, TO-14A, TO-15: This report includes canister certification data for the batch certified and/or individually certified canisters used to collect samples as well as for any canisters used for dilution of those samples. All of the canisters used for sample collection or sample dilution for this job were certified to be clean to the levels listed on the results page. Please note that results for individually certified canisters that were not used for sample collection or sample dilution may also be included in the report because these canisters were in the same cleaning batch as the canisters used for this project. Since these canisters were not used for this job, the results have no bearing on the sample results.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments
No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-7358-1

Client Sample ID: BLDG-C EFFLUENT — Lab Sample ID: 140-7358-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.6		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.12	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.13	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.56		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.41		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.091	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.25	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.85	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	2.1		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.13	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.55		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.21	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.4		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5.0		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	4.4		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.61	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.50	J	1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.8		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1.7		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.36	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	1.1	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.9	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	7.9		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.72	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	2.7		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.0	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	6.3		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-C MIDGAC — Lab Sample ID: 140-7358-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.7		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.14	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.43		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.54		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.17	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.15	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.70	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	10		0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.2		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.97		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.10	J	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.87		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5.3		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	4.4		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.66	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-C MIDGAC (Continued) — Lab Sample ID: 140-7358-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.7		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.6		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.69	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.66	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.4	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	70		2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	4.4		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	5.3		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.55	J	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.8		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-C INFLUENT — Lab Sample ID: 140-7358-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.97		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.092	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.4		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.12	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.89		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.54		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.078	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.52		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.95	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.45		0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.6		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.24	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	7.5		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.36	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	2.8		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	3.1		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.58	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	4.8		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.59	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	3.5		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.7		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.31	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	2.2		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.3	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	3.1		2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	6.2		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	1.3	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	40		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.8	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	12		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A EFFLUENT — Lab Sample ID: 140-7358-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.37	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-A EFFLUENT (Continued) — Lab Sample ID: 140-7358-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.17	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	8.3		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.55		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	3.8		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	18		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.19	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.68	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.98		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.15	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	48		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.86		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Vinyl chloride	0.16	J	0.20	0.15	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.1		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.84	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	33		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.7		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	15		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	71		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.80	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.4	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	3.7		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.58	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	260		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	4.6		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Vinyl chloride	0.42	J	0.51	0.37	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	4.8		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A MIDGAC — Lab Sample ID: 140-7358-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.37	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.14	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	9.3		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.54		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	2.7		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	16		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.68	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.65		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.19	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	29		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.14	J	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.47		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.7		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.67	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	37		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-A MIDGAC (Continued) — Lab Sample ID: 140-7358-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dichlorodifluoromethane	2.7		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	11		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	61		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	1.2	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.4	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.5		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.75	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	160		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.77	J	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	2.3		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	7.5		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A INFLUENT — Lab Sample ID: 140-7358-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	6.5		1.6	0.46	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.41	J	1.6	0.30	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	25		1.6	0.48	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.67	J	1.6	0.54	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	5.1		1.6	0.20	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	29		1.6	0.28	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	1.3	J	1.6	0.32	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.55	J	1.6	0.40	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	110		1.6	0.24	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	190		0.80	0.28	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	21		5.1	1.5	ug/m3	1		TO 15 LL	Total/NA
Chloroform	2.0	J	7.8	1.5	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	100		6.3	1.9	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	3.3	J	7.9	2.7	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	21		6.5	0.81	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	110		6.3	1.1	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	8.5	J	11	2.2	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	2.2	J	6.3	1.6	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	590		8.7	1.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1000		4.3	1.5	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BLDG-C EFFLUENT

Lab Sample ID: 140-7358-1

Date Collected: 03/08/17 13:42

Matrix: Air

Date Received: 03/09/17 10:00

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.6**		0.40	0.12	ppb v/v			03/10/17 15:34	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			03/10/17 15:34	1
Chlorodifluoromethane	**1.2**		0.40	0.075	ppb v/v			03/10/17 15:34	1
Chloroform	**0.12**	**J**	0.40	0.075	ppb v/v			03/10/17 15:34	1
cis-1,2-Dichloroethene	**0.13**	**J**	0.40	0.12	ppb v/v			03/10/17 15:34	1
Dichlorodifluoromethane	**0.56**		0.40	0.14	ppb v/v			03/10/17 15:34	1
1,1-Dichloroethane	**0.41**		0.40	0.050	ppb v/v			03/10/17 15:34	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			03/10/17 15:34	1
1,1-Dichloroethene	**0.091**	**J**	0.40	0.070	ppb v/v			03/10/17 15:34	1
Ethylbenzene	**0.25**	**J**	0.40	0.14	ppb v/v			03/10/17 15:34	1
Methylene Chloride	**0.85**	**J**	1.0	0.65	ppb v/v			03/10/17 15:34	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			03/10/17 15:34	1
Naphthalene	ND		0.20	0.20	ppb v/v			03/10/17 15:34	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			03/10/17 15:34	1
Toluene	**2.1**		0.60	0.60	ppb v/v			03/10/17 15:34	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			03/10/17 15:34	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			03/10/17 15:34	1
1,1,1-Trichloroethane	**0.13**	**J**	0.40	0.060	ppb v/v			03/10/17 15:34	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			03/10/17 15:34	1
Trichloroethene	ND		0.20	0.070	ppb v/v			03/10/17 15:34	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			03/10/17 15:34	1
1,2,4-Trimethylbenzene	**0.55**		0.40	0.13	ppb v/v			03/10/17 15:34	1
1,3,5-Trimethylbenzene	**0.21**	**J**	0.40	0.13	ppb v/v			03/10/17 15:34	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			03/10/17 15:34	1
Xylenes, Total	**1.4**		0.80	0.12	ppb v/v			03/10/17 15:34	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**5.0**		1.3	0.37	ug/m3			03/10/17 15:34	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			03/10/17 15:34	1
Chlorodifluoromethane	**4.4**		1.4	0.27	ug/m3			03/10/17 15:34	1
Chloroform	**0.61**	**J**	2.0	0.37	ug/m3			03/10/17 15:34	1
cis-1,2-Dichloroethene	**0.50**	**J**	1.6	0.48	ug/m3			03/10/17 15:34	1
Dichlorodifluoromethane	**2.8**		2.0	0.67	ug/m3			03/10/17 15:34	1
1,1-Dichloroethane	**1.7**		1.6	0.20	ug/m3			03/10/17 15:34	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			03/10/17 15:34	1
1,1-Dichloroethene	**0.36**	**J**	1.6	0.28	ug/m3			03/10/17 15:34	1
Ethylbenzene	**1.1**	**J**	1.7	0.59	ug/m3			03/10/17 15:34	1
Methylene Chloride	**2.9**	**J**	3.5	2.3	ug/m3			03/10/17 15:34	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			03/10/17 15:34	1
Naphthalene	ND		1.0	1.0	ug/m3			03/10/17 15:34	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			03/10/17 15:34	1
Toluene	**7.9**		2.3	2.3	ug/m3			03/10/17 15:34	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			03/10/17 15:34	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			03/10/17 15:34	1
1,1,1-Trichloroethane	**0.72**	**J**	2.2	0.33	ug/m3			03/10/17 15:34	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			03/10/17 15:34	1
Trichloroethene	ND		1.1	0.38	ug/m3			03/10/17 15:34	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			03/10/17 15:34	1
1,2,4-Trimethylbenzene	**2.7**		2.0	0.61	ug/m3			03/10/17 15:34	1

Client Sample ID: BLDG-C EFFLUENT

Lab Sample ID: 140-7358-1

Date Collected: 03/08/17 13:42

Matrix: Air

Date Received: 03/09/17 10:00

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	**1.0**	**J**	2.0	0.64	ug/m3			03/10/17 15:34	1
Vinyl chloride	ND		0.51	0.37	ug/m3			03/10/17 15:34	1
Xylenes, Total	**6.3**		3.5	0.52	ug/m3			03/10/17 15:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*		*03/10/17 15:34*	*1*

Client Sample ID: BLDG-C MIDGAC

Lab Sample ID: 140-7358-2

Date Collected: 03/08/17 13:48

Matrix: Air

Date Received: 03/09/17 10:00

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.7**		0.40	0.12	ppb v/v			03/10/17 16:15	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			03/10/17 16:15	1
Chlorodifluoromethane	**1.2**		0.40	0.075	ppb v/v			03/10/17 16:15	1
Chloroform	**0.14**	**J**	0.40	0.075	ppb v/v			03/10/17 16:15	1
cis-1,2-Dichloroethene	**0.43**		0.40	0.12	ppb v/v			03/10/17 16:15	1
Dichlorodifluoromethane	**0.54**		0.40	0.14	ppb v/v			03/10/17 16:15	1
1,1-Dichloroethane	**0.17**	**J**	0.40	0.050	ppb v/v			03/10/17 16:15	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			03/10/17 16:15	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			03/10/17 16:15	1
Ethylbenzene	**0.15**	**J**	0.40	0.14	ppb v/v			03/10/17 16:15	1
Methylene Chloride	**0.70**	**J**	1.0	0.65	ppb v/v			03/10/17 16:15	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			03/10/17 16:15	1
Naphthalene	ND		0.20	0.20	ppb v/v			03/10/17 16:15	1
Tetrachloroethene	**10**		0.40	0.080	ppb v/v			03/10/17 16:15	1
Toluene	**1.2**		0.60	0.60	ppb v/v			03/10/17 16:15	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			03/10/17 16:15	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			03/10/17 16:15	1
1,1,1-Trichloroethane	**0.97**		0.40	0.060	ppb v/v			03/10/17 16:15	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			03/10/17 16:15	1
Trichloroethene	**0.10**	**J**	0.20	0.070	ppb v/v			03/10/17 16:15	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			03/10/17 16:15	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			03/10/17 16:15	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			03/10/17 16:15	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			03/10/17 16:15	1
Xylenes, Total	**0.87**		0.80	0.12	ppb v/v			03/10/17 16:15	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**5.3**		1.3	0.37	ug/m3			03/10/17 16:15	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			03/10/17 16:15	1
Chlorodifluoromethane	**4.4**		1.4	0.27	ug/m3			03/10/17 16:15	1
Chloroform	**0.66**	**J**	2.0	0.37	ug/m3			03/10/17 16:15	1
cis-1,2-Dichloroethene	**1.7**		1.6	0.48	ug/m3			03/10/17 16:15	1
Dichlorodifluoromethane	**2.6**		2.0	0.67	ug/m3			03/10/17 16:15	1
1,1-Dichloroethane	**0.69**	**J**	1.6	0.20	ug/m3			03/10/17 16:15	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			03/10/17 16:15	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			03/10/17 16:15	1
Ethylbenzene	**0.66**	**J**	1.7	0.59	ug/m3			03/10/17 16:15	1
Methylene Chloride	**2.4**	**J**	3.5	2.3	ug/m3			03/10/17 16:15	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			03/10/17 16:15	1
Naphthalene	ND		1.0	1.0	ug/m3			03/10/17 16:15	1
Tetrachloroethene	**70**		2.7	0.54	ug/m3			03/10/17 16:15	1
Toluene	**4.4**		2.3	2.3	ug/m3			03/10/17 16:15	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			03/10/17 16:15	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			03/10/17 16:15	1
1,1,1-Trichloroethane	**5.3**		2.2	0.33	ug/m3			03/10/17 16:15	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			03/10/17 16:15	1
Trichloroethene	**0.55**	**J**	1.1	0.38	ug/m3			03/10/17 16:15	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			03/10/17 16:15	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			03/10/17 16:15	1

Client Sample ID: BLDG-C MIDGAC

Lab Sample ID: 140-7358-2

Date Collected: 03/08/17 13:48

Matrix: Air

Date Received: 03/09/17 10:00

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			03/10/17 16:15	1
Vinyl chloride	ND		0.51	0.37	ug/m3			03/10/17 16:15	1
Xylenes, Total	**3.8**		3.5	0.52	ug/m3			03/10/17 16:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*60 - 140*		*03/10/17 16:15*	*1*

Client Sample ID: BLDG-C INFLUENT

Lab Sample ID: 140-7358-3

Date Collected: 03/08/17 13:52

Matrix: Air

Date Received: 03/09/17 10:00

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.97**		0.40	0.12	ppb v/v			03/10/17 16:58	1
Carbon tetrachloride	**0.092**	**J**	0.40	0.075	ppb v/v			03/10/17 16:58	1
Chlorodifluoromethane	**1.4**		0.40	0.075	ppb v/v			03/10/17 16:58	1
Chloroform	**0.12**	**J**	0.40	0.075	ppb v/v			03/10/17 16:58	1
cis-1,2-Dichloroethene	**0.89**		0.40	0.12	ppb v/v			03/10/17 16:58	1
Dichlorodifluoromethane	**0.54**		0.40	0.14	ppb v/v			03/10/17 16:58	1
1,1-Dichloroethane	**0.078**	**J**	0.40	0.050	ppb v/v			03/10/17 16:58	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			03/10/17 16:58	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			03/10/17 16:58	1
Ethylbenzene	**0.52**		0.40	0.14	ppb v/v			03/10/17 16:58	1
Methylene Chloride	**0.95**	**J**	1.0	0.65	ppb v/v			03/10/17 16:58	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			03/10/17 16:58	1
Naphthalene	ND		0.20	0.20	ppb v/v			03/10/17 16:58	1
Tetrachloroethene	**0.45**		0.40	0.080	ppb v/v			03/10/17 16:58	1
Toluene	**1.6**		0.60	0.60	ppb v/v			03/10/17 16:58	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			03/10/17 16:58	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			03/10/17 16:58	1
1,1,1-Trichloroethane	**0.24**	**J**	0.40	0.060	ppb v/v			03/10/17 16:58	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			03/10/17 16:58	1
Trichloroethene	**7.5**		0.20	0.070	ppb v/v			03/10/17 16:58	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			03/10/17 16:58	1
1,2,4-Trimethylbenzene	**0.36**	**J**	0.40	0.13	ppb v/v			03/10/17 16:58	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			03/10/17 16:58	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			03/10/17 16:58	1
Xylenes, Total	**2.8**		0.80	0.12	ppb v/v			03/10/17 16:58	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**3.1**		1.3	0.37	ug/m3			03/10/17 16:58	1
Carbon tetrachloride	**0.58**	**J**	2.5	0.47	ug/m3			03/10/17 16:58	1
Chlorodifluoromethane	**4.8**		1.4	0.27	ug/m3			03/10/17 16:58	1
Chloroform	**0.59**	**J**	2.0	0.37	ug/m3			03/10/17 16:58	1
cis-1,2-Dichloroethene	**3.5**		1.6	0.48	ug/m3			03/10/17 16:58	1
Dichlorodifluoromethane	**2.7**		2.0	0.67	ug/m3			03/10/17 16:58	1
1,1-Dichloroethane	**0.31**	**J**	1.6	0.20	ug/m3			03/10/17 16:58	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			03/10/17 16:58	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			03/10/17 16:58	1
Ethylbenzene	**2.2**		1.7	0.59	ug/m3			03/10/17 16:58	1
Methylene Chloride	**3.3**	**J**	3.5	2.3	ug/m3			03/10/17 16:58	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			03/10/17 16:58	1
Naphthalene	ND		1.0	1.0	ug/m3			03/10/17 16:58	1
Tetrachloroethene	**3.1**		2.7	0.54	ug/m3			03/10/17 16:58	1
Toluene	**6.2**		2.3	2.3	ug/m3			03/10/17 16:58	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			03/10/17 16:58	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			03/10/17 16:58	1
1,1,1-Trichloroethane	**1.3**	**J**	2.2	0.33	ug/m3			03/10/17 16:58	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			03/10/17 16:58	1
Trichloroethene	**40**		1.1	0.38	ug/m3			03/10/17 16:58	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			03/10/17 16:58	1
1,2,4-Trimethylbenzene	**1.8**	**J**	2.0	0.61	ug/m3			03/10/17 16:58	1

Client Sample ID: BLDG-C INFLUENT

Lab Sample ID: 140-7358-3

Date Collected: 03/08/17 13:52

Matrix: Air

Date Received: 03/09/17 10:00

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			03/10/17 16:58	1
Vinyl chloride	ND		0.51	0.37	ug/m3			03/10/17 16:58	1
Xylenes, Total	**12**		3.5	0.52	ug/m3			03/10/17 16:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*60 - 140*		*03/10/17 16:58*	*1*

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-7358-4

Date Collected: 03/08/17 14:23

Matrix: Air

Date Received: 03/09/17 10:00

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			03/10/17 17:41	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			03/10/17 17:41	1
Chlorodifluoromethane	**0.37**	**J**	0.40	0.075	ppb v/v			03/10/17 17:41	1
Chloroform	**0.17**	**J**	0.40	0.075	ppb v/v			03/10/17 17:41	1
cis-1,2-Dichloroethene	**8.3**		0.40	0.12	ppb v/v			03/10/17 17:41	1
Dichlorodifluoromethane	**0.55**		0.40	0.14	ppb v/v			03/10/17 17:41	1
1,1-Dichloroethane	**3.8**		0.40	0.050	ppb v/v			03/10/17 17:41	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			03/10/17 17:41	1
1,1-Dichloroethene	**18**		0.40	0.070	ppb v/v			03/10/17 17:41	1
Ethylbenzene	**0.19**	**J**	0.40	0.14	ppb v/v			03/10/17 17:41	1
Methylene Chloride	**0.68**	**J**	1.0	0.65	ppb v/v			03/10/17 17:41	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			03/10/17 17:41	1
Naphthalene	ND		0.20	0.20	ppb v/v			03/10/17 17:41	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			03/10/17 17:41	1
Toluene	**0.98**		0.60	0.60	ppb v/v			03/10/17 17:41	1
trans-1,2-Dichloroethene	**0.15**	**J**	0.40	0.10	ppb v/v			03/10/17 17:41	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			03/10/17 17:41	1
1,1,1-Trichloroethane	**48**		0.40	0.060	ppb v/v			03/10/17 17:41	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			03/10/17 17:41	1
Trichloroethene	**0.86**		0.20	0.070	ppb v/v			03/10/17 17:41	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			03/10/17 17:41	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			03/10/17 17:41	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			03/10/17 17:41	1
Vinyl chloride	**0.16**	**J**	0.20	0.15	ppb v/v			03/10/17 17:41	1
Xylenes, Total	**1.1**		0.80	0.12	ppb v/v			03/10/17 17:41	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			03/10/17 17:41	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			03/10/17 17:41	1
Chlorodifluoromethane	**1.3**	**J**	1.4	0.27	ug/m3			03/10/17 17:41	1
Chloroform	**0.84**	**J**	2.0	0.37	ug/m3			03/10/17 17:41	1
cis-1,2-Dichloroethene	**33**		1.6	0.48	ug/m3			03/10/17 17:41	1
Dichlorodifluoromethane	**2.7**		2.0	0.67	ug/m3			03/10/17 17:41	1
1,1-Dichloroethane	**15**		1.6	0.20	ug/m3			03/10/17 17:41	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			03/10/17 17:41	1
1,1-Dichloroethene	**71**		1.6	0.28	ug/m3			03/10/17 17:41	1
Ethylbenzene	**0.80**	**J**	1.7	0.59	ug/m3			03/10/17 17:41	1
Methylene Chloride	**2.4**	**J**	3.5	2.3	ug/m3			03/10/17 17:41	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			03/10/17 17:41	1
Naphthalene	ND		1.0	1.0	ug/m3			03/10/17 17:41	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			03/10/17 17:41	1
Toluene	**3.7**		2.3	2.3	ug/m3			03/10/17 17:41	1
trans-1,2-Dichloroethene	**0.58**	**J**	1.6	0.40	ug/m3			03/10/17 17:41	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			03/10/17 17:41	1
1,1,1-Trichloroethane	**260**		2.2	0.33	ug/m3			03/10/17 17:41	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			03/10/17 17:41	1
Trichloroethene	**4.6**		1.1	0.38	ug/m3			03/10/17 17:41	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			03/10/17 17:41	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			03/10/17 17:41	1

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-7358-4

Date Collected: 03/08/17 14:23

Matrix: Air

Date Received: 03/09/17 10:00

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			03/10/17 17:41	1
Vinyl chloride	**0.42**	**J**	0.51	0.37	ug/m3			03/10/17 17:41	1
Xylenes, Total	**4.8**		3.5	0.52	ug/m3			03/10/17 17:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*60 - 140*		*03/10/17 17:41*	*1*

Client Sample ID: BLDG-A MIDGAC

Lab Sample ID: 140-7358-5

Date Collected: 03/08/17 14:28

Matrix: Air

Date Received: 03/09/17 10:00

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			03/10/17 18:24	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			03/10/17 18:24	1
Chlorodifluoromethane	**0.37**	**J**	0.40	0.075	ppb v/v			03/10/17 18:24	1
Chloroform	**0.14**	**J**	0.40	0.075	ppb v/v			03/10/17 18:24	1
cis-1,2-Dichloroethene	**9.3**		0.40	0.12	ppb v/v			03/10/17 18:24	1
Dichlorodifluoromethane	**0.54**		0.40	0.14	ppb v/v			03/10/17 18:24	1
1,1-Dichloroethane	**2.7**		0.40	0.050	ppb v/v			03/10/17 18:24	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			03/10/17 18:24	1
1,1-Dichloroethene	**16**		0.40	0.070	ppb v/v			03/10/17 18:24	1
Ethylbenzene	**0.28**	**J**	0.40	0.14	ppb v/v			03/10/17 18:24	1
Methylene Chloride	**0.68**	**J**	1.0	0.65	ppb v/v			03/10/17 18:24	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			03/10/17 18:24	1
Naphthalene	ND		0.20	0.20	ppb v/v			03/10/17 18:24	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			03/10/17 18:24	1
Toluene	**0.65**		0.60	0.60	ppb v/v			03/10/17 18:24	1
trans-1,2-Dichloroethene	**0.19**	**J**	0.40	0.10	ppb v/v			03/10/17 18:24	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			03/10/17 18:24	1
1,1,1-Trichloroethane	**29**		0.40	0.060	ppb v/v			03/10/17 18:24	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			03/10/17 18:24	1
Trichloroethene	**0.14**	**J**	0.20	0.070	ppb v/v			03/10/17 18:24	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			03/10/17 18:24	1
1,2,4-Trimethylbenzene	**0.47**		0.40	0.13	ppb v/v			03/10/17 18:24	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			03/10/17 18:24	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			03/10/17 18:24	1
Xylenes, Total	**1.7**		0.80	0.12	ppb v/v			03/10/17 18:24	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			03/10/17 18:24	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			03/10/17 18:24	1
Chlorodifluoromethane	**1.3**	**J**	1.4	0.27	ug/m3			03/10/17 18:24	1
Chloroform	**0.67**	**J**	2.0	0.37	ug/m3			03/10/17 18:24	1
cis-1,2-Dichloroethene	**37**		1.6	0.48	ug/m3			03/10/17 18:24	1
Dichlorodifluoromethane	**2.7**		2.0	0.67	ug/m3			03/10/17 18:24	1
1,1-Dichloroethane	**11**		1.6	0.20	ug/m3			03/10/17 18:24	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			03/10/17 18:24	1
1,1-Dichloroethene	**61**		1.6	0.28	ug/m3			03/10/17 18:24	1
Ethylbenzene	**1.2**	**J**	1.7	0.59	ug/m3			03/10/17 18:24	1
Methylene Chloride	**2.4**	**J**	3.5	2.3	ug/m3			03/10/17 18:24	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			03/10/17 18:24	1
Naphthalene	ND		1.0	1.0	ug/m3			03/10/17 18:24	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			03/10/17 18:24	1
Toluene	**2.5**		2.3	2.3	ug/m3			03/10/17 18:24	1
trans-1,2-Dichloroethene	**0.75**	**J**	1.6	0.40	ug/m3			03/10/17 18:24	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			03/10/17 18:24	1
1,1,1-Trichloroethane	**160**		2.2	0.33	ug/m3			03/10/17 18:24	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			03/10/17 18:24	1
Trichloroethene	**0.77**	**J**	1.1	0.38	ug/m3			03/10/17 18:24	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			03/10/17 18:24	1
1,2,4-Trimethylbenzene	**2.3**		2.0	0.61	ug/m3			03/10/17 18:24	1

Client Sample ID: BLDG-A MIDGAC

Lab Sample ID: 140-7358-5

Date Collected: 03/08/17 14:28

Matrix: Air

Date Received: 03/09/17 10:00

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			03/10/17 18:24	1
Vinyl chloride	ND		0.51	0.37	ug/m3			03/10/17 18:24	1
Xylenes, Total	**7.5**		3.5	0.52	ug/m3			03/10/17 18:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*60 - 140*		*03/10/17 18:24*	*1*

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-7358-6

Date Collected: 03/08/17 14:33

Matrix: Air

Date Received: 03/09/17 10:00

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**6.5**		1.6	0.46	ppb v/v			03/10/17 19:07	1
Carbon tetrachloride	ND		1.6	0.30	ppb v/v			03/10/17 19:07	1
Chlorodifluoromethane	ND		1.6	0.30	ppb v/v			03/10/17 19:07	1
Chloroform	**0.41**	**J**	1.6	0.30	ppb v/v			03/10/17 19:07	1
cis-1,2-Dichloroethene	**25**		1.6	0.48	ppb v/v			03/10/17 19:07	1
Dichlorodifluoromethane	**0.67**	**J**	1.6	0.54	ppb v/v			03/10/17 19:07	1
1,1-Dichloroethane	**5.1**		1.6	0.20	ppb v/v			03/10/17 19:07	1
1,2-Dichloroethane	ND		1.6	0.38	ppb v/v			03/10/17 19:07	1
1,1-Dichloroethene	**29**		1.6	0.28	ppb v/v			03/10/17 19:07	1
Ethylbenzene	ND		1.6	0.54	ppb v/v			03/10/17 19:07	1
Methylene Chloride	ND		4.0	2.6	ppb v/v			03/10/17 19:07	1
Methyl tert-butyl ether	ND		8.0	1.4	ppb v/v			03/10/17 19:07	1
Naphthalene	ND		0.80	0.80	ppb v/v			03/10/17 19:07	1
Tetrachloroethene	**1.3**	**J**	1.6	0.32	ppb v/v			03/10/17 19:07	1
Toluene	ND		2.4	2.4	ppb v/v			03/10/17 19:07	1
trans-1,2-Dichloroethene	**0.55**	**J**	1.6	0.40	ppb v/v			03/10/17 19:07	1
1,2,4-Trichlorobenzene	ND		1.6	0.78	ppb v/v			03/10/17 19:07	1
1,1,1-Trichloroethane	**110**		1.6	0.24	ppb v/v			03/10/17 19:07	1
1,1,2-Trichloroethane	ND		1.6	0.42	ppb v/v			03/10/17 19:07	1
Trichloroethene	**190**		0.80	0.28	ppb v/v			03/10/17 19:07	1
1,2,3-Trimethylbenzene	ND	*	1.6	0.68	ppb v/v			03/10/17 19:07	1
1,2,4-Trimethylbenzene	ND		1.6	0.50	ppb v/v			03/10/17 19:07	1
1,3,5-Trimethylbenzene	ND		1.6	0.52	ppb v/v			03/10/17 19:07	1
Vinyl chloride	ND		0.80	0.58	ppb v/v			03/10/17 19:07	1
Xylenes, Total	ND		3.2	0.48	ppb v/v			03/10/17 19:07	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**21**		5.1	1.5	ug/m3			03/10/17 19:07	1
Carbon tetrachloride	ND		10	1.9	ug/m3			03/10/17 19:07	1
Chlorodifluoromethane	ND		5.7	1.1	ug/m3			03/10/17 19:07	1
Chloroform	**2.0**	**J**	7.8	1.5	ug/m3			03/10/17 19:07	1
cis-1,2-Dichloroethene	**100**		6.3	1.9	ug/m3			03/10/17 19:07	1
Dichlorodifluoromethane	**3.3**	**J**	7.9	2.7	ug/m3			03/10/17 19:07	1
1,1-Dichloroethane	**21**		6.5	0.81	ug/m3			03/10/17 19:07	1
1,2-Dichloroethane	ND		6.5	1.5	ug/m3			03/10/17 19:07	1
1,1-Dichloroethene	**110**		6.3	1.1	ug/m3			03/10/17 19:07	1
Ethylbenzene	ND		6.9	2.3	ug/m3			03/10/17 19:07	1
Methylene Chloride	ND		14	9.0	ug/m3			03/10/17 19:07	1
Methyl tert-butyl ether	ND		29	4.9	ug/m3			03/10/17 19:07	1
Naphthalene	ND		4.2	4.2	ug/m3			03/10/17 19:07	1
Tetrachloroethene	**8.5**	**J**	11	2.2	ug/m3			03/10/17 19:07	1
Toluene	ND		9.0	9.0	ug/m3			03/10/17 19:07	1
trans-1,2-Dichloroethene	**2.2**	**J**	6.3	1.6	ug/m3			03/10/17 19:07	1
1,2,4-Trichlorobenzene	ND		12	5.8	ug/m3			03/10/17 19:07	1
1,1,1-Trichloroethane	**590**		8.7	1.3	ug/m3			03/10/17 19:07	1
1,1,2-Trichloroethane	ND		8.7	2.3	ug/m3			03/10/17 19:07	1
Trichloroethene	**1000**		4.3	1.5	ug/m3			03/10/17 19:07	1
1,2,3-Trimethylbenzene	ND	*	7.9	3.3	ug/m3			03/10/17 19:07	1
1,2,4-Trimethylbenzene	ND		7.9	2.5	ug/m3			03/10/17 19:07	1

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-7358-6

Date Collected: 03/08/17 14:33

Matrix: Air

Date Received: 03/09/17 10:00

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		7.9	2.6	ug/m3			03/10/17 19:07	1
Vinyl chloride	ND		2.0	1.5	ug/m3			03/10/17 19:07	1
Xylenes, Total	ND		14	2.1	ug/m3			03/10/17 19:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*		*03/10/17 19:07*	*1*

Default Detection Limits

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-7358-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.20	0.13	ppb v/v	TO 15 LL
Methylene Chloride	0.69	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-7358-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	BFB (60-140)								
140-7358-1	BLDG-C EFFLUENT	104								
140-7358-2	BLDG-C MIDGAC	106								
140-7358-3	BLDG-C INFLUENT	106								
140-7358-4	BLDG-A EFFLUENT	106								
140-7358-5	BLDG-A MIDGAC	106								
140-7358-6	BLDG-A INFLUENT	103								
LCS 140-9158/1002	Lab Control Sample	107								
MB 140-9158/4	Method Blank	103								

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-9158/4
Matrix: Air
Analysis Batch: 9158

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			03/10/17 10:04	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			03/10/17 10:04	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			03/10/17 10:04	1
Chloroform	ND		0.080	0.015	ppb v/v			03/10/17 10:04	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			03/10/17 10:04	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			03/10/17 10:04	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			03/10/17 10:04	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			03/10/17 10:04	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			03/10/17 10:04	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			03/10/17 10:04	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			03/10/17 10:04	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			03/10/17 10:04	1
Naphthalene	ND		0.040	0.040	ppb v/v			03/10/17 10:04	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			03/10/17 10:04	1
Toluene	ND		0.12	0.12	ppb v/v			03/10/17 10:04	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			03/10/17 10:04	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			03/10/17 10:04	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			03/10/17 10:04	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			03/10/17 10:04	1
Trichloroethene	ND		0.040	0.014	ppb v/v			03/10/17 10:04	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			03/10/17 10:04	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			03/10/17 10:04	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			03/10/17 10:04	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			03/10/17 10:04	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			03/10/17 10:04	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			03/10/17 10:04	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			03/10/17 10:04	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			03/10/17 10:04	1
Chloroform	ND		0.39	0.073	ug/m3			03/10/17 10:04	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			03/10/17 10:04	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			03/10/17 10:04	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			03/10/17 10:04	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			03/10/17 10:04	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			03/10/17 10:04	1
Ethylbenzene	ND		0.35	0.12	ug/m3			03/10/17 10:04	1
Methylene Chloride	ND		0.69	0.45	ug/m3			03/10/17 10:04	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			03/10/17 10:04	1
Naphthalene	ND		0.21	0.21	ug/m3			03/10/17 10:04	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			03/10/17 10:04	1
Toluene	ND		0.45	0.45	ug/m3			03/10/17 10:04	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			03/10/17 10:04	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			03/10/17 10:04	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			03/10/17 10:04	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			03/10/17 10:04	1
Trichloroethene	ND		0.21	0.075	ug/m3			03/10/17 10:04	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			03/10/17 10:04	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-9158/4
Matrix: Air
Analysis Batch: 9158

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			03/10/17 10:04	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			03/10/17 10:04	1
Vinyl chloride	ND		0.10	0.074	ug/m3			03/10/17 10:04	1
Xylenes, Total	ND		0.69	0.10	ug/m3			03/10/17 10:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*		*03/10/17 10:04*	*1*

Lab Sample ID: LCS 140-9158/1002
Matrix: Air
Analysis Batch: 9158

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	2.22		ppb v/v		111	70 - 130
Carbon tetrachloride	2.00	2.43		ppb v/v		122	70 - 130
Chlorodifluoromethane	2.00	2.47		ppb v/v		124	60 - 140
Chloroform	2.00	2.26		ppb v/v		113	70 - 130
cis-1,2-Dichloroethene	2.00	2.16		ppb v/v		108	70 - 130
Dichlorodifluoromethane	2.00	2.60		ppb v/v		130	60 - 140
1,1-Dichloroethane	2.00	2.29		ppb v/v		114	70 - 130
1,2-Dichloroethane	2.00	2.41		ppb v/v		121	70 - 130
1,1-Dichloroethene	2.00	2.25		ppb v/v		112	70 - 130
Ethylbenzene	2.00	2.32		ppb v/v		116	70 - 130
Methylene Chloride	2.00	1.97		ppb v/v		98	70 - 130
Methyl tert-butyl ether	2.00	2.38		ppb v/v		119	60 - 140
Naphthalene	2.00	2.27		ppb v/v		114	60 - 140
Tetrachloroethene	2.00	2.23		ppb v/v		111	70 - 130
Toluene	2.00	2.26		ppb v/v		113	70 - 130
trans-1,2-Dichloroethene	2.00	2.09		ppb v/v		105	70 - 130
1,2,4-Trichlorobenzene	2.00	2.32		ppb v/v		116	60 - 140
1,1,1-Trichloroethane	2.00	2.30		ppb v/v		115	70 - 130
1,1,2-Trichloroethane	2.00	2.13		ppb v/v		106	70 - 130
Trichloroethene	2.00	2.05		ppb v/v		103	70 - 130
1,2,3-Trimethylbenzene	2.00	2.65	*	ppb v/v		132	70 - 130
1,2,4-Trimethylbenzene	2.00	2.45		ppb v/v		122	70 - 130
1,3,5-Trimethylbenzene	2.00	2.41		ppb v/v		120	70 - 130
Vinyl chloride	2.00	2.45		ppb v/v		122	70 - 130
Xylenes, Total	6.00	7.15		ppb v/v		119	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	7.08		ug/m3		111	70 - 130
Carbon tetrachloride	13	15.3		ug/m3		122	70 - 130
Chlorodifluoromethane	7.1	8.75		ug/m3		124	60 - 140
Chloroform	9.8	11.0		ug/m3		113	70 - 130
cis-1,2-Dichloroethene	7.9	8.55		ug/m3		108	70 - 130
Dichlorodifluoromethane	9.9	12.9		ug/m3		130	60 - 140
1,1-Dichloroethane	8.1	9.27		ug/m3		114	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-9158/1002
Matrix: Air
Analysis Batch: 9158

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2-Dichloroethane			8.1	9.76		ug/m3		121	70 - 130		
1,1-Dichloroethene			7.9	8.92		ug/m3		112	70 - 130		
Ethylbenzene			8.7	10.1		ug/m3		116	70 - 130		
Methylene Chloride			7.0	6.83		ug/m3		98	70 - 130		
Methyl tert-butyl ether			7.2	8.60		ug/m3		119	60 - 140		
Naphthalene			10	11.9		ug/m3		114	60 - 140		
Tetrachloroethene			14	15.1		ug/m3		111	70 - 130		
Toluene			7.5	8.53		ug/m3		113	70 - 130		
trans-1,2-Dichloroethene			7.9	8.29		ug/m3		105	70 - 130		
1,2,4-Trichlorobenzene			15	17.2		ug/m3		116	60 - 140		
1,1,1-Trichloroethane			11	12.6		ug/m3		115	70 - 130		
1,1,2-Trichloroethane			11	11.6		ug/m3		106	70 - 130		
Trichloroethene			11	11.0		ug/m3		103	70 - 130		
1,2,3-Trimethylbenzene			9.8	13.0	*	ug/m3		132	70 - 130		
1,2,4-Trimethylbenzene			9.8	12.0		ug/m3		122	70 - 130		
1,3,5-Trimethylbenzene			9.8	11.8		ug/m3		120	70 - 130		
Vinyl chloride			5.1	6.26		ug/m3		122	70 - 130		
Xylenes, Total			26	31.0		ug/m3		119	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*60 - 140*

QC Association Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-7358-1

Air - GC/MS VOA

Analysis Batch: 9158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-7358-1	BLDG-C EFFLUENT	Total/NA	Air	TO 15 LL	
140-7358-2	BLDG-C MIDGAC	Total/NA	Air	TO 15 LL	
140-7358-3	BLDG-C INFLUENT	Total/NA	Air	TO 15 LL	
140-7358-4	BLDG-A EFFLUENT	Total/NA	Air	TO 15 LL	
140-7358-5	BLDG-A MIDGAC	Total/NA	Air	TO 15 LL	
140-7358-6	BLDG-A INFLUENT	Total/NA	Air	TO 15 LL	
MB 140-9158/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-9158/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Client Sample ID: BLDG-C EFFLUENT
Lab Sample ID: 140-7358-1
Date Collected: 03/08/17 13:42
Matrix: Air
Date Received: 03/09/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	9158	03/10/17 15:34	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: BLDG-C MIDGAC
Lab Sample ID: 140-7358-2
Date Collected: 03/08/17 13:48
Matrix: Air
Date Received: 03/09/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	9158	03/10/17 16:15	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: BLDG-C INFLUENT
Lab Sample ID: 140-7358-3
Date Collected: 03/08/17 13:52
Matrix: Air
Date Received: 03/09/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	9158	03/10/17 16:58	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: BLDG-A EFFLUENT
Lab Sample ID: 140-7358-4
Date Collected: 03/08/17 14:23
Matrix: Air
Date Received: 03/09/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	9158	03/10/17 17:41	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: BLDG-A MIDGAC
Lab Sample ID: 140-7358-5
Date Collected: 03/08/17 14:28
Matrix: Air
Date Received: 03/09/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	9158	03/10/17 18:24	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: BLDG-A INFLUENT
Lab Sample ID: 140-7358-6
Date Collected: 03/08/17 14:33
Matrix: Air
Date Received: 03/09/17 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	25 mL	500 mL	9158	03/10/17 19:07	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: Method Blank

Lab Sample ID: MB 140-9158/4

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9158	03/10/17 10:04	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-9158/1002

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	9158	03/10/17 08:21	HMT	TAL KNX
	Instrument ID: MG									

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-7358-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-7358-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-7358-1	BLDG-C EFFLUENT	Air	03/08/17 13:42	03/09/17 10:00
140-7358-2	BLDG-C MIDGAC	Air	03/08/17 13:48	03/09/17 10:00
140-7358-3	BLDG-C INFLUENT	Air	03/08/17 13:52	03/09/17 10:00
140-7358-4	BLDG-A EFFLUENT	Air	03/08/17 14:23	03/09/17 10:00
140-7358-5	BLDG-A MIDGAC	Air	03/08/17 14:28	03/09/17 10:00
140-7358-6	BLDG-A INFLUENT	Air	03/08/17 14:33	03/09/17 10:00

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
BLDG-C EFFLUENT	140-7358-1	104
BLDG-C MIDGAC	140-7358-2	106
BLDG-C INFLUENT	140-7358-3	106
BLDG-A EFFLUENT	140-7358-4	106
BLDG-A MIDGAC	140-7358-5	106
BLDG-A INFLUENT	140-7358-6	103
	MB 140-9158/4	103
	LCS 140-9158/1002	107

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1

SDG No.:

Matrix: Air Level: Low Lab File ID: GCCVC10-LCS.d

Lab ID: LCS 140-9158/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.22	111	70-130	
Carbon tetrachloride	2.00	2.43	122	70-130	
Chlorodifluoromethane	2.00	2.47	124	60-140	
Chloroform	2.00	2.26	113	70-130	
cis-1,2-Dichloroethene	2.00	2.16	108	70-130	
Dichlorodifluoromethane	2.00	2.60	130	60-140	
1,1-Dichloroethane	2.00	2.29	114	70-130	
1,2-Dichloroethane	2.00	2.41	121	70-130	
1,1-Dichloroethene	2.00	2.25	112	70-130	
Ethylbenzene	2.00	2.32	116	70-130	
Methylene Chloride	2.00	1.97	98	70-130	
Methyl tert-butyl ether	2.00	2.38	119	60-140	
Naphthalene	2.00	2.27	114	60-140	
Tetrachloroethene	2.00	2.23	111	70-130	
Toluene	2.00	2.26	113	70-130	
trans-1,2-Dichloroethene	2.00	2.09	105	70-130	
1,2,4-Trichlorobenzene	2.00	2.32	116	60-140	
1,1,1-Trichloroethane	2.00	2.30	115	70-130	
1,1,2-Trichloroethane	2.00	2.13	106	70-130	
Trichloroethene	2.00	2.05	103	70-130	
1,2,3-Trimethylbenzene	2.00	2.65	132	70-130	*
1,2,4-Trimethylbenzene	2.00	2.45	122	70-130	
1,3,5-Trimethylbenzene	2.00	2.41	120	70-130	
Vinyl chloride	2.00	2.45	122	70-130	
Xylenes, Total	6.00	7.15	119	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1

SDG No.:

Lab File ID: GMB500C10.D Lab Sample ID: MB 140-9158/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MG Date Analyzed: 03/10/2017 10:04

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-9158/1002	GCCVC10-LCS.d	03/10/2017 08:21
BLDG-C EFFLUENT	140-7358-1	GC10P106.D	03/10/2017 15:34
BLDG-C MIDGAC	140-7358-2	GC10P107.D	03/10/2017 16:15
BLDG-C INFLUENT	140-7358-3	GC10P108.D	03/10/2017 16:58
BLDG-A EFFLUENT	140-7358-4	GC10P109.D	03/10/2017 17:41
BLDG-A MIDGAC	140-7358-5	GC10P110.D	03/10/2017 18:24
BLDG-A INFLUENT	140-7358-6	GC10P111.D	03/10/2017 19:07

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1

SDG No.:

Lab File ID: GBFBC02.D BFB Injection Date: 03/02/2017

Instrument ID: MG BFB Injection Time: 12:22

Analysis Batch No.: 9079

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.4	
75	30.0 - 60.0 % of mass 95	55.3	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.5	(0.6) 1
174	50.0 - 120.00 % of mass 95	90.3	
175	5.0 - 9.0 % of mass 174	6.1	(6.8) 1
176	95.0 - 101.0 % of mass 174	87.4	(96.7) 1
177	5.0 - 9.0 % of mass 176	5.5	(6.3) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-9079/3	GC02IC01.D	03/02/2017	13:34
	IC 140-9079/5	GC02IC03.D	03/02/2017	14:57
	IC 140-9079/6	GC02IC04.D	03/02/2017	15:39
	IC 140-9079/7	GC02IC05.D	03/02/2017	16:20
	ICIS 140-9079/8	GC02IC06.D	03/02/2017	17:02
	IC 140-9079/9	GC02IC07.D	03/02/2017	17:44
	IC 140-9079/10	GC02IC08.D	03/02/2017	18:26
	IC 140-9079/11	GC02IC09.D	03/02/2017	19:08
	IC 140-9079/20	GC02IC02R.D	03/02/2017	20:31
	ICV 140-9079/15	GLCSC02.D	03/02/2017	23:17

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1

SDG No.:

Lab File ID: GBFBC10.D BFB Injection Date: 03/10/2017

Instrument ID: MG BFB Injection Time: 07:50

Analysis Batch No.: 9158

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.6	
75	30.0 - 60.0 % of mass 95	55.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	88.2	
175	5.0 - 9.0 % of mass 174	6.1	(6.9) 1
176	95.0 - 101.0 % of mass 174	85.2	(96.6) 1
177	5.0 - 9.0 % of mass 176	5.4	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-9158/2	GCCVC10.D	03/10/2017	08:21
	LCS 140-9158/1002	GCCVC10-LCS.d	03/10/2017	08:21
	MB 140-9158/4	GMB500C10.D	03/10/2017	10:04
BLDG-C EFFLUENT	140-7358-1	GC10P106.D	03/10/2017	15:34
BLDG-C MIDGAC	140-7358-2	GC10P107.D	03/10/2017	16:15
BLDG-C INFLUENT	140-7358-3	GC10P108.D	03/10/2017	16:58
BLDG-A EFFLUENT	140-7358-4	GC10P109.D	03/10/2017	17:41
BLDG-A MIDGAC	140-7358-5	GC10P110.D	03/10/2017	18:24
BLDG-A INFLUENT	140-7358-6	GC10P111.D	03/10/2017	19:07

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1

SDG No.:

Sample No.: ICIS 140-9079/8 Date Analyzed: 03/02/2017 17:02

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): GC02IC06.D Heated Purge: (Y/N) N

Calibration ID: 934

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		397020	8.01	1995357	10.18	2047691	15.04
UPPER LIMIT		555828	8.34	2793500	10.51	2866767	15.37
LOWER LIMIT		238212	7.68	1197214	9.85	1228615	14.71
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-9079/15		386596	8.01	1963711	10.18	2019239	15.04

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1

SDG No.:

Sample No.: CCVIS 140-9158/2 Date Analyzed: 03/10/2017 08:21

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): GCCVC10.D Heated Purge: (Y/N) N

Calibration ID: 934

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		284389	8.00	1474377	10.17	1473079	15.04
UPPER LIMIT		398145	8.33	2064128	10.50	2062311	15.37
LOWER LIMIT		170633	7.67	884626	9.84	883847	14.71
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-9158/1002		284389	8.00	1474377	10.17	1473079	15.04
MB 140-9158/4		280896	7.99	1418032	10.16	1398041	15.03
140-7358-1	BLDG-C EFFLUENT	306961	8.00	1555093	10.16	1543382	15.03
140-7358-2	BLDG-C MIDGAC	306080	7.99	1583822	10.16	1544959	15.03
140-7358-3	BLDG-C INFLUENT	322613	8.00	1634960	10.17	1577171	15.04
140-7358-4	BLDG-A EFFLUENT	303516	8.00	1540720	10.16	1526987	15.03
140-7358-5	BLDG-A MIDGAC	306878	7.99	1596042	10.16	1560804	15.03
140-7358-6	BLDG-A INFLUENT	309209	8.00	1576815	10.16	1518283	15.03

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7358-1

SDG No.:

Client Sample ID: BLDG-C EFFLUENT | Lab Sample ID: 140-7358-1

Matrix: Air | Lab File ID: GC10P106.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 13:42

Sample wt/vol: 100(mL) | Date Analyzed: 03/10/2017 15:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9158 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.6		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.2		0.40	0.075
67-66-3	Chloroform	119.38	0.12	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.13	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.56		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.41		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.091	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.25	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.85	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.13	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.55		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.21	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7358-1

SDG No.:

Client Sample ID: BLDG-C EFFLUENT | Lab Sample ID: 140-7358-1

Matrix: Air | Lab File ID: GC10P106.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 13:42

Sample wt/vol: 100(mL) | Date Analyzed: 03/10/2017 15:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9158 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	5.0		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.4		1.4	0.27
67-66-3	Chloroform	119.38	0.61	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.50	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.7		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.36	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.9	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	7.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.72	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.7		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.0	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.3		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P106.D				
Lims ID:	140-7358-A-1				
Client ID:	BLDG-C EFFLUENT				
Sample Type:	Client				
Inject. Date:	10-Mar-2017 15:34:30	ALS Bottle#:	6	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004228-010				
Misc. Info.:	140-7358-a-1				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Mar-2017 11:59:36	Calib Date:	02-Mar-2017 20:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK020				
First Level Reviewer: barlozhetskayaa		Date:	13-Mar-2017 11:59:36		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.996	8.001	-0.005	86	306961	4.00	
* 2 1,4-Difluorobenzene	114	10.164	10.169	-0.005	95	1555093	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.033	15.038	-0.005	88	1543382	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.705	16.710	-0.005	94	1199318	4.17	
6 Chlorodifluoromethane	67	3.456	3.461	-0.005	97	7437	0.2478	
8 Dichlorodifluoromethane	85	3.504	3.515	-0.011	100	30459	0.1118	
27 1,1-Dichloroethene	96	5.354	5.359	-0.005	93	1442	0.0181	
31 Methylene Chloride	84	5.661	5.666	-0.005	86	12540	0.1696	
37 1,1-Dichloroethane	63	6.772	6.783	-0.011	99	12290	0.0817	
42 cis-1,2-Dichloroethene	96	7.694	7.699	-0.005	94	2129	0.0252	
44 Chloroform	83	8.018	8.028	-0.010	87	5062	0.0249	
47 1,1,1-Trichloroethane	97	9.005	9.004	0.000	93	5892	0.0263	
49 Benzene	78	9.587	9.592	-0.005	75	76447	0.3139	
68 Toluene	91	13.022	13.027	-0.005	93	116852	0.4172	
79 Ethylbenzene	91	15.394	15.394	0.000	98	18328	0.0498	
81 m-Xylene & p-Xylene	91	15.556	15.567	-0.011	99	58782	0.2038	
85 o-Xylene	91	16.090	16.090	0.000	97	25813	0.0873	
92 1,3,5-Trimethylbenzene	120	17.492	17.497	-0.005	89	7958	0.0419	
96 1,2,4-Trimethylbenzene	105	17.950	17.956	-0.006	98	39055	0.1109	
116 Naphthalene	128	20.550	20.550	0.001	84	4032	0.008285	7
S 126 Xylenes, Total	100				0		0.2910	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

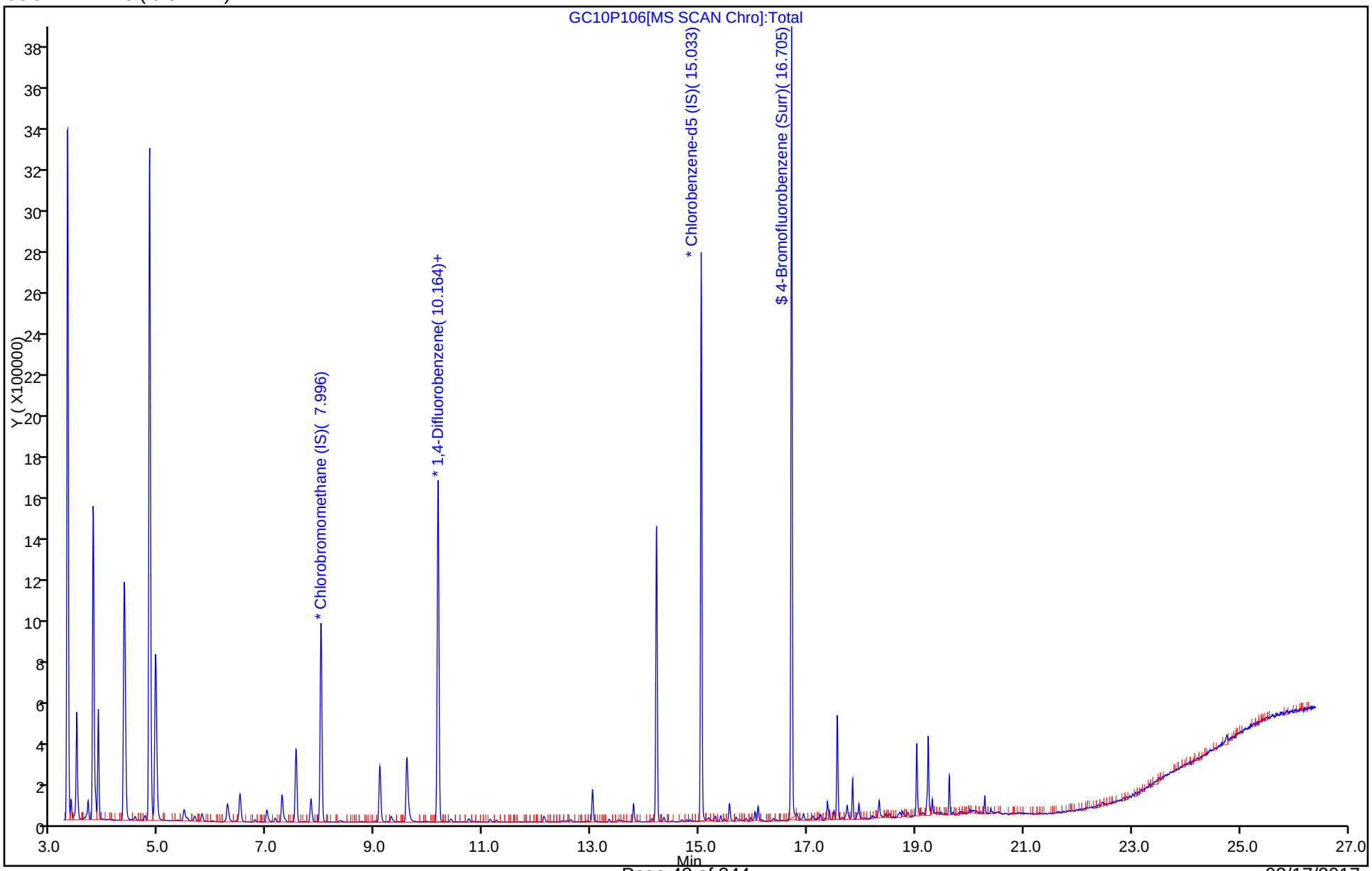
Report Date: 13-Mar-2017 11:59:37 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P106.D

Injection Date:	10-Mar-2017 15:34:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-7358-A-1	Lab Sample ID:	140-7358-1	Worklist Smp#:	10
Client ID:	BLDG-C EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P106.D				
Lims ID:	140-7358-A-1				
Client ID:	BLDG-C EFFLUENT				
Sample Type:	Client				
Inject. Date:	10-Mar-2017 15:34:30	ALS Bottle#:	6	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004228-010				
Misc. Info.:	140-7358-a-1				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Mar-2017 11:59:36	Calib Date:	02-Mar-2017 20:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK020				

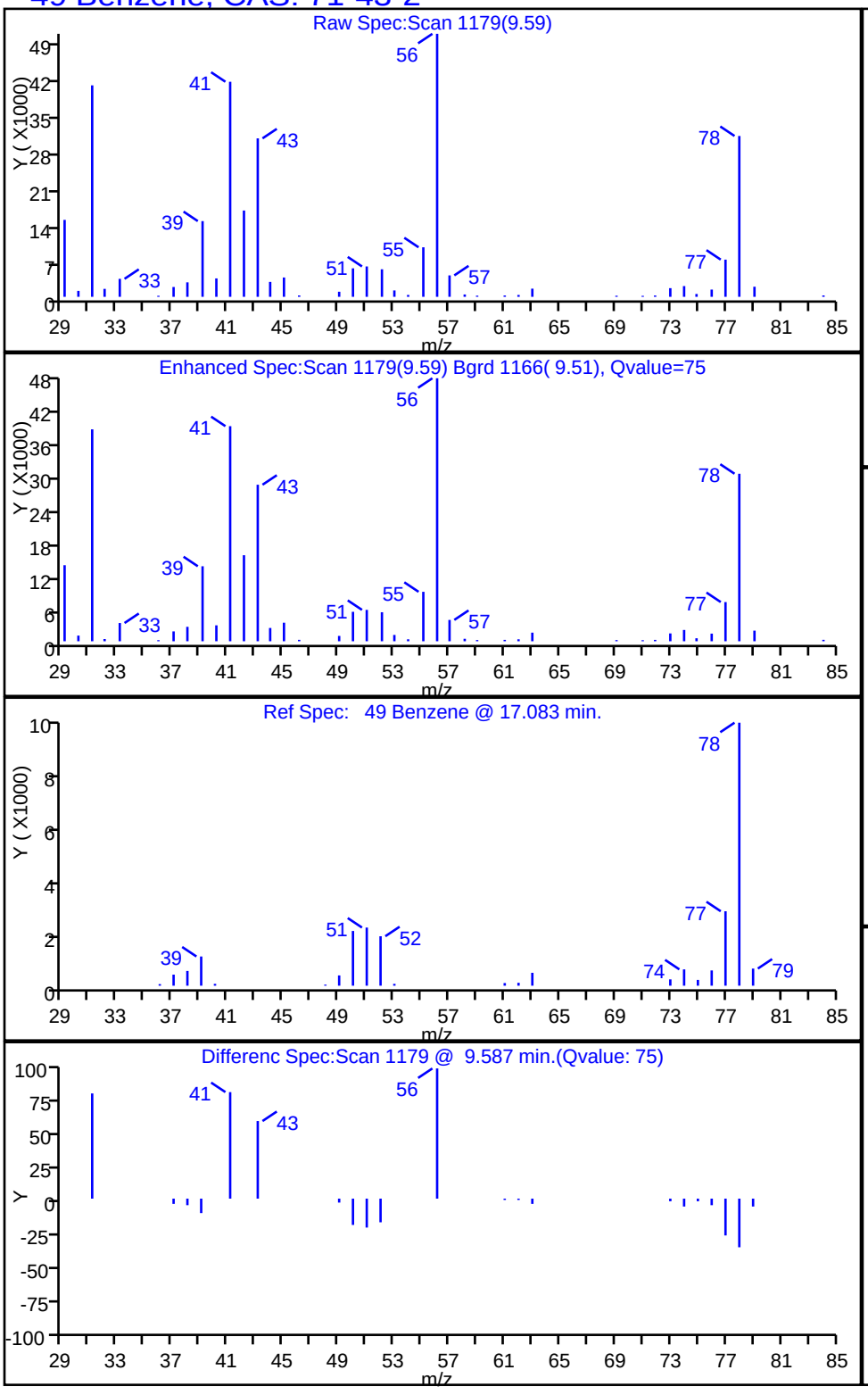
First Level Reviewer: barlozhetskayaa Date: 13-Mar-2017 11:59:36

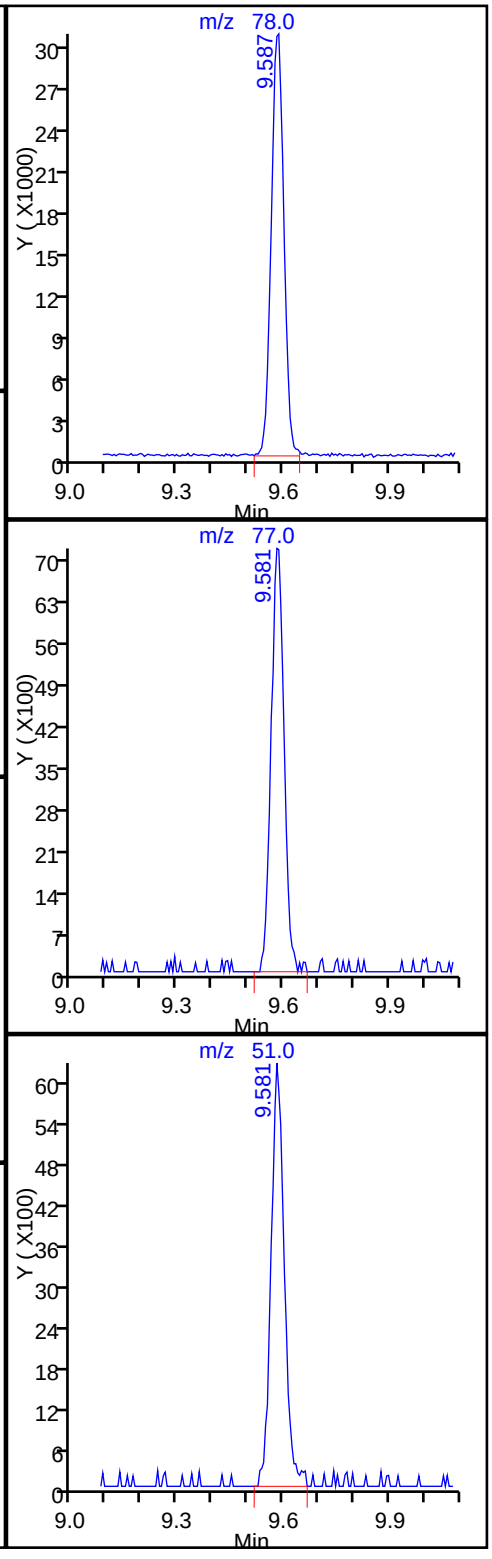
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.17	104.34

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P106.D		
Injection Date:	10-Mar-2017 15:34:30	Instrument ID:	MG
Lims ID:	140-7358-A-1	Lab Sample ID:	140-7358-1
Client ID:	BLDG-C EFFLUENT		
Operator ID:	7126	ALS Bottle#:	6 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

49 Benzene, CAS: 71-43-2

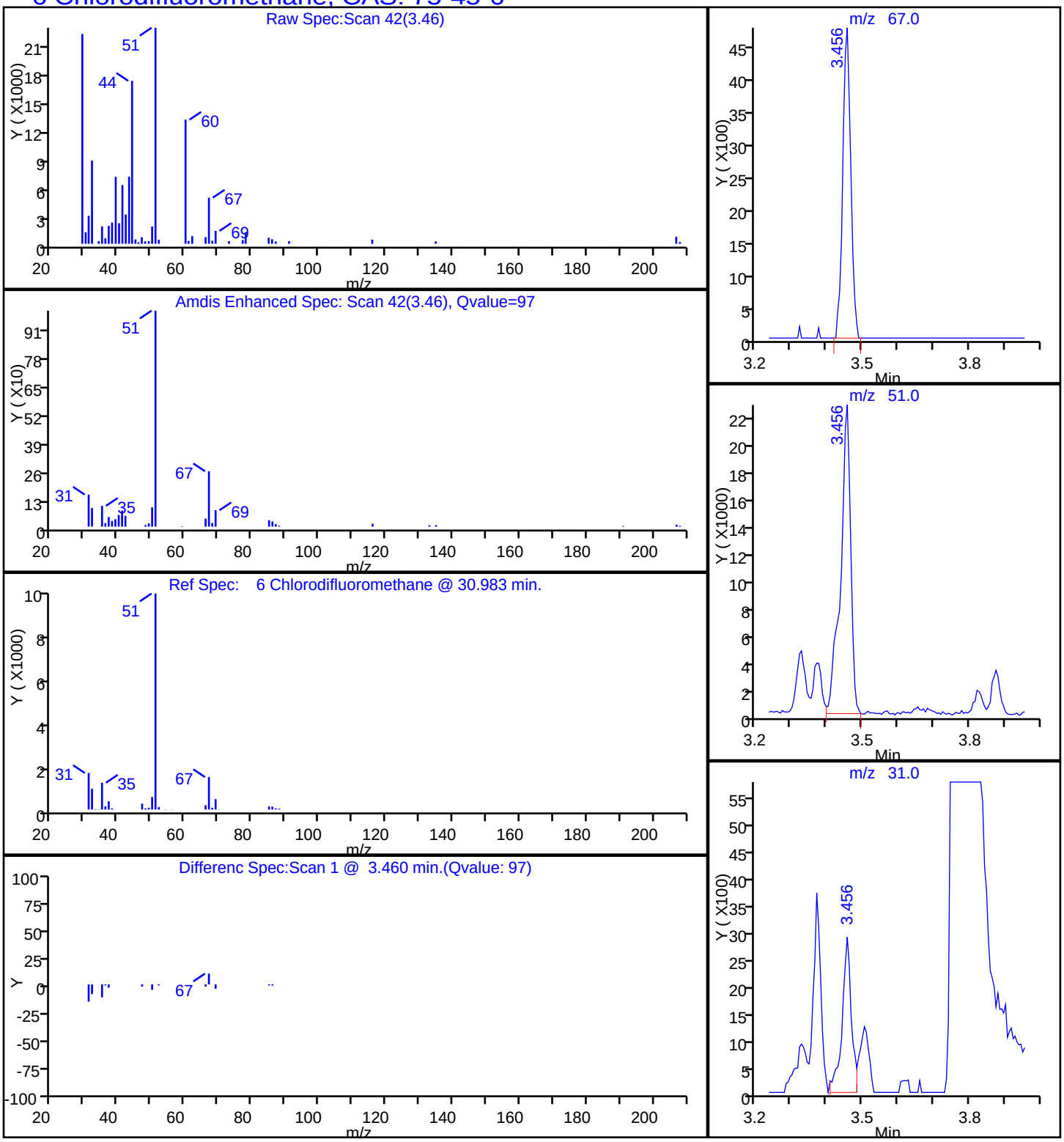




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P106.D		
Injection Date:	10-Mar-2017 15:34:30	Instrument ID:	MG
Lims ID:	140-7358-A-1	Lab Sample ID:	140-7358-1
Client ID:	BLDG-C EFFLUENT		
Operator ID:	7126	ALS Bottle#:	6 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

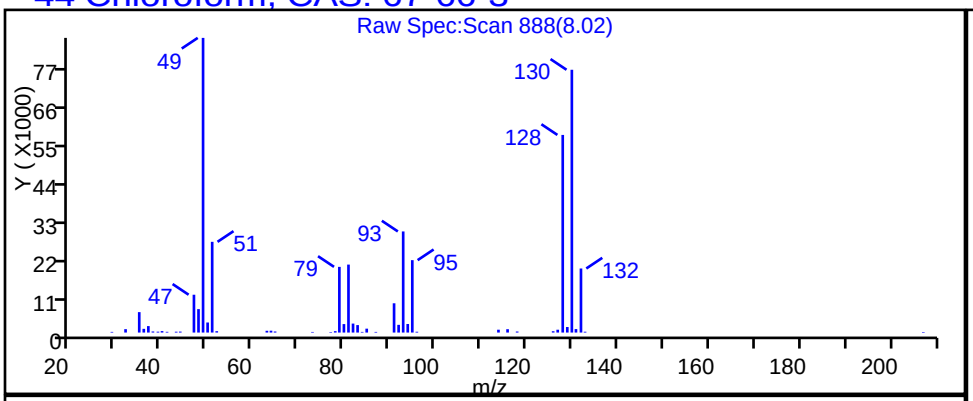
6 Chlorodifluoromethane, CAS: 75-45-6

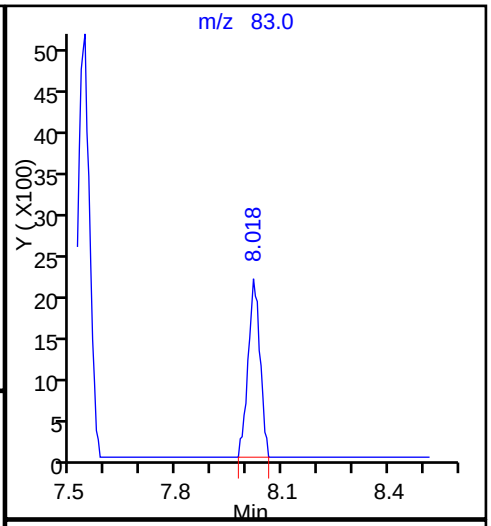


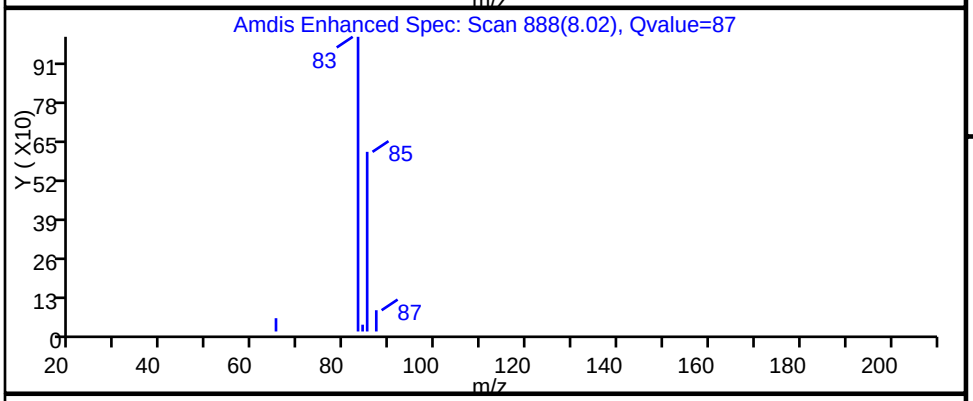
TestAmerica Knoxville

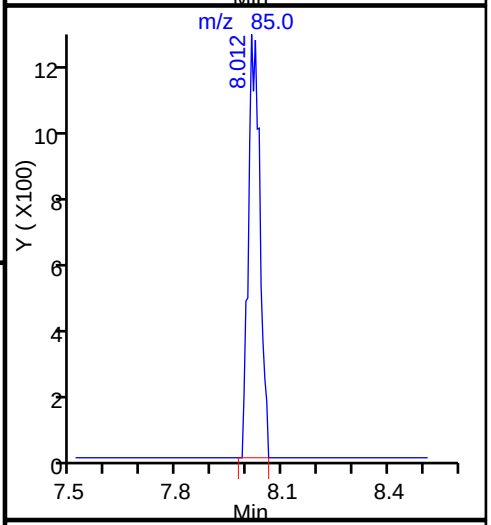
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P106.D		
Injection Date:	10-Mar-2017 15:34:30	Instrument ID:	MG
Lims ID:	140-7358-A-1	Lab Sample ID:	140-7358-1
Client ID:	BLDG-C EFFLUENT		
Operator ID:	7126	ALS Bottle#:	6 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

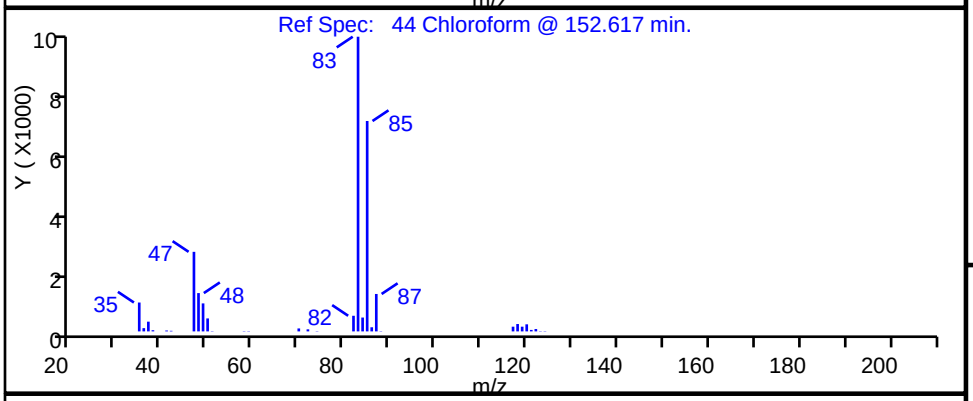
44 Chloroform, CAS: 67-66-3

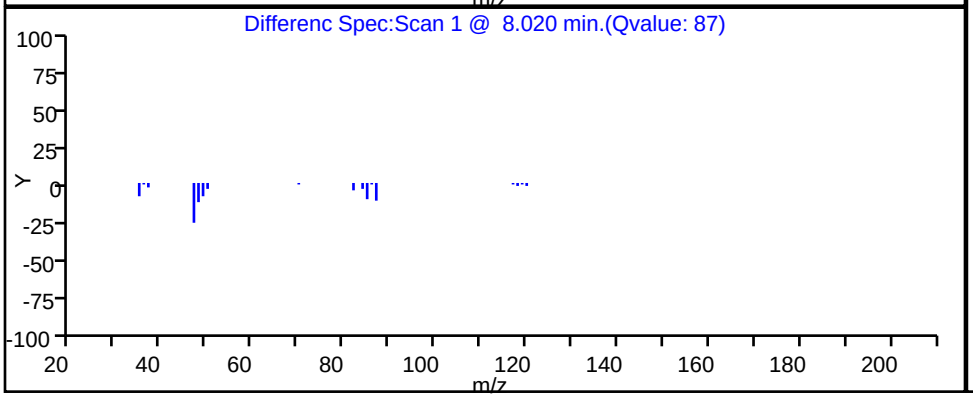


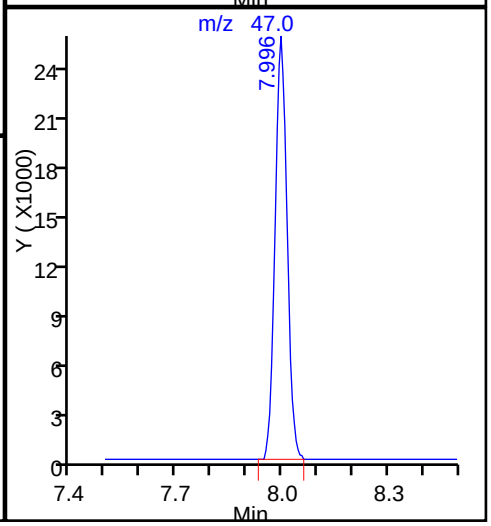








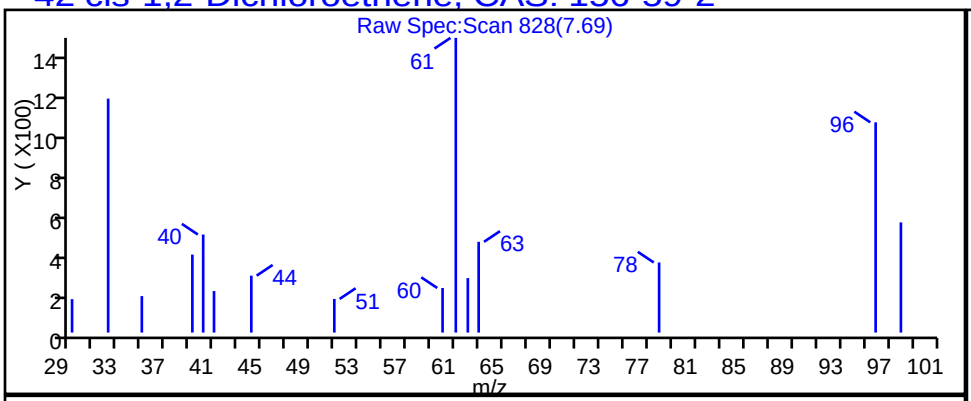


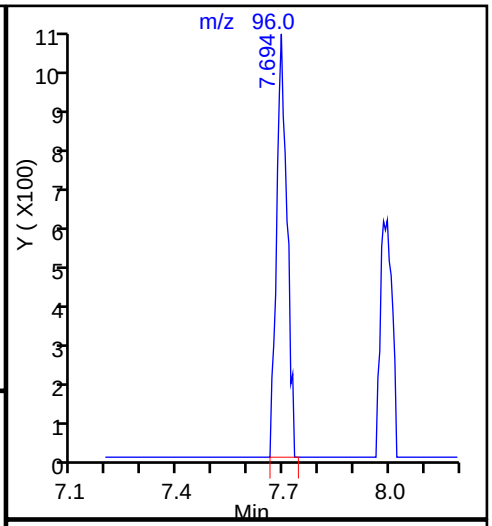


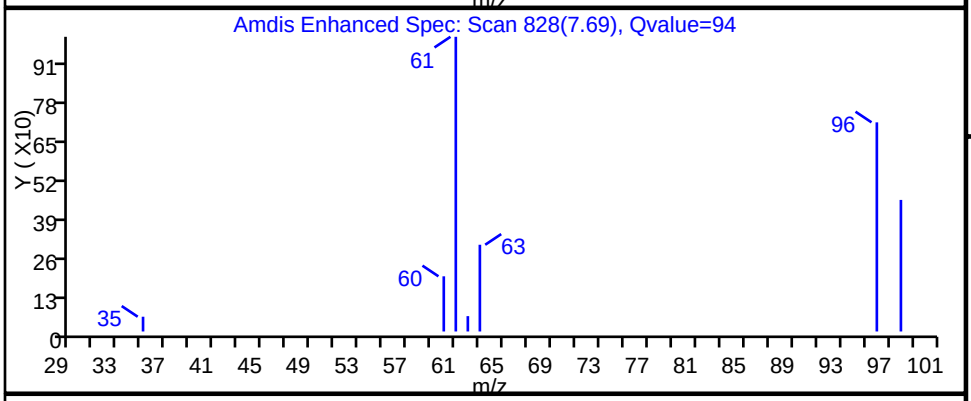
TestAmerica Knoxville

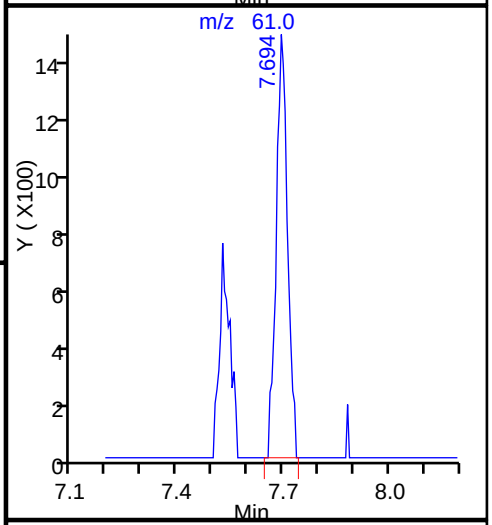
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P106.D				
Injection Date:	10-Mar-2017 15:34:30	Instrument ID:	MG		
Lims ID:	140-7358-A-1	Lab Sample ID:	140-7358-1		
Client ID:	BLDG-C EFFLUENT				
Operator ID:	7126	ALS Bottle#:	6	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

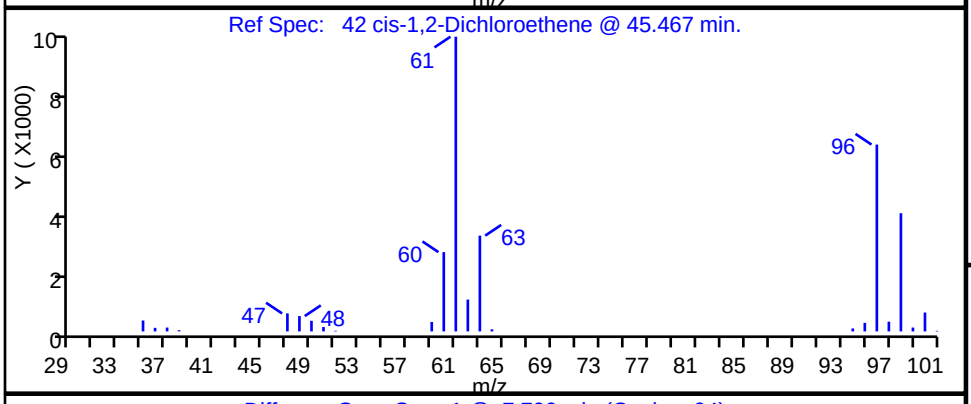
42 cis-1,2-Dichloroethene, CAS: 156-59-2

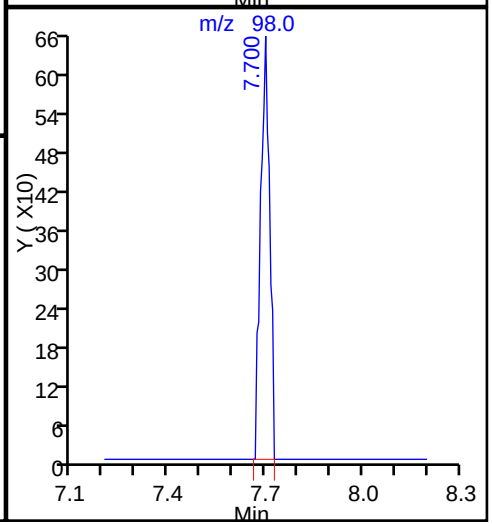


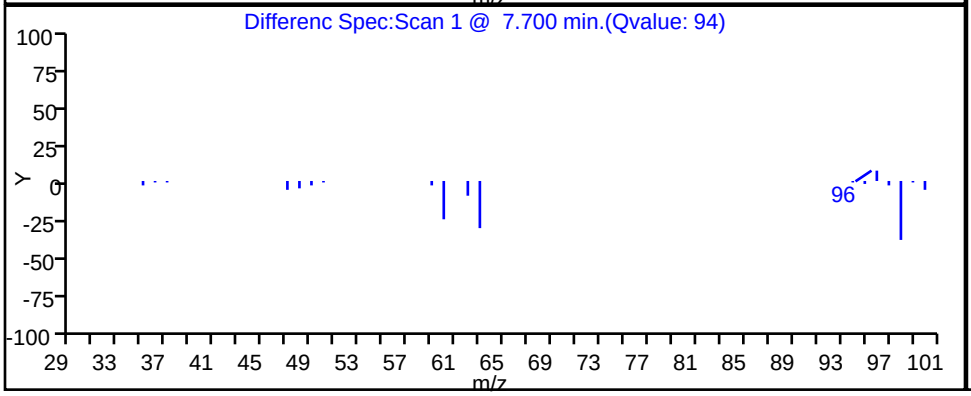








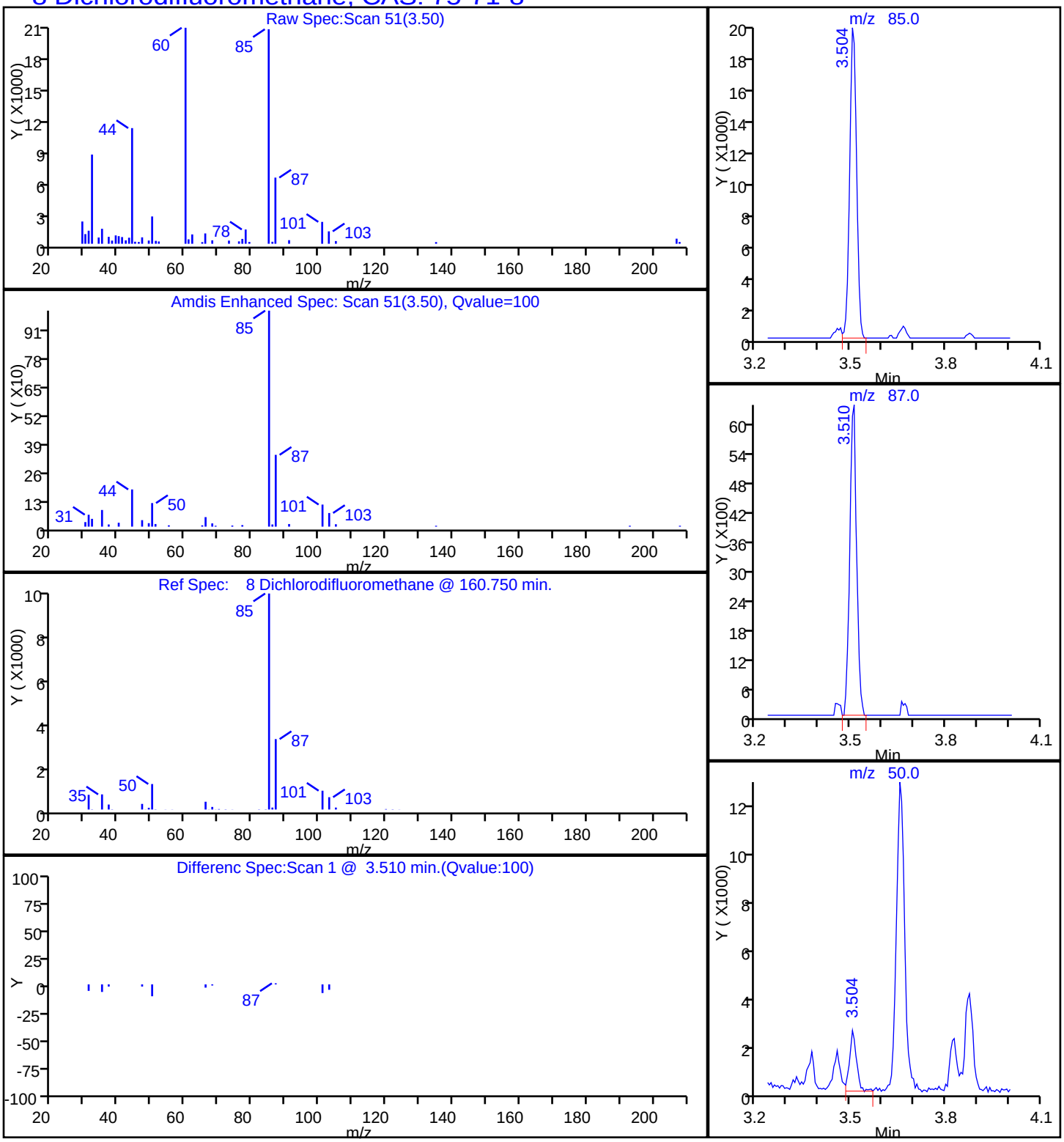




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P106.D		
Injection Date:	10-Mar-2017 15:34:30	Instrument ID:	MG
Lims ID:	140-7358-A-1	Lab Sample ID:	140-7358-1
Client ID:	BLDG-C EFFLUENT		
Operator ID:	7126	ALS Bottle#:	6 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



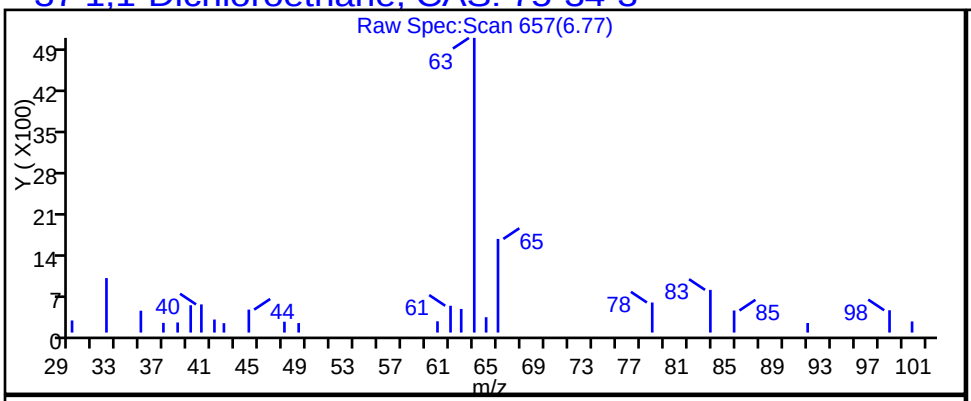
Report Date: 13-Mar-2017 11:59:37 Chrom Revision: 2.2 05-Mar-2017 11:38:00

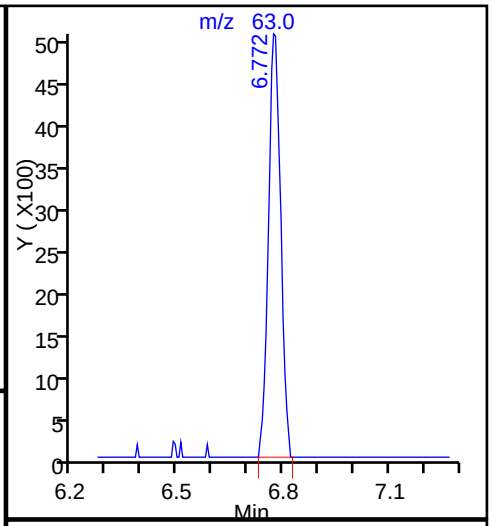
TestAmerica Knoxville

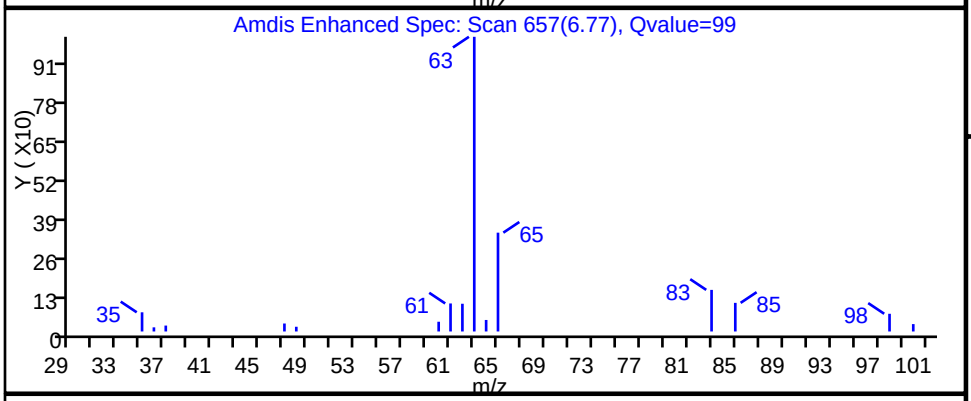
Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P106.D

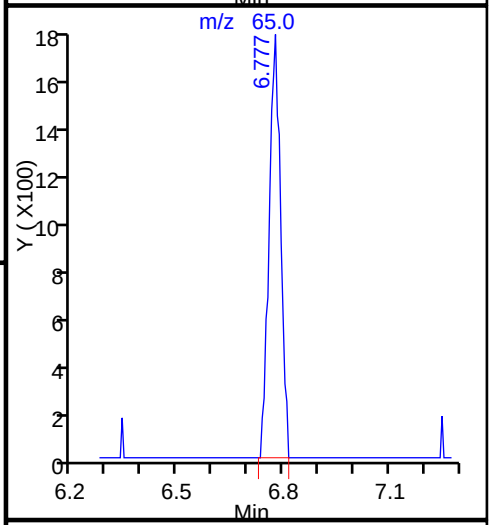
Injection Date:	10-Mar-2017 15:34:30	Instrument ID:	MG		
Lims ID:	140-7358-A-1	Lab Sample ID:	140-7358-1		
Client ID:	BLDG-C EFFLUENT				
Operator ID:	7126	ALS Bottle#:	6	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

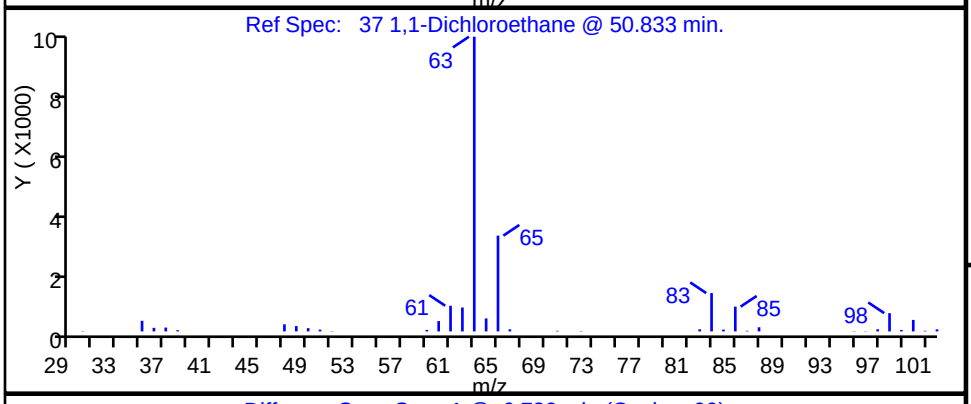
37 1,1-Dichloroethane, CAS: 75-34-3

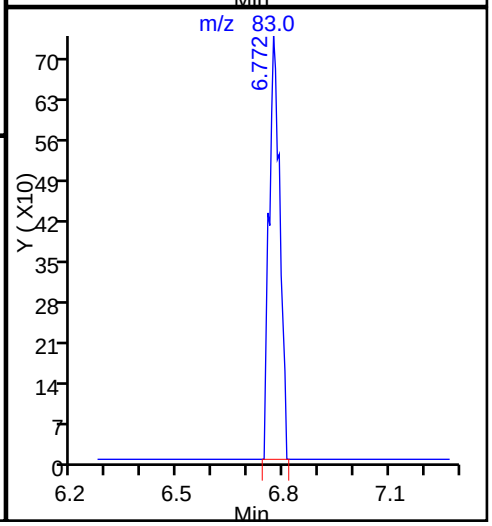


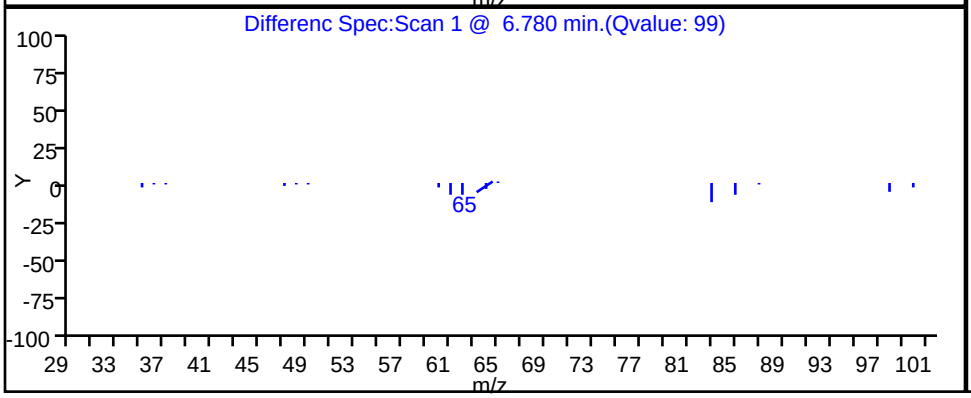








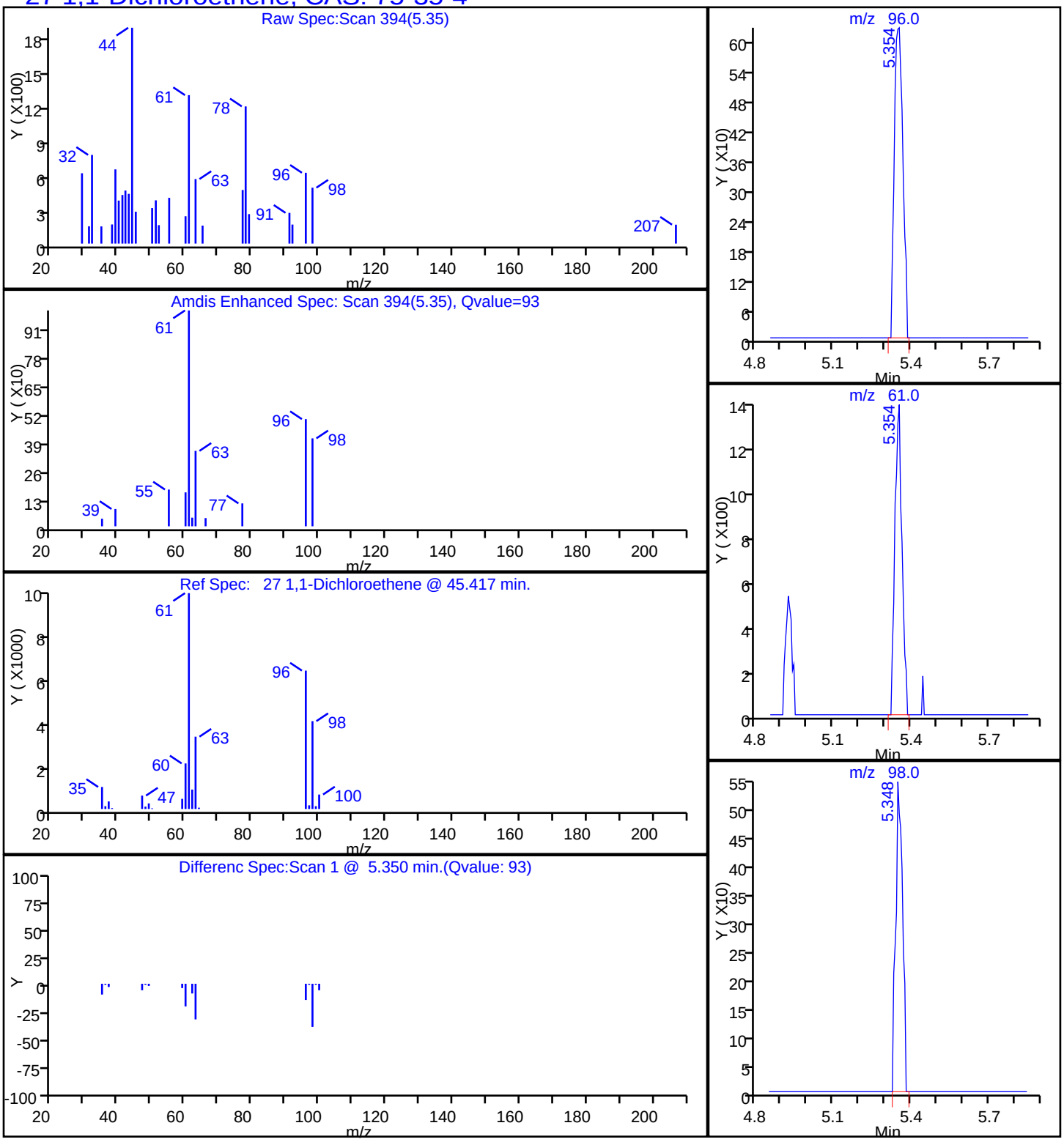




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P106.D		
Injection Date:	10-Mar-2017 15:34:30	Instrument ID:	MG
Lims ID:	140-7358-A-1	Lab Sample ID:	140-7358-1
Client ID:	BLDG-C EFFLUENT		
Operator ID:	7126	ALS Bottle#:	6 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P106.D		
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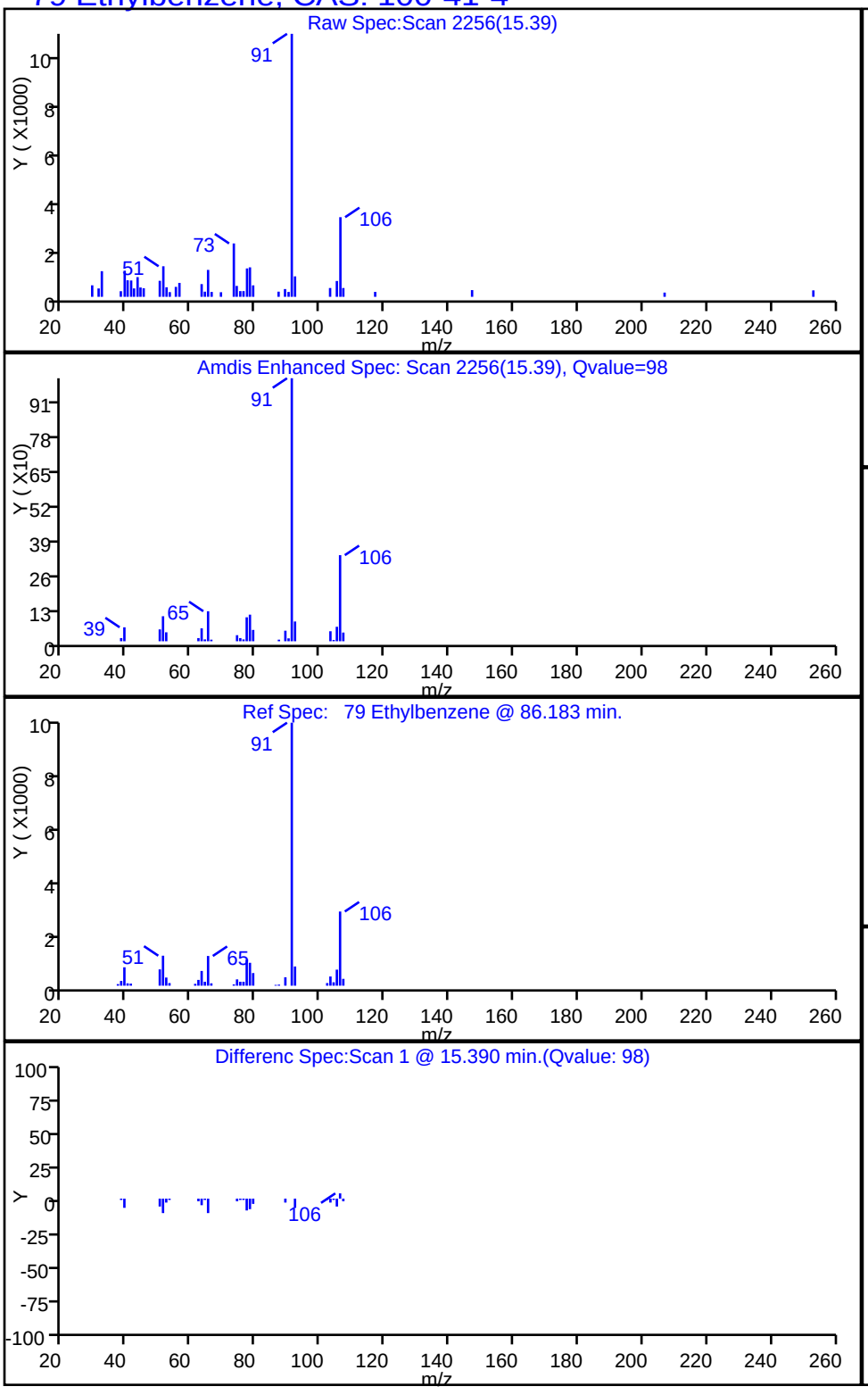
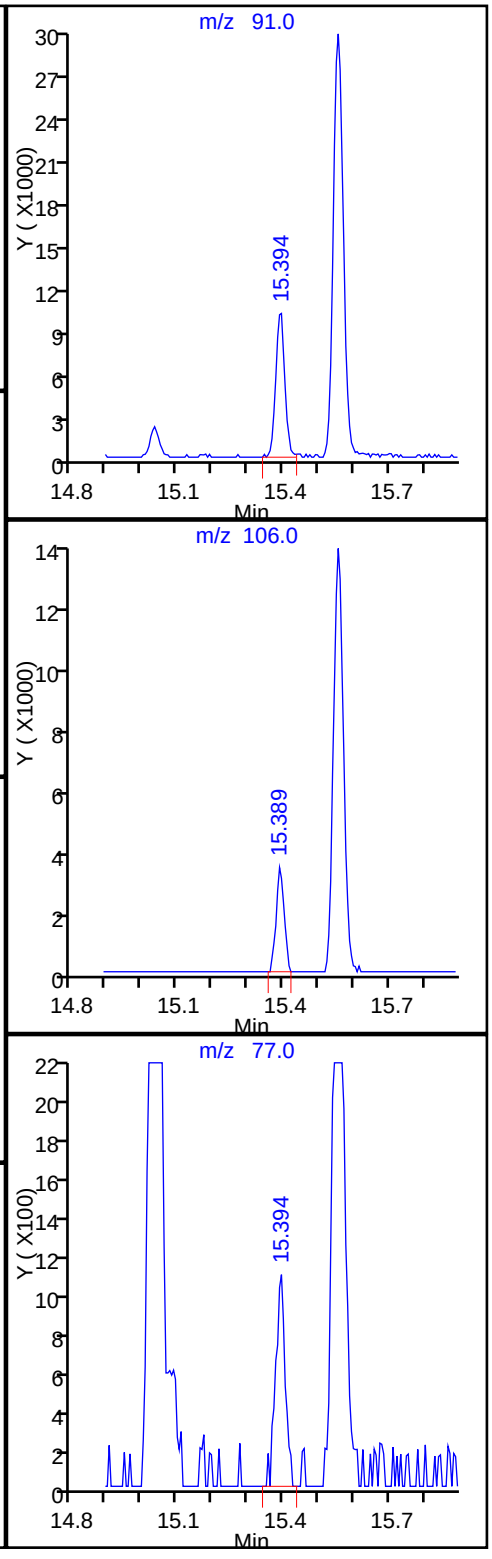
Lims ID:	140-7358-A-1	Lab Sample ID:	140-7358-1
Client ID:	BLDG-C EFFLUENT		
Operator ID:	7126	ALS Bottle#:	6 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

79 Ethylbenzene, CAS: 100-41-4

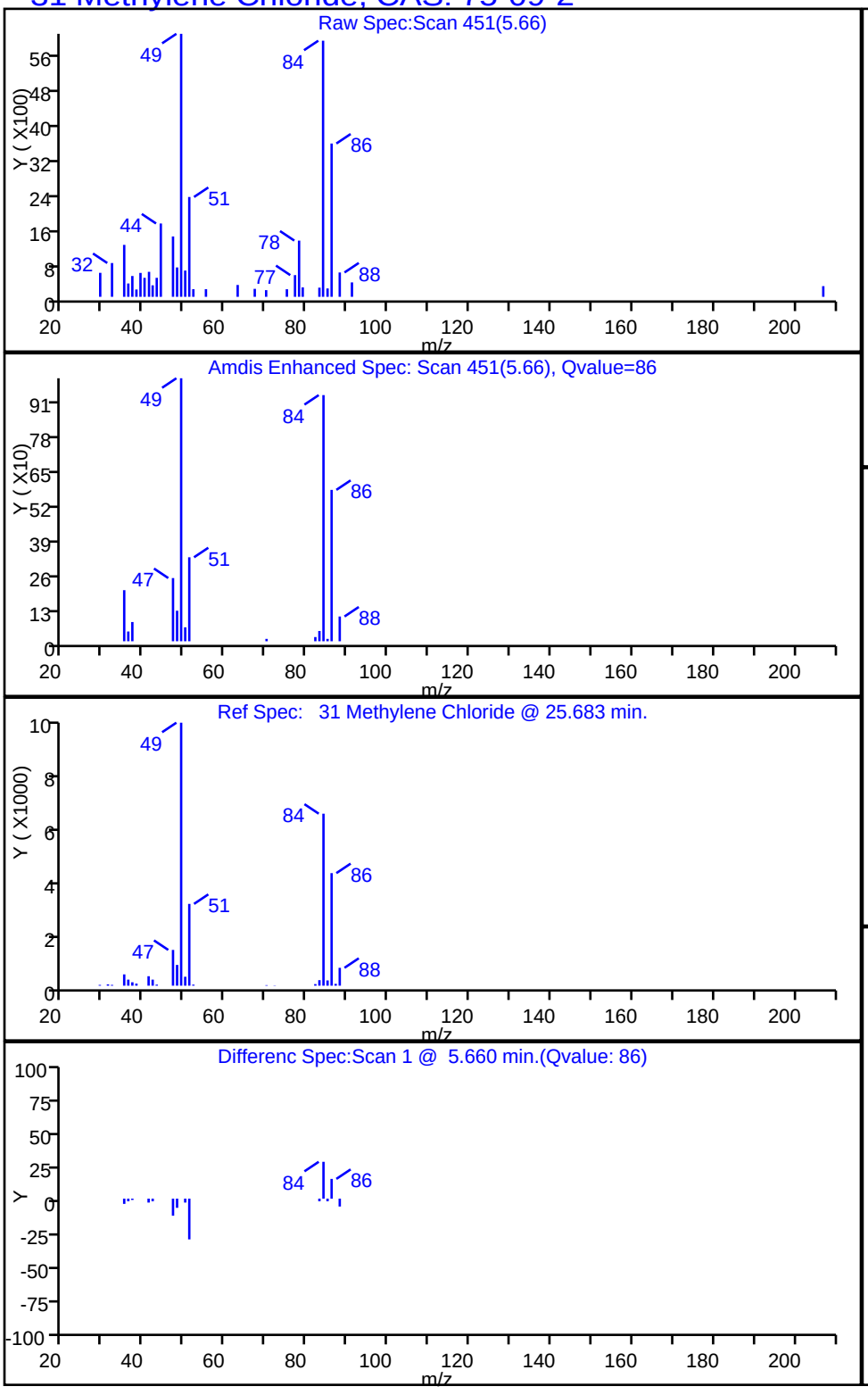


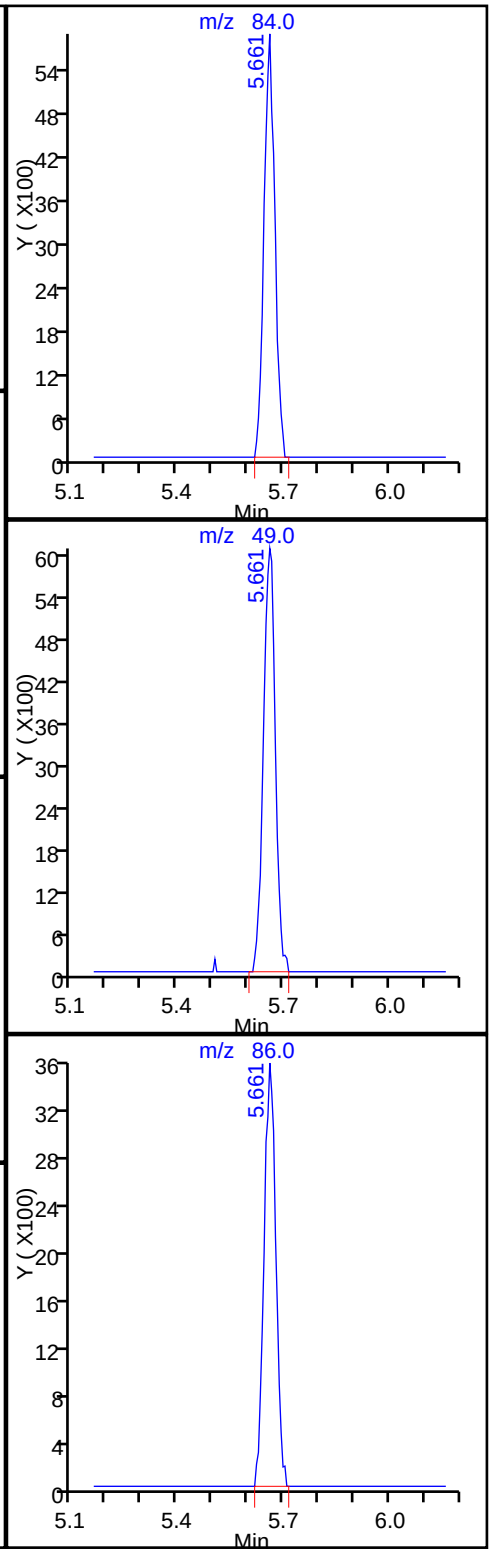


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P106.D				
Injection Date:	10-Mar-2017 15:34:30	Instrument ID:	MG		
Lims ID:	140-7358-A-1	Lab Sample ID:	140-7358-1		
Client ID:	BLDG-C EFFLUENT				
Operator ID:	7126	ALS Bottle#:	6	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

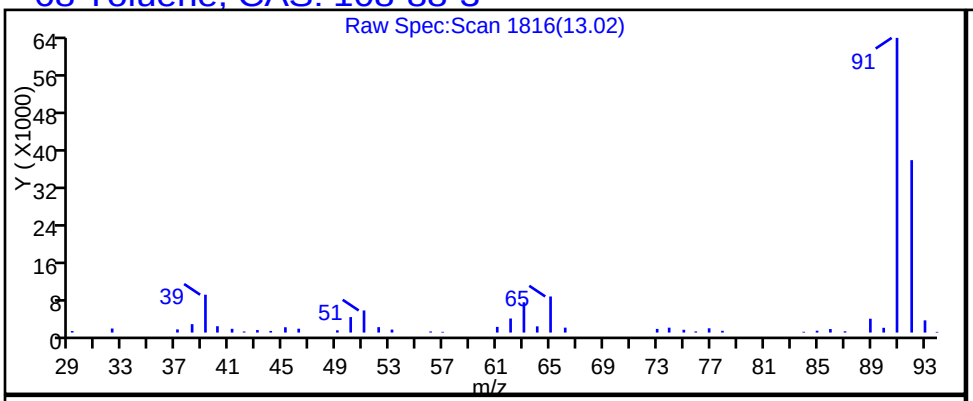
31 Methylene Chloride, CAS: 75-09-2

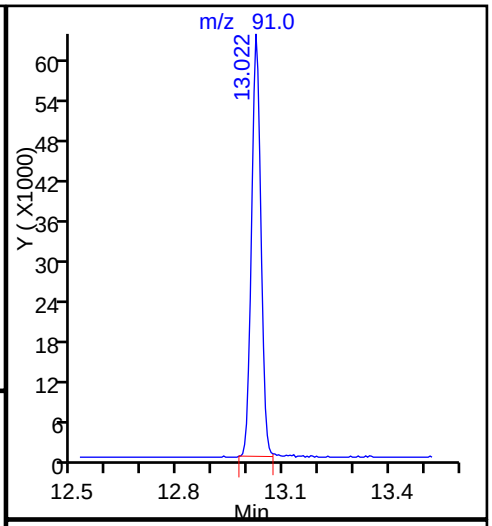


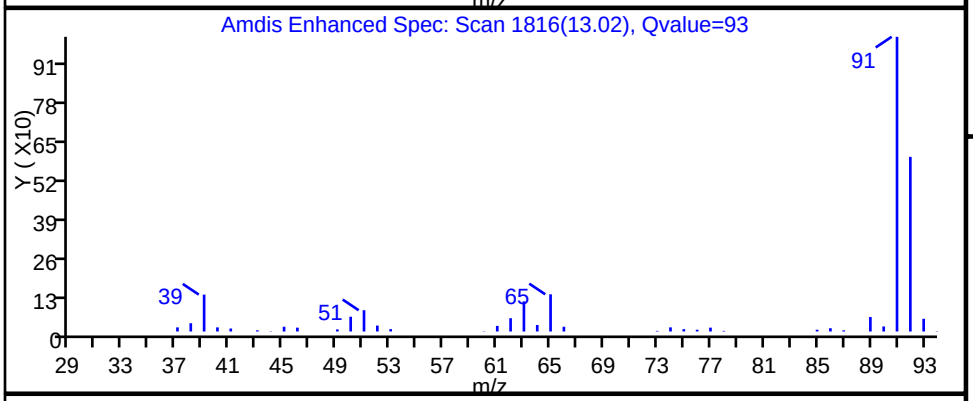


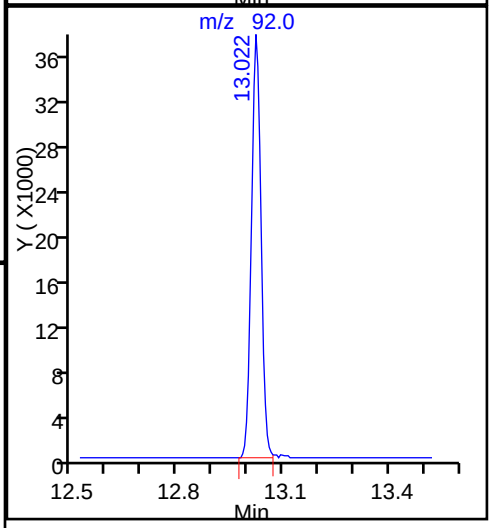
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P106.D				
Injection Date:	10-Mar-2017 15:34:30	Instrument ID:	MG		
Lims ID:	140-7358-A-1	Lab Sample ID:	140-7358-1		
Client ID:	BLDG-C EFFLUENT				
Operator ID:	7126	ALS Bottle#:	6	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

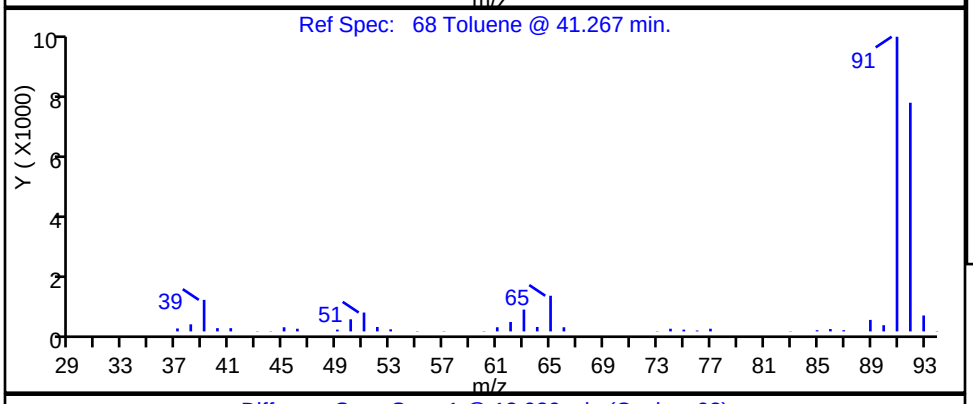
68 Toluene, CAS: 108-88-3

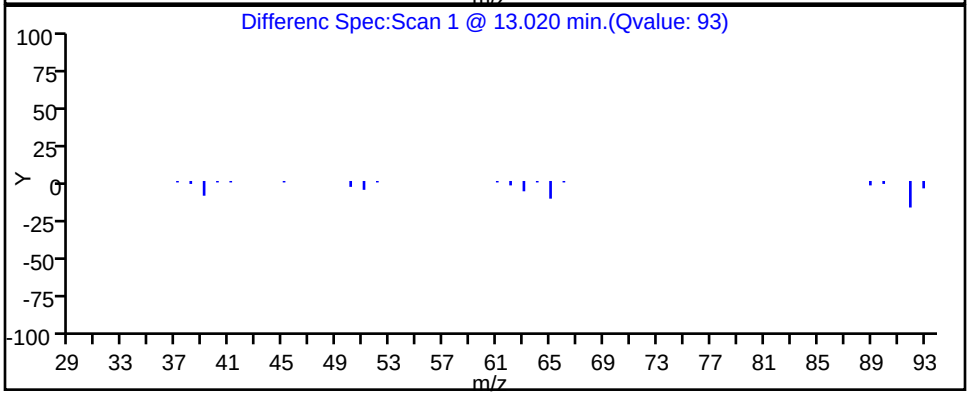












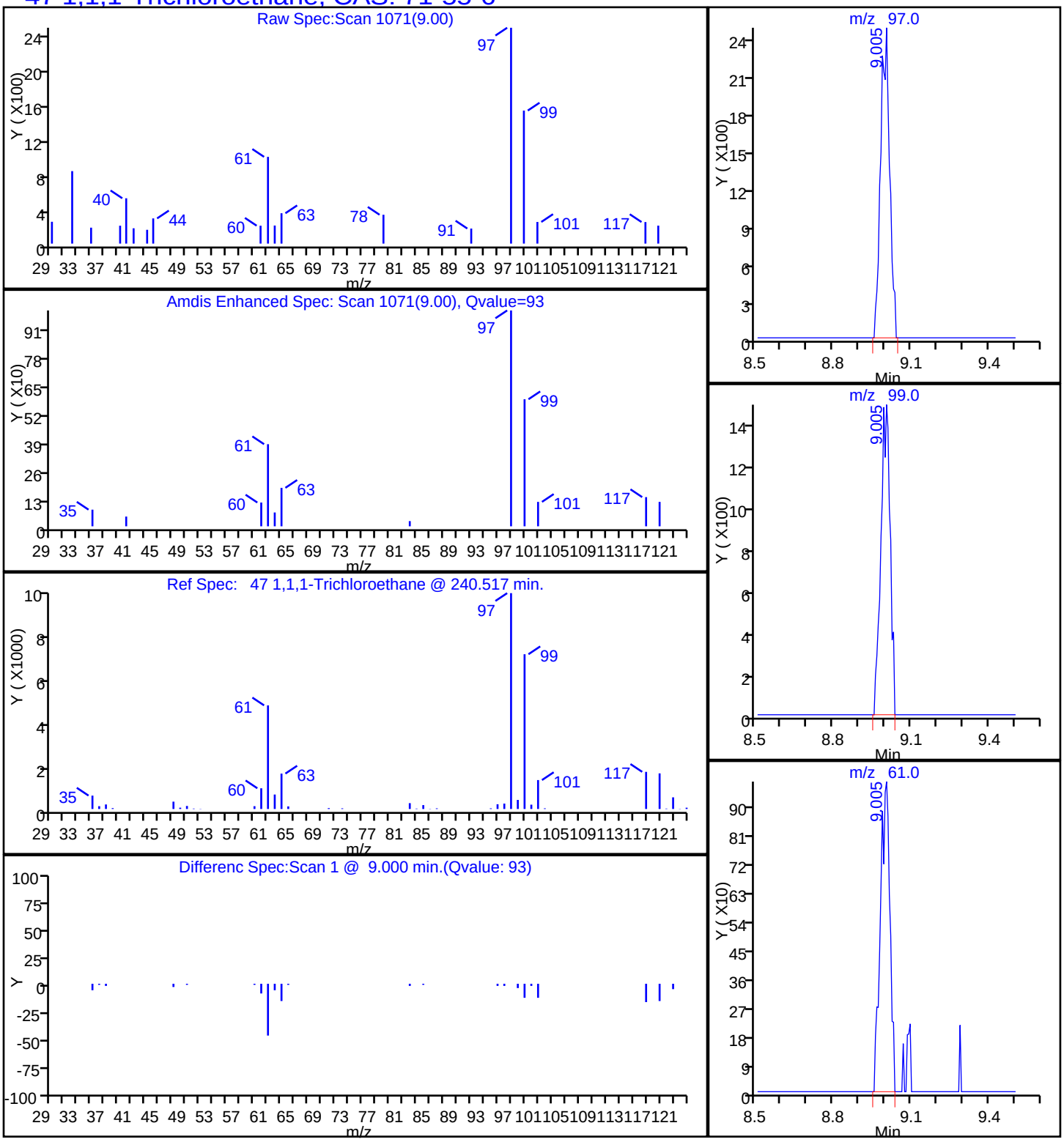
Report Date: 13-Mar-2017 11:59:37 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P106.D

Injection Date:	10-Mar-2017 15:34:30	Instrument ID:	MG		
Lims ID:	140-7358-A-1	Lab Sample ID:	140-7358-1		
Client ID:	BLDG-C EFFLUENT				
Operator ID:	7126	ALS Bottle#:	6	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

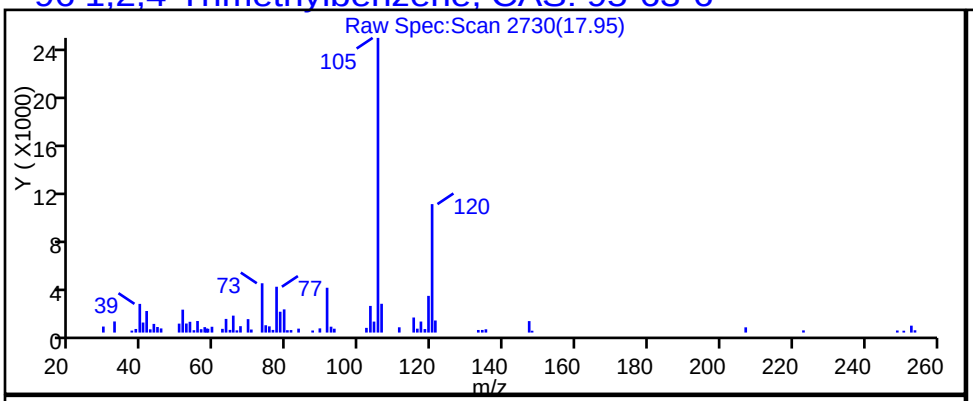
47 1,1,1-Trichloroethane, CAS: 71-55-6

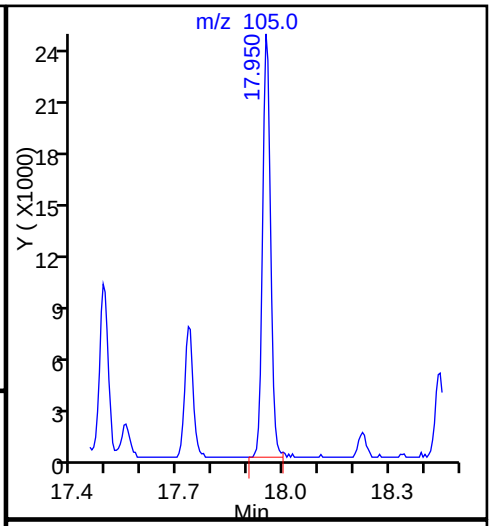


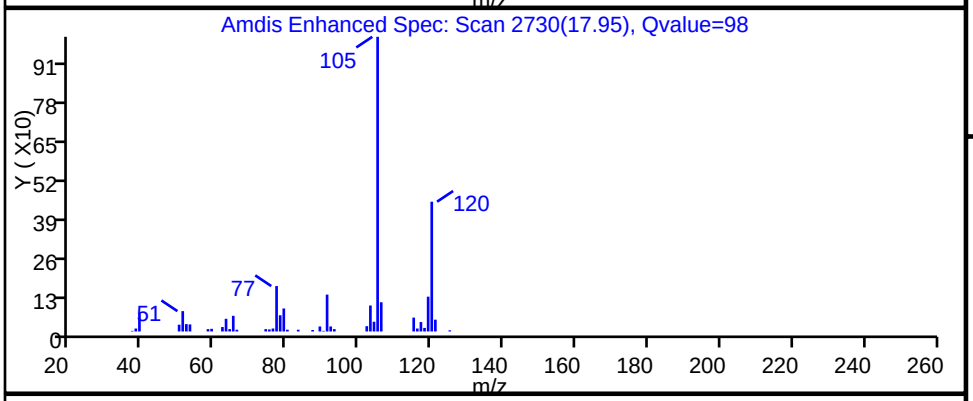
TestAmerica Knoxville

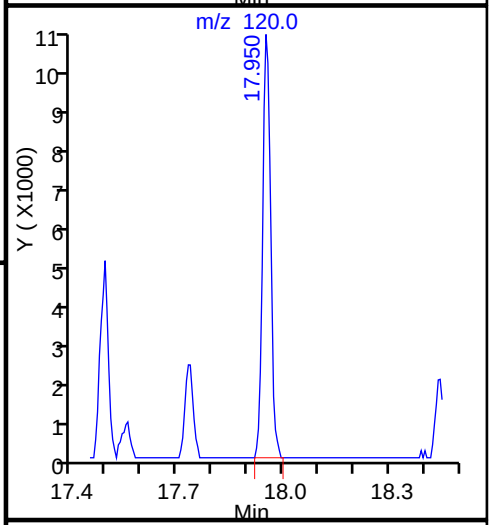
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P106.D		
Injection Date:	10-Mar-2017 15:34:30	Instrument ID:	MG
Lims ID:	140-7358-A-1	Lab Sample ID:	140-7358-1
Client ID:	BLDG-C EFFLUENT		
Operator ID:	7126	ALS Bottle#:	6 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

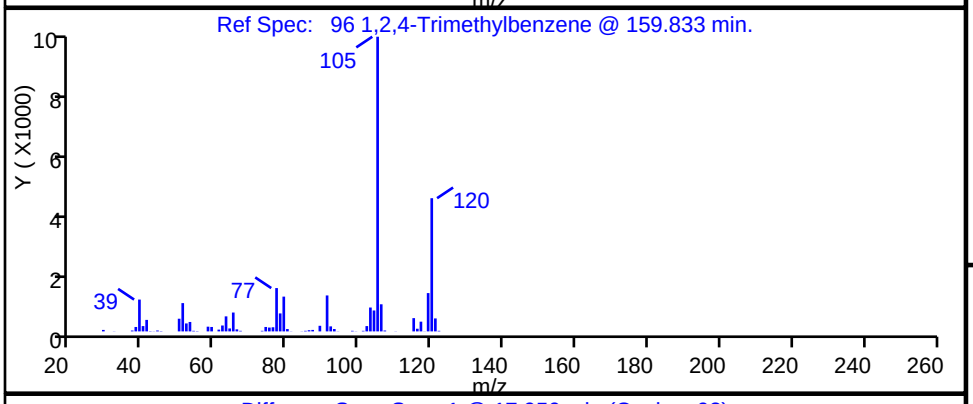
96 1,2,4-Trimethylbenzene, CAS: 95-63-6

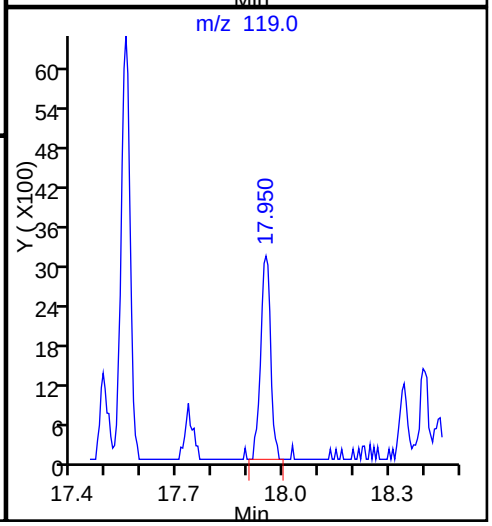


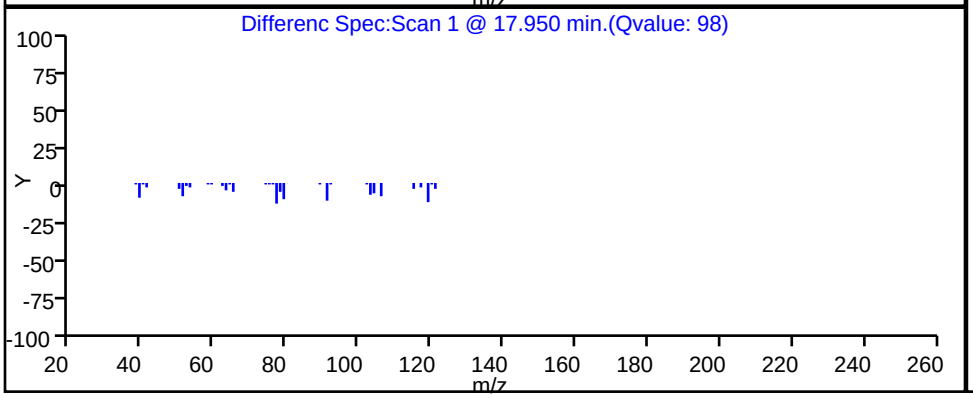








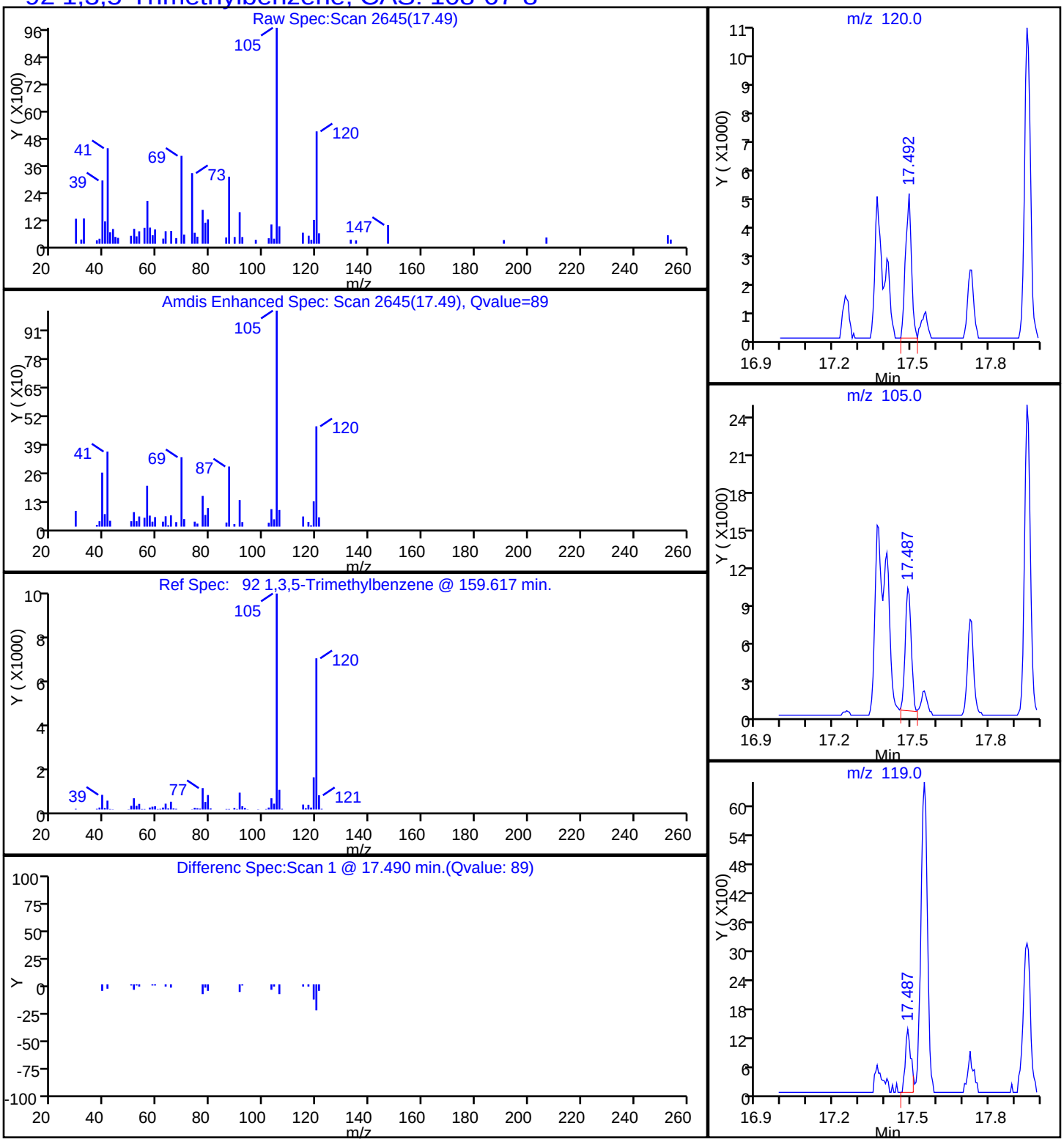




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P106.D		
Injection Date:	10-Mar-2017 15:34:30	Instrument ID:	MG
Lims ID:	140-7358-A-1	Lab Sample ID:	140-7358-1
Client ID:	BLDG-C EFFLUENT		
Operator ID:	7126	ALS Bottle#:	6 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

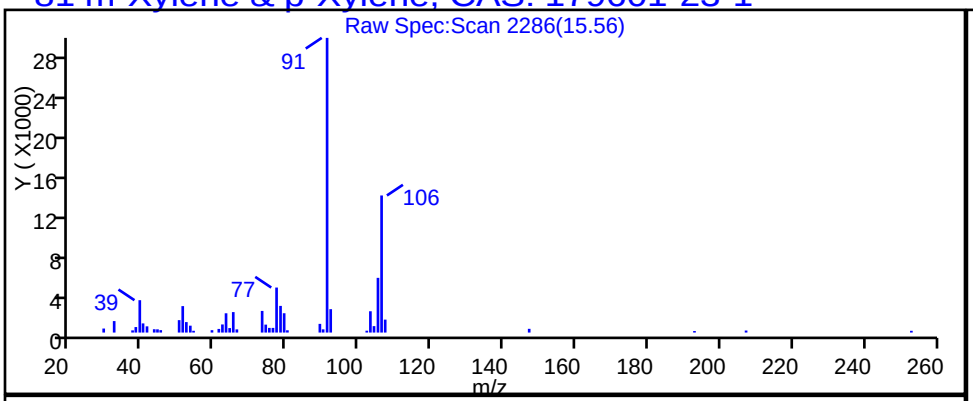
92 1,3,5-Trimethylbenzene, CAS: 108-67-8

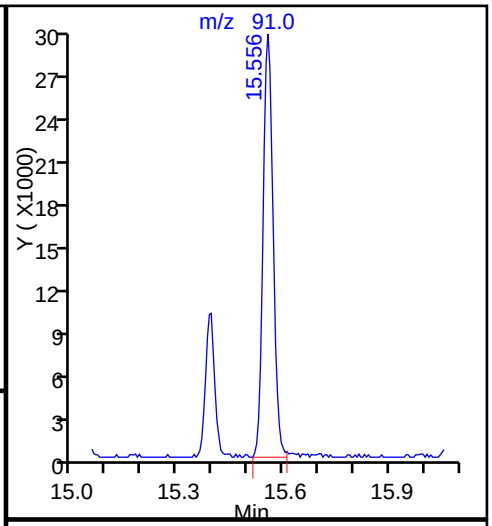


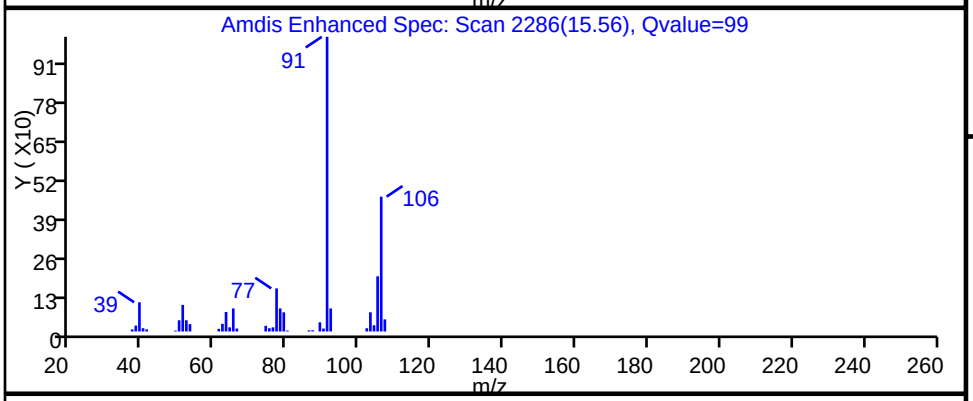
TestAmerica Knoxville

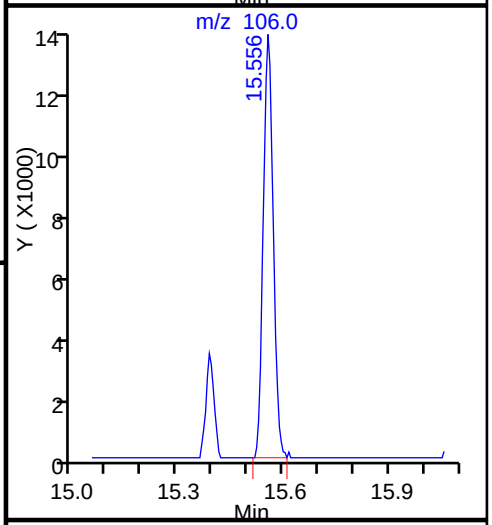
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P106.D		
Injection Date:	10-Mar-2017 15:34:30	Instrument ID:	MG
Lims ID:	140-7358-A-1	Lab Sample ID:	140-7358-1
Client ID:	BLDG-C EFFLUENT		
Operator ID:	7126	ALS Bottle#:	6 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

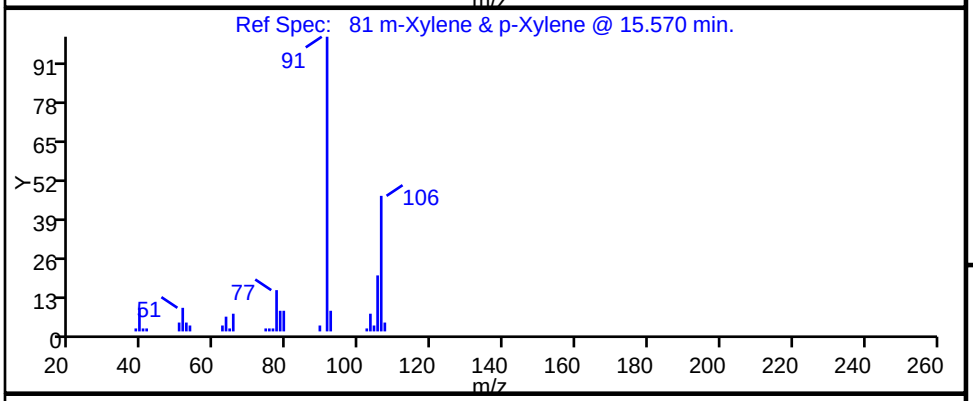
81 m-Xylene & p-Xylene, CAS: 179601-23-1

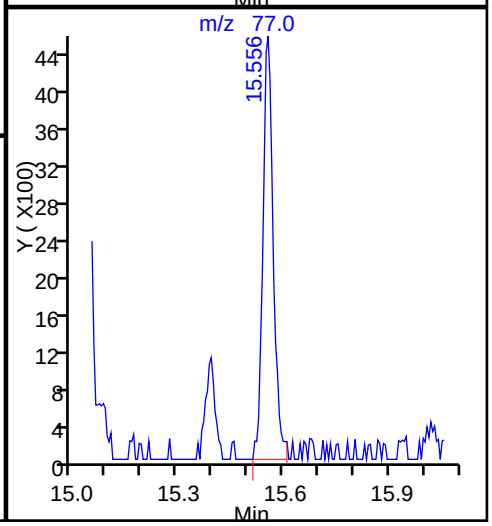


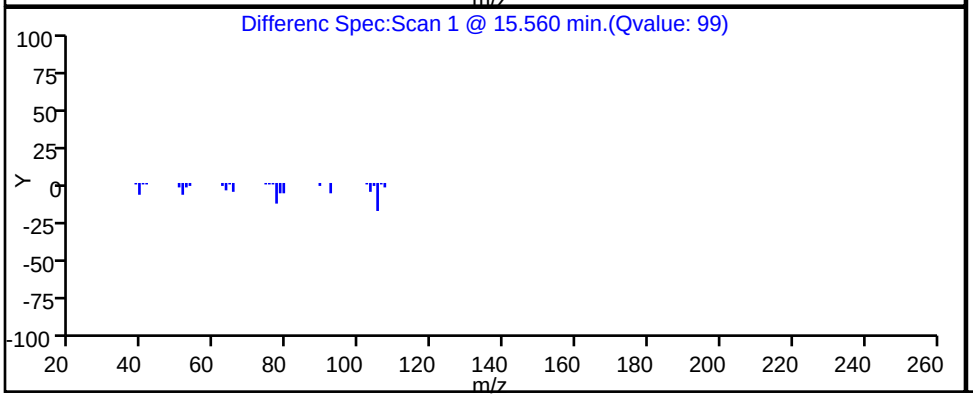








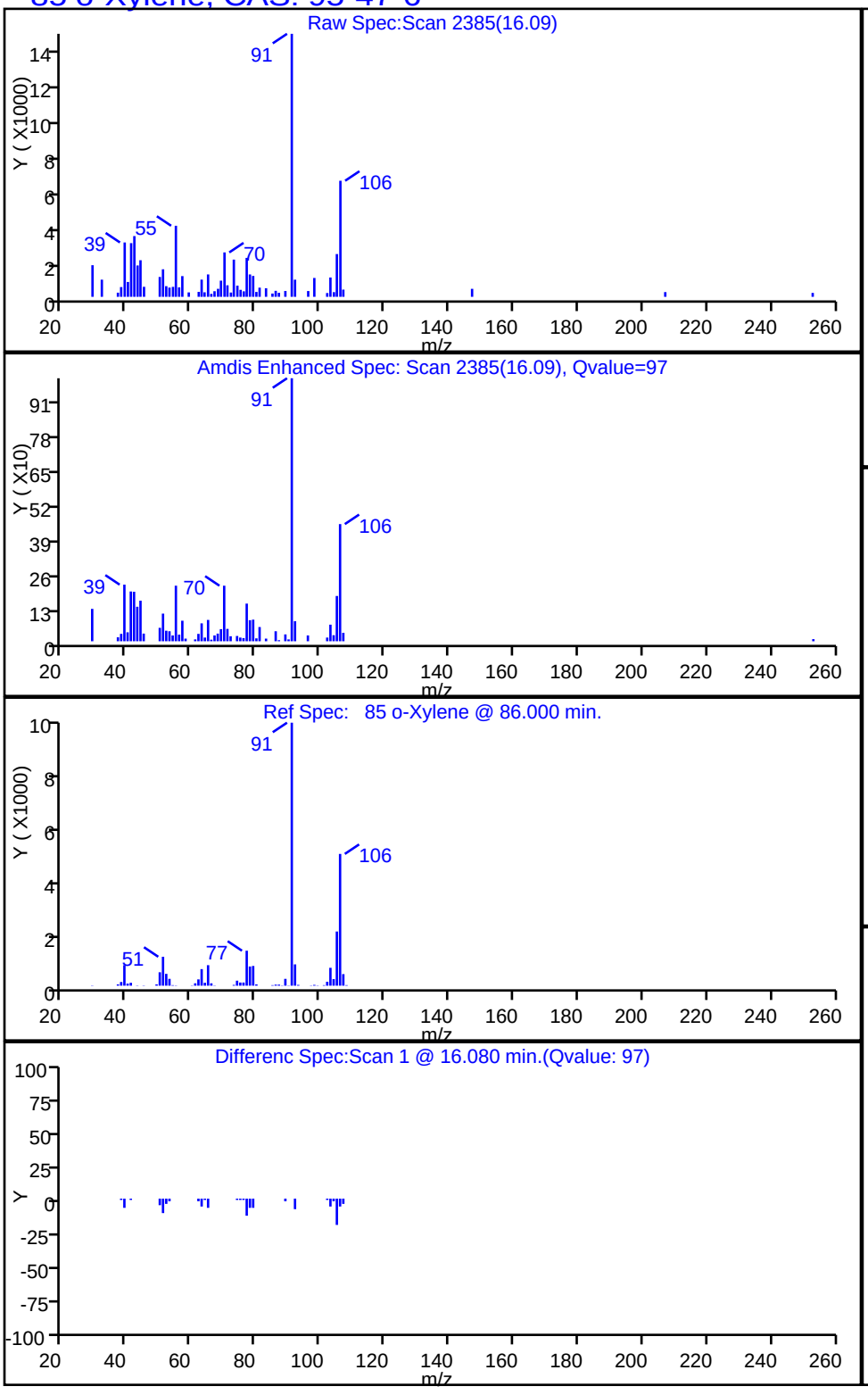


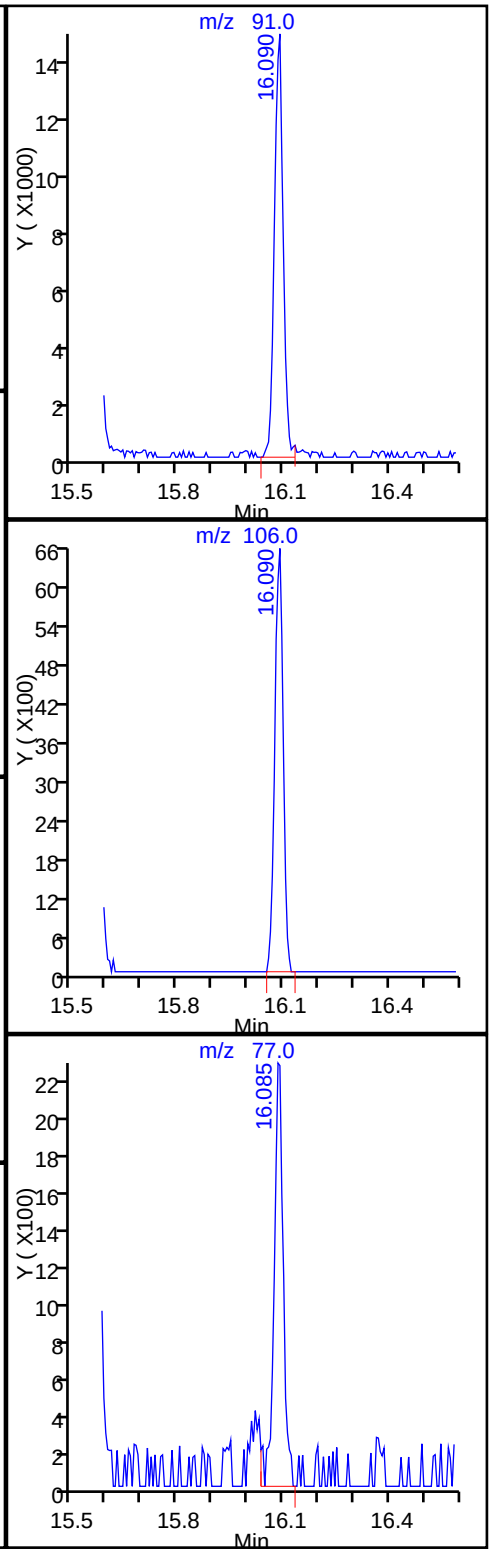


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P106.D		
Injection Date:	10-Mar-2017 15:34:30	Instrument ID:	MG
Lims ID:	140-7358-A-1	Lab Sample ID:	140-7358-1
Client ID:	BLDG-C EFFLUENT		
Operator ID:	7126	ALS Bottle#:	6 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

85 o-Xylene, CAS: 95-47-6





FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7358-1

SDG No.:

Client Sample ID: BLDG-C MIDGAC | Lab Sample ID: 140-7358-2

Matrix: Air | Lab File ID: GC10P107.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 13:48

Sample wt/vol: 100(mL) | Date Analyzed: 03/10/2017 16:15

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9158 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.7		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.2		0.40	0.075
67-66-3	Chloroform	119.38	0.14	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.43		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.17	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.70	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	10		0.40	0.080
108-88-3	Toluene	92.14	1.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.97		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.10	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.87		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7358-1

SDG No.:

Client Sample ID: BLDG-C MIDGAC | Lab Sample ID: 140-7358-2

Matrix: Air | Lab File ID: GC10P107.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 13:48

Sample wt/vol: 100(mL) | Date Analyzed: 03/10/2017 16:15

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9158 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	5.3		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.4		1.4	0.27
67-66-3	Chloroform	119.38	0.66	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	1.7		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.69	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.66	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	70		2.7	0.54
108-88-3	Toluene	92.14	4.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	5.3		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.55	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.8		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P107.D
Lims ID: 140-7358-A-2
Client ID: BLDG-C MIDGAC
Sample Type: Client
Inject. Date: 10-Mar-2017 16:15:30 ALS Bottle#: 7 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004228-011
Misc. Info.: 140-7358-a-2
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Mar-2017 12:00:15 Calib Date: 02-Mar-2017 20:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: barlozhetskayaa Date: 13-Mar-2017 12:00:15

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.991	8.001	-0.010	86	306080	4.00	
* 2 1,4-Difluorobenzene	114	10.158	10.169	-0.011	95	1583822	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.033	15.038	-0.005	87	1544959	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.705	16.710	-0.005	94	1217422	4.23	
6 Chlorodifluoromethane	67	3.456	3.461	-0.005	96	7449	0.2489	
8 Dichlorodifluoromethane	85	3.510	3.515	-0.005	100	29071	0.1071	
31 Methylene Chloride	84	5.650	5.666	-0.016	87	10282	0.1394	
37 1,1-Dichloroethane	63	6.772	6.783	-0.011	97	5081	0.0339	
42 cis-1,2-Dichloroethene	96	7.683	7.699	-0.016	93	7324	0.0868	
44 Chloroform	83	8.012	8.028	-0.016	88	5487	0.0271	
47 1,1,1-Trichloroethane	97	8.994	9.004	-0.010	95	43200	0.1936	
49 Benzene	78	9.581	9.592	-0.011	97	81872	0.3300	
59 Trichloroethene	130	10.892	10.908	-0.016	89	2891	0.0203	
68 Toluene	91	13.022	13.027	-0.005	93	64979	0.2317	
76 Tetrachloroethene	129	14.197	14.203	-0.005	95	255892	2.07	
79 Ethylbenzene	91	15.389	15.394	-0.005	98	11131	0.0302	
81 m-Xylene & p-Xylene	91	15.556	15.567	-0.011	99	36036	0.1248	
85 o-Xylene	91	16.085	16.090	-0.005	95	14822	0.0501	
S 126 Xylenes, Total	100				0		0.1749	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

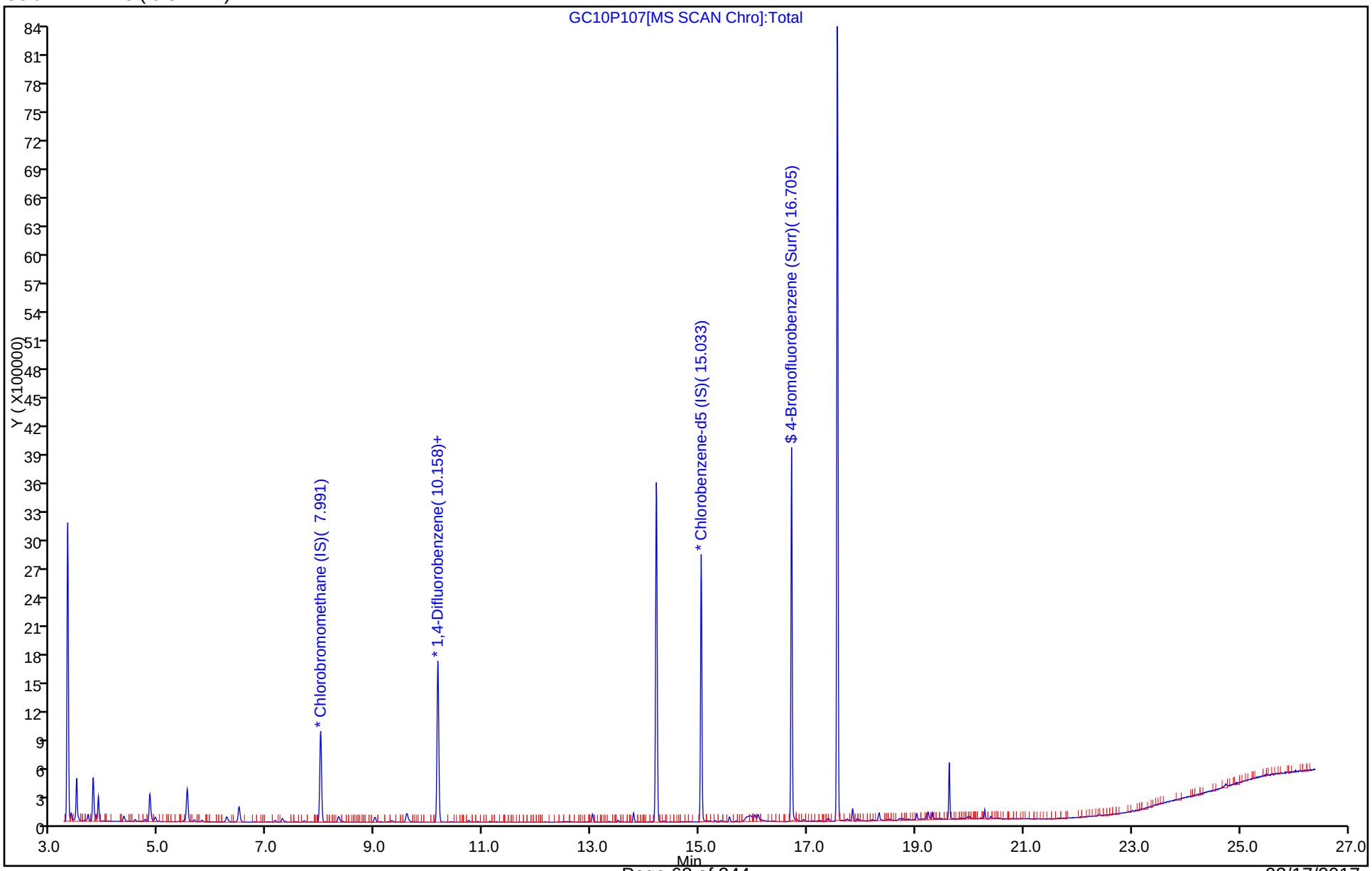
Report Date: 13-Mar-2017 12:00:16 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P107.D

Injection Date:	10-Mar-2017 16:15:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-7358-A-2	Lab Sample ID:	140-7358-2	Worklist Smp#:	11
Client ID:	BLDG-C MIDGAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P107.D				
Lims ID:	140-7358-A-2				
Client ID:	BLDG-C MIDGAC				
Sample Type:	Client				
Inject. Date:	10-Mar-2017 16:15:30	ALS Bottle#:	7	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004228-011				
Misc. Info.:	140-7358-a-2				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Mar-2017 12:00:15	Calib Date:	02-Mar-2017 20:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK020				

First Level Reviewer: barlozhetskayaa Date: 13-Mar-2017 12:00:15

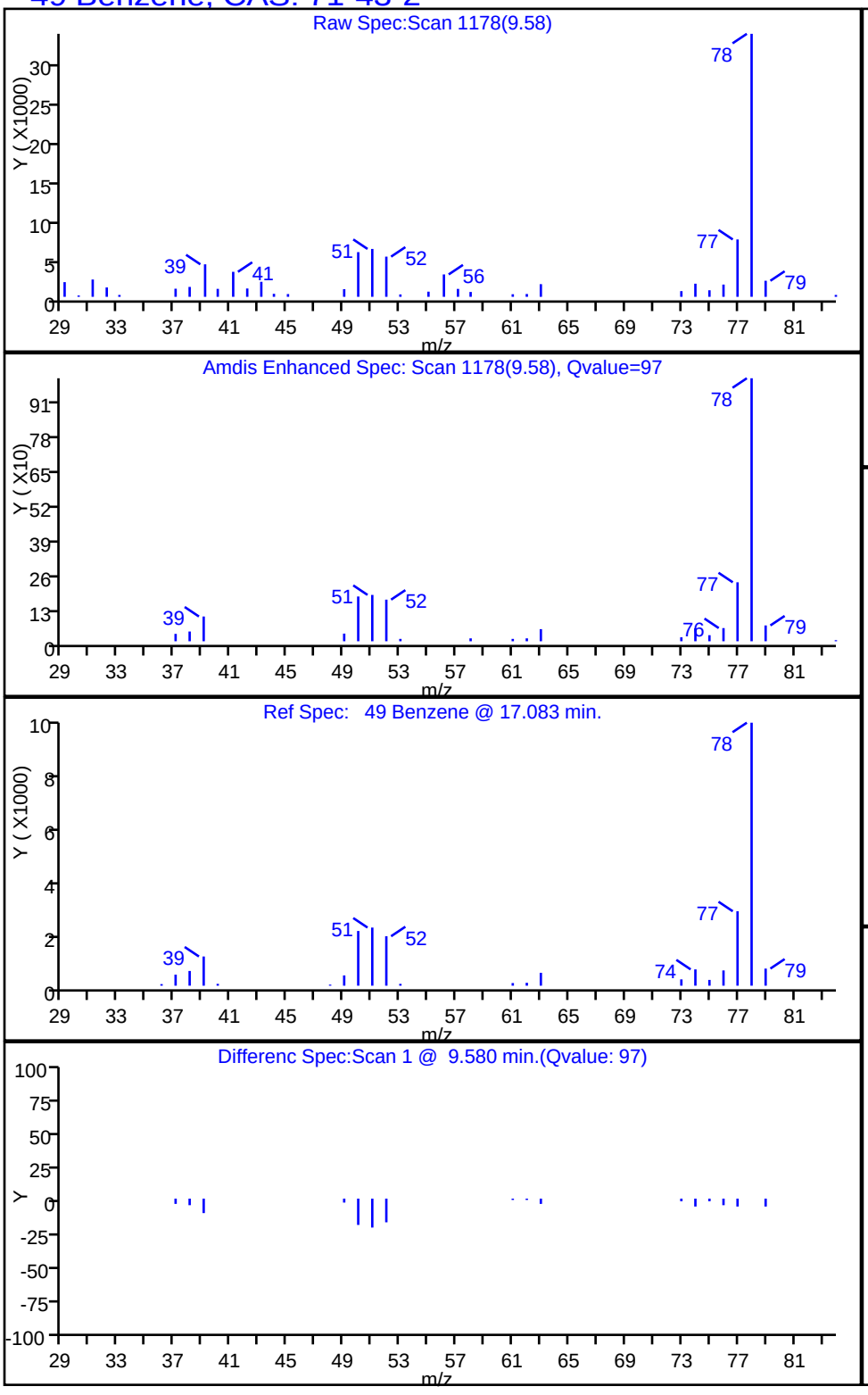
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.23	105.81

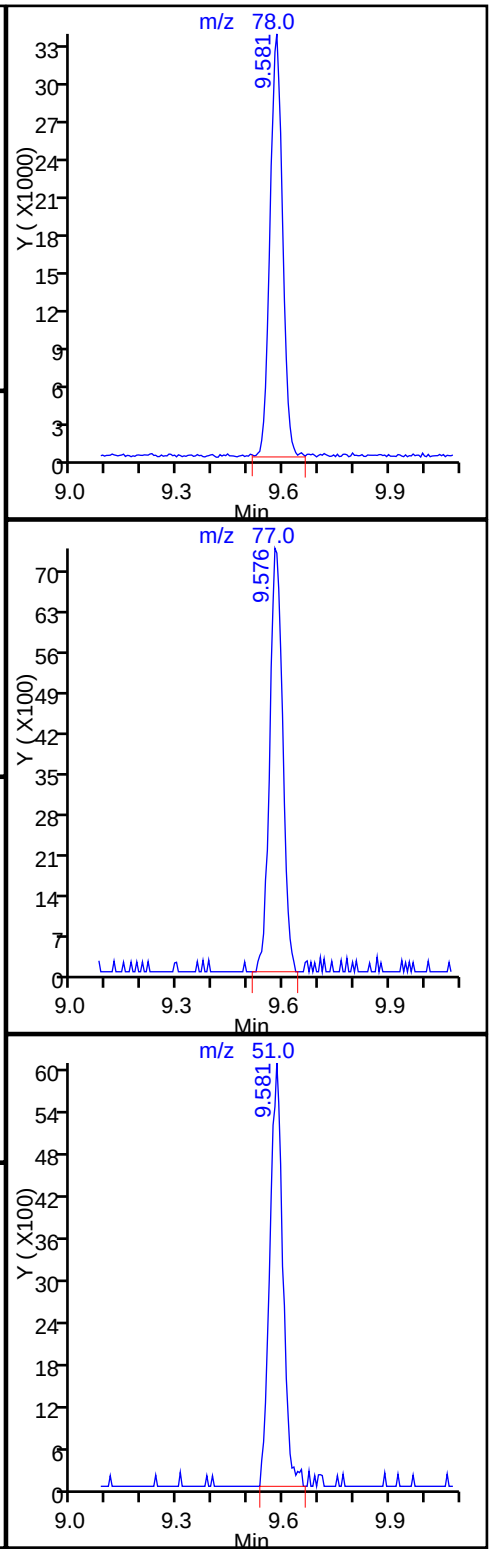
Report Date: 13-Mar-2017 12:00:16 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P107.D		
Injection Date:	10-Mar-2017 16:15:30	Instrument ID:	MG
Lims ID:	140-7358-A-2	Lab Sample ID:	140-7358-2
Client ID:	BLDG-C MIDGAC		
Operator ID:	7126	ALS Bottle#:	7 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

49 Benzene, CAS: 71-43-2

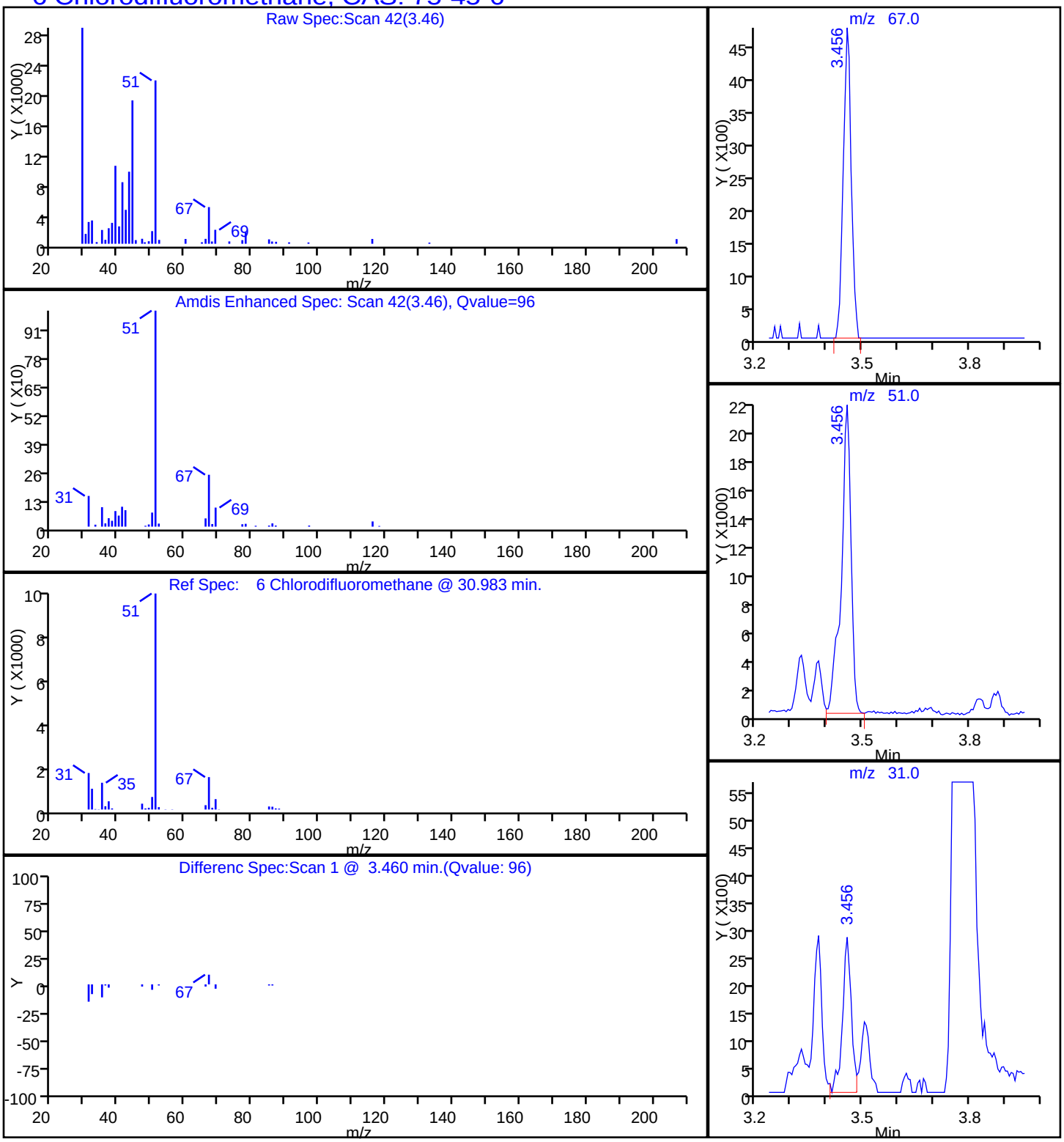




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P107.D				
Injection Date:	10-Mar-2017 16:15:30	Instrument ID:	MG		
Lims ID:	140-7358-A-2	Lab Sample ID:	140-7358-2		
Client ID:	BLDG-C MIDGAC				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

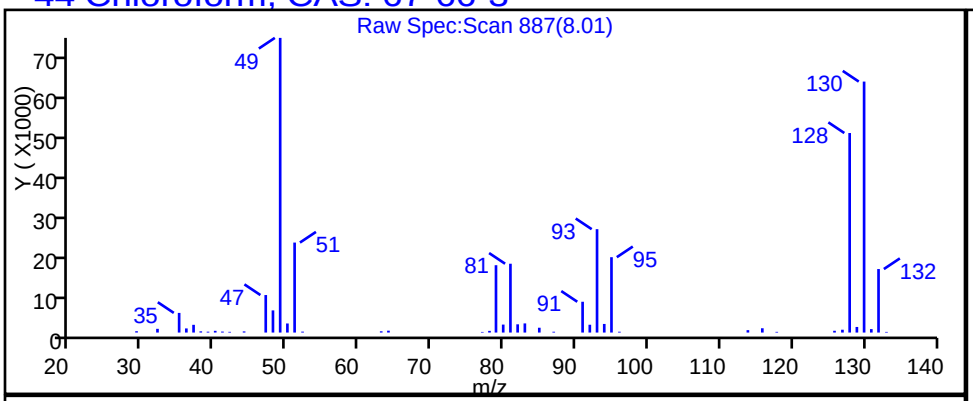
6 Chlorodifluoromethane, CAS: 75-45-6

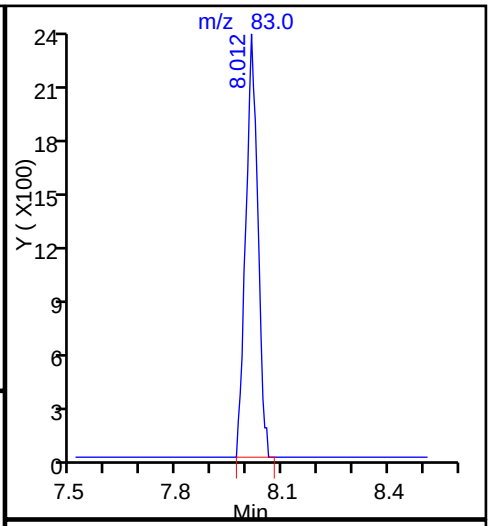


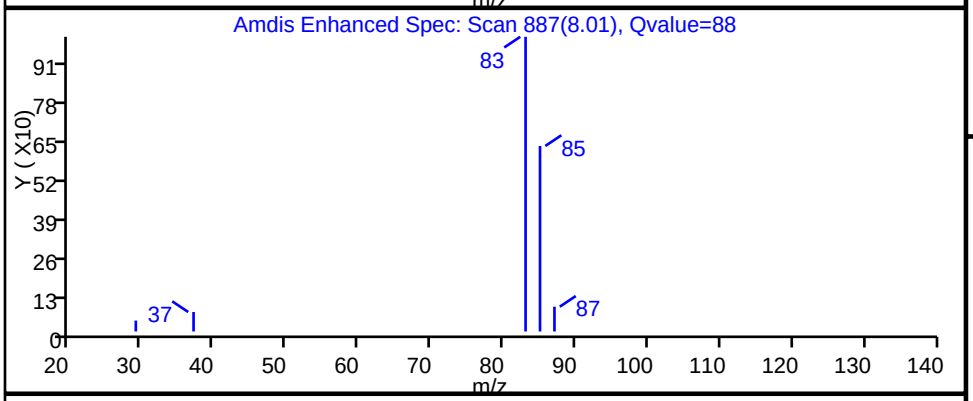
TestAmerica Knoxville

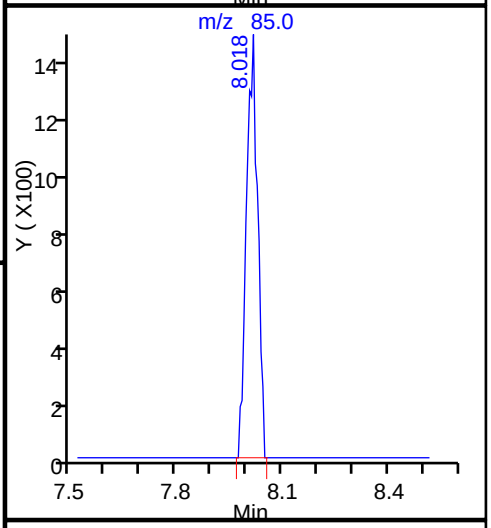
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P107.D		
Injection Date:	10-Mar-2017 16:15:30	Instrument ID:	MG
Lims ID:	140-7358-A-2	Lab Sample ID:	140-7358-2
Client ID:	BLDG-C MIDGAC		
Operator ID:	7126	ALS Bottle#:	7 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

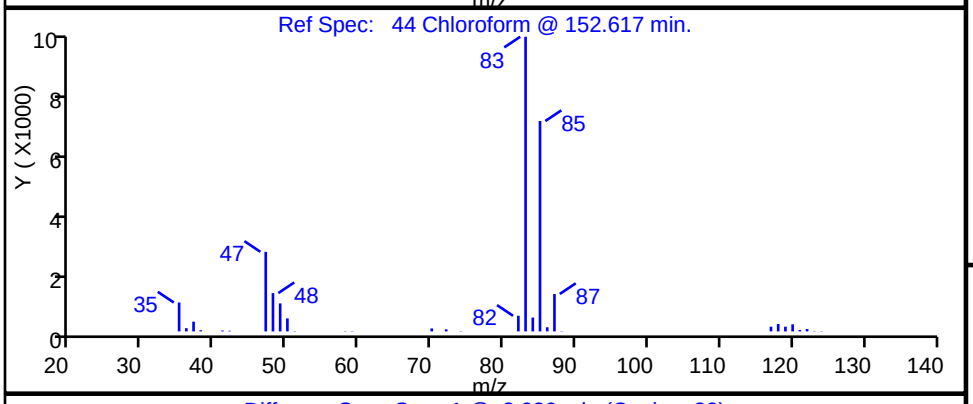
44 Chloroform, CAS: 67-66-3

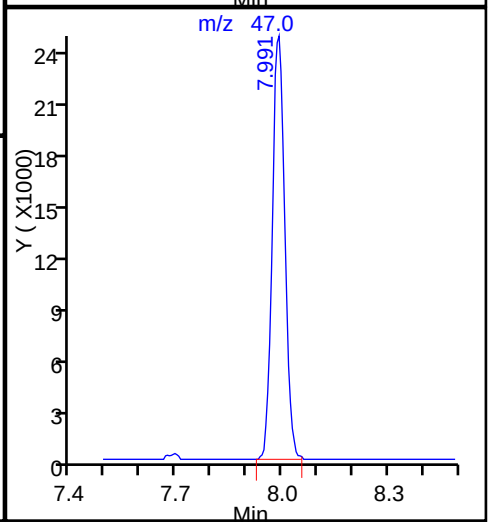


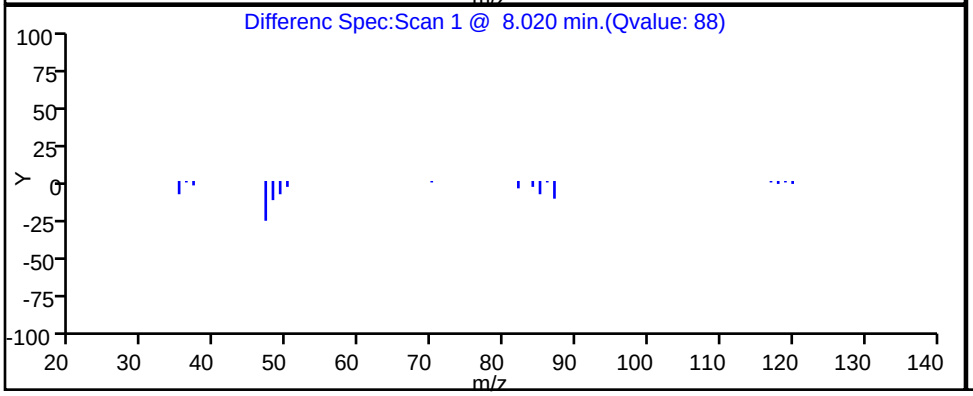








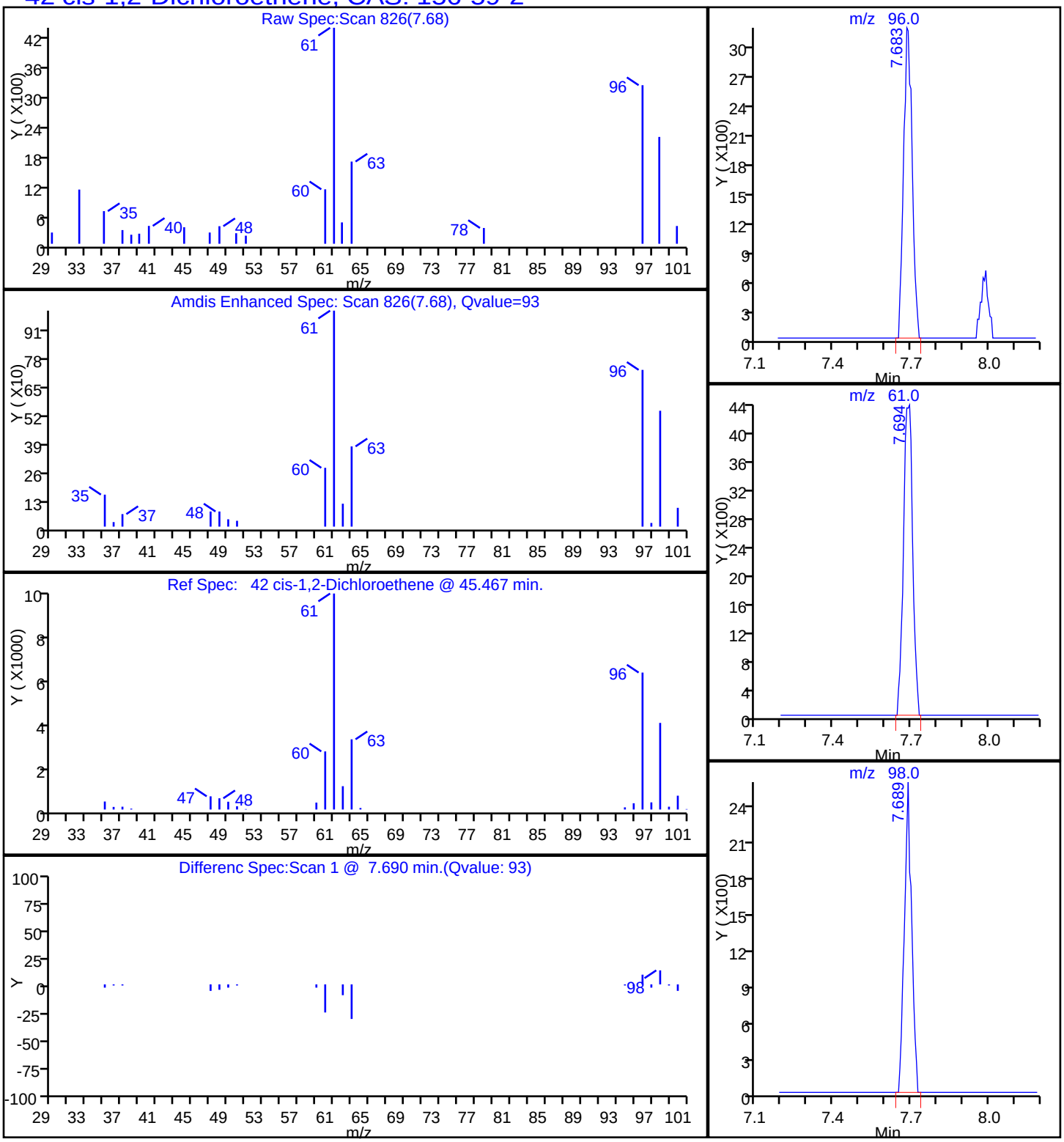




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P107.D				
Injection Date:	10-Mar-2017 16:15:30	Instrument ID:	MG		
Lims ID:	140-7358-A-2	Lab Sample ID:	140-7358-2		
Client ID:	BLDG-C MIDGAC				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

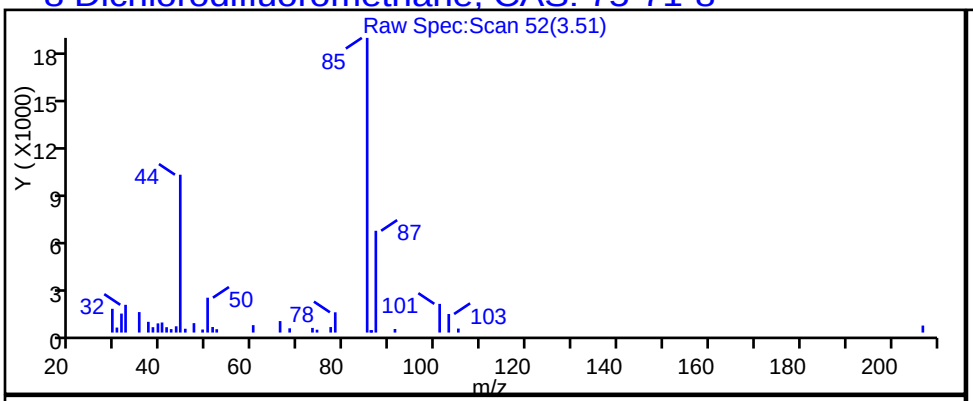
42 cis-1,2-Dichloroethene, CAS: 156-59-2

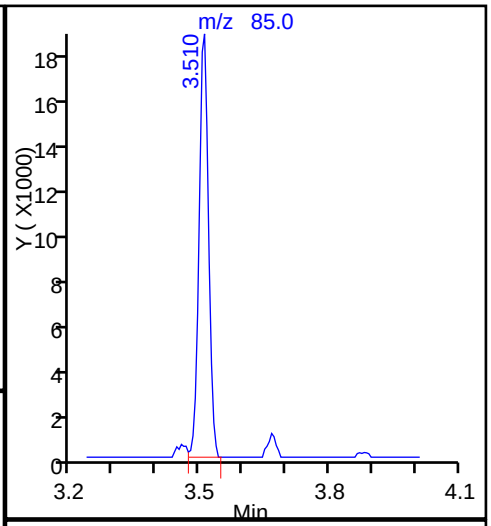


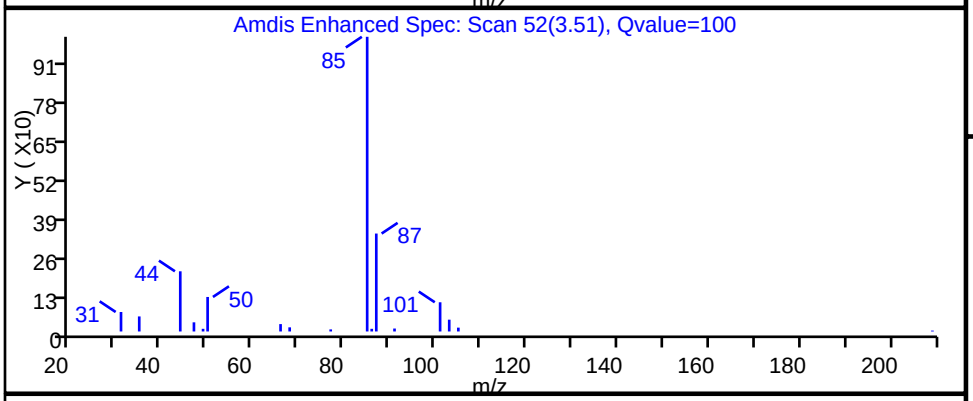
TestAmerica Knoxville

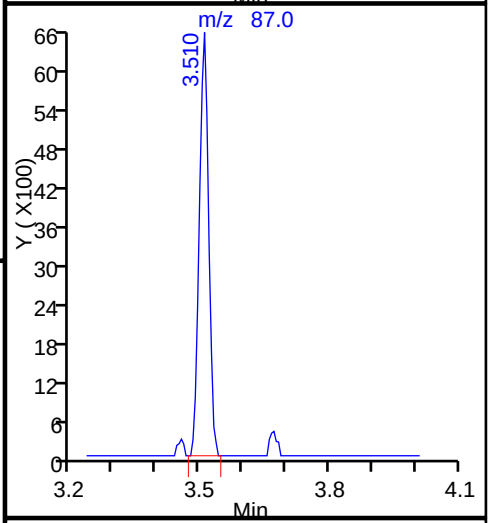
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P107.D				
Injection Date:	10-Mar-2017 16:15:30	Instrument ID:	MG		
Lims ID:	140-7358-A-2	Lab Sample ID:	140-7358-2		
Client ID:	BLDG-C MIDGAC				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

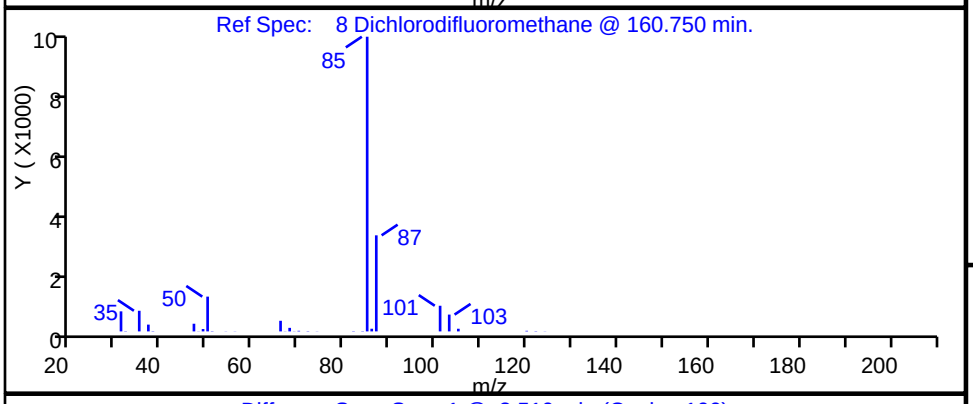
8 Dichlorodifluoromethane, CAS: 75-71-8

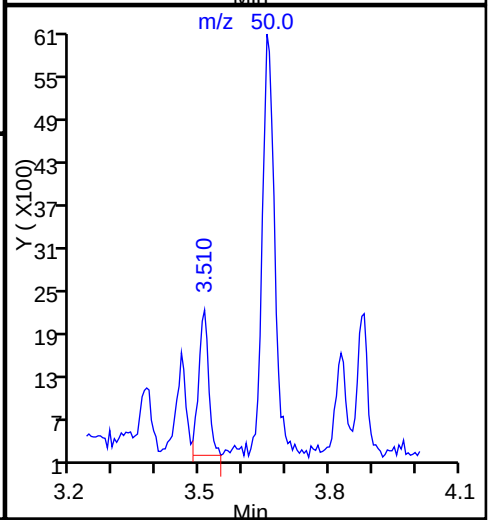


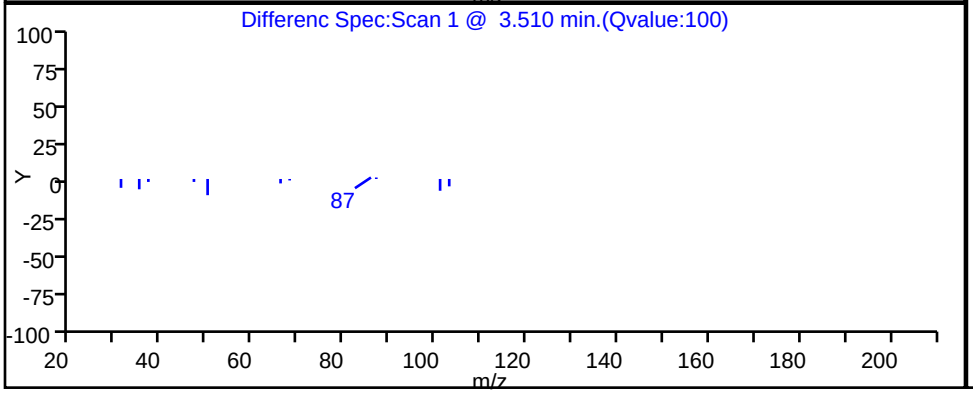








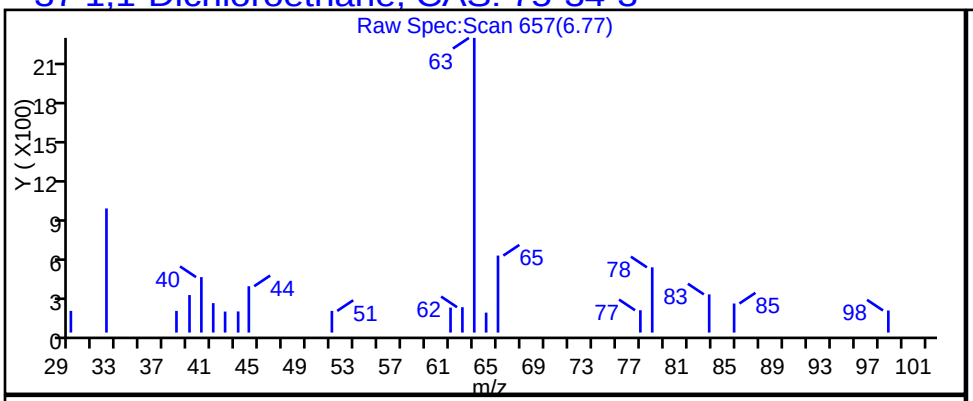


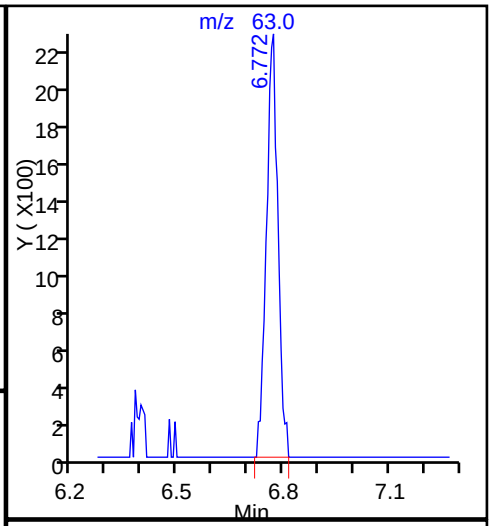


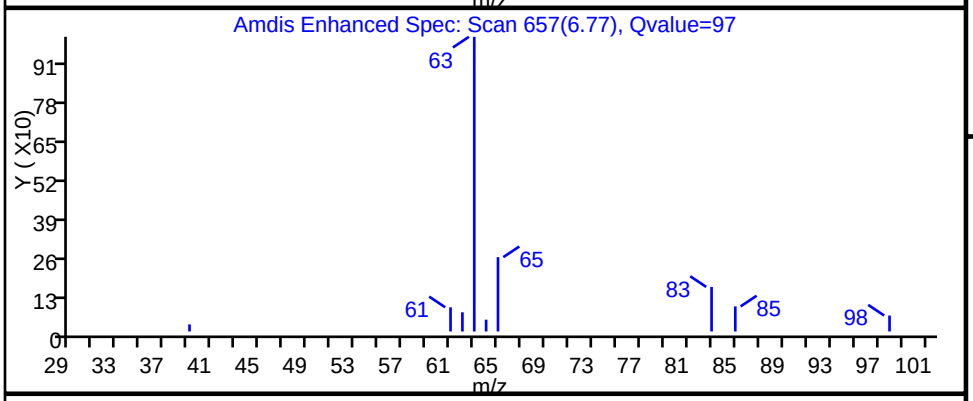
TestAmerica Knoxville

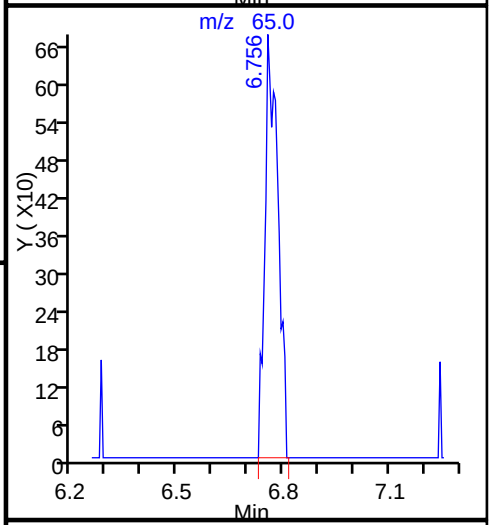
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P107.D		
Injection Date:	10-Mar-2017 16:15:30	Instrument ID:	MG
Lims ID:	140-7358-A-2	Lab Sample ID:	140-7358-2
Client ID:	BLDG-C MIDGAC		
Operator ID:	7126	ALS Bottle#:	7 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

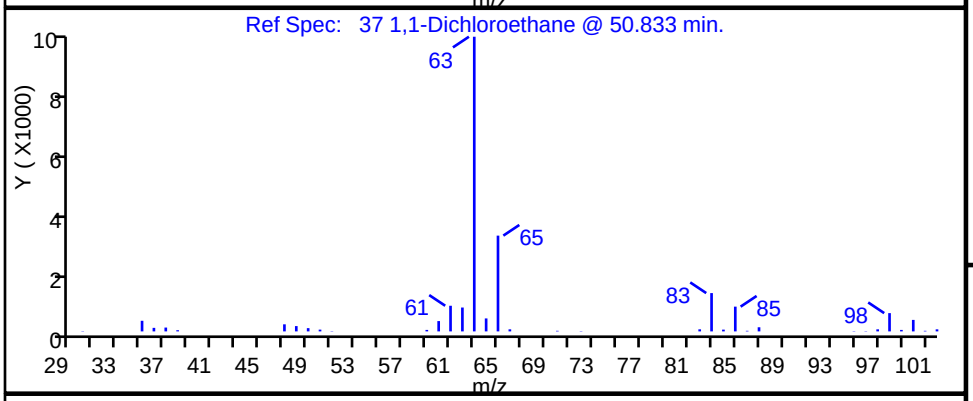
37 1,1-Dichloroethane, CAS: 75-34-3

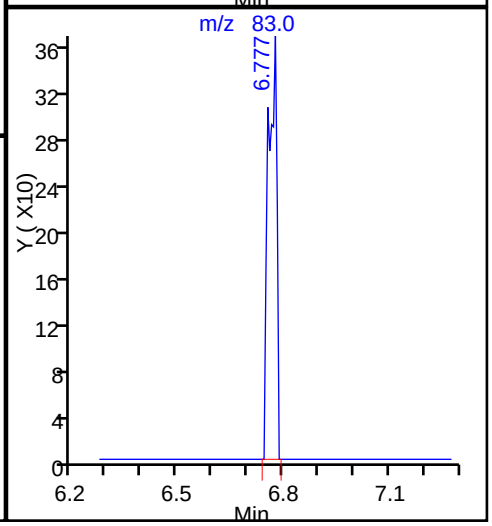


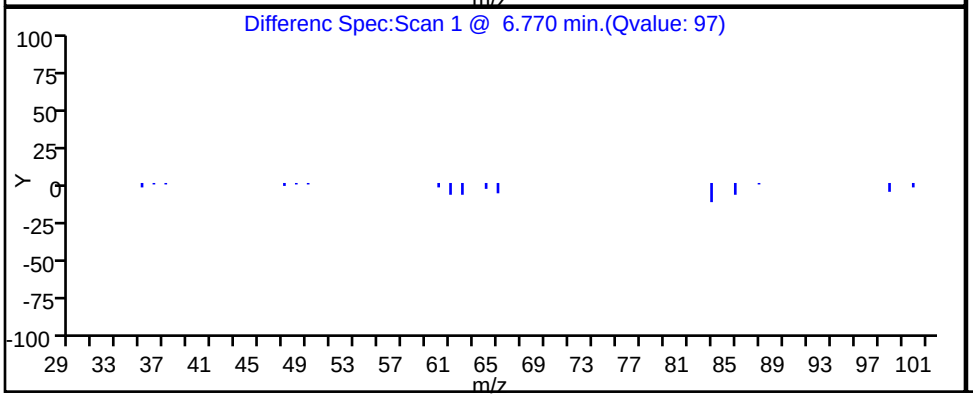








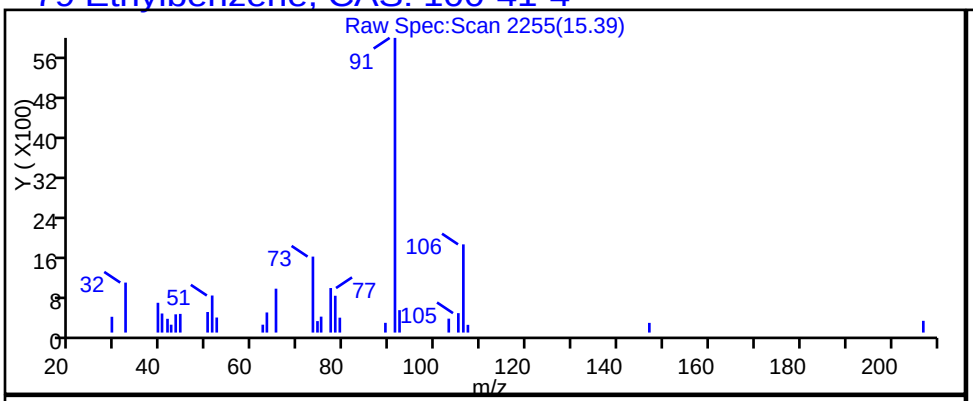


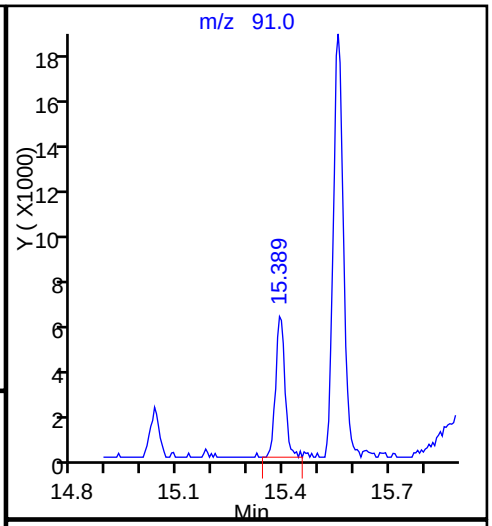


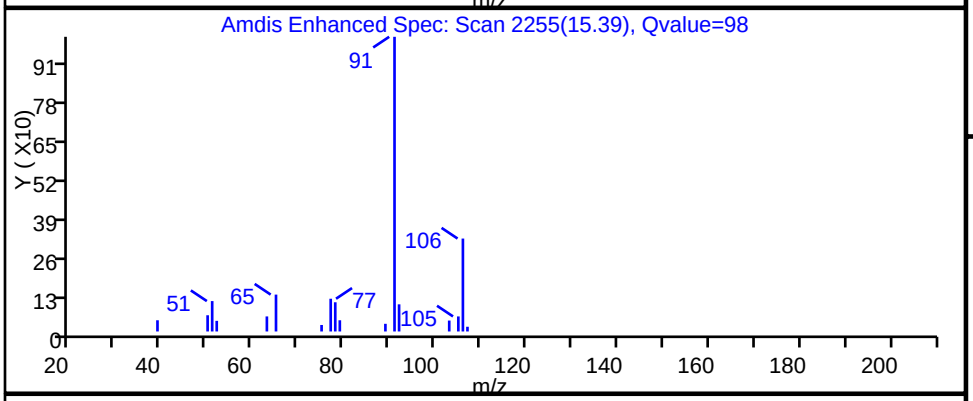
TestAmerica Knoxville

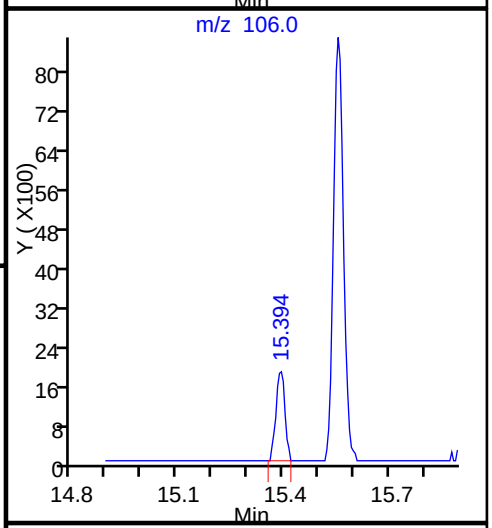
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P107.D		
Injection Date:	10-Mar-2017 16:15:30	Instrument ID:	MG
Lims ID:	140-7358-A-2	Lab Sample ID:	140-7358-2
Client ID:	BLDG-C MIDGAC		
Operator ID:	7126	ALS Bottle#:	7 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

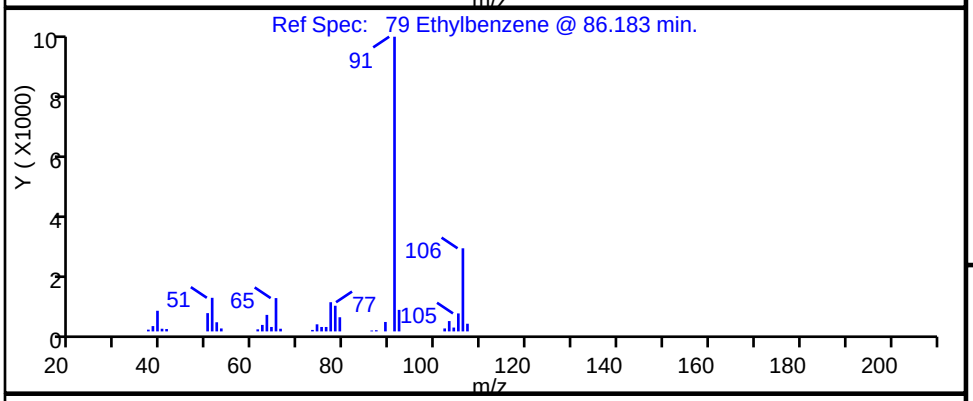
79 Ethylbenzene, CAS: 100-41-4

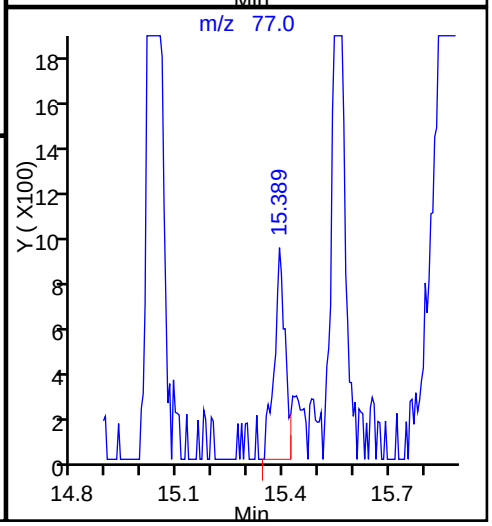


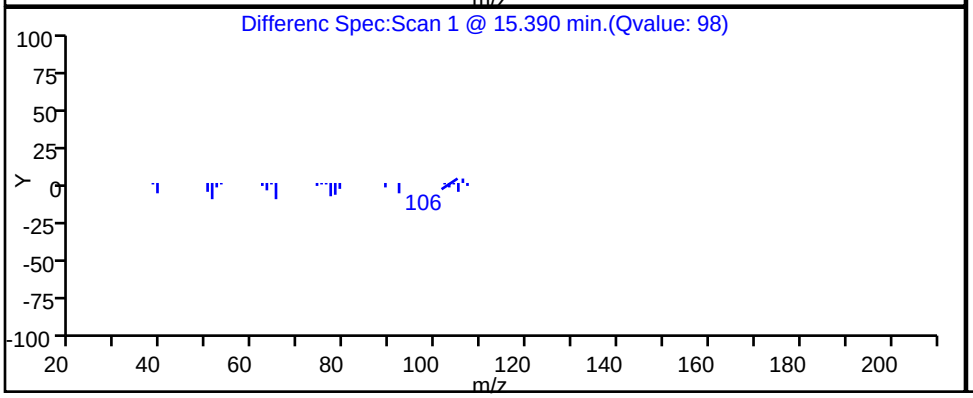








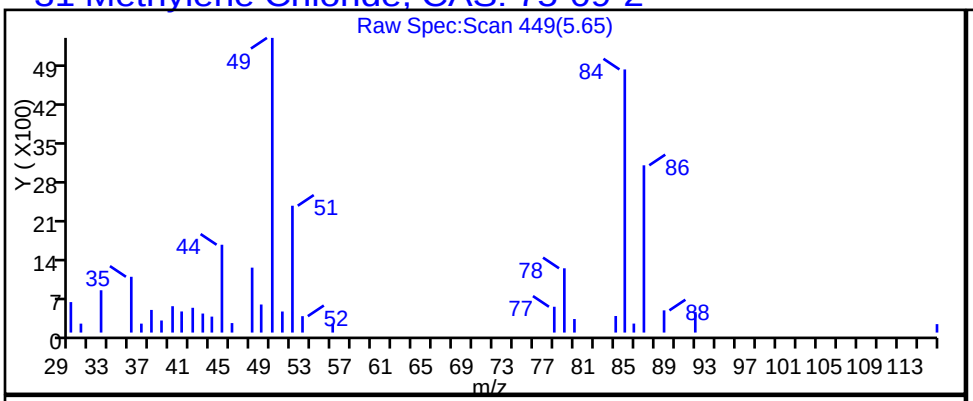


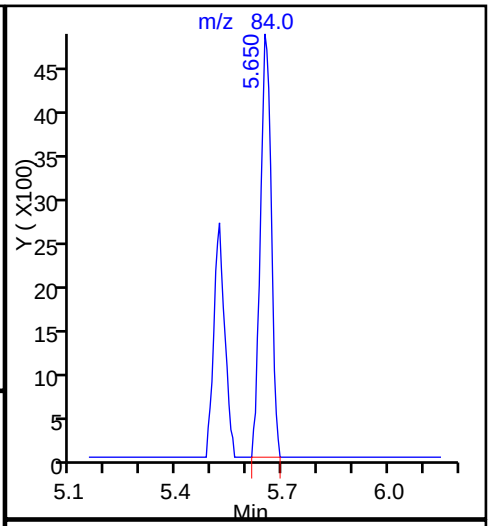


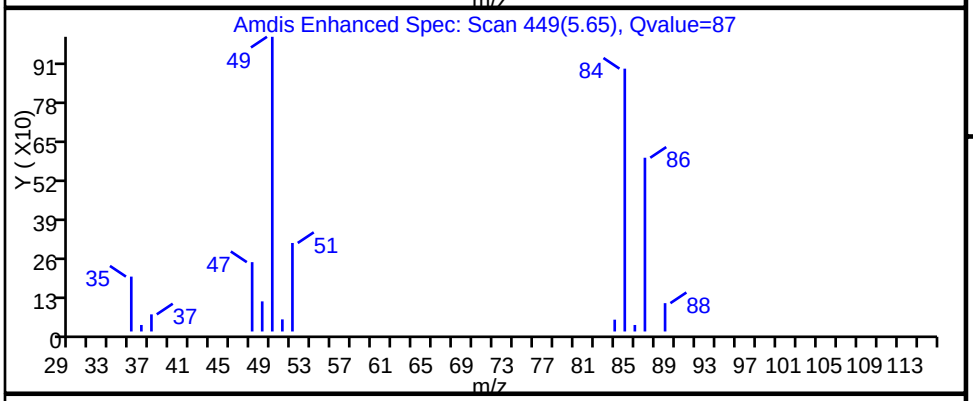
TestAmerica Knoxville

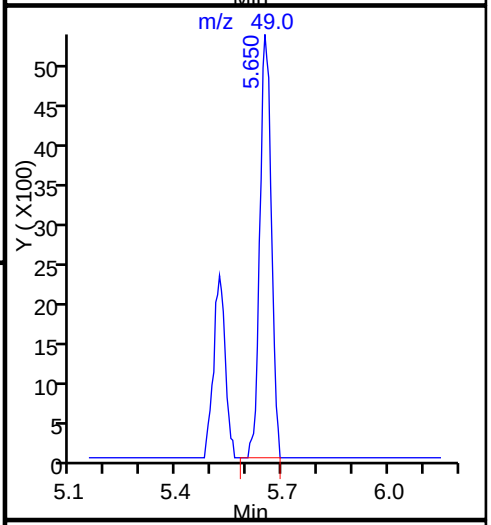
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P107.D		
Injection Date:	10-Mar-2017 16:15:30	Instrument ID:	MG
Lims ID:	140-7358-A-2	Lab Sample ID:	140-7358-2
Client ID:	BLDG-C MIDGAC		
Operator ID:	7126	ALS Bottle#:	7 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

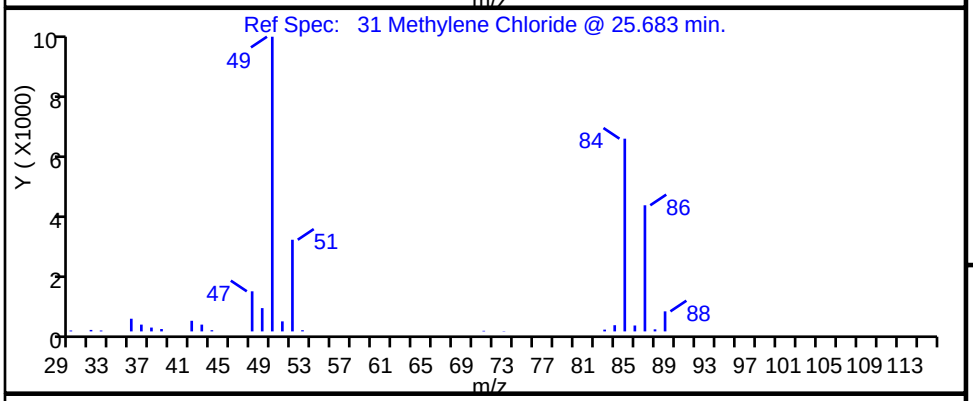
31 Methylene Chloride, CAS: 75-09-2

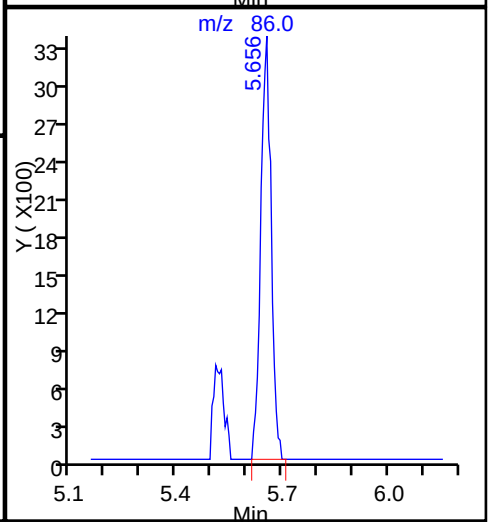


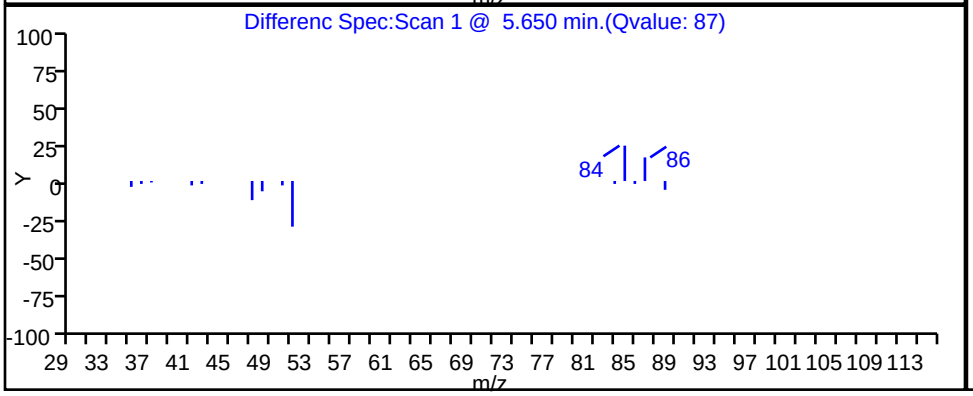








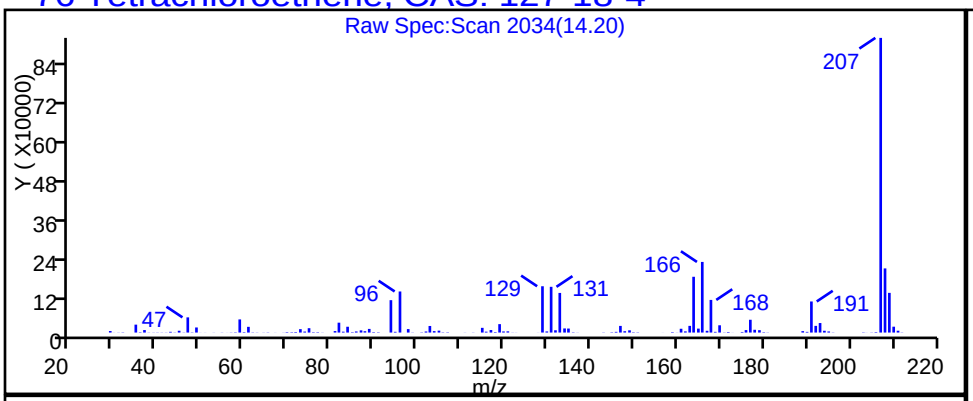


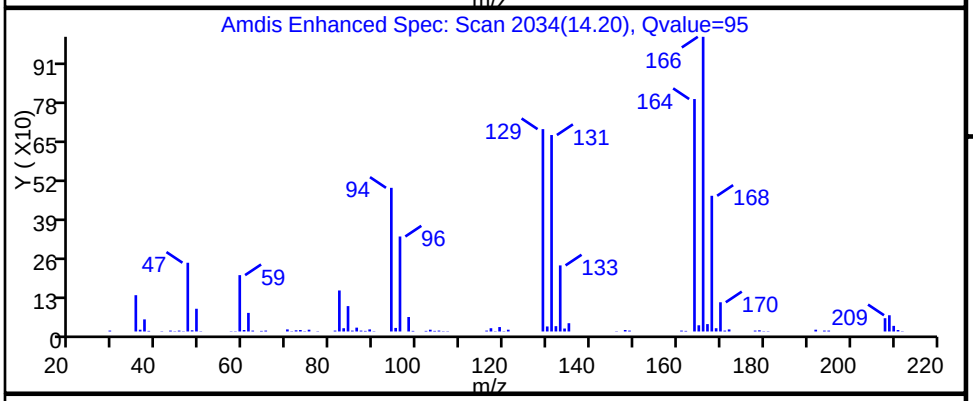


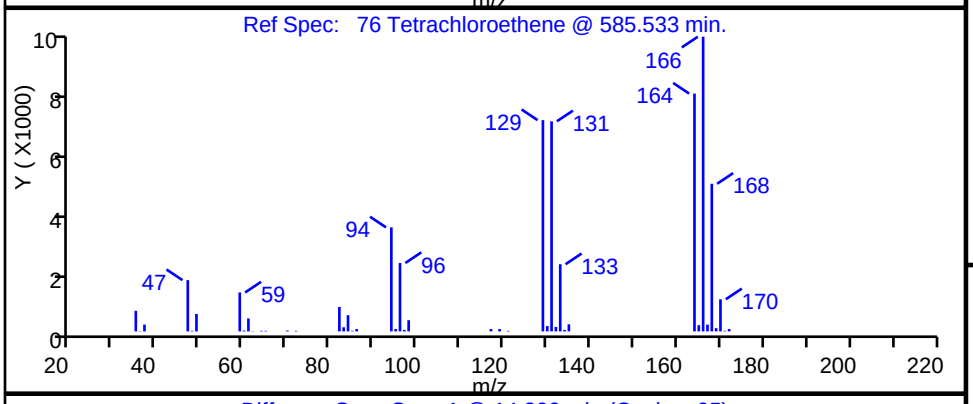
Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P107.D

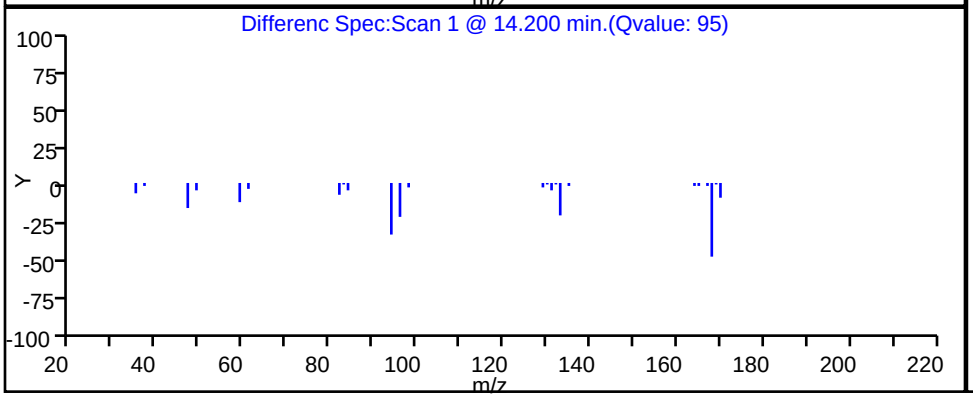
Injection Date:	10-Mar-2017 16:15:30	Instrument ID:	MG
Lims ID:	140-7358-A-2	Lab Sample ID:	140-7358-2
Client ID:	BLDG-C MIDGAC		
Operator ID:	7126	ALS Bottle#:	7 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

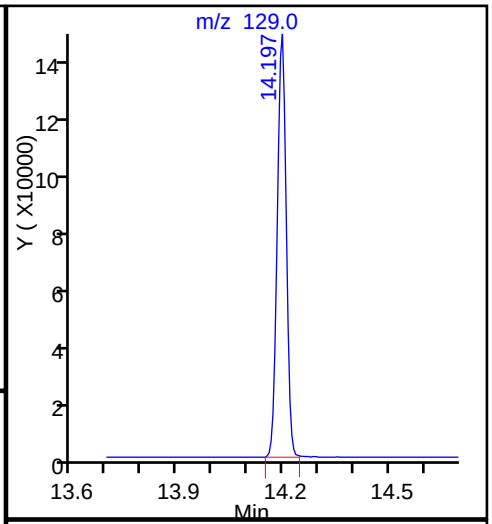
76 Tetrachloroethene, CAS: 127-18-4

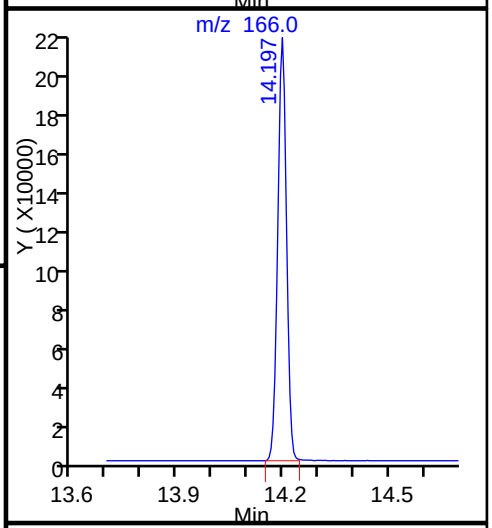


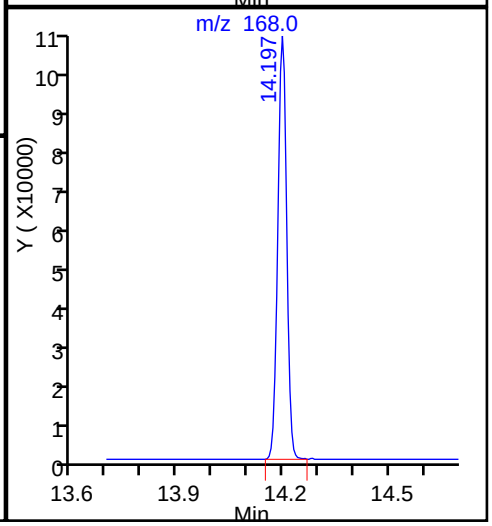








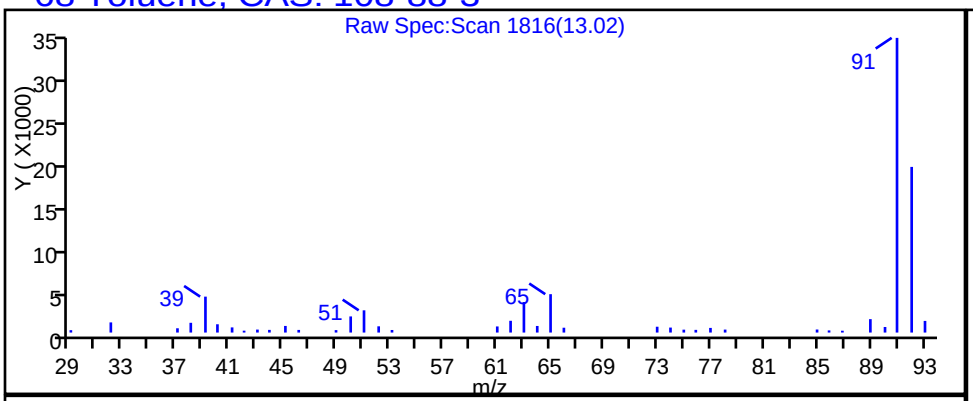


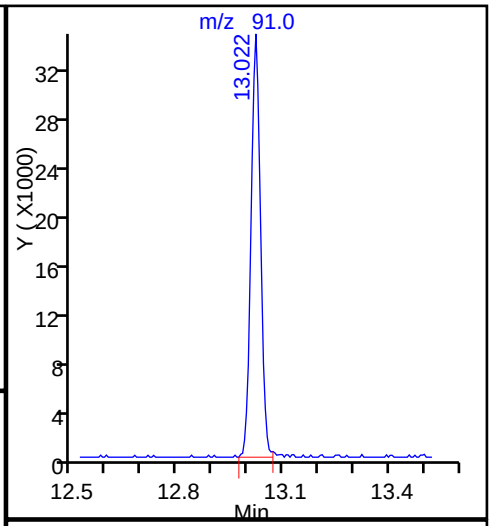


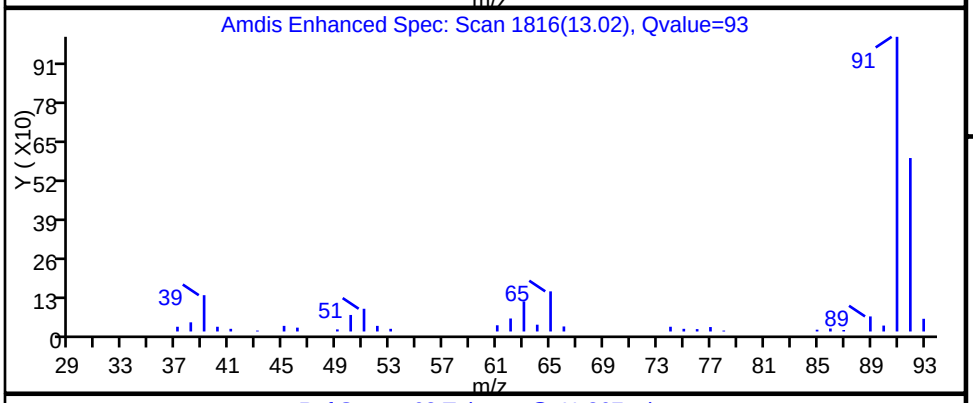
TestAmerica Knoxville

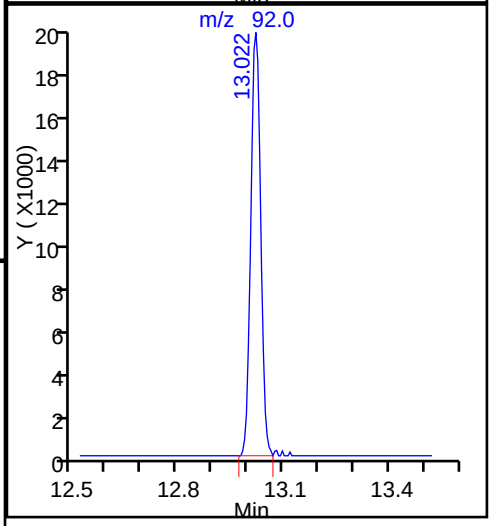
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P107.D		
Injection Date:	10-Mar-2017 16:15:30	Instrument ID:	MG
Lims ID:	140-7358-A-2	Lab Sample ID:	140-7358-2
Client ID:	BLDG-C MIDGAC		
Operator ID:	7126	ALS Bottle#:	7 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

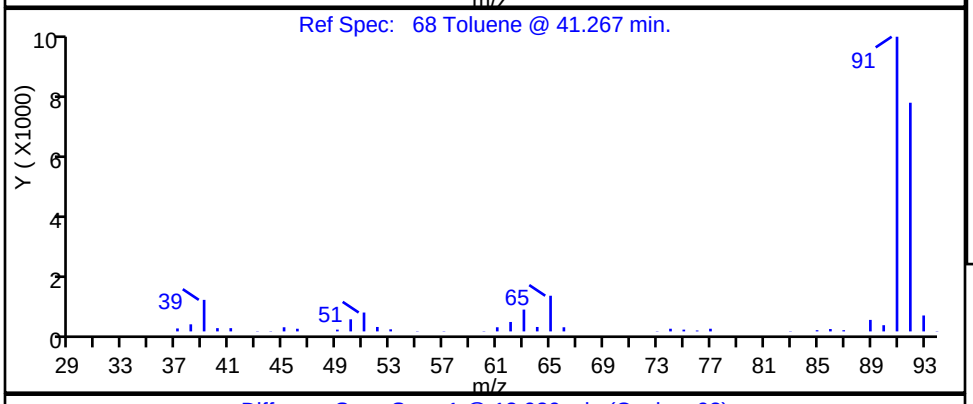
68 Toluene, CAS: 108-88-3

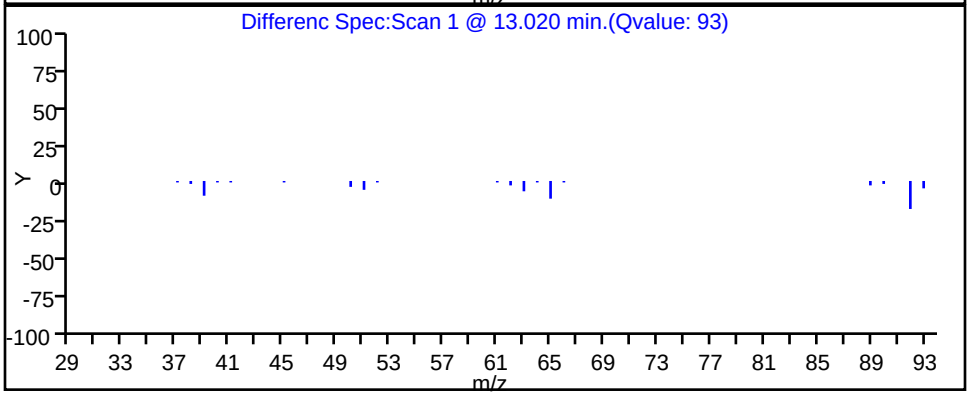










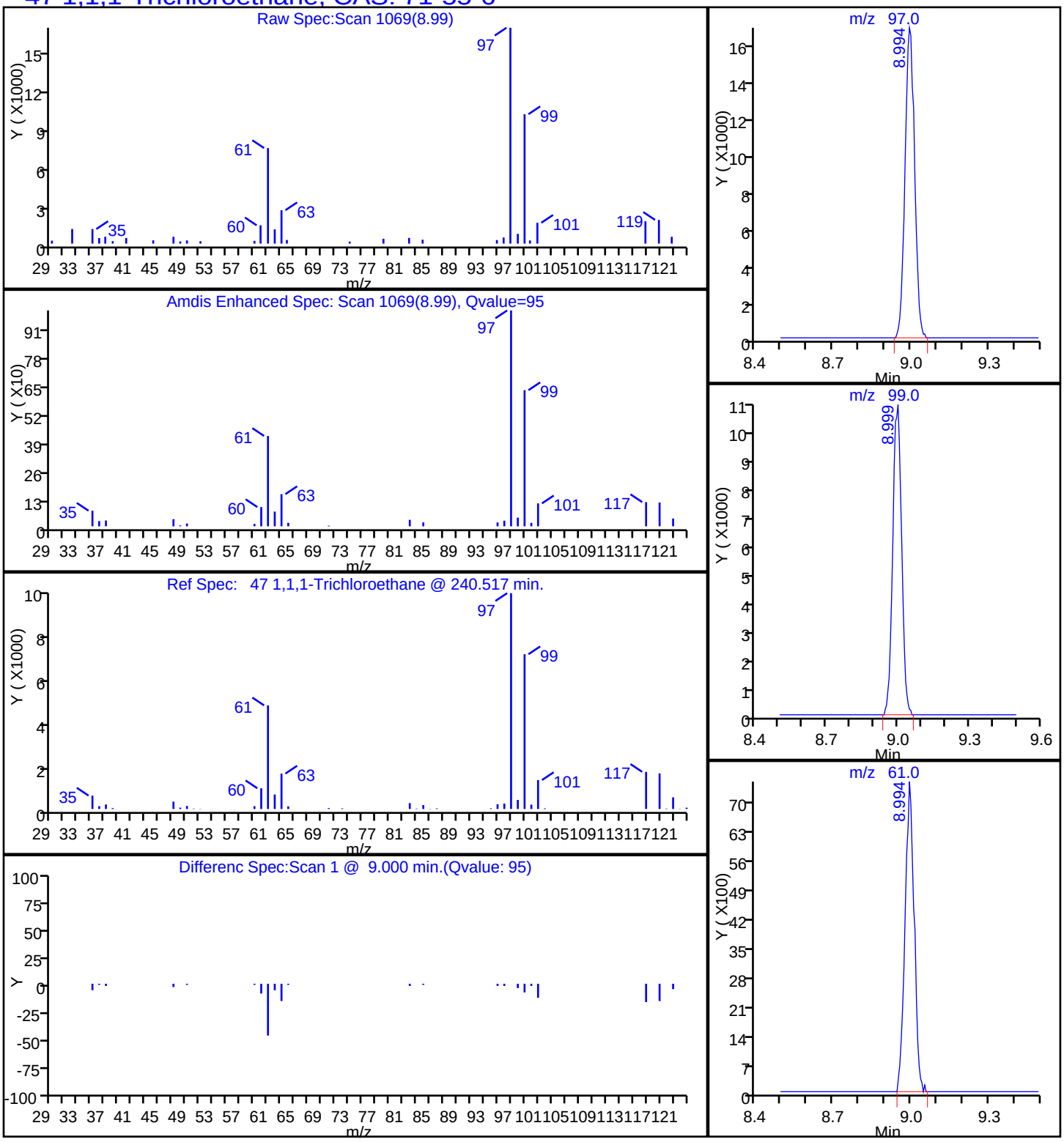


Report Date: 13-Mar-2017 12:00:16 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P107.D				
Injection Date:	10-Mar-2017 16:15:30	Instrument ID:	MG		
Lims ID:	140-7358-A-2	Lab Sample ID:	140-7358-2		
Client ID:	BLDG-C MIDGAC				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

47 1,1,1-Trichloroethane, CAS: 71-55-6



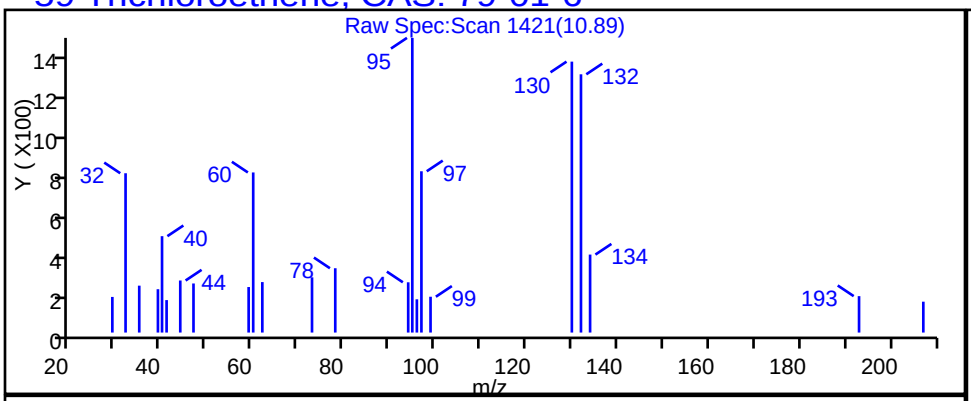
Report Date: 13-Mar-2017 12:00:16 Chrom Revision: 2.2 05-Mar-2017 11:38:00

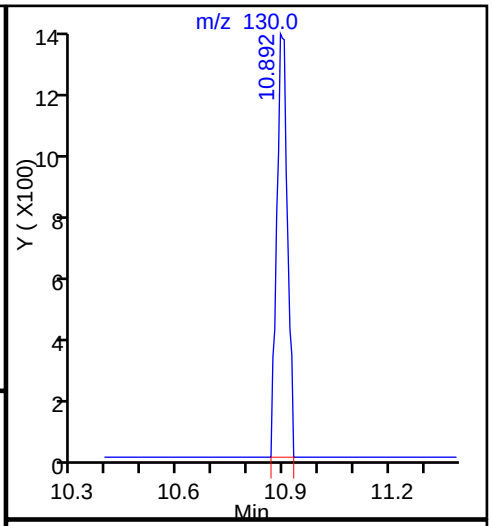
TestAmerica Knoxville

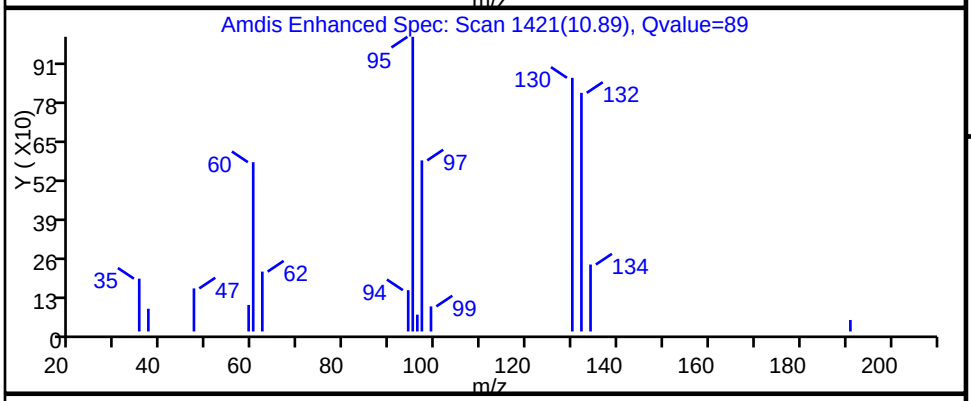
Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P107.D

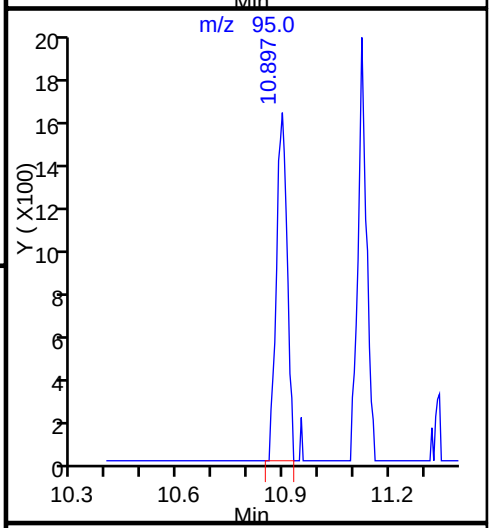
Injection Date:	10-Mar-2017 16:15:30	Instrument ID:	MG		
Lims ID:	140-7358-A-2	Lab Sample ID:	140-7358-2		
Client ID:	BLDG-C MIDGAC				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

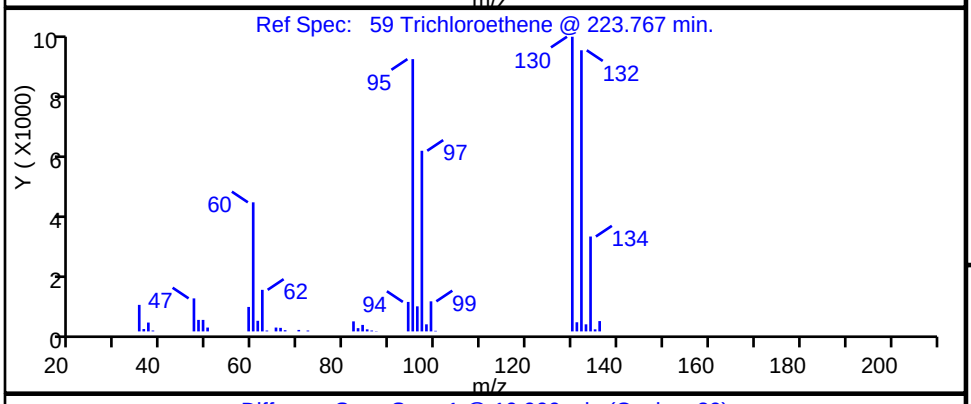
59 Trichloroethene, CAS: 79-01-6

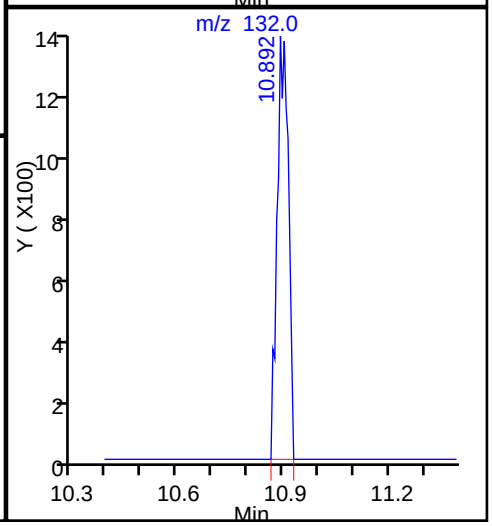


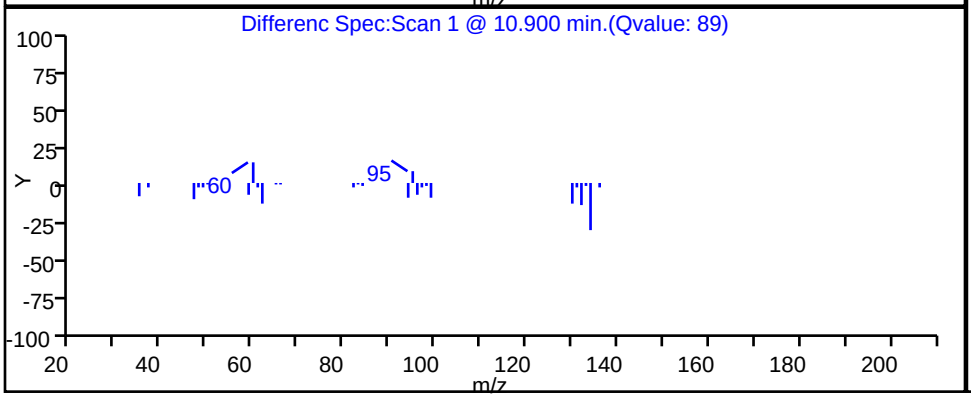








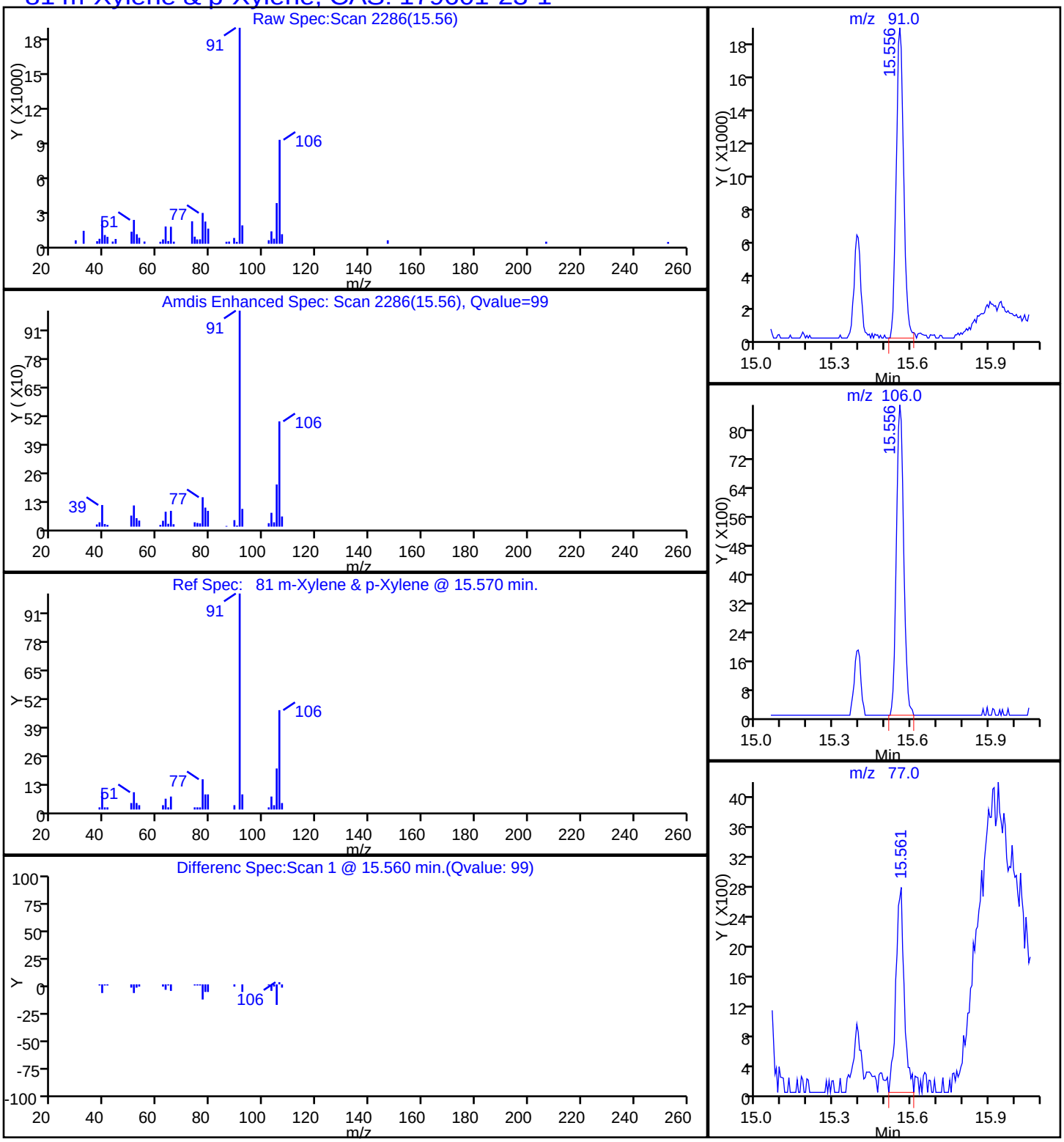




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P107.D				
Injection Date:	10-Mar-2017 16:15:30	Instrument ID:	MG		
Lims ID:	140-7358-A-2	Lab Sample ID:	140-7358-2		
Client ID:	BLDG-C MIDGAC				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

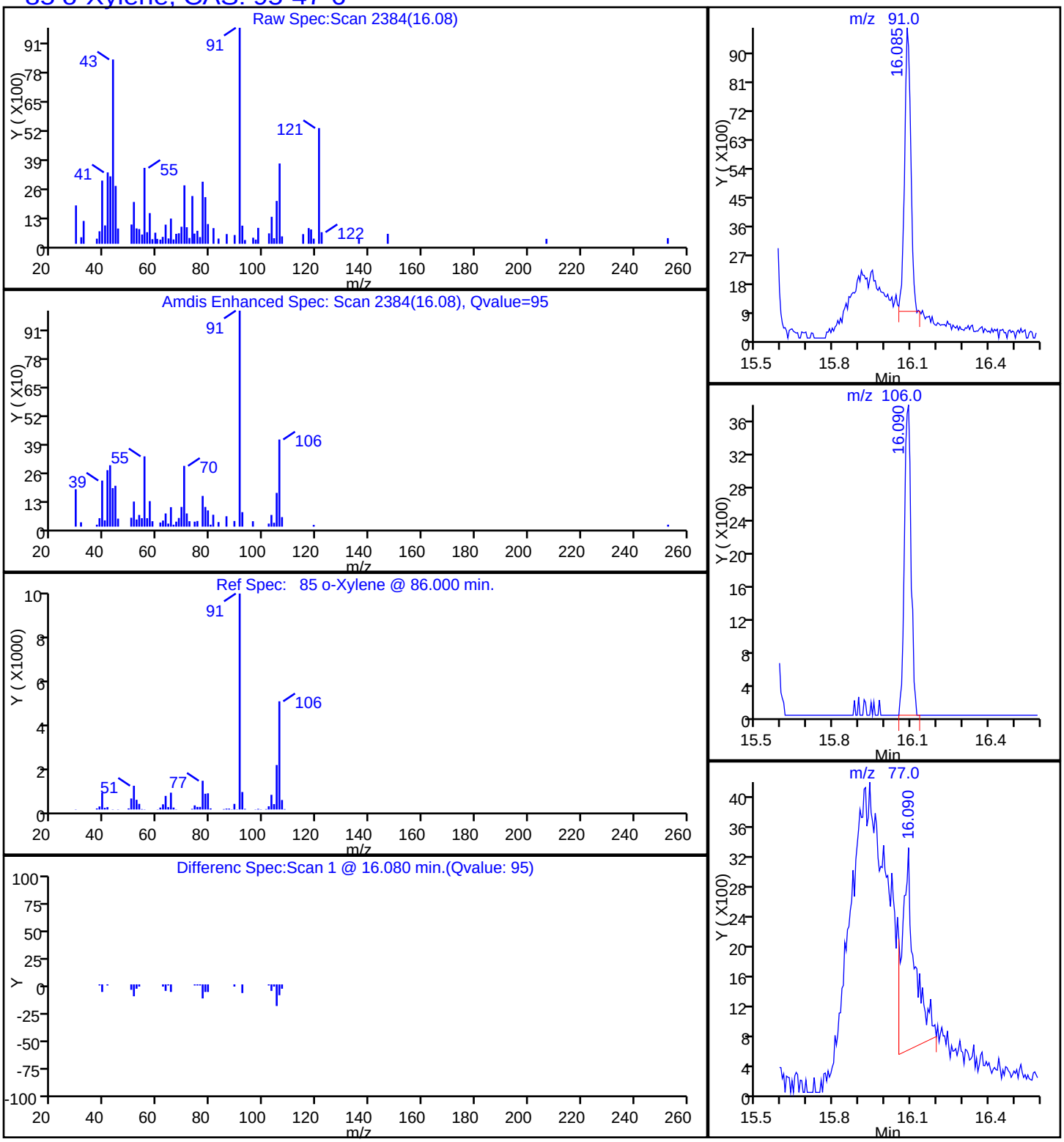
81 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P107.D				
Injection Date:	10-Mar-2017 16:15:30	Instrument ID:	MG		
Lims ID:	140-7358-A-2	Lab Sample ID:	140-7358-2		
Client ID:	BLDG-C MIDGAC				
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

85 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7358-1

SDG No.:

Client Sample ID: BLDG-C INFLUENT | Lab Sample ID: 140-7358-3

Matrix: Air | Lab File ID: GC10P108.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 13:52

Sample wt/vol: 100(mL) | Date Analyzed: 03/10/2017 16:58

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9158 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.97		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.092	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.4		0.40	0.075
67-66-3	Chloroform	119.38	0.12	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.89		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.078	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.52		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.95	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.45		0.40	0.080
108-88-3	Toluene	92.14	1.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.24	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	7.5		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.36	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.8		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7358-1

SDG No.:

Client Sample ID: BLDG-C INFLUENT | Lab Sample ID: 140-7358-3

Matrix: Air | Lab File ID: GC10P108.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 13:52

Sample wt/vol: 100(mL) | Date Analyzed: 03/10/2017 16:58

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9158 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	3.1		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.58	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.8		1.4	0.27
67-66-3	Chloroform	119.38	0.59	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	3.5		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.31	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.2		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	3.1		2.7	0.54
108-88-3	Toluene	92.14	6.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.3	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	40		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.8	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	12		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P108.D				
Lims ID:	140-7358-A-3				
Client ID:	BLDG-C INFLUENT				
Sample Type:	Client				
Inject. Date:	10-Mar-2017 16:58:30	ALS Bottle#:	8	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004228-012				
Misc. Info.:	140-7358-a-3				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Mar-2017 12:02:06	Calib Date:	02-Mar-2017 20:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK020				
First Level Reviewer: barlozhetskayaa		Date:	13-Mar-2017 12:02:06		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.001	8.001	0.000	86	322613	4.00	
* 2 1,4-Difluorobenzene	114	10.169	10.169	0.000	95	1634960	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.038	15.038	0.000	88	1577171	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.705	16.710	-0.005	94	1243117	4.23	
6 Chlorodifluoromethane	67	3.466	3.461	0.005	96	8624	0.2734	
8 Dichlorodifluoromethane	85	3.520	3.515	0.005	99	30799	0.1076	
31 Methylene Chloride	84	5.667	5.666	0.000	91	14751	0.1898	
37 1,1-Dichloroethane	63	6.783	6.783	0.000	94	2457	0.0155	
42 cis-1,2-Dichloroethene	96	7.705	7.699	0.006	97	15789	0.1776	
44 Chloroform	83	8.028	8.028	0.000	90	5136	0.0240	
47 1,1,1-Trichloroethane	97	9.004	9.004	0.000	94	11328	0.0482	
49 Benzene	78	9.587	9.592	-0.005	95	49923	0.1950	
52 Carbon tetrachloride	117	9.619	9.619	0.000	30	4374	0.0183	
59 Trichloroethene	130	10.903	10.908	-0.006	95	220005	1.50	
68 Toluene	91	13.027	13.027	0.000	94	94203	0.3291	
76 Tetrachloroethene	129	14.197	14.203	-0.005	93	11406	0.0904	
79 Ethylbenzene	91	15.394	15.394	0.000	99	38915	0.1035	
81 m-Xylene & p-Xylene	91	15.556	15.567	-0.011	99	119031	0.4038	
85 o-Xylene	91	16.090	16.090	0.000	97	49119	0.1625	
92 1,3,5-Trimethylbenzene	120	17.492	17.492	-0.005	81	4767	0.0246	7
96 1,2,4-Trimethylbenzene	105	17.950	17.956	-0.006	98	25646	0.0712	
S 126 Xylenes, Total	100				0		0.5663	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

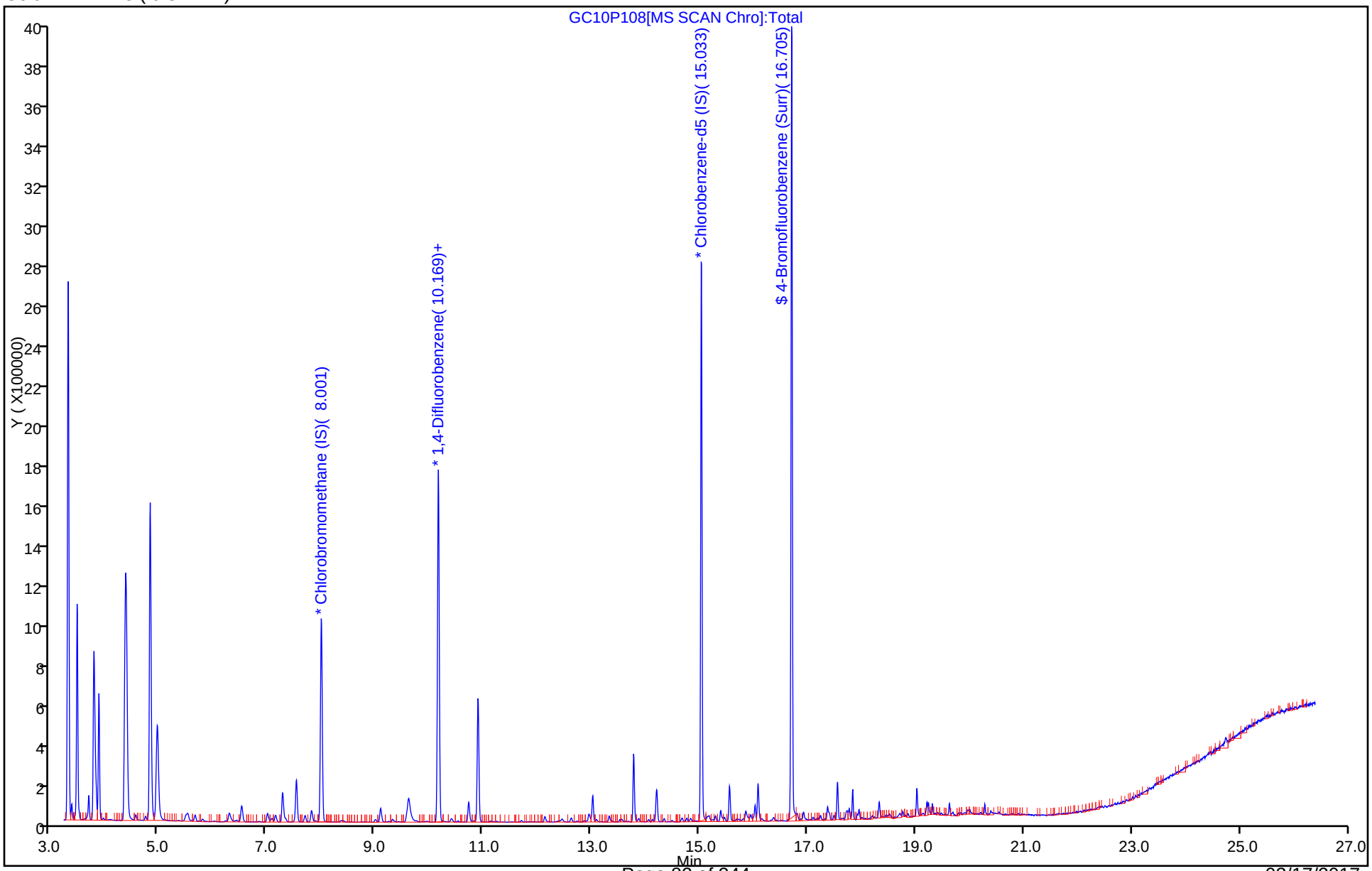
Report Date: 13-Mar-2017 12:02:07 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P108.D

Injection Date:	10-Mar-2017 16:58:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-7358-A-3	Lab Sample ID:	140-7358-3	Worklist Smp#:	12
Client ID:	BLDG-C INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P108.D				
Lims ID:	140-7358-A-3				
Client ID:	BLDG-C INFLUENT				
Sample Type:	Client				
Inject. Date:	10-Mar-2017 16:58:30	ALS Bottle#:	8	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004228-012				
Misc. Info.:	140-7358-a-3				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Mar-2017 12:02:06	Calib Date:	02-Mar-2017 20:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK020				

First Level Reviewer: barlozhetskayaa Date: 13-Mar-2017 12:02:06

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.23	105.84

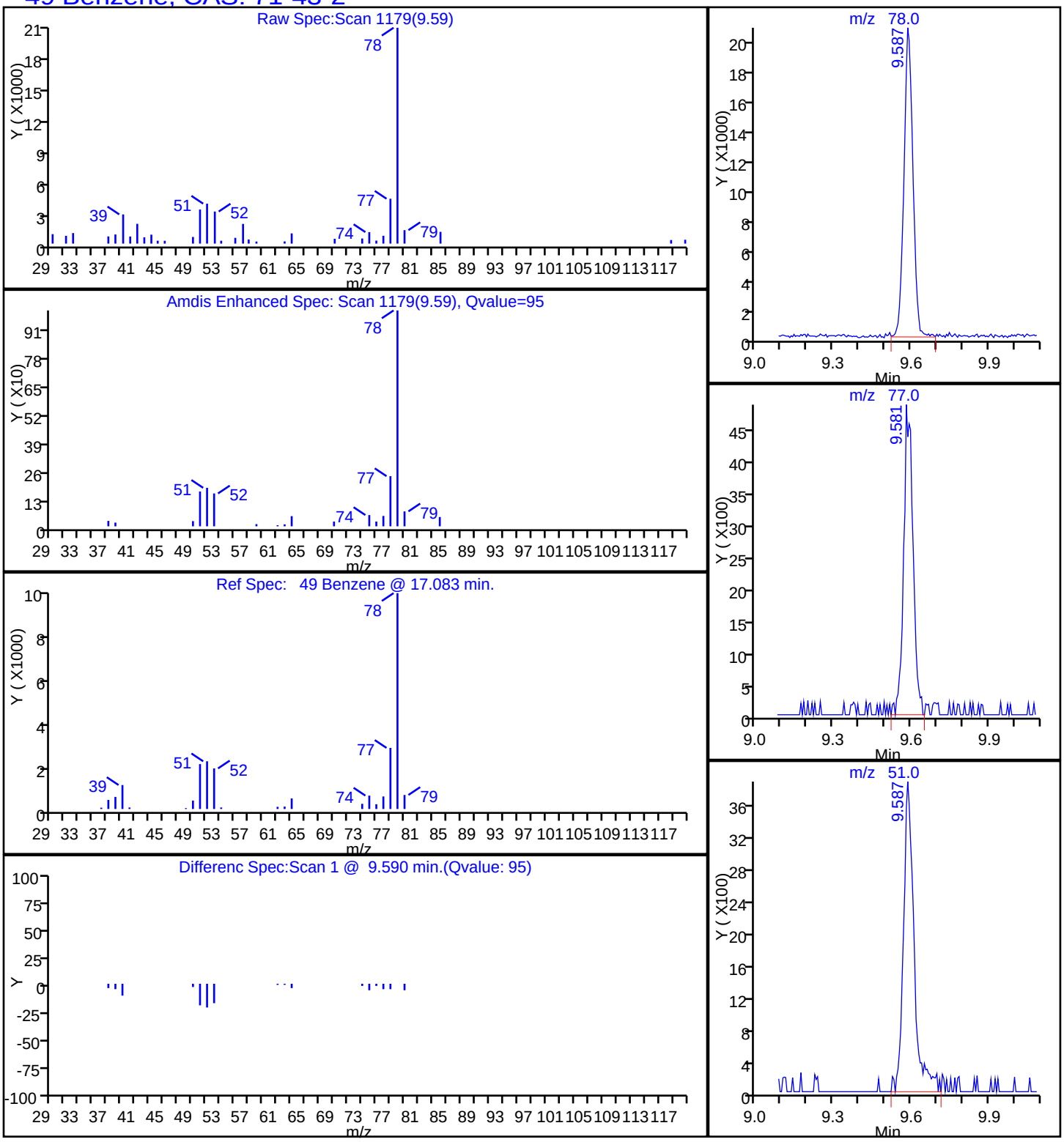
Report Date: 13-Mar-2017 12:02:07 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P108.D

Injection Date:	10-Mar-2017 16:58:30	Instrument ID:	MG		
Lims ID:	140-7358-A-3	Lab Sample ID:	140-7358-3		
Client ID:	BLDG-C INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

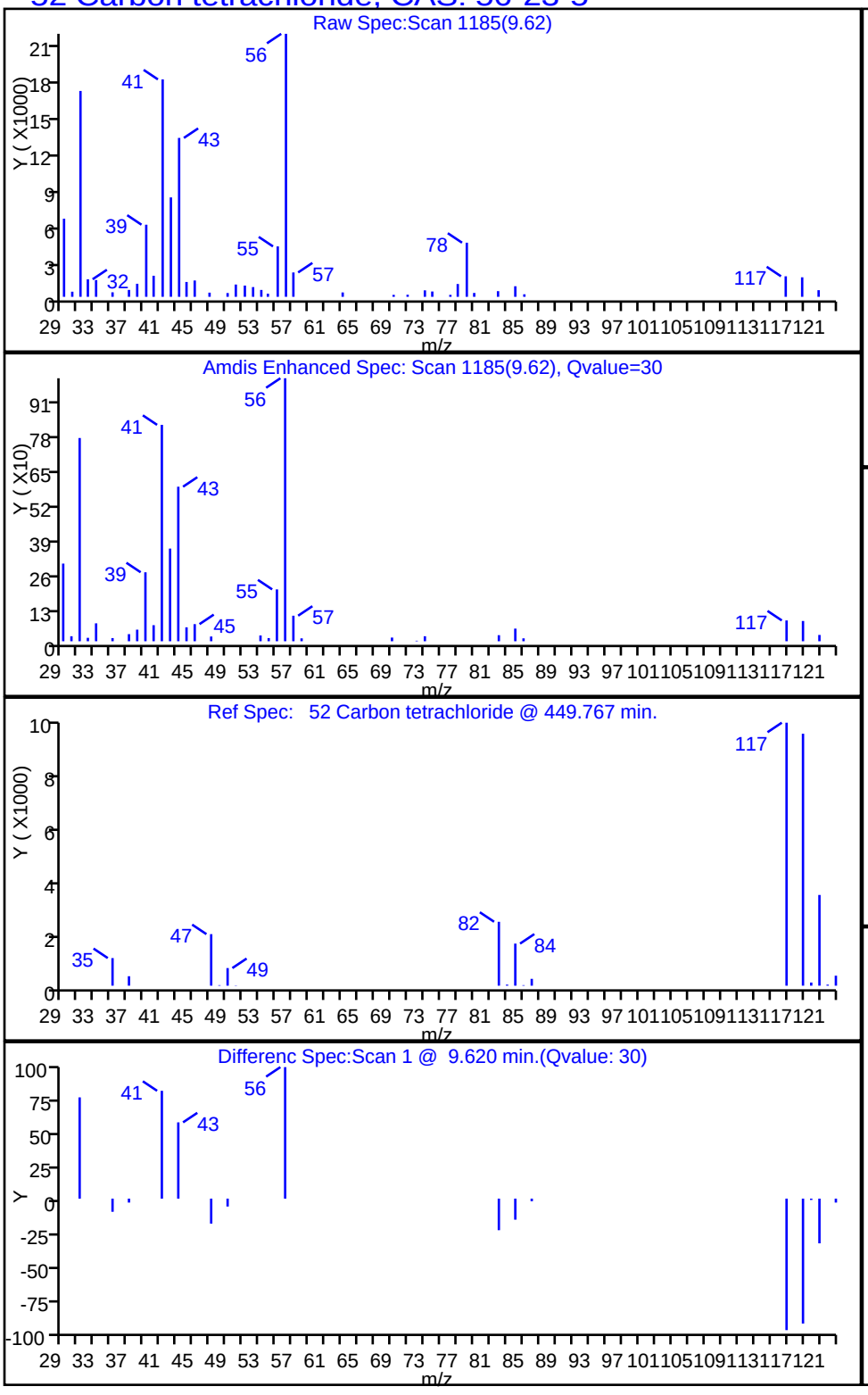
49 Benzene, CAS: 71-43-2

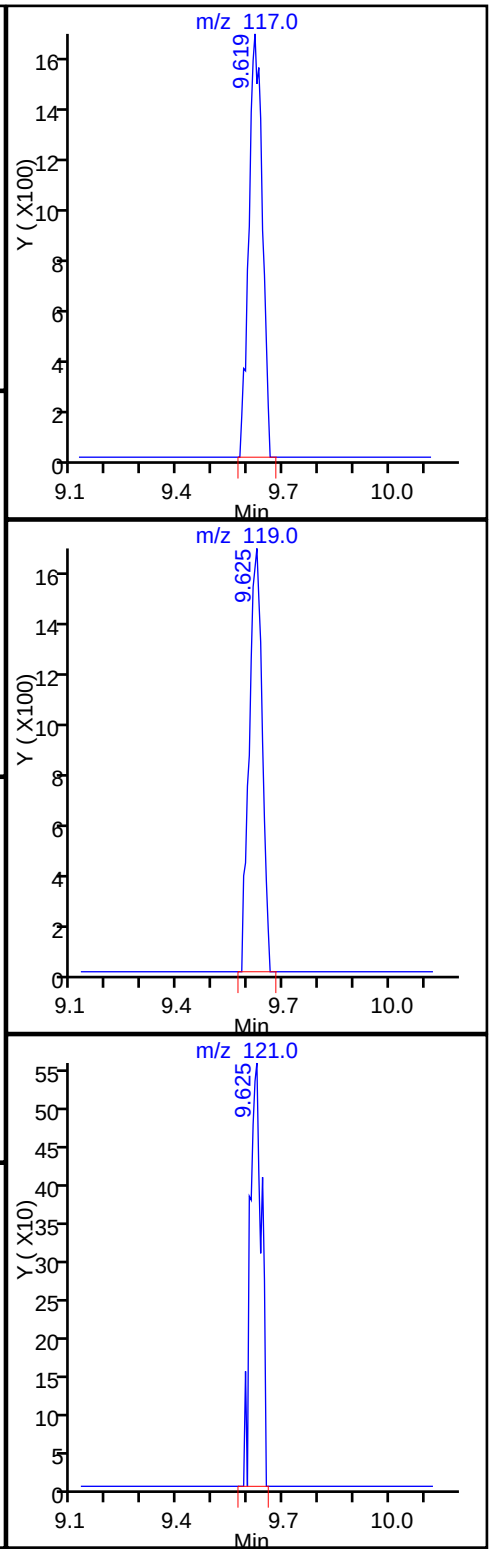


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P108.D				
Injection Date:	10-Mar-2017 16:58:30	Instrument ID:	MG		
Lims ID:	140-7358-A-3	Lab Sample ID:	140-7358-3		
Client ID:	BLDG-C INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

52 Carbon tetrachloride, CAS: 56-23-5

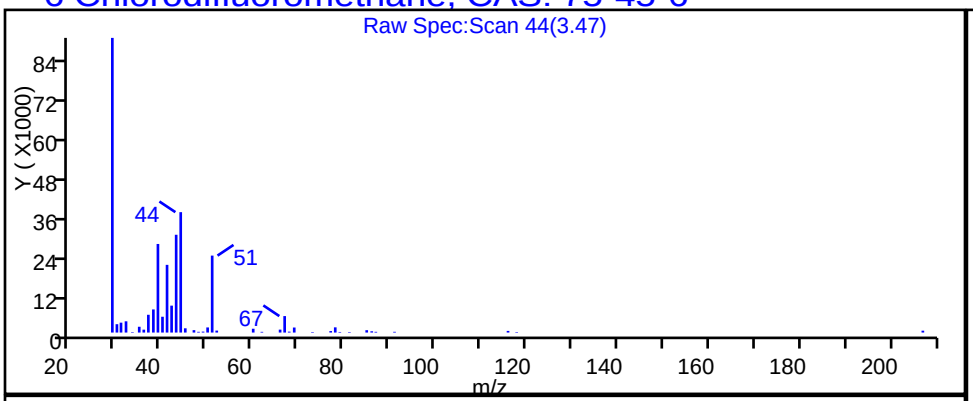


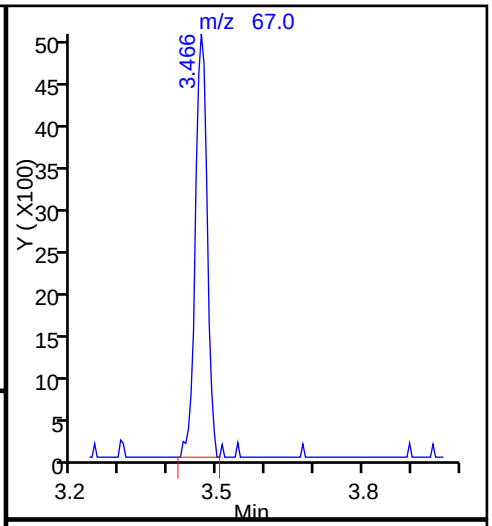


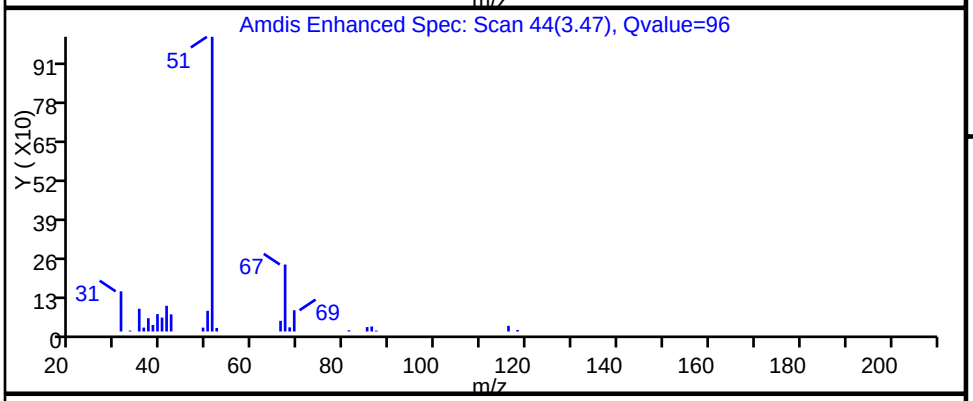
TestAmerica Knoxville

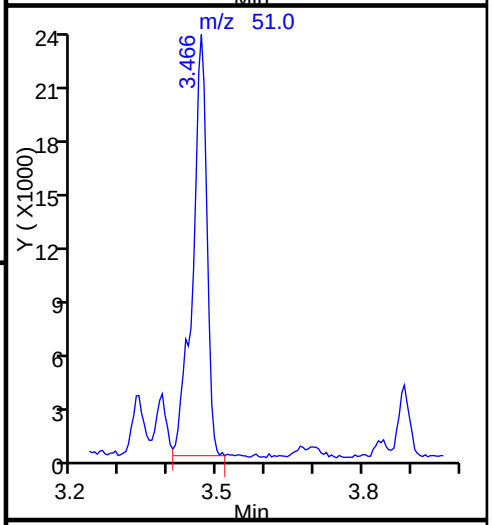
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P108.D		
Injection Date:	10-Mar-2017 16:58:30	Instrument ID:	MG
Lims ID:	140-7358-A-3	Lab Sample ID:	140-7358-3
Client ID:	BLDG-C INFLUENT		
Operator ID:	7126	ALS Bottle#:	8 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

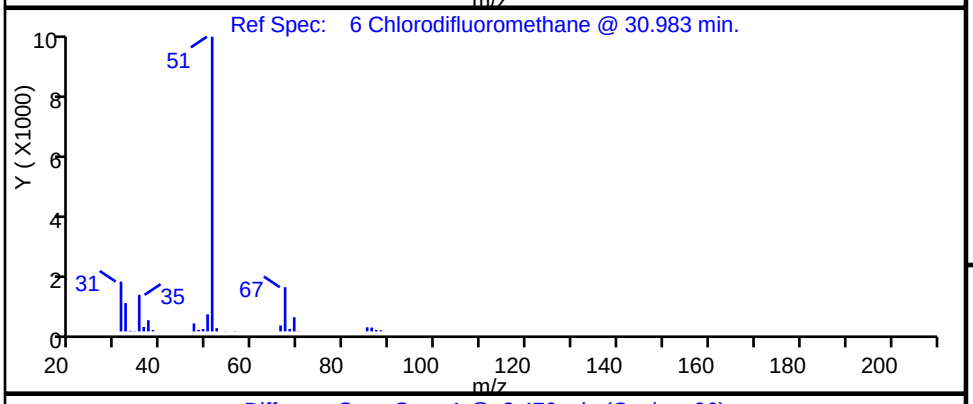
6 Chlorodifluoromethane, CAS: 75-45-6

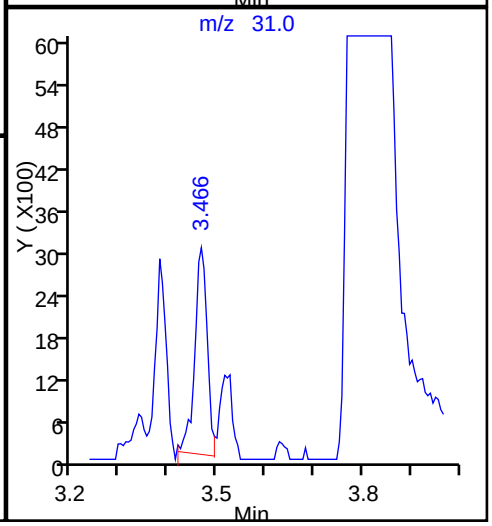


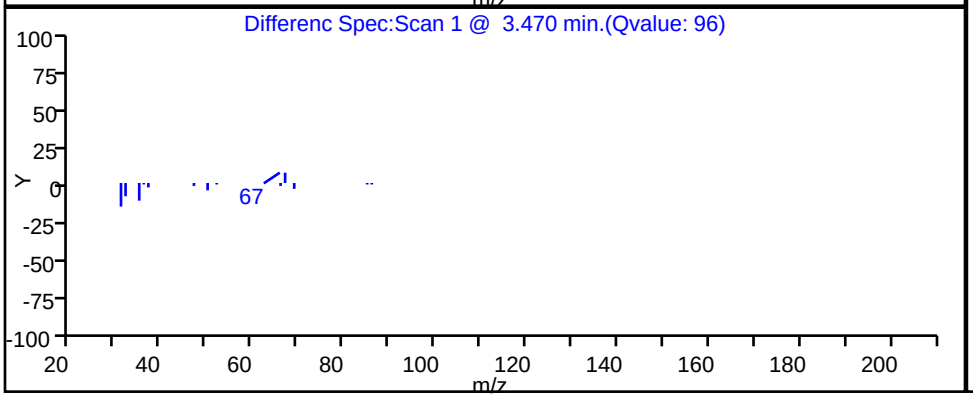








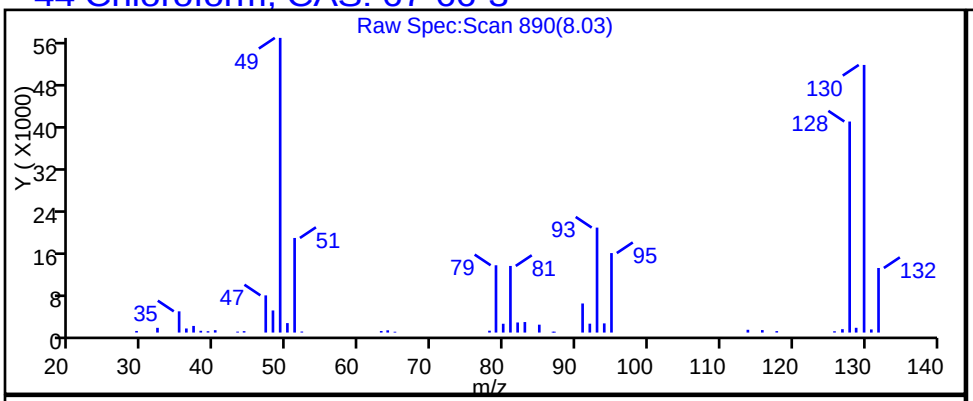


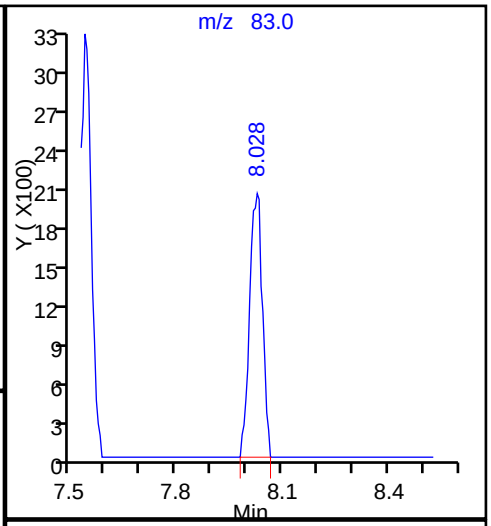


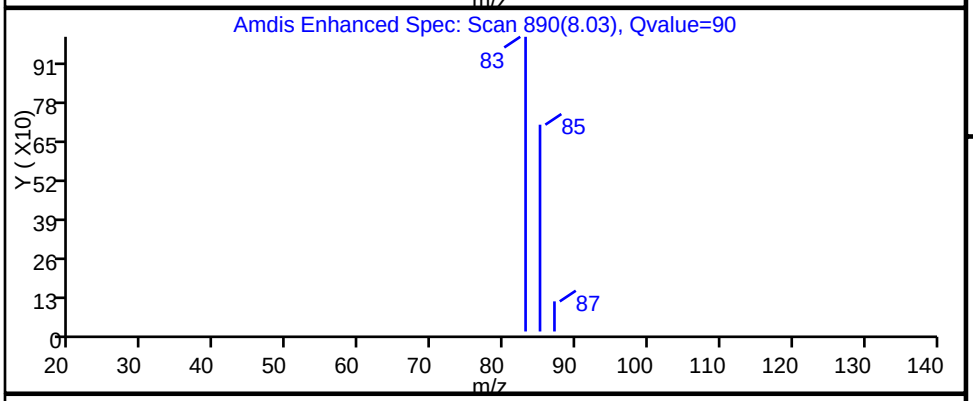
TestAmerica Knoxville

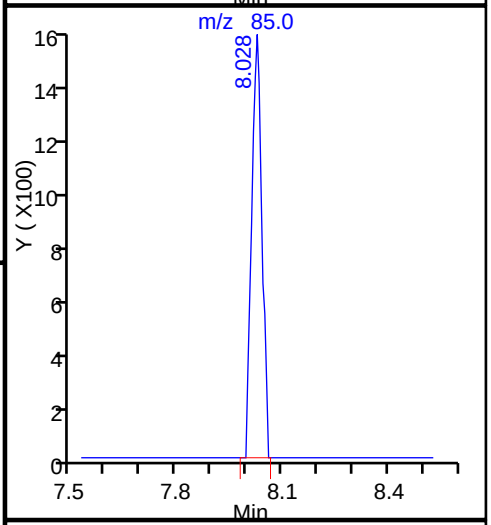
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P108.D		
Injection Date:	10-Mar-2017 16:58:30	Instrument ID:	MG
Lims ID:	140-7358-A-3	Lab Sample ID:	140-7358-3
Client ID:	BLDG-C INFLUENT		
Operator ID:	7126	ALS Bottle#:	8 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

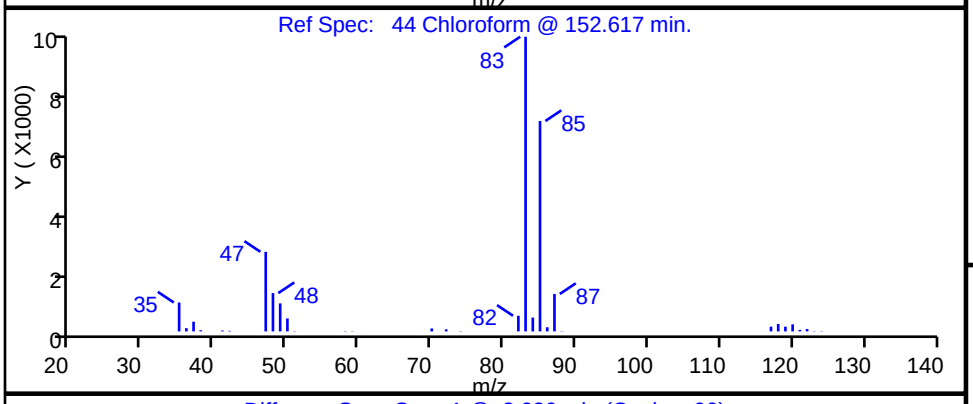
44 Chloroform, CAS: 67-66-3

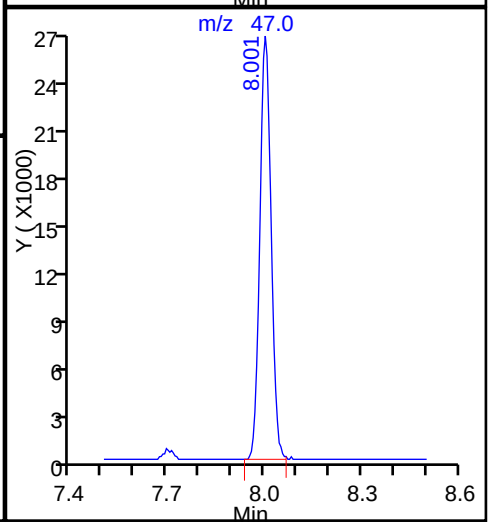


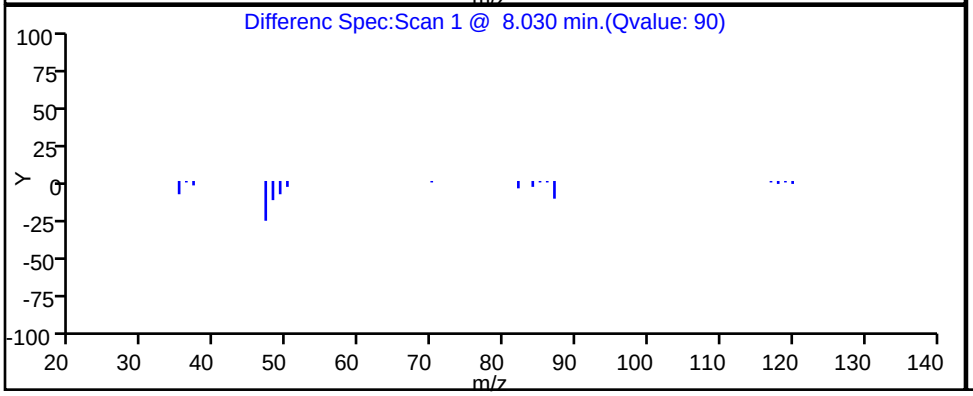








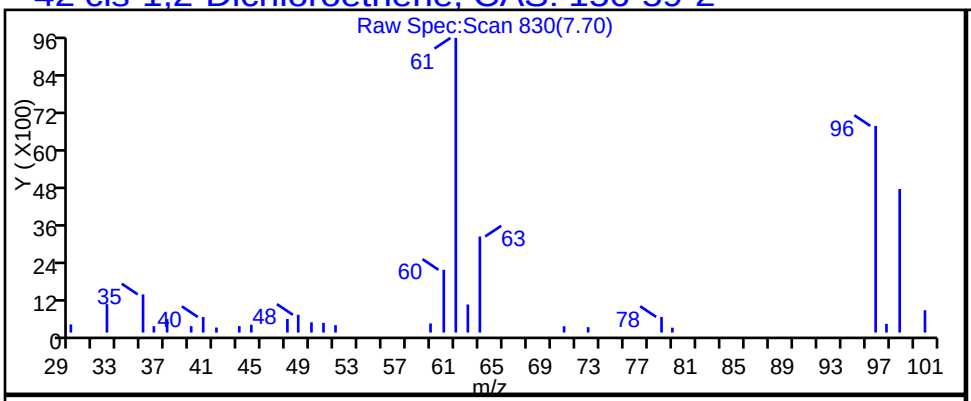


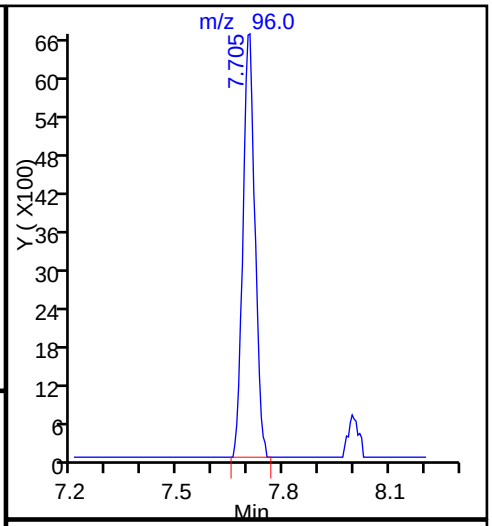


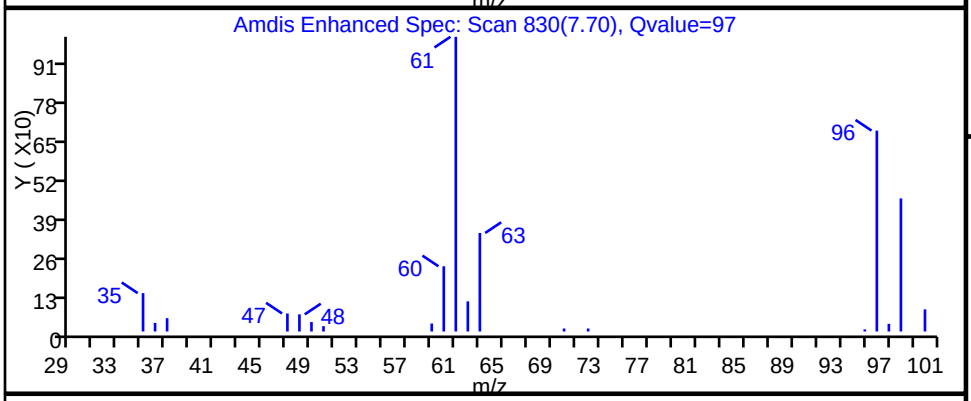
TestAmerica Knoxville

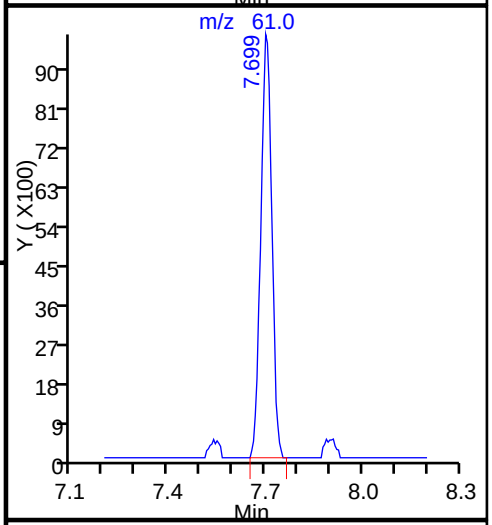
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P108.D		
Injection Date:	10-Mar-2017 16:58:30	Instrument ID:	MG
Lims ID:	140-7358-A-3	Lab Sample ID:	140-7358-3
Client ID:	BLDG-C INFLUENT		
Operator ID:	7126	ALS Bottle#:	8 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

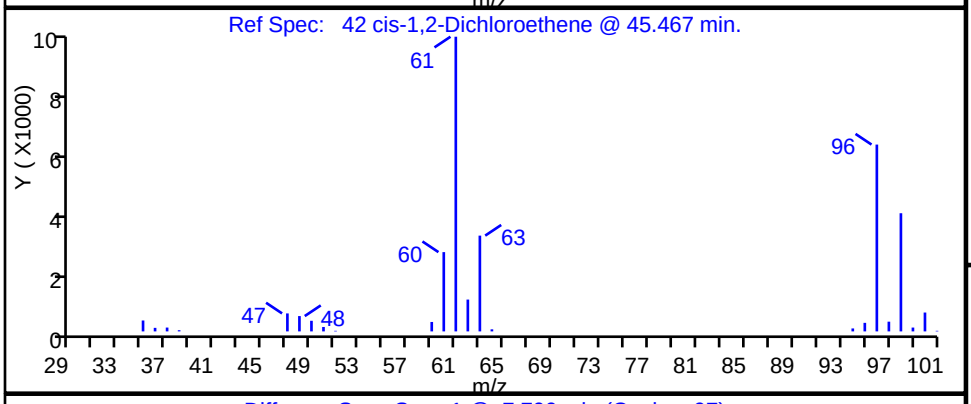
42 cis-1,2-Dichloroethene, CAS: 156-59-2

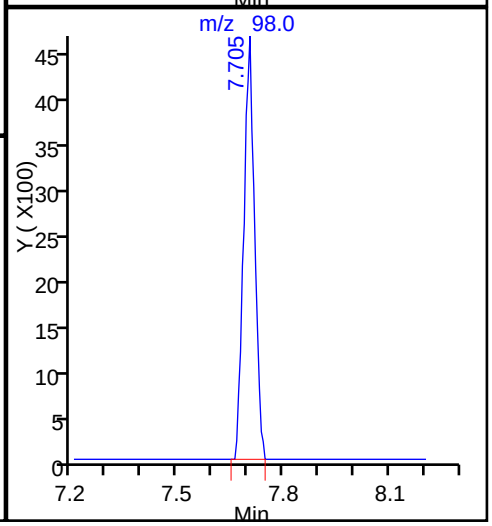


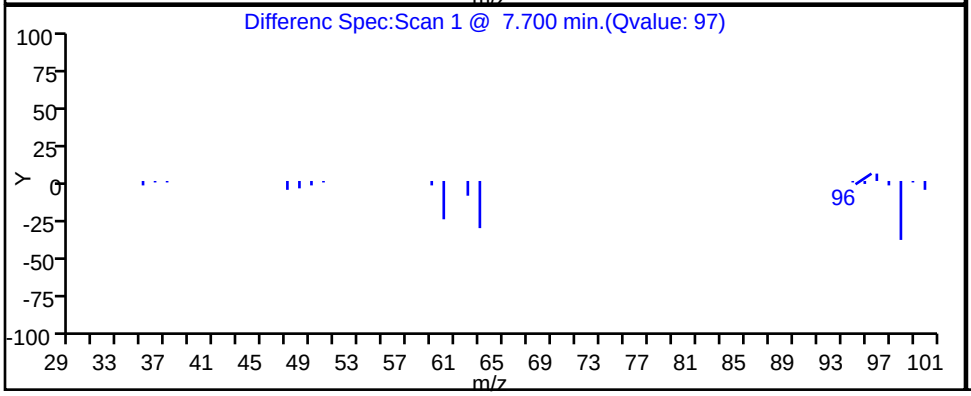












TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P108.D				
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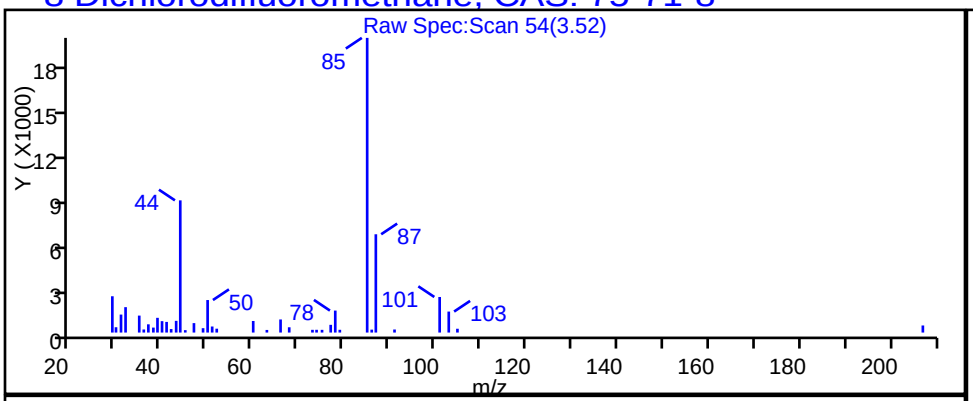
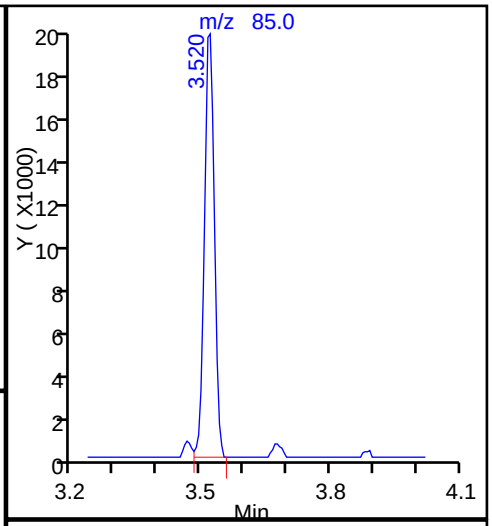
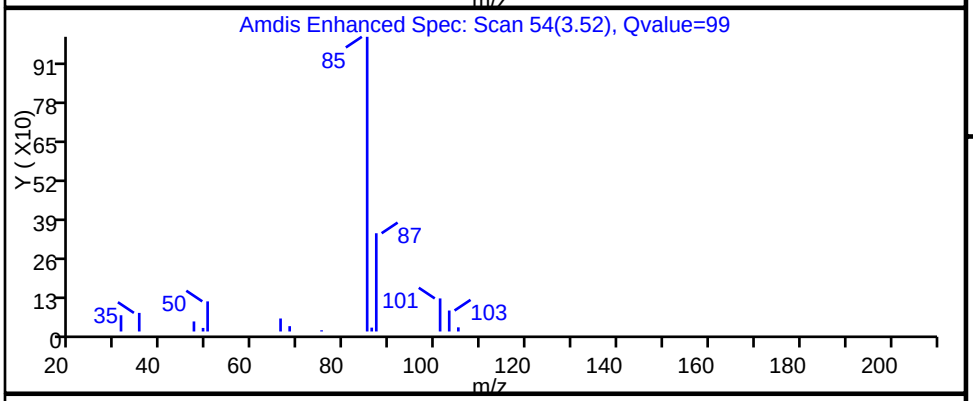
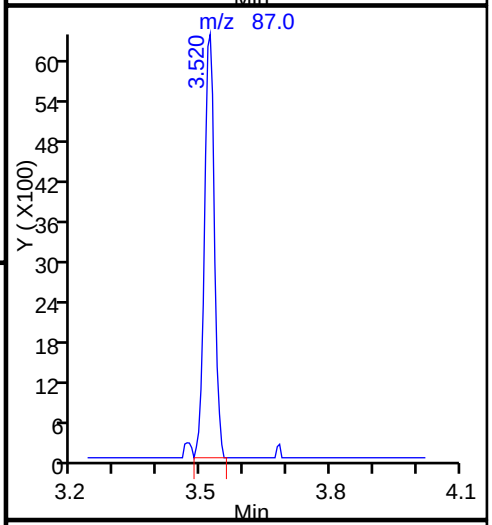
Lims ID:	140-7358-A-3	Lab Sample ID:	140-7358-3		
Client ID:	BLDG-C INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

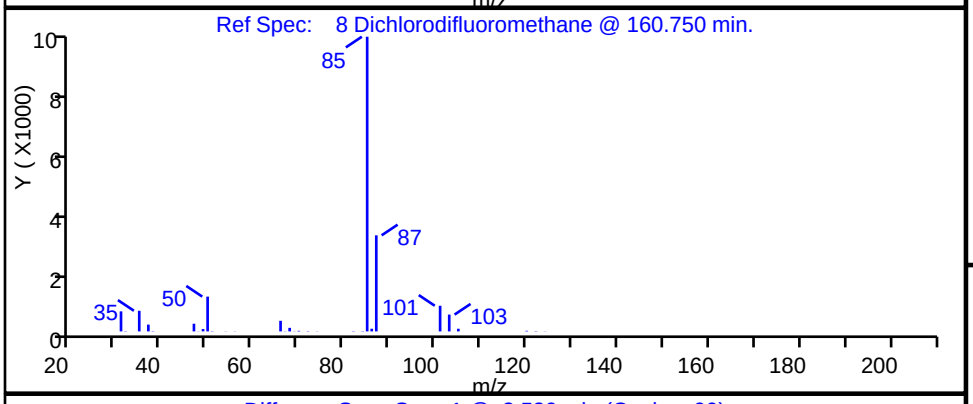
8 Dichlorodifluoromethane, CAS: 75-71-8

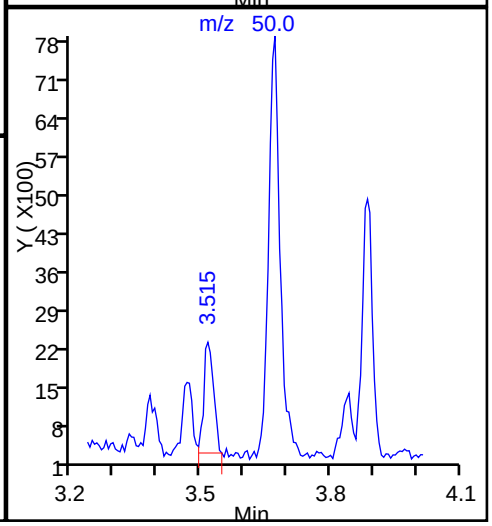


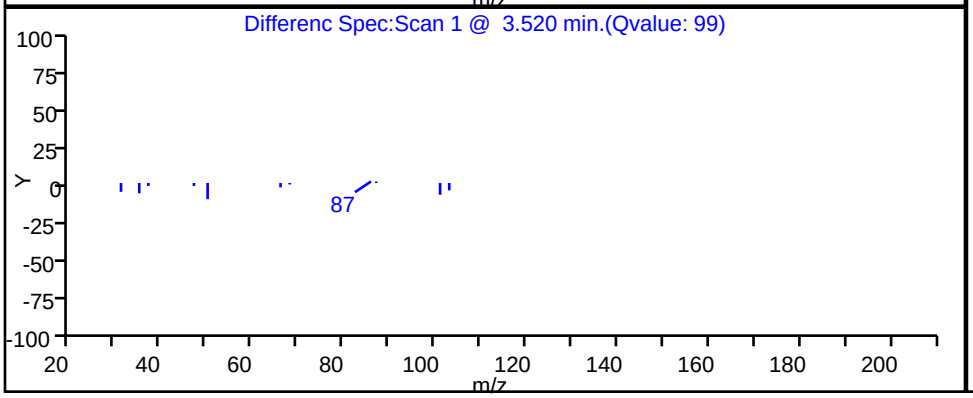












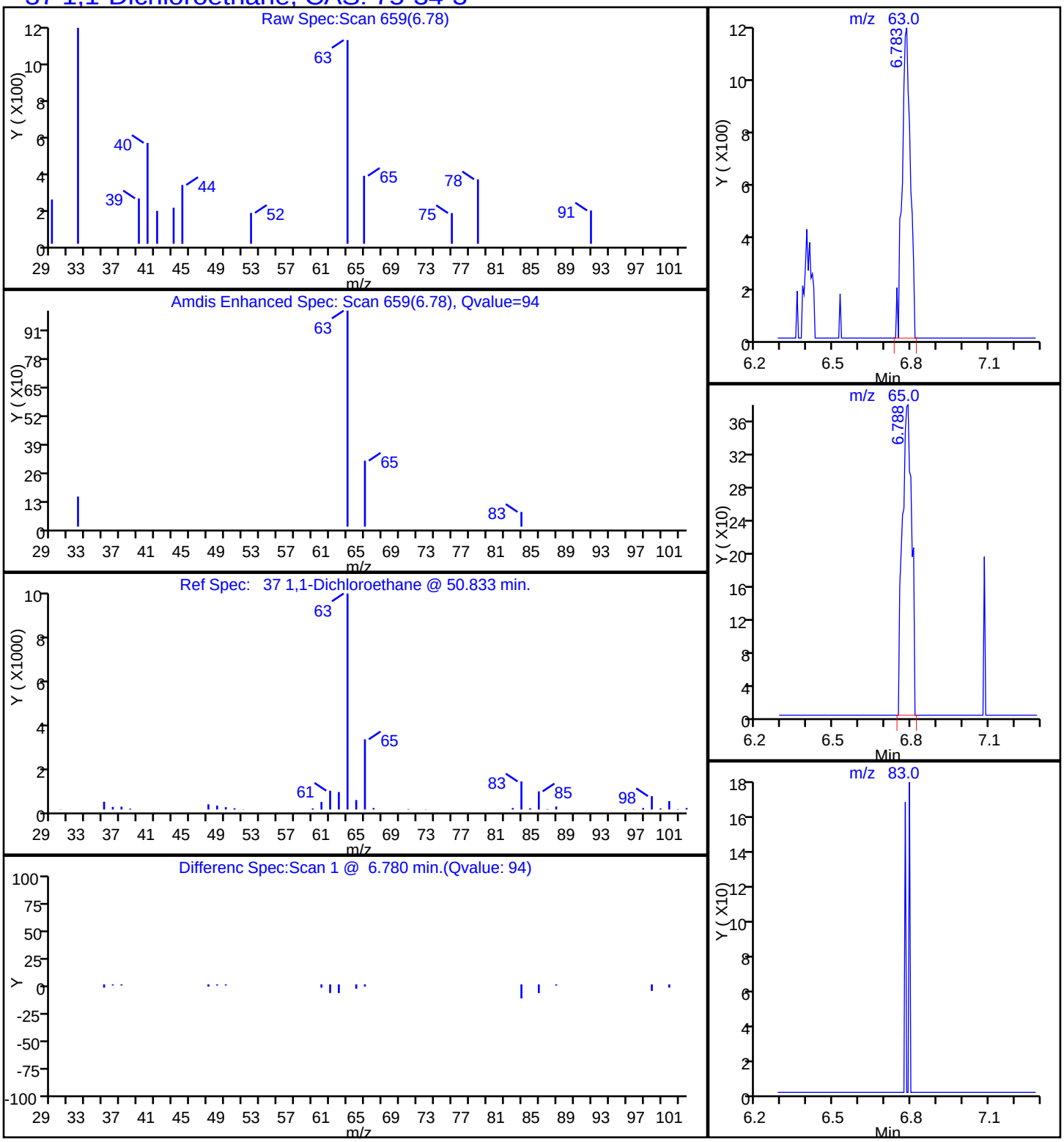
Report Date: 13-Mar-2017 12:02:07 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P108.D

Injection Date:	10-Mar-2017 16:58:30	Instrument ID:	MG		
Lims ID:	140-7358-A-3	Lab Sample ID:	140-7358-3		
Client ID:	BLDG-C INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P108.D		
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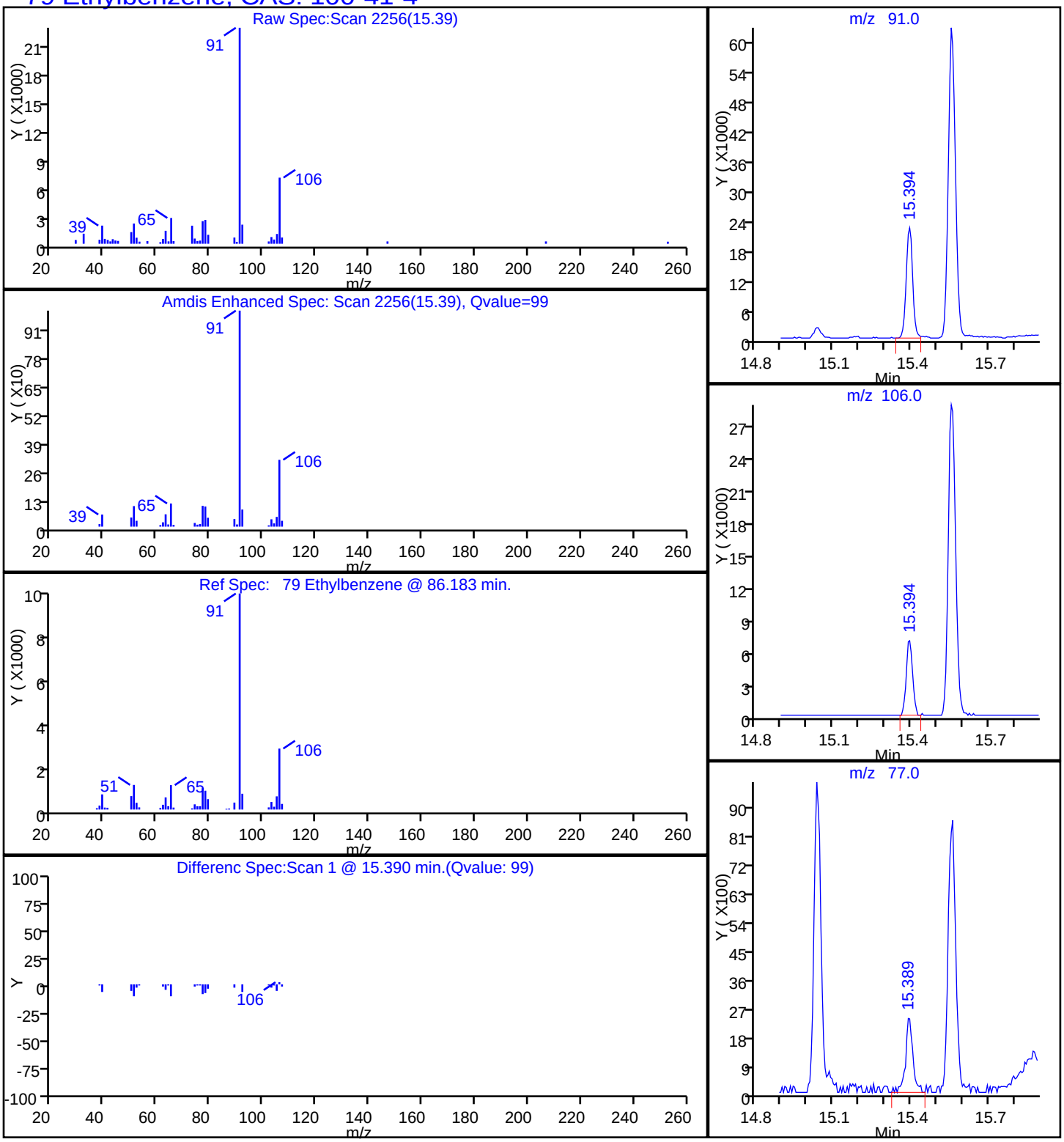
Lims ID:	140-7358-A-3	Lab Sample ID:	140-7358-3
Client ID:	BLDG-C INFLUENT		
Operator ID:	7126	ALS Bottle#:	8 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

79 Ethylbenzene, CAS: 100-41-4



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TestAmerica Knoxville

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Injection Date:	10-Mar-2017 16:58:30	Instrument ID:	MG		
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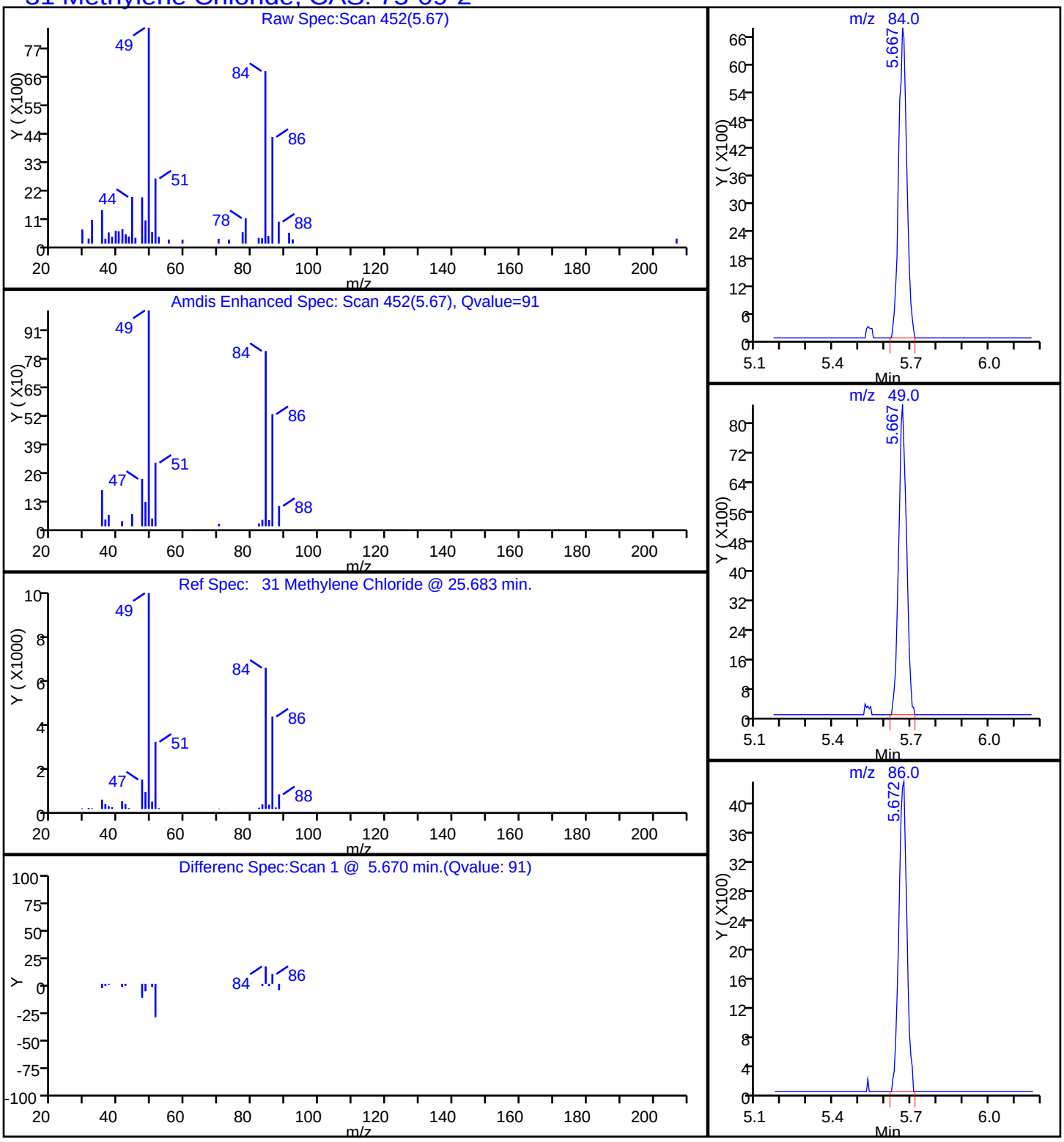
Client ID:	BLDG-C INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

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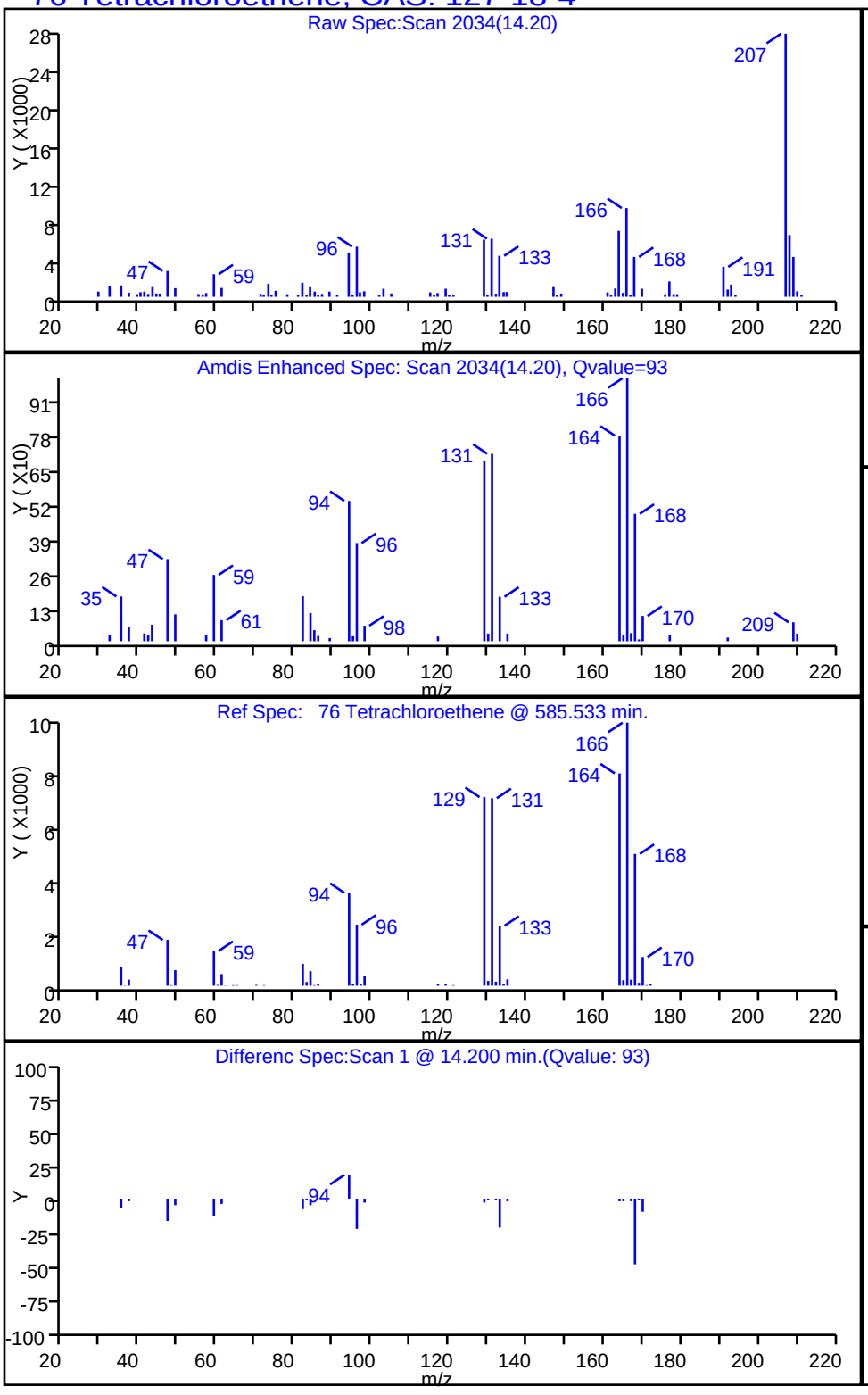
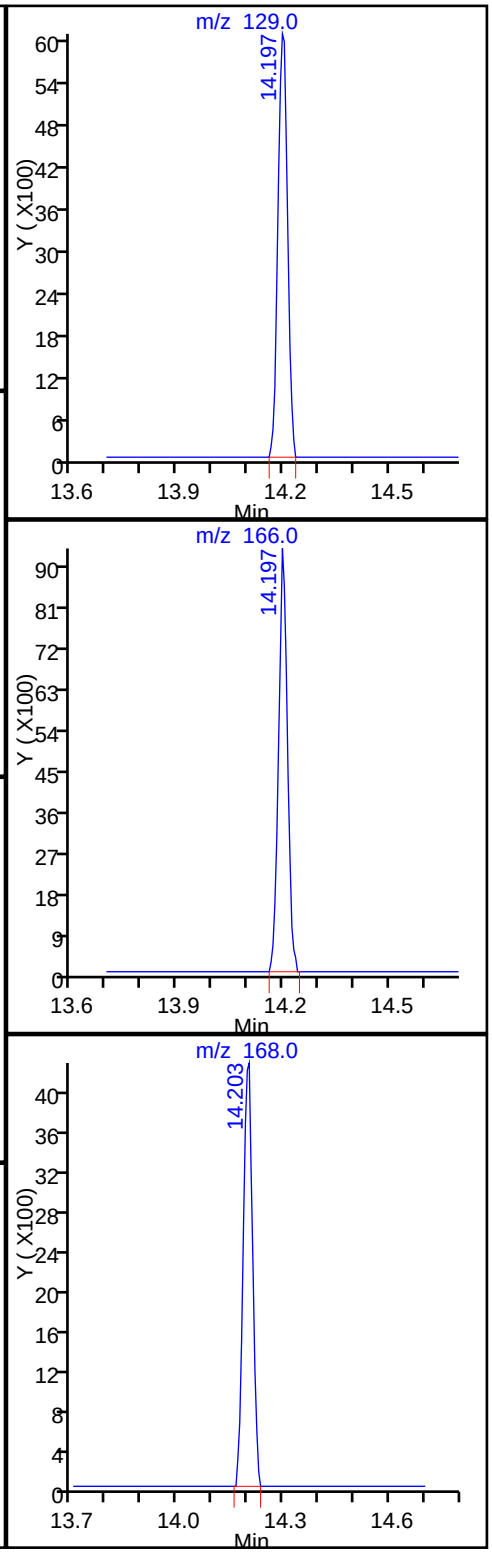
Client ID:	BLDG-C INFLUENT		
Operator ID:	7126	ALS Bottle#:	8 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

76 Tetrachloroethene, CAS: 127-18-4





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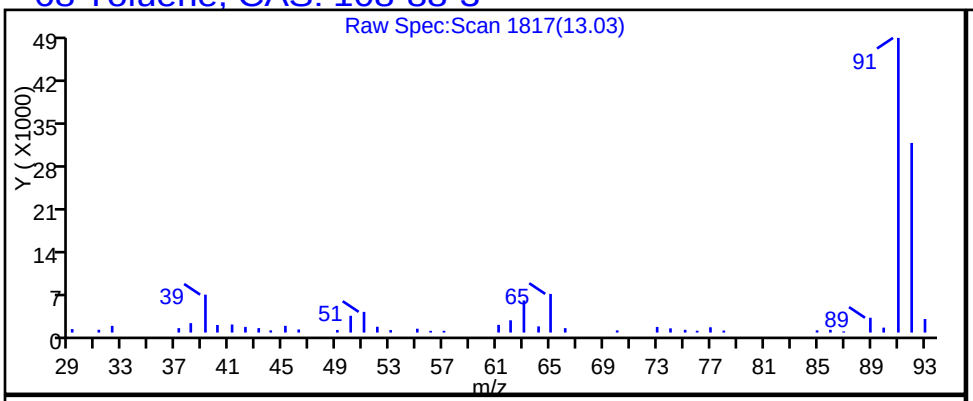
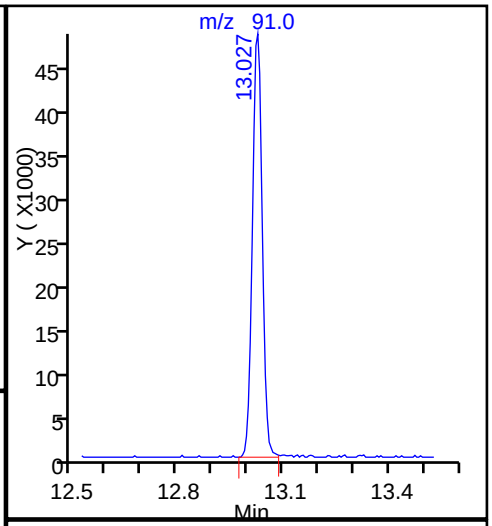
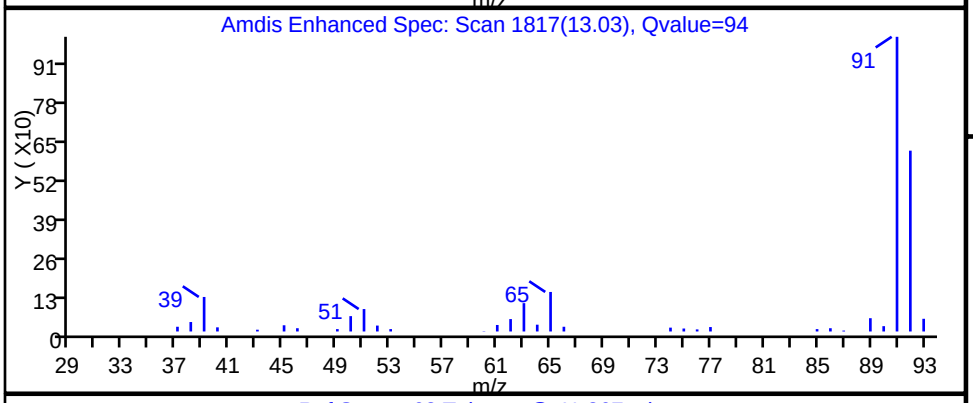
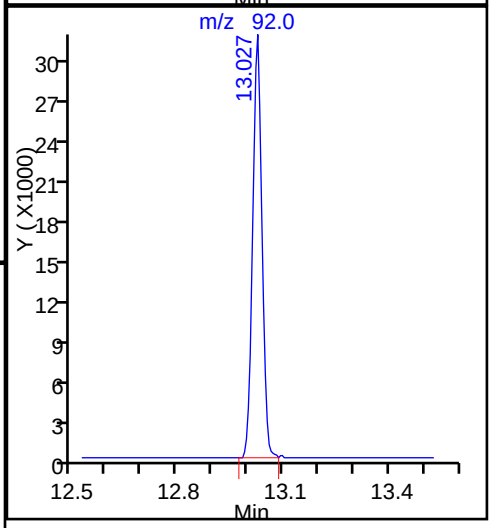
Client ID:	BLDG-C INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

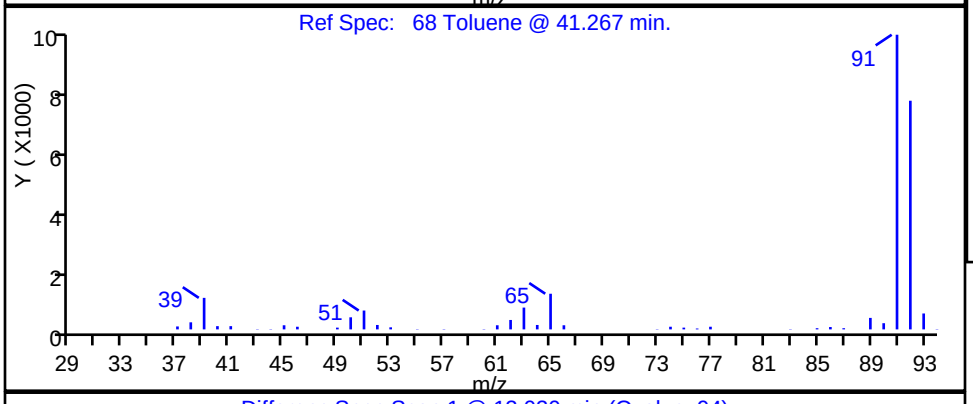
68 Toluene, CAS: 108-88-3

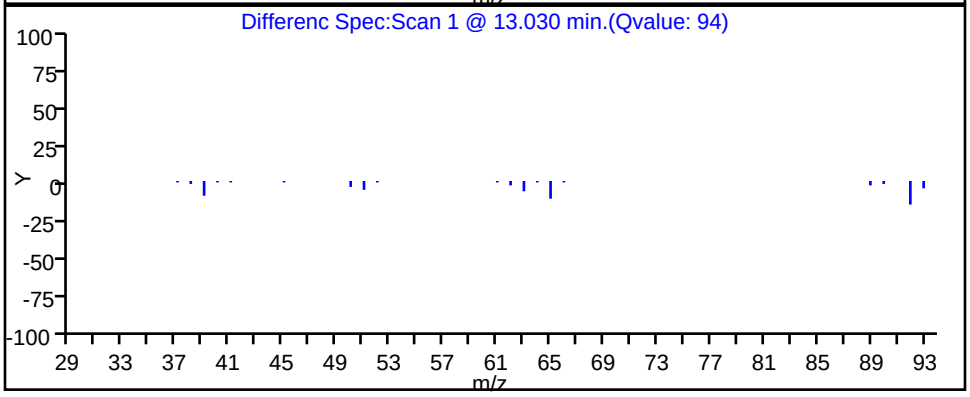












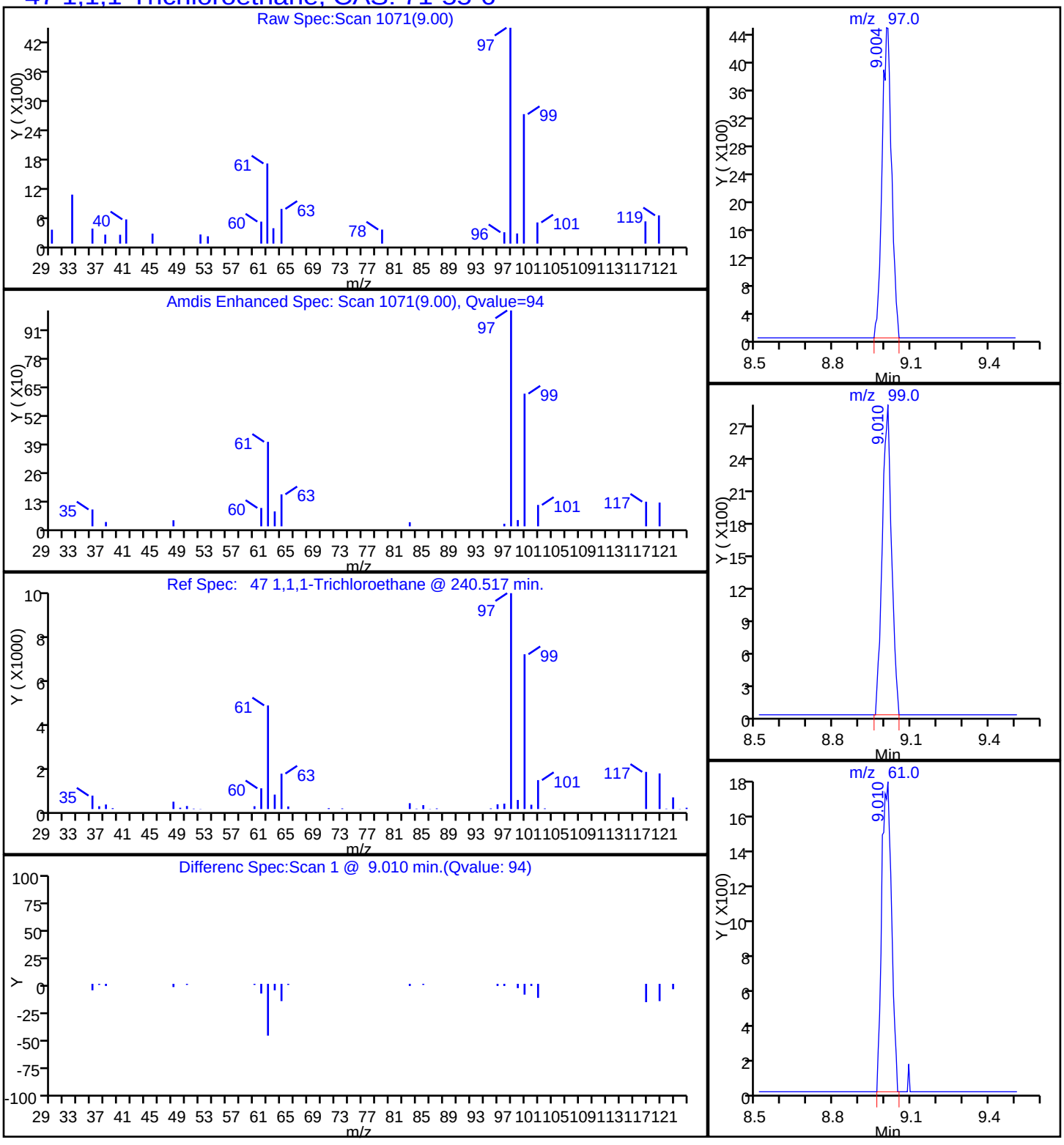
Report Date: 13-Mar-2017 12:02:07 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P108.D

Injection Date:	10-Mar-2017 16:58:30	Instrument ID:	MG		
Lims ID:	140-7358-A-3	Lab Sample ID:	140-7358-3		
Client ID:	BLDG-C INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

47 1,1,1-Trichloroethane, CAS: 71-55-6



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Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P108.D		
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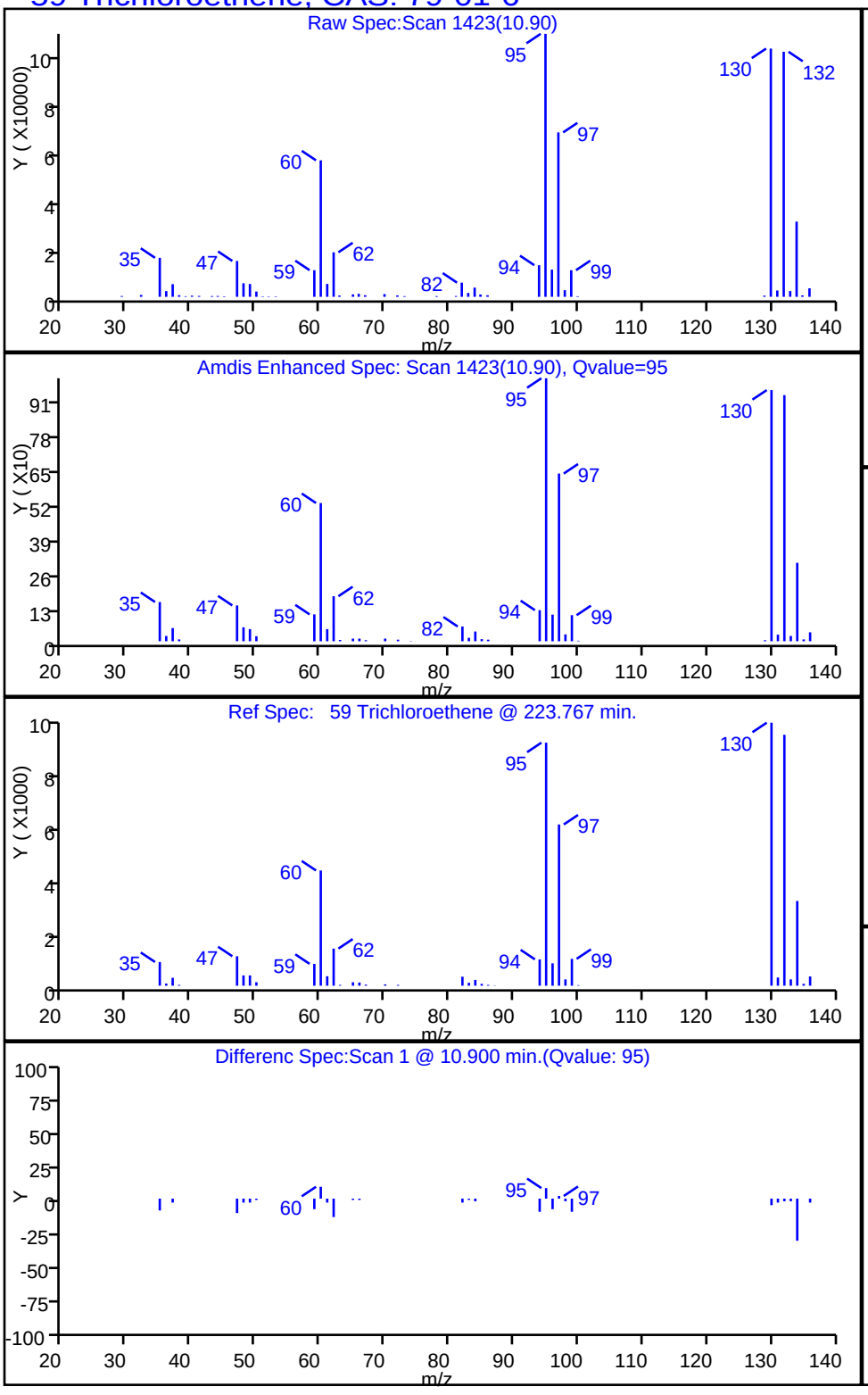
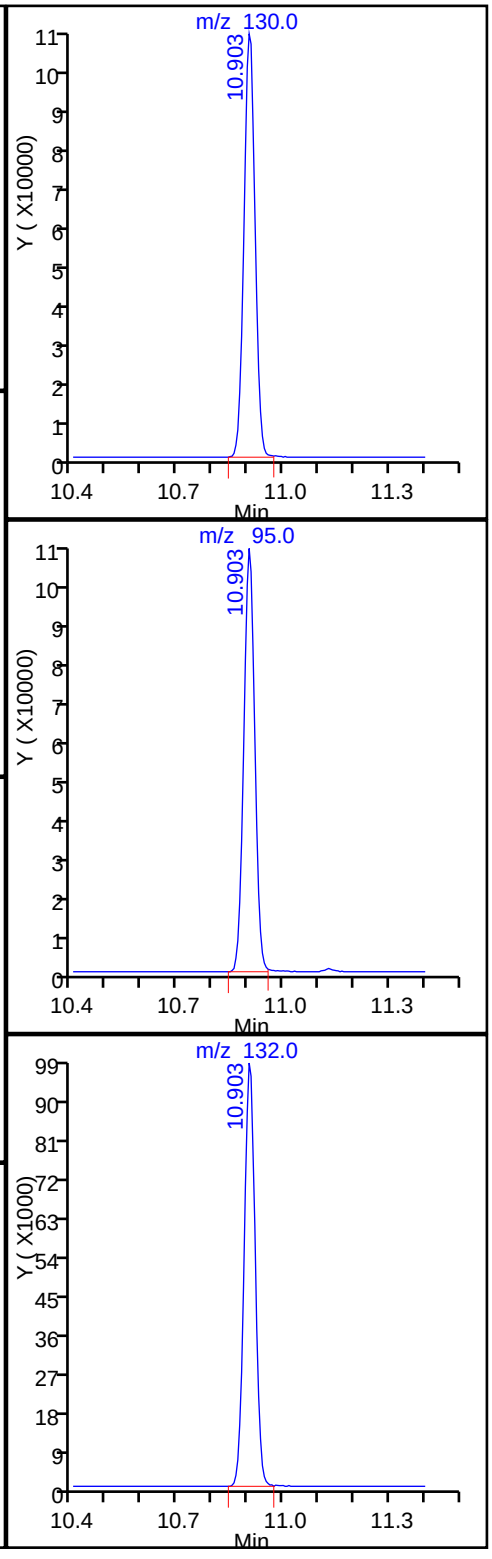
Lims ID:	140-7358-A-3	Lab Sample ID:	140-7358-3
Client ID:	BLDG-C INFLUENT		
Operator ID:	7126	ALS Bottle#:	8 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

59 Trichloroethene, CAS: 79-01-6





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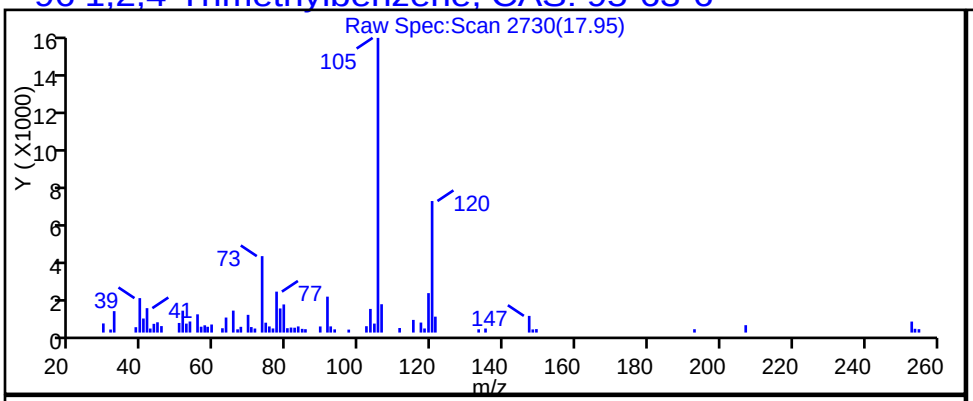
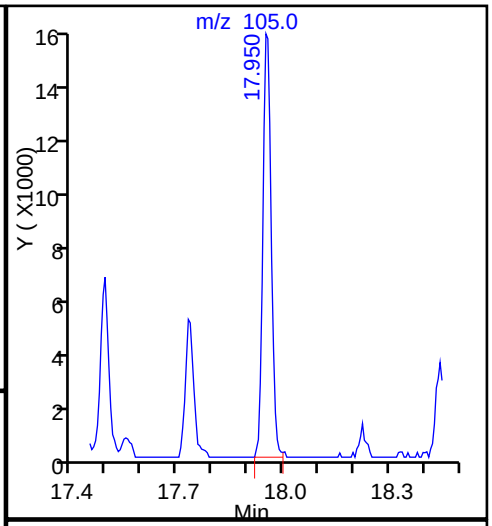
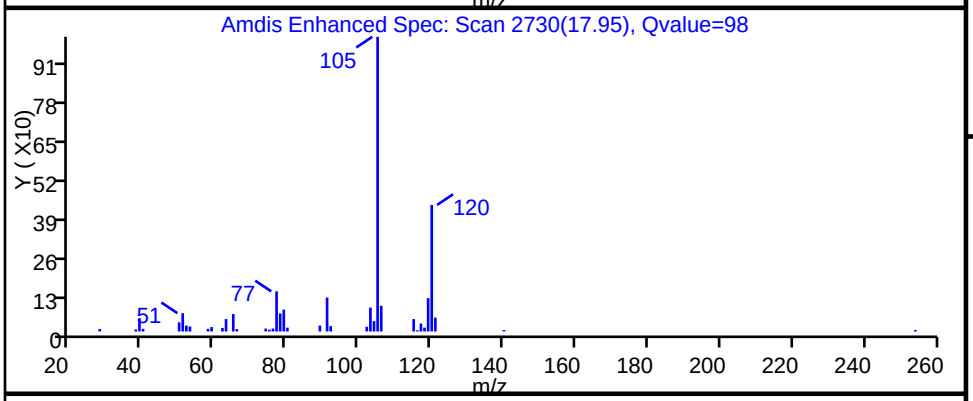
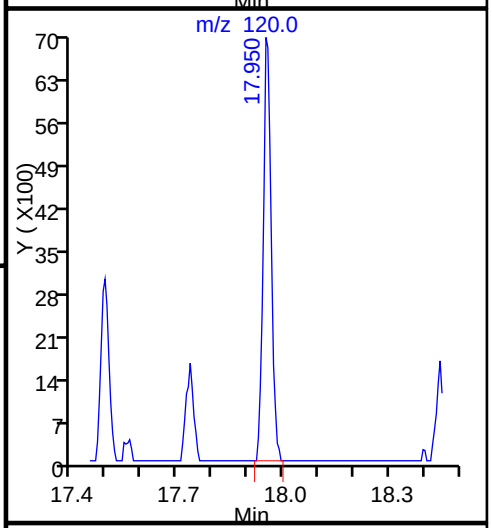
Client ID:	BLDG-C INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

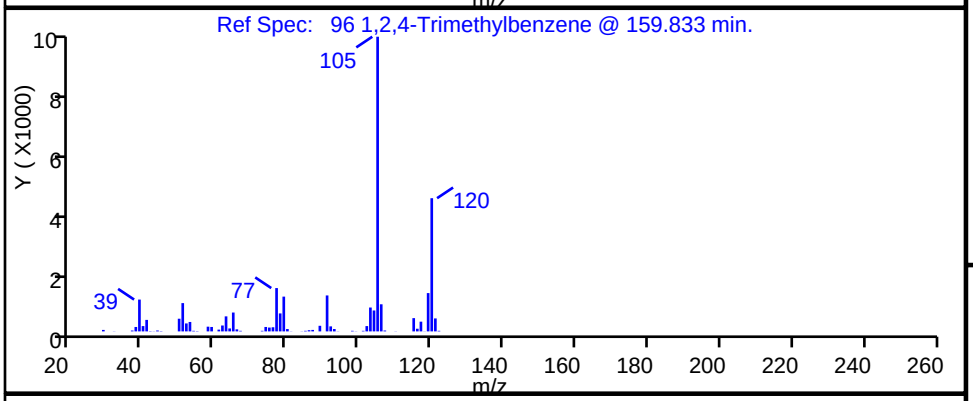
96 1,2,4-Trimethylbenzene, CAS: 95-63-6

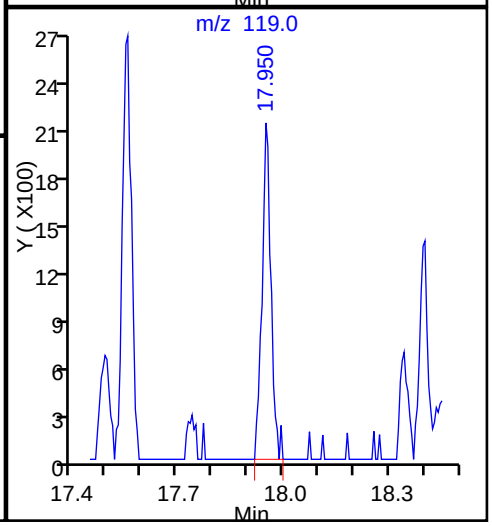


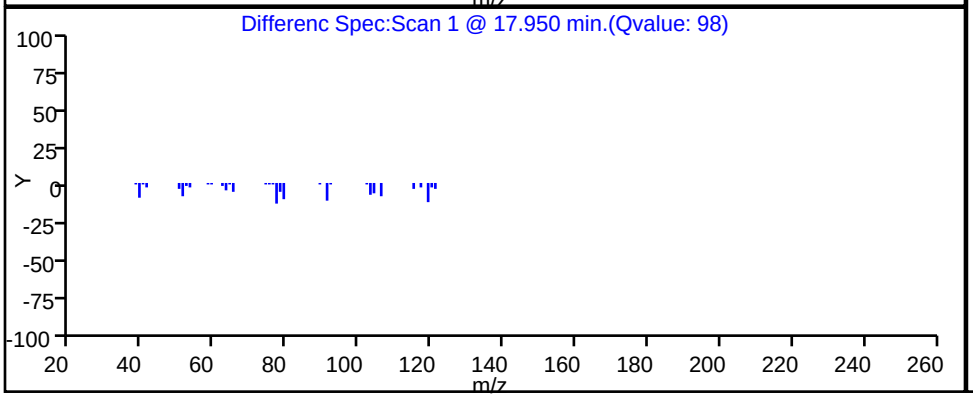








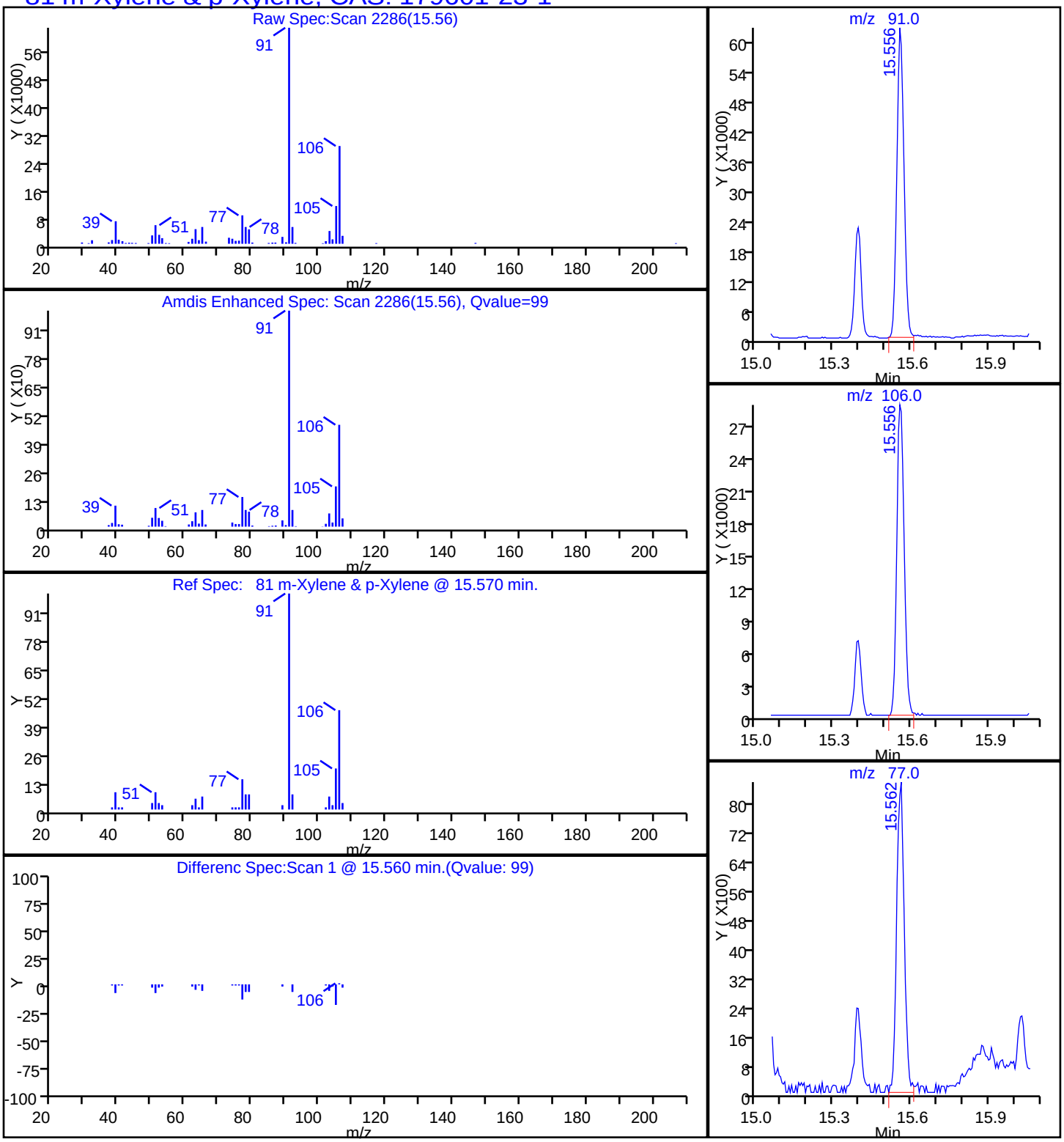




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P108.D				
Injection Date:	10-Mar-2017 16:58:30	Instrument ID:	MG		
Lims ID:	140-7358-A-3	Lab Sample ID:	140-7358-3		
Client ID:	BLDG-C INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

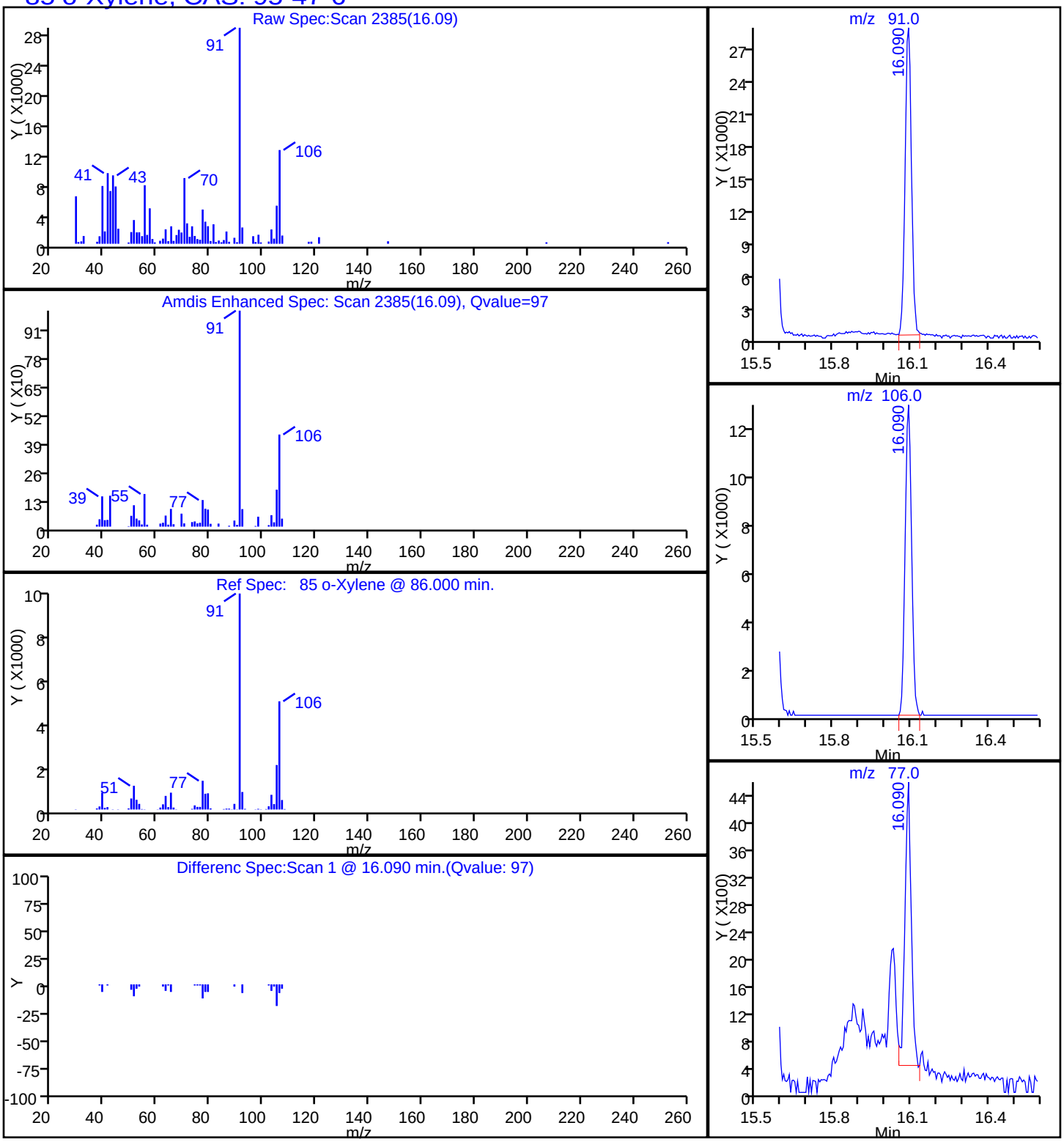
81 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P108.D		
Injection Date:	10-Mar-2017 16:58:30	Instrument ID:	MG
Lims ID:	140-7358-A-3	Lab Sample ID:	140-7358-3
Client ID:	BLDG-C INFLUENT		
Operator ID:	7126	ALS Bottle#:	8 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

85 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7358-1

SDG No.:

Client Sample ID: BLDG-A EFFLUENT | Lab Sample ID: 140-7358-4

Matrix: Air | Lab File ID: GC10P109.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 14:23

Sample wt/vol: 100(mL) | Date Analyzed: 03/10/2017 17:41

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9158 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.37	J	0.40	0.075
67-66-3	Chloroform	119.38	0.17	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	8.3		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.55		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	3.8		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	18		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.19	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.68	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.98		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.15	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	48		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.86		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	0.16	J	0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7358-1

SDG No.:

Client Sample ID: BLDG-A EFFLUENT | Lab Sample ID: 140-7358-4

Matrix: Air | Lab File ID: GC10P109.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 14:23

Sample wt/vol: 100(mL) | Date Analyzed: 03/10/2017 17:41

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9158 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	0.84	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	33		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	15		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	71		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.80	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.58	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	260		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	4.6		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	0.42	J	0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.8		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P109.D				
Lims ID:	140-7358-A-4				
Client ID:	BLDG-A EFFLUENT				
Sample Type:	Client				
Inject. Date:	10-Mar-2017 17:41:30	ALS Bottle#:	9	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004228-013				
Misc. Info.:	140-7358-a-4				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Mar-2017 12:06:21	Calib Date:	02-Mar-2017 20:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK020				
First Level Reviewer: barlozhetskayaa		Date:	13-Mar-2017 12:06:21		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.996	8.001	-0.005	86	303516	4.00	
* 2 1,4-Difluorobenzene	114	10.164	10.169	-0.005	95	1540720	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.033	15.038	-0.005	88	1526987	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.705	16.710	-0.005	94	1209362	4.25	
6 Chlorodifluoromethane	67	3.461	3.461	0.000	89	2211	0.0745	
8 Dichlorodifluoromethane	85	3.510	3.515	-0.005	100	29564	0.1098	
12 Vinyl chloride	62	3.806	3.806	0.000	95	2713	0.0326	
27 1,1-Dichloroethene	96	5.354	5.359	-0.005	98	281700	3.58	
31 Methylene Chloride	84	5.656	5.666	-0.010	91	9952	0.1361	
34 trans-1,2-Dichloroethene	96	6.395	6.400	-0.005	92	2334	0.0292	
37 1,1-Dichloroethane	63	6.772	6.783	-0.011	100	111814	0.7521	
42 cis-1,2-Dichloroethene	96	7.694	7.699	-0.005	96	138316	1.65	
44 Chloroform	83	8.018	8.028	-0.010	91	6942	0.0345	
47 1,1,1-Trichloroethane	97	8.999	9.004	-0.005	94	2110060	9.54	
49 Benzene	78	9.587	9.587	-0.005	95	5039	0.0209	7M
59 Trichloroethene	130	10.903	10.908	-0.005	93	23944	0.1730	
68 Toluene	91	13.022	13.027	-0.005	93	54118	0.1953	
79 Ethylbenzene	91	15.389	15.394	-0.005	99	13499	0.0371	
81 m-Xylene & p-Xylene	91	15.562	15.567	-0.005	99	44726	0.1567	
85 o-Xylene	91	16.090	16.090	0.000	95	18872	0.0645	
S 126 Xylenes, Total	100				0		0.2212	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection
Review Flags
M - Manually Integrated

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

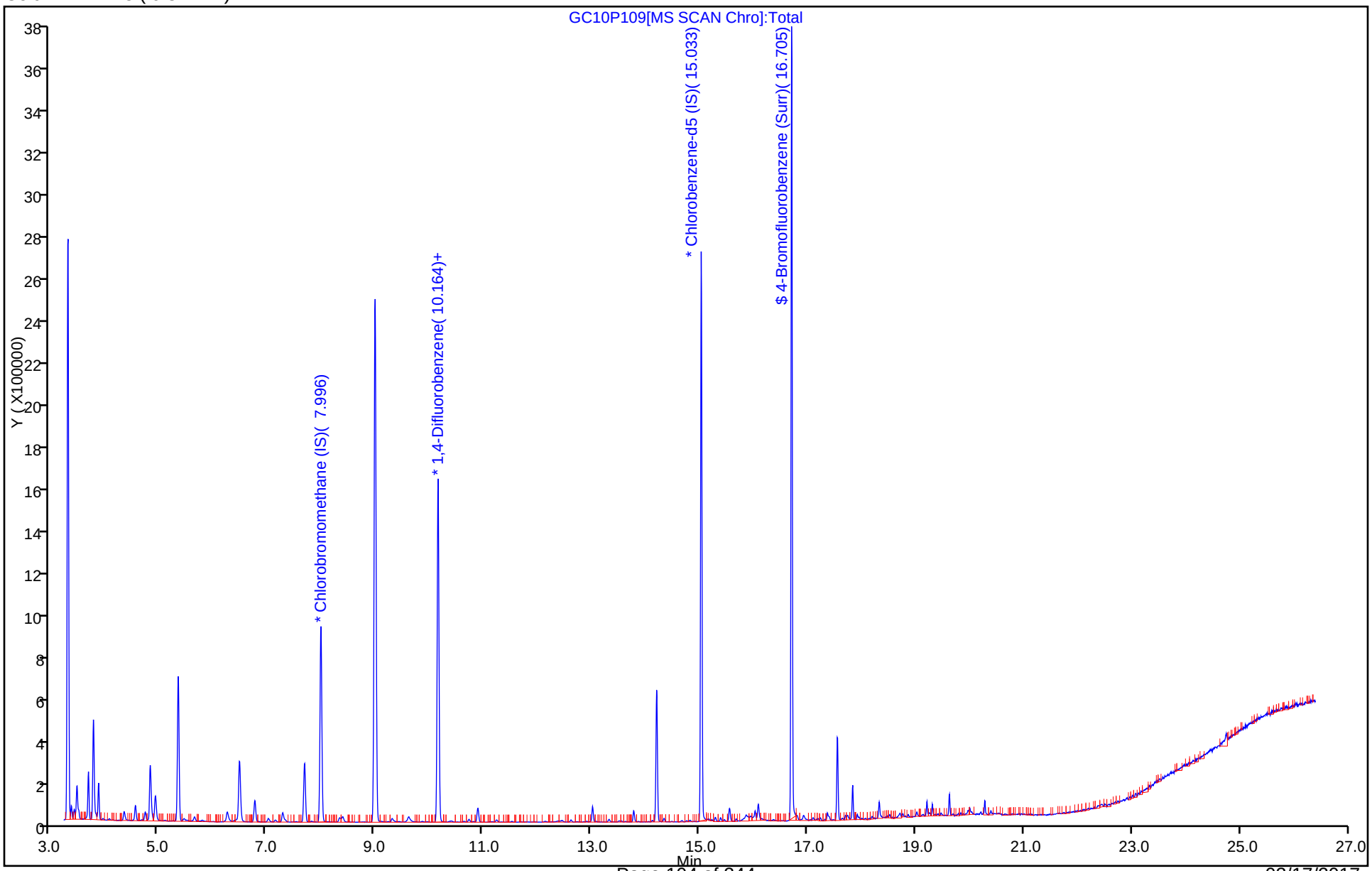
Report Date: 13-Mar-2017 12:06:21 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P109.D

Injection Date:	10-Mar-2017 17:41:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-7358-A-4	Lab Sample ID:	140-7358-4	Worklist Smp#:	13
Client ID:	BLDG-A EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P109.D				
Lims ID:	140-7358-A-4				
Client ID:	BLDG-A EFFLUENT				
Sample Type:	Client				
Inject. Date:	10-Mar-2017 17:41:30	ALS Bottle#:	9	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004228-013				
Misc. Info.:	140-7358-a-4				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Mar-2017 12:06:21	Calib Date:	02-Mar-2017 20:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK020				

First Level Reviewer: barlozhetskayaa Date: 13-Mar-2017 12:06:21

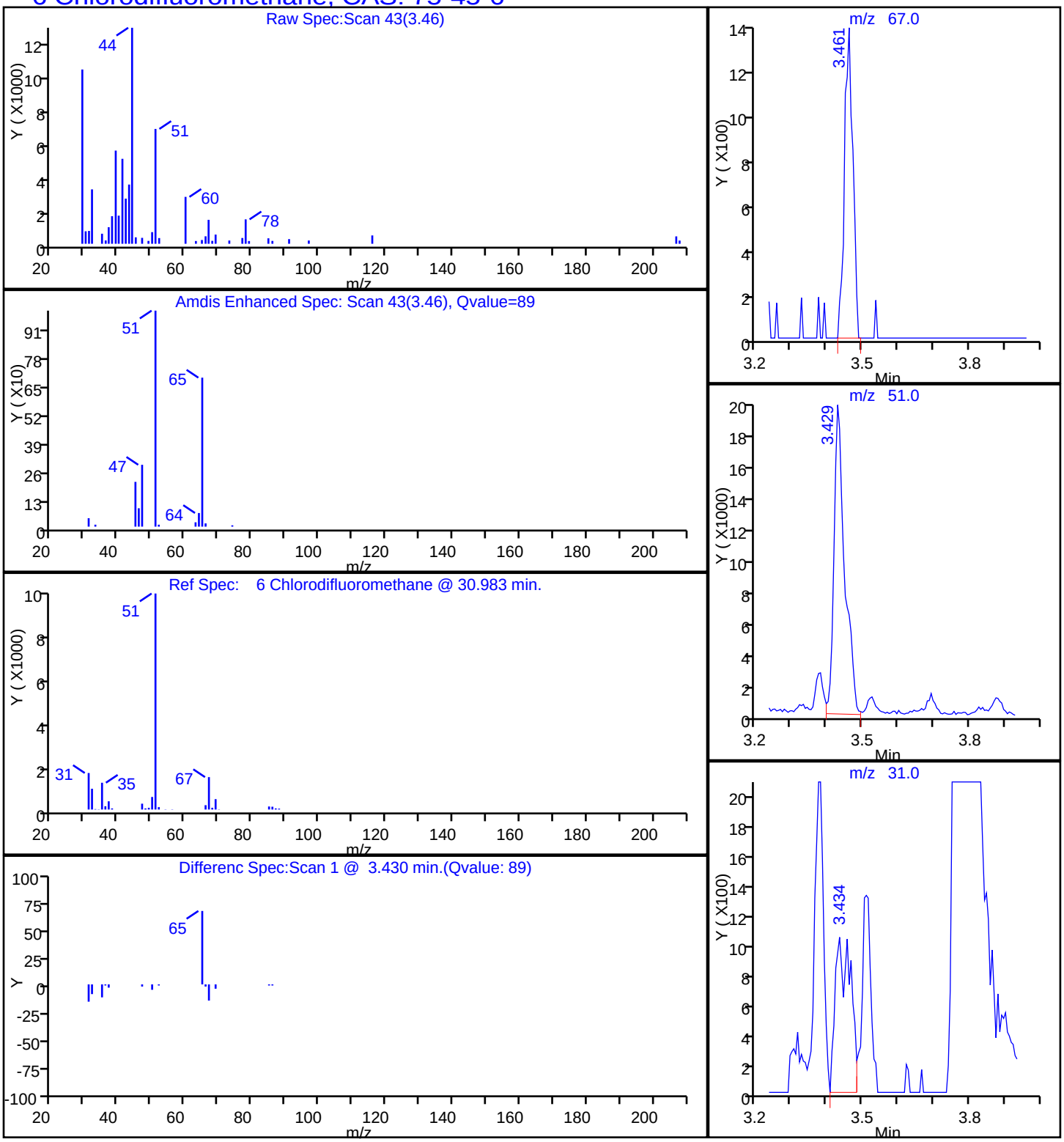
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.25	106.35

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P109.D

Injection Date:	10-Mar-2017 17:41:30	Instrument ID:	MG
Lims ID:	140-7358-A-4	Lab Sample ID:	140-7358-4
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	9 Worklist Smp#: 13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

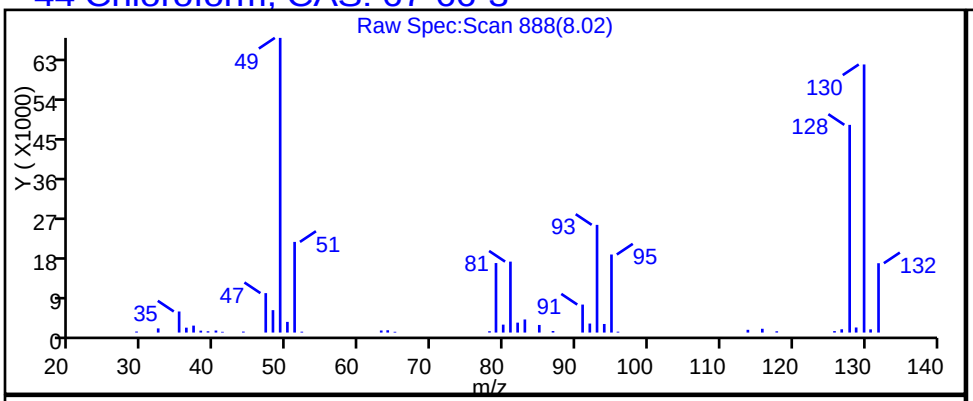
6 Chlorodifluoromethane, CAS: 75-45-6

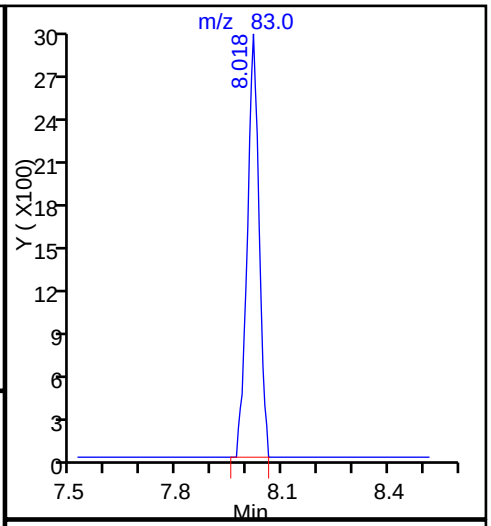


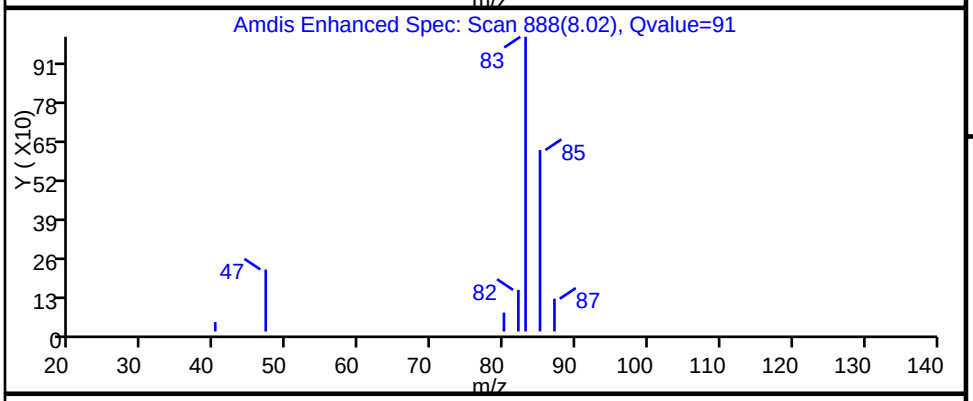
TestAmerica Knoxville

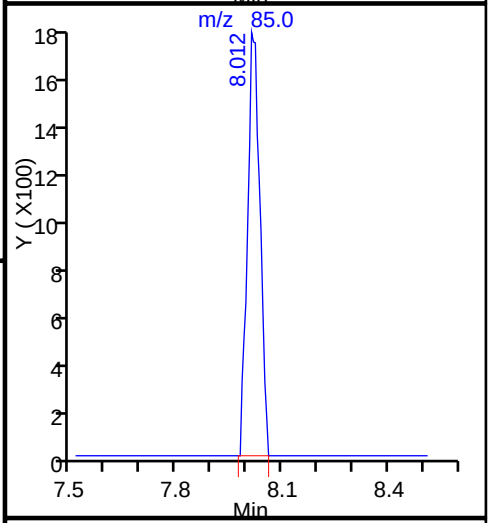
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P109.D		
Injection Date:	10-Mar-2017 17:41:30	Instrument ID:	MG
Lims ID:	140-7358-A-4	Lab Sample ID:	140-7358-4
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	9 Worklist Smp#: 13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

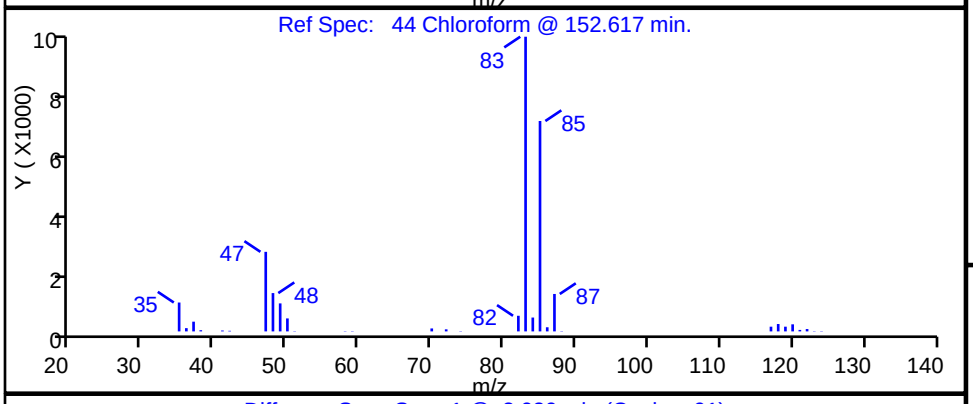
44 Chloroform, CAS: 67-66-3

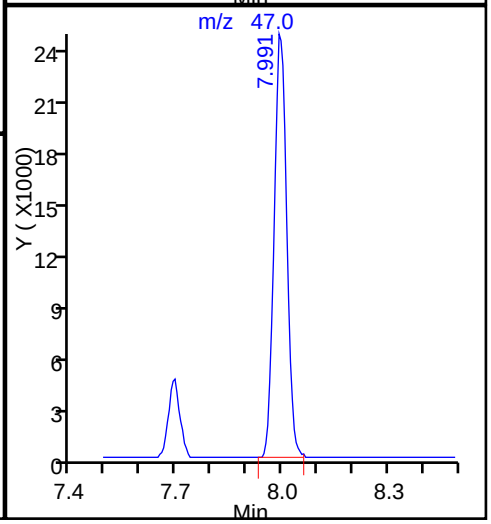


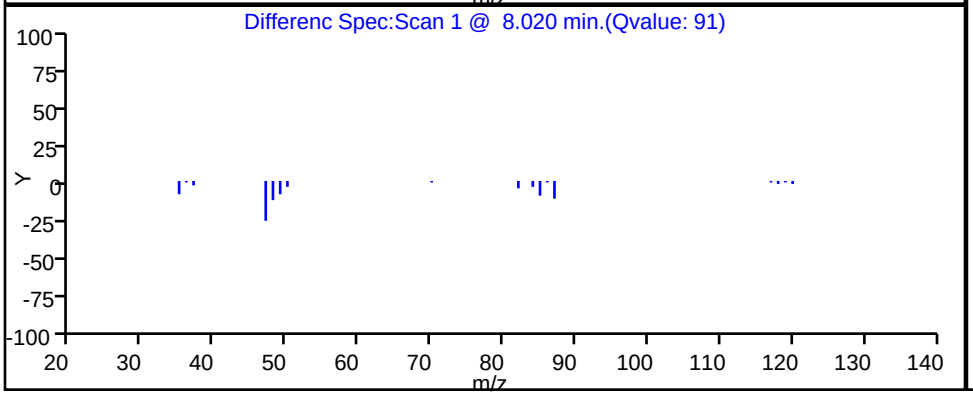








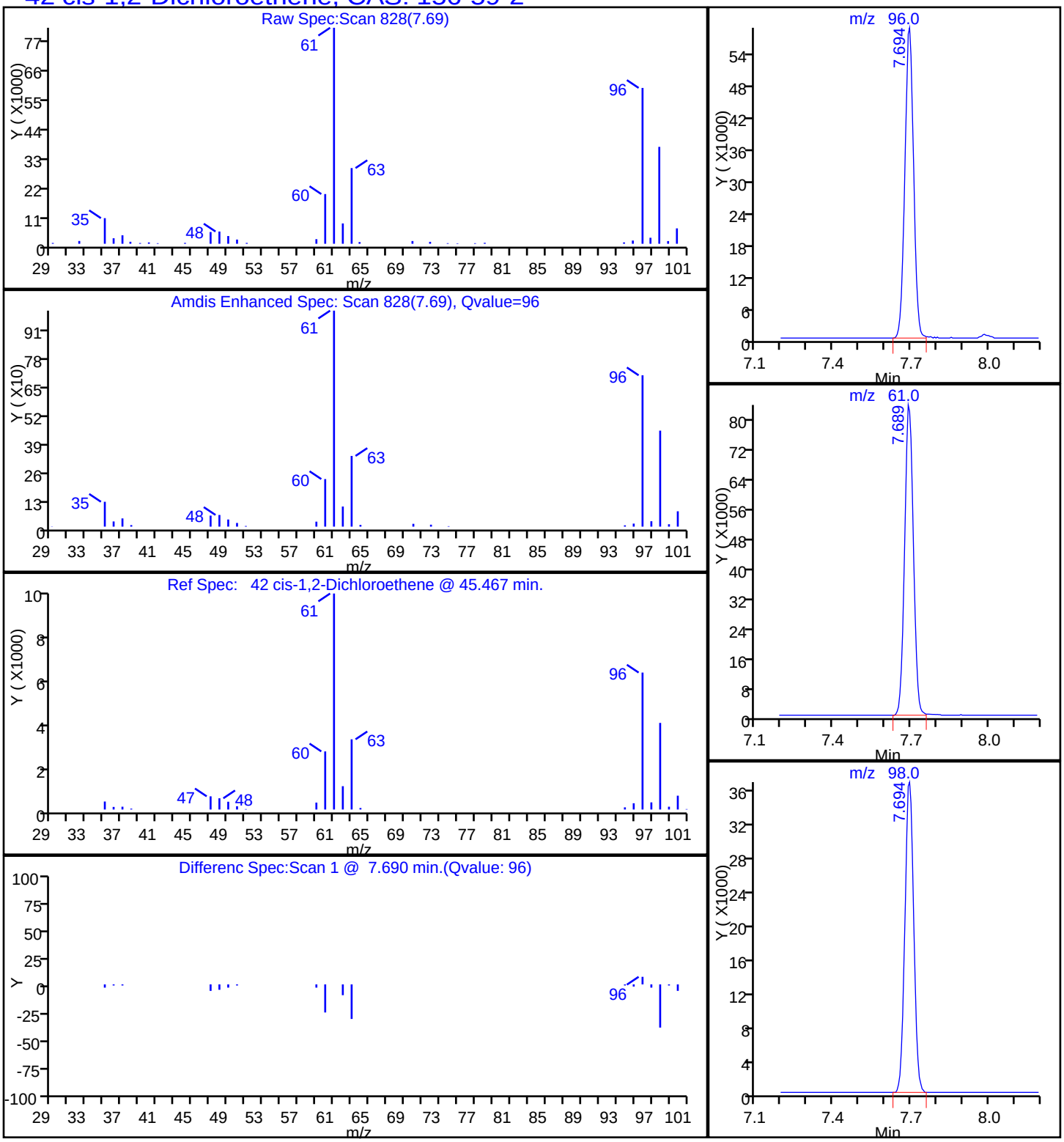




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P109.D				
Injection Date:	10-Mar-2017 17:41:30	Instrument ID:	MG		
Lims ID:	140-7358-A-4	Lab Sample ID:	140-7358-4		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

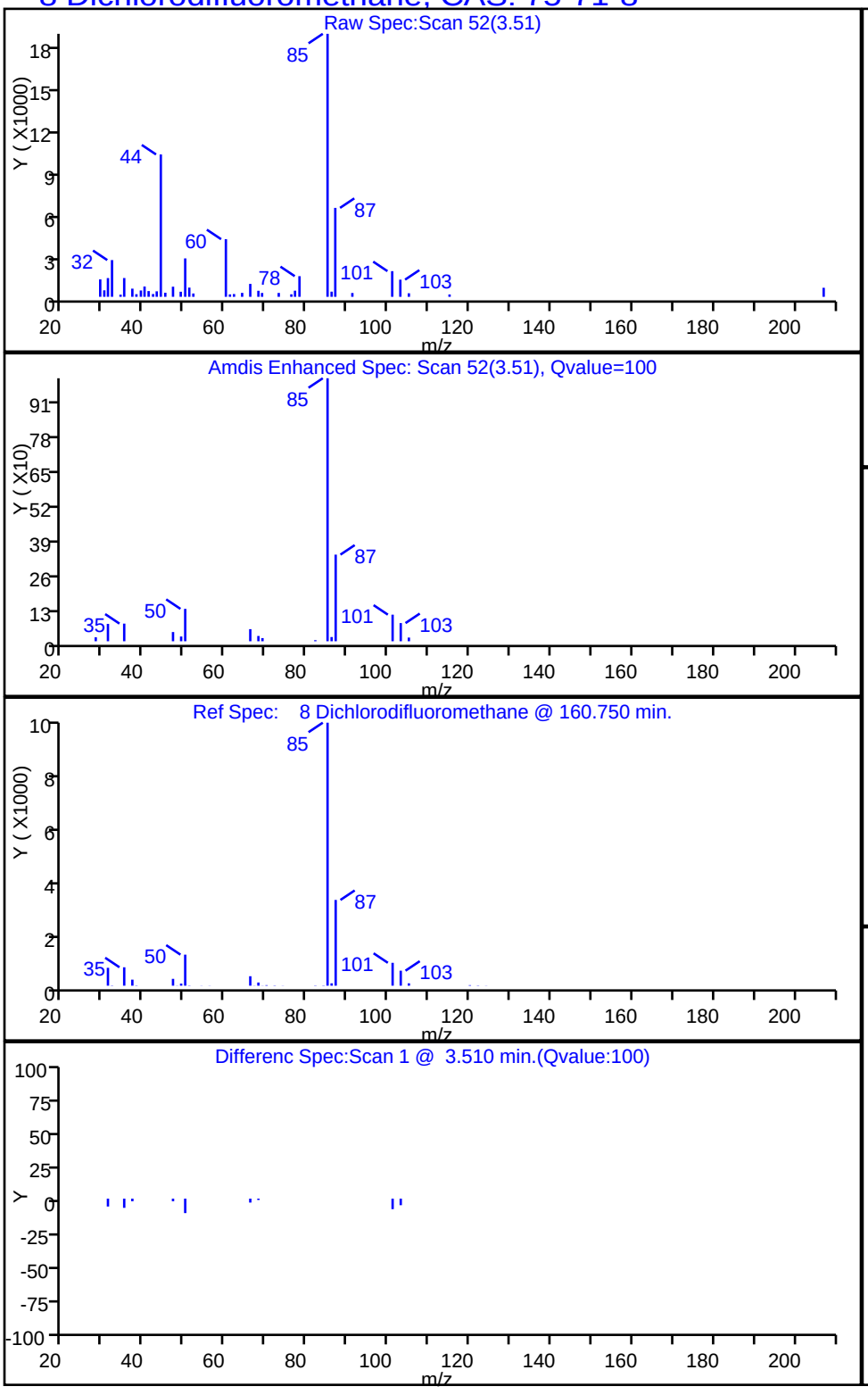
42 cis-1,2-Dichloroethene, CAS: 156-59-2

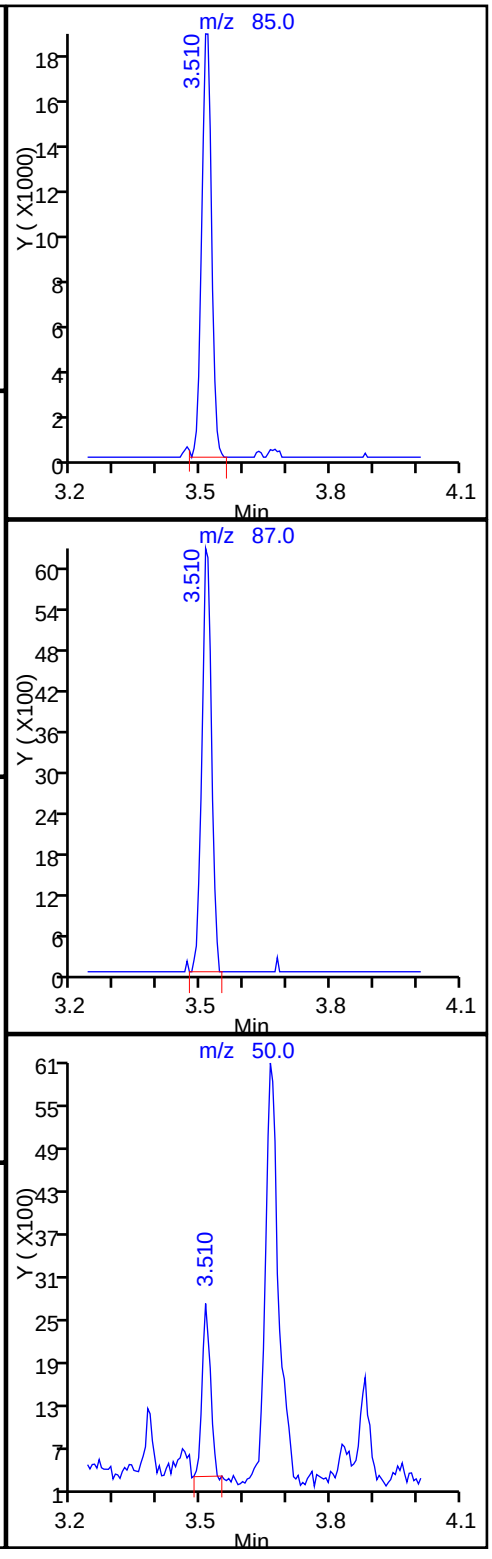


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P109.D				
Injection Date:	10-Mar-2017 17:41:30	Instrument ID:	MG		
Lims ID:	140-7358-A-4	Lab Sample ID:	140-7358-4		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

8 Dichlorodifluoromethane, CAS: 75-71-8

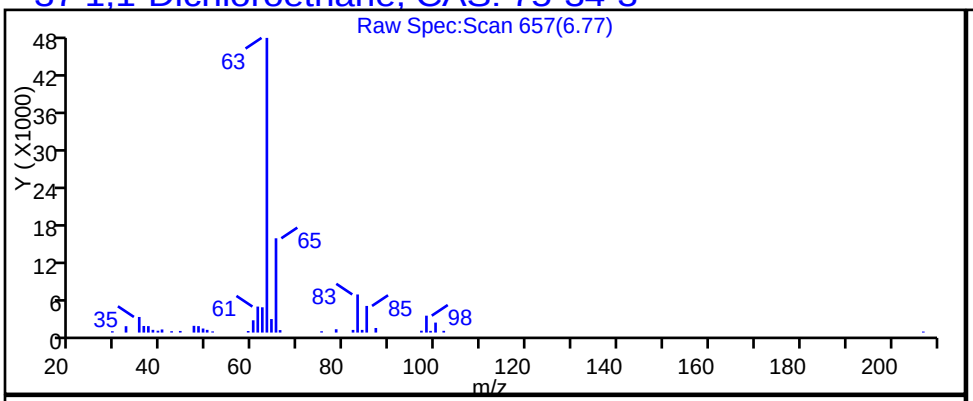


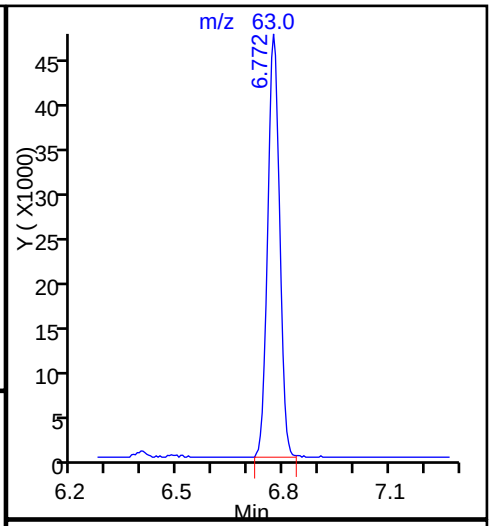


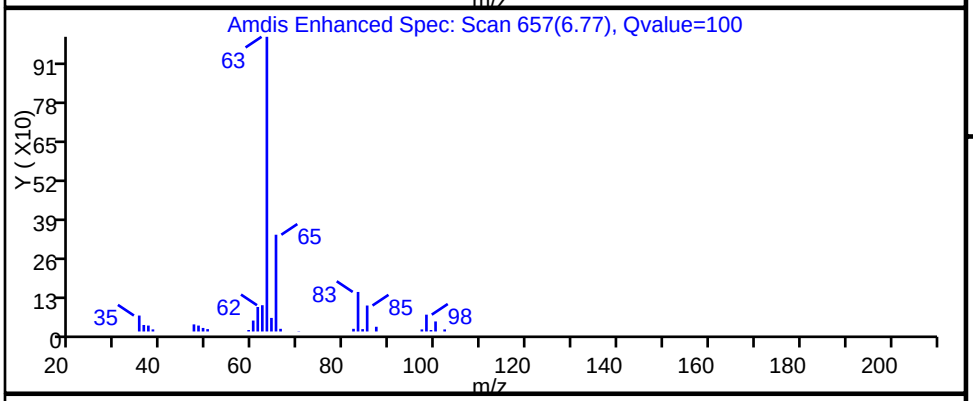
TestAmerica Knoxville

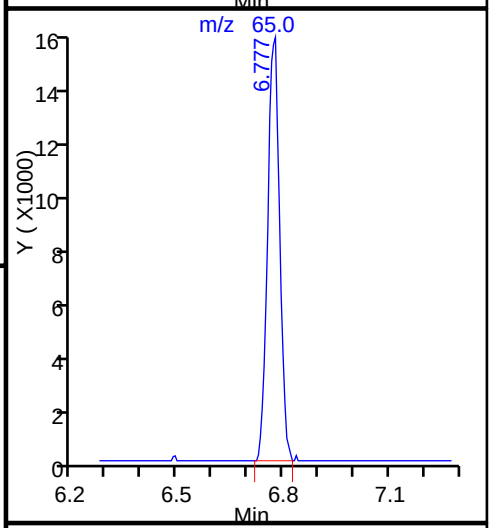
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P109.D		
Injection Date:	10-Mar-2017 17:41:30	Instrument ID:	MG
Lims ID:	140-7358-A-4	Lab Sample ID:	140-7358-4
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	9 Worklist Smp#: 13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

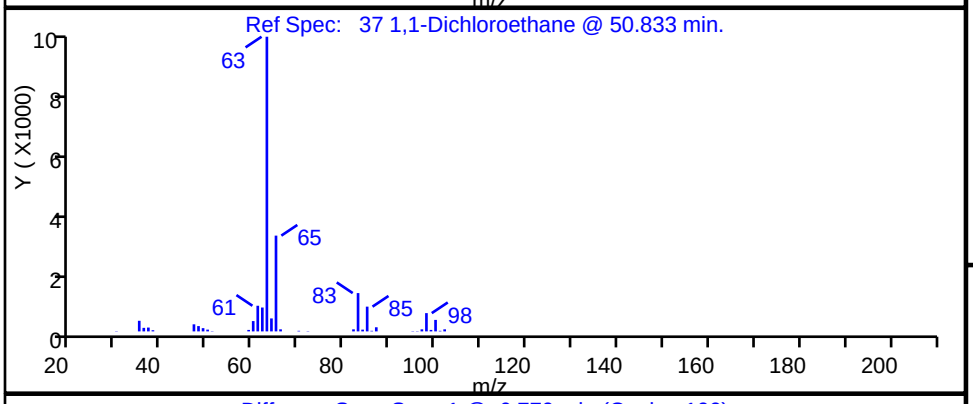
37 1,1-Dichloroethane, CAS: 75-34-3

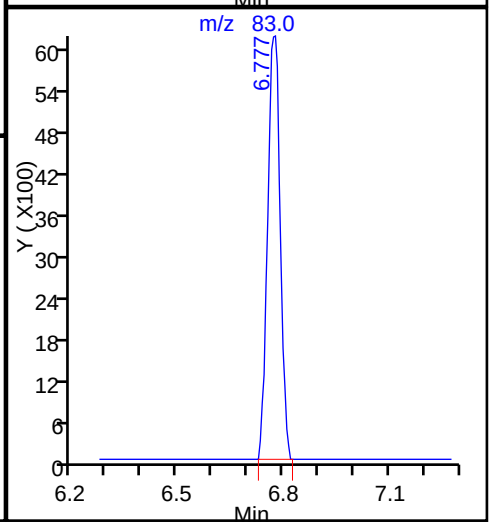


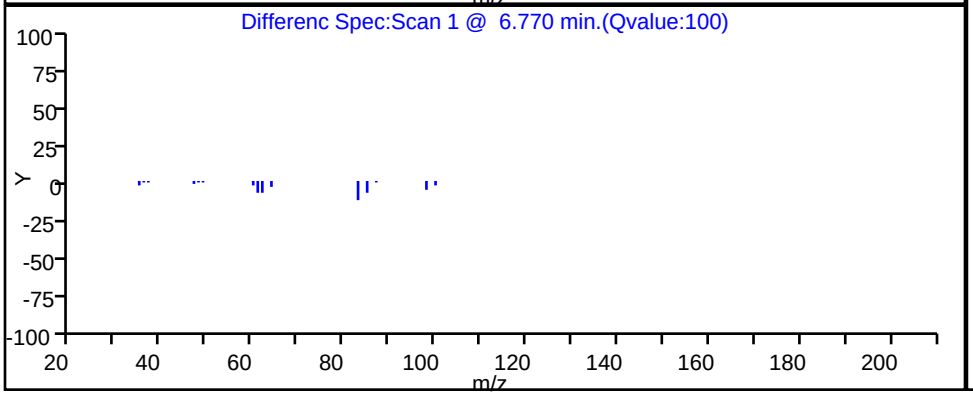








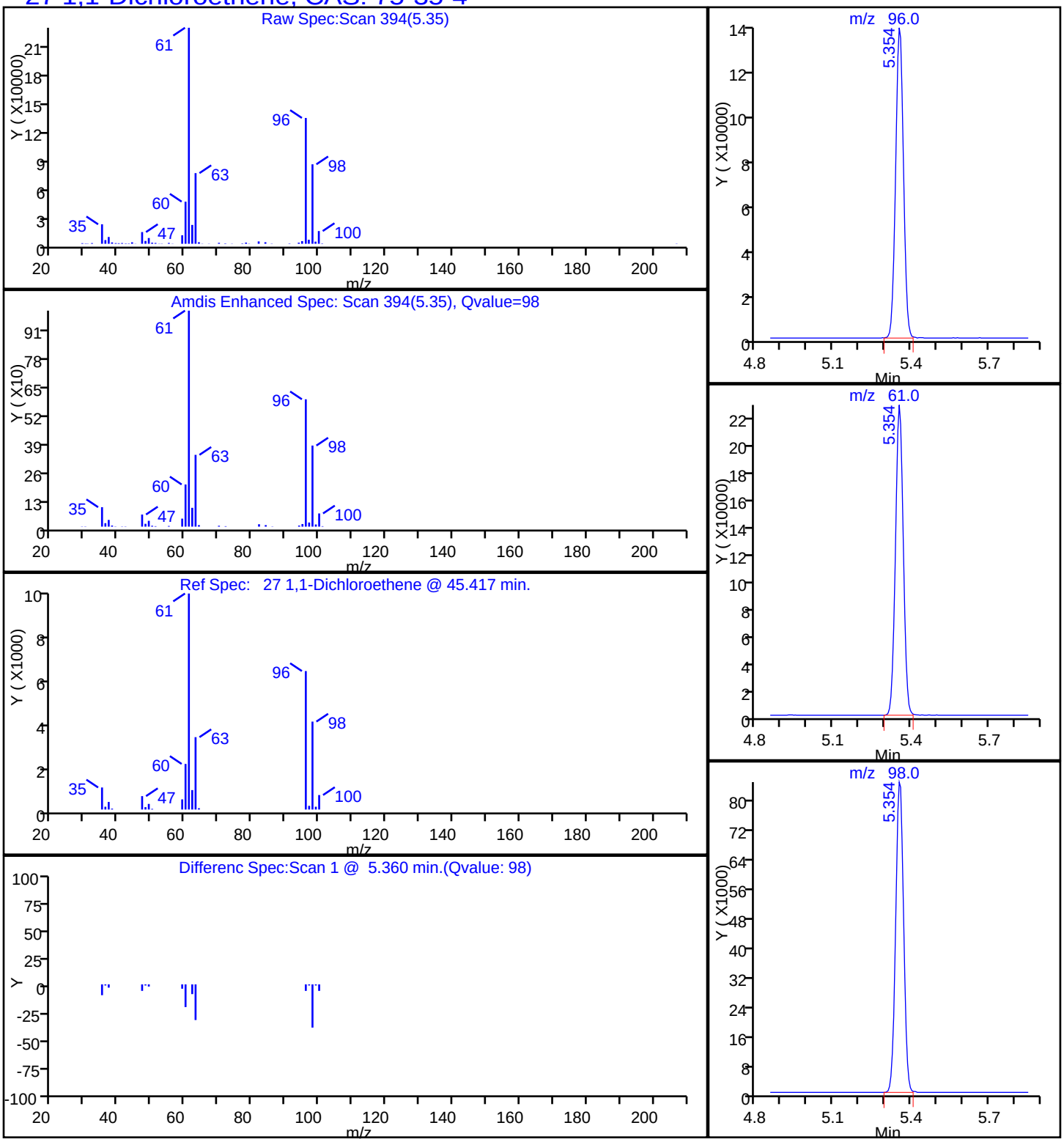




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P109.D				
Injection Date:	10-Mar-2017 17:41:30	Instrument ID:	MG		
Lims ID:	140-7358-A-4	Lab Sample ID:	140-7358-4		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

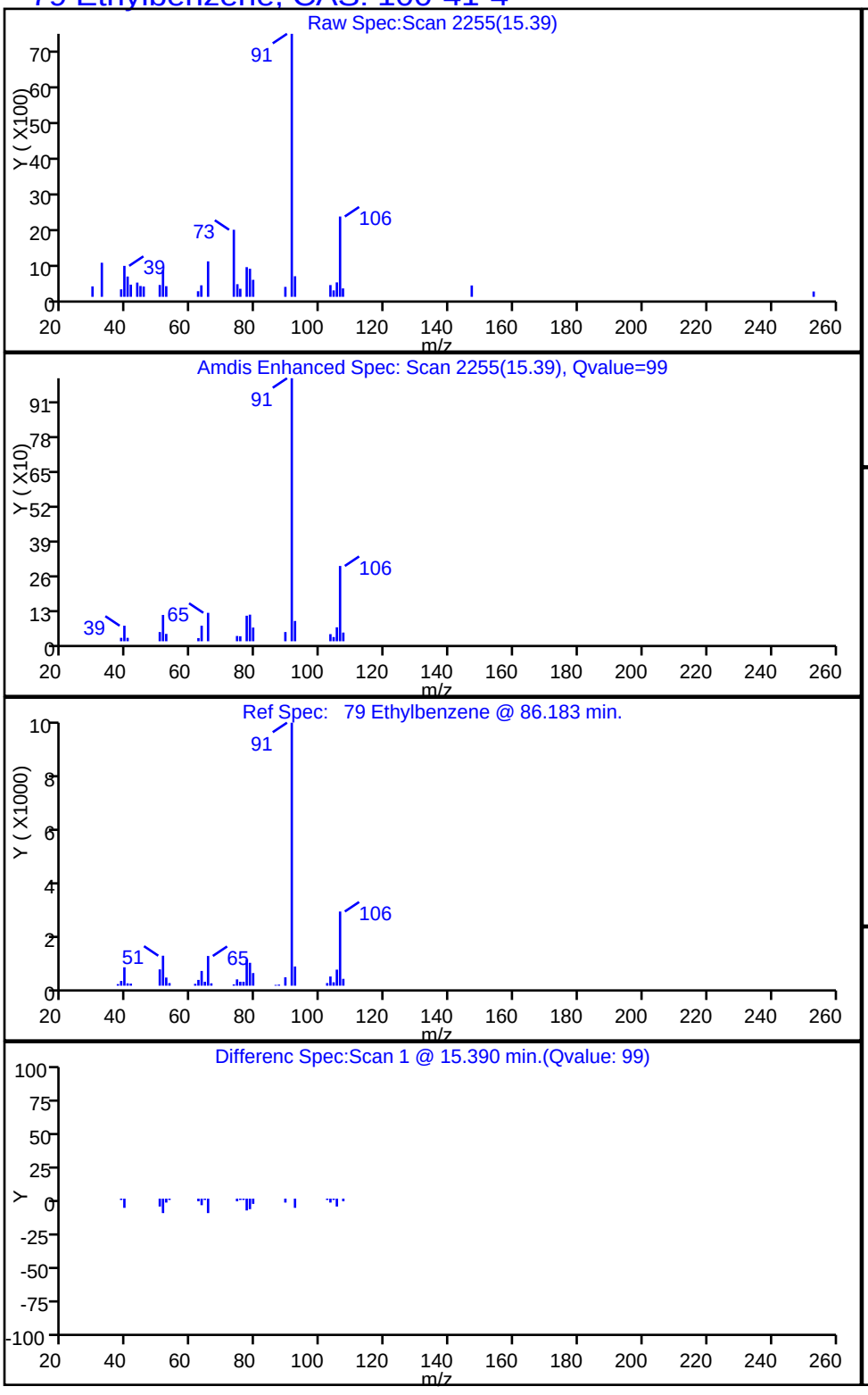
27 1,1-Dichloroethene, CAS: 75-35-4

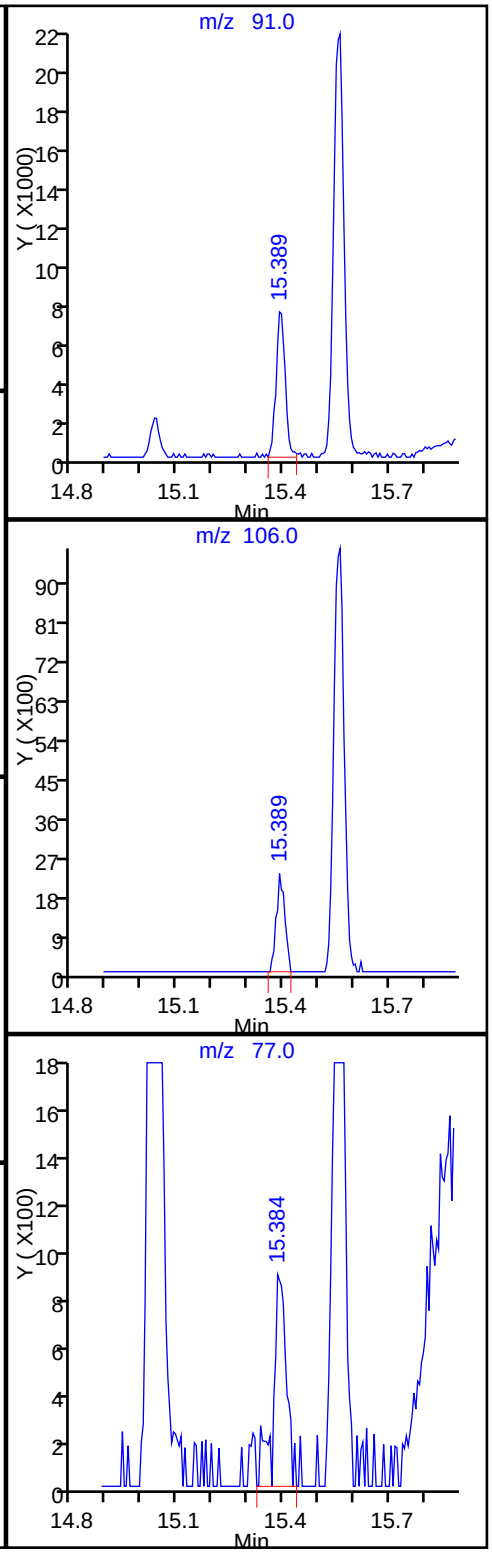


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P109.D				
Injection Date:	10-Mar-2017 17:41:30	Instrument ID:	MG		
Lims ID:	140-7358-A-4	Lab Sample ID:	140-7358-4		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

79 Ethylbenzene, CAS: 100-41-4

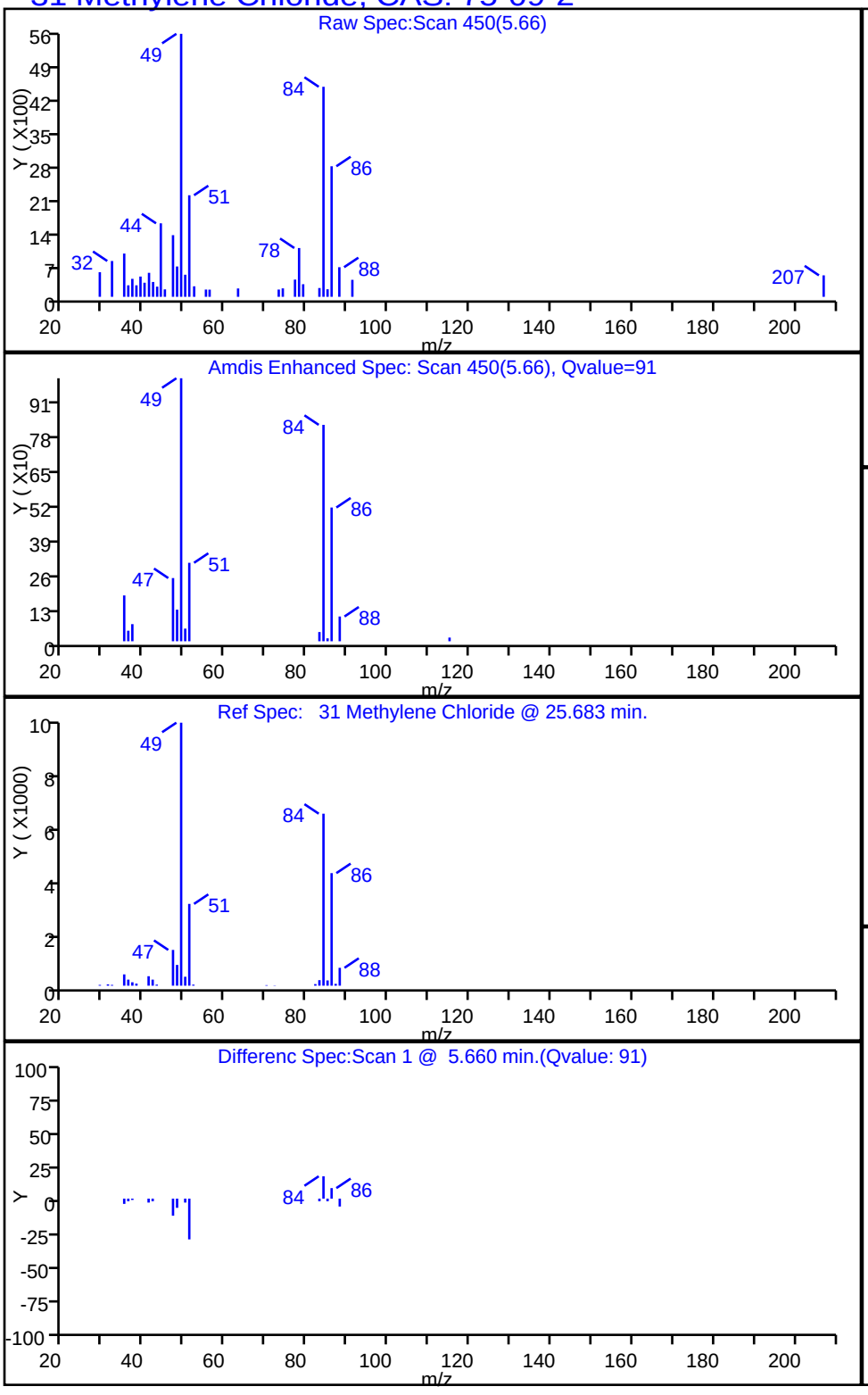


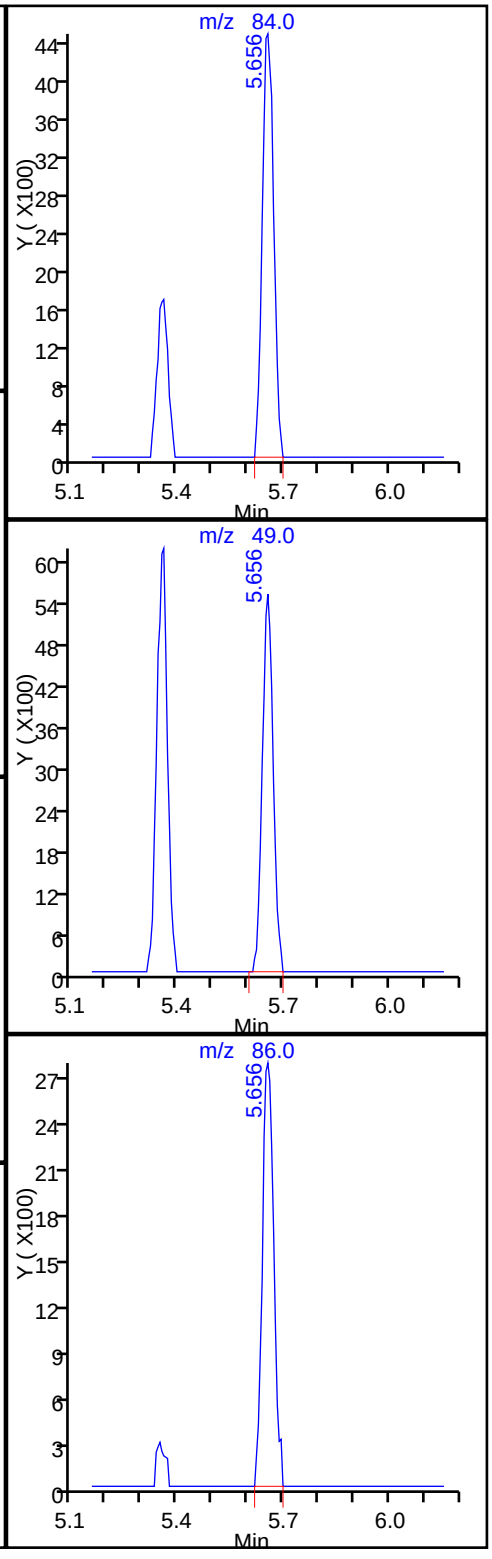


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P109.D				
Injection Date:	10-Mar-2017 17:41:30	Instrument ID:	MG		
Lims ID:	140-7358-A-4	Lab Sample ID:	140-7358-4		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

31 Methylene Chloride, CAS: 75-09-2

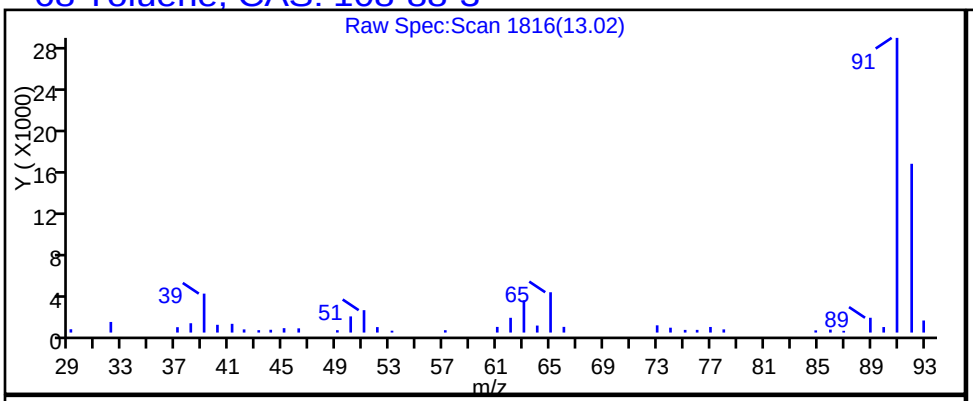


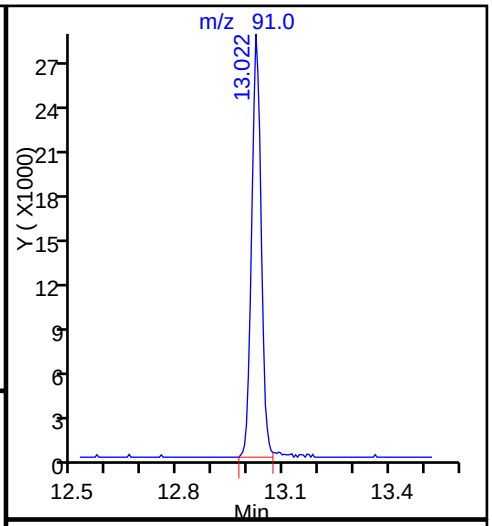


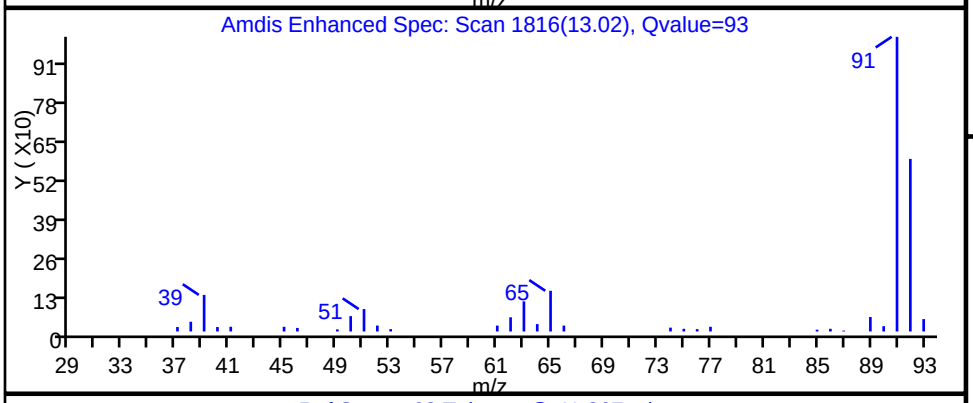
TestAmerica Knoxville

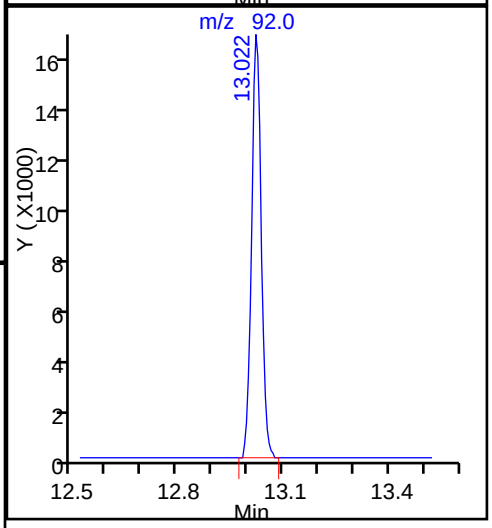
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P109.D				
Injection Date:	10-Mar-2017 17:41:30	Instrument ID:	MG		
Lims ID:	140-7358-A-4	Lab Sample ID:	140-7358-4		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

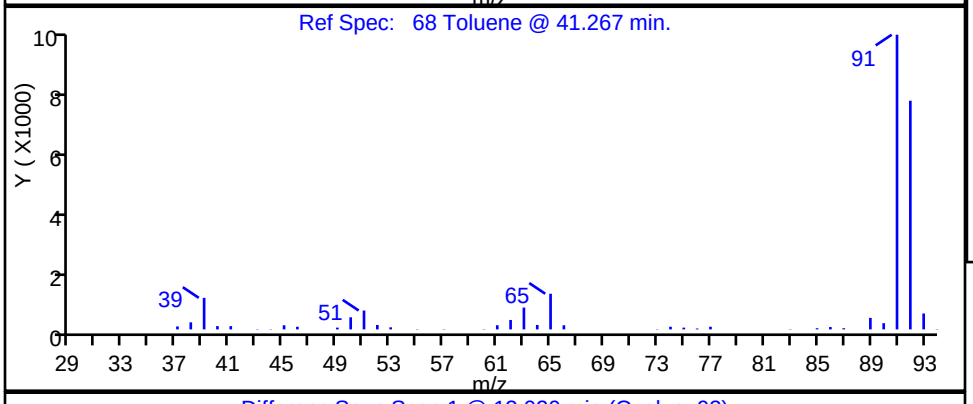
68 Toluene, CAS: 108-88-3

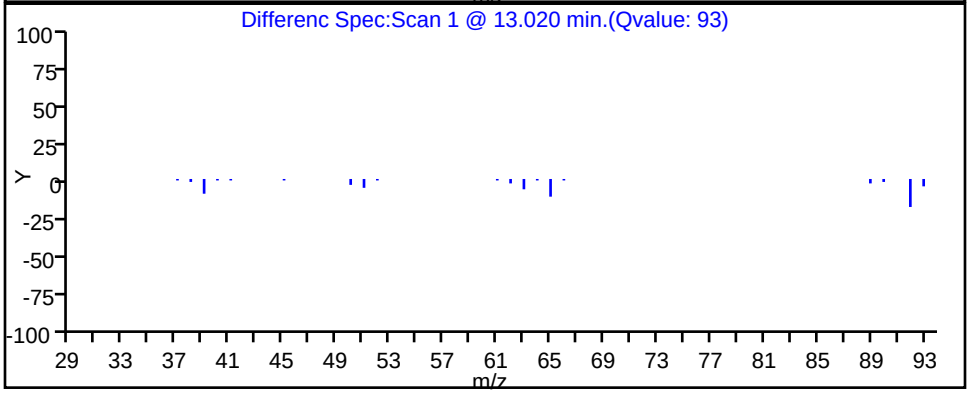












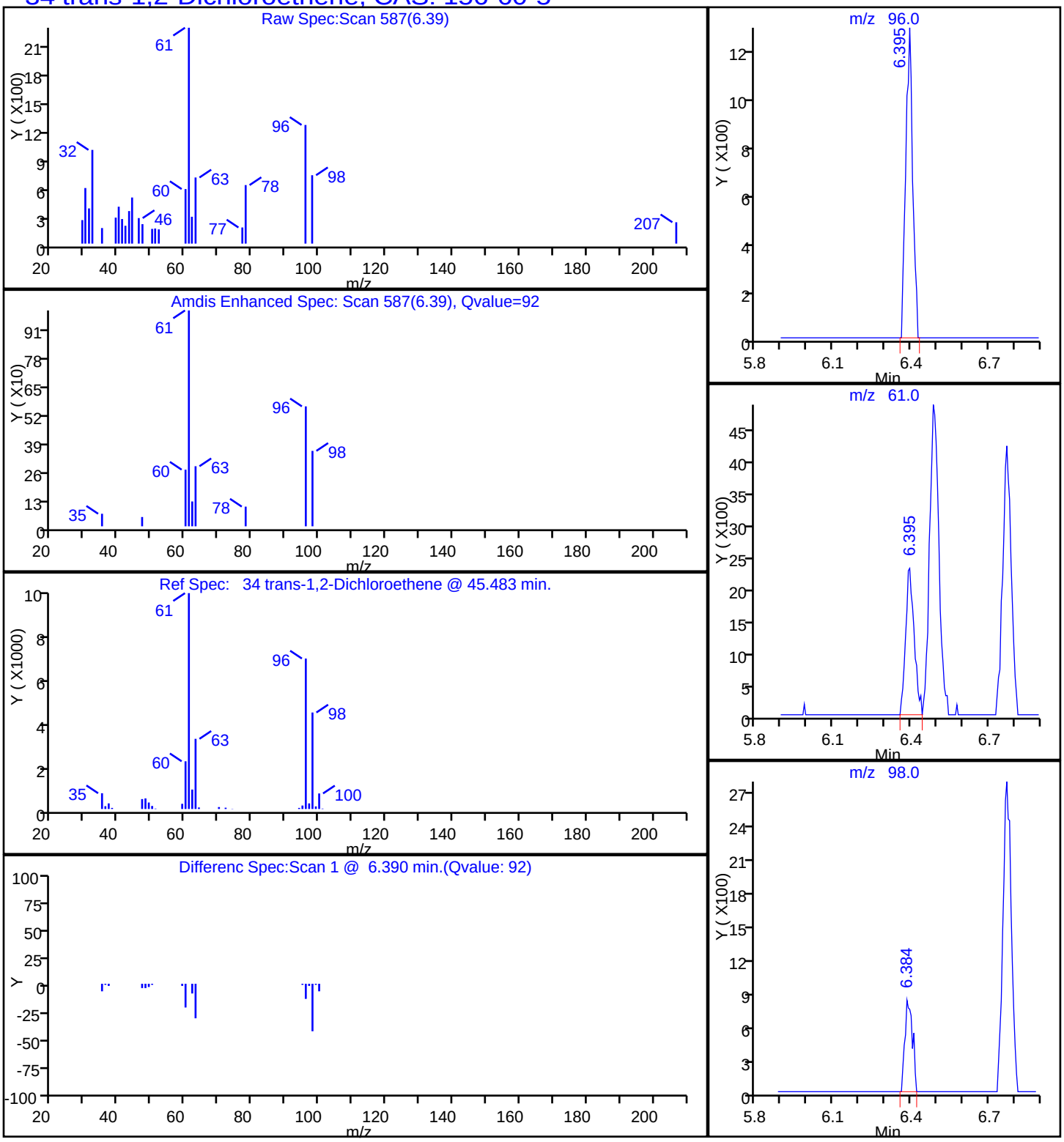
Report Date: 13-Mar-2017 12:06:22 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P109.D

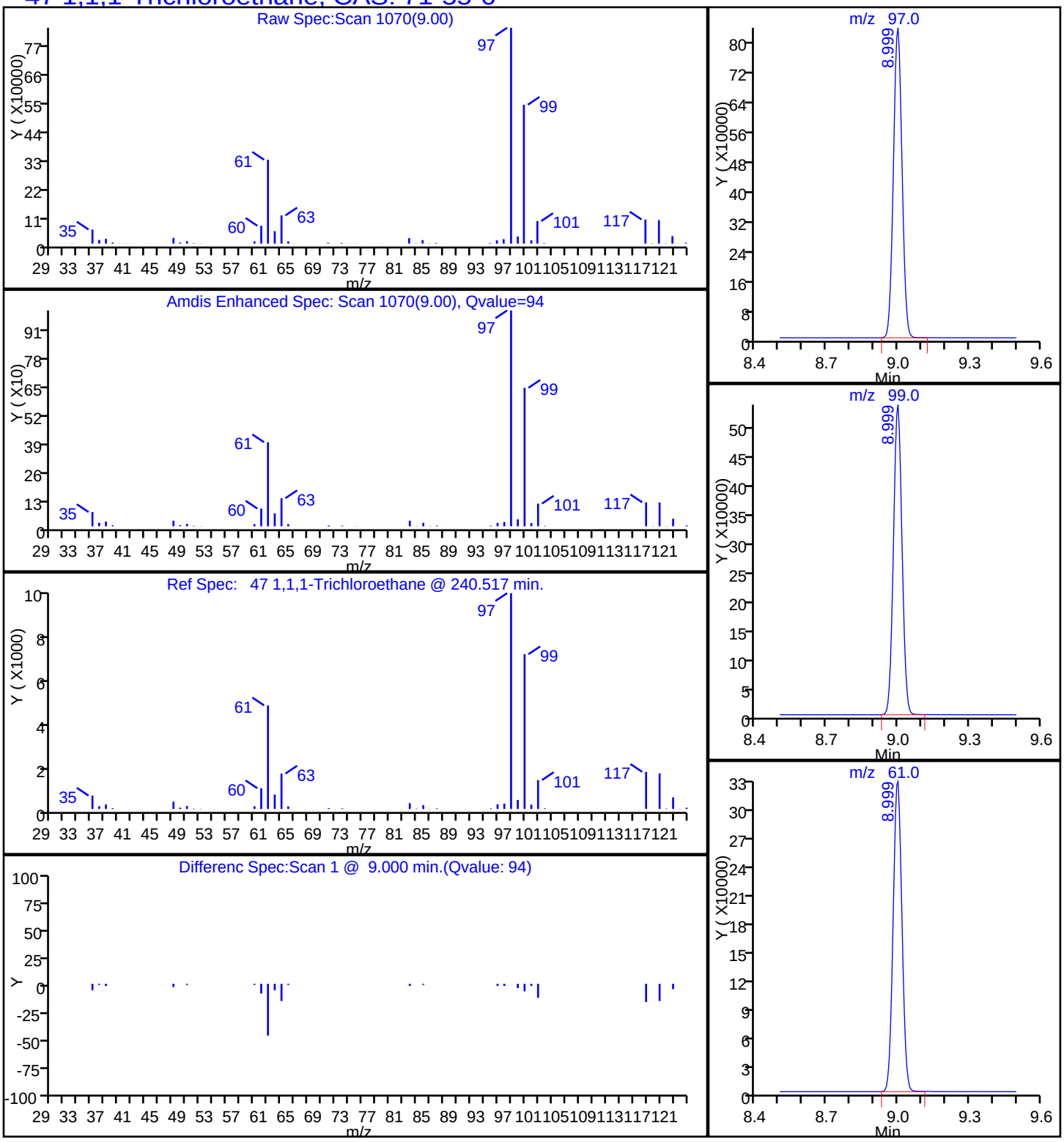
Injection Date:	10-Mar-2017 17:41:30	Instrument ID:	MG		
Lims ID:	140-7358-A-4	Lab Sample ID:	140-7358-4		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

34 trans-1,2-Dichloroethene, CAS: 156-60-5



Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P109.D
Injection Date: 10-Mar-2017 17:41:30 Instrument ID: MG
Lims ID: 140-7358-A-4 Lab Sample ID: 140-7358-4
Client ID: BLDG-A EFFLUENT
Operator ID: 7126 ALS Bottle#: 9 Worklist Smp#: 13
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

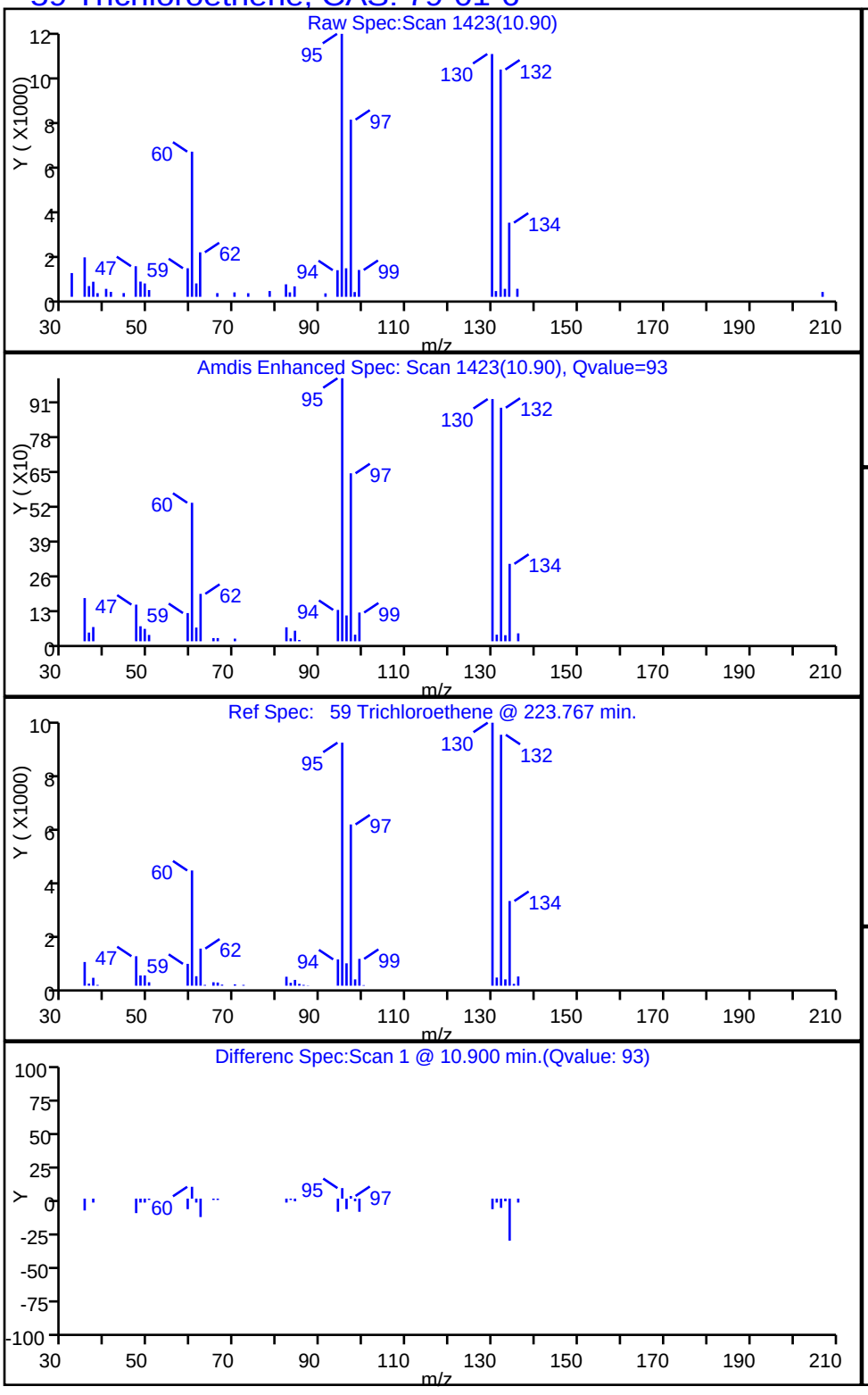
47 1,1,1-Trichloroethane, CAS: 71-55-6

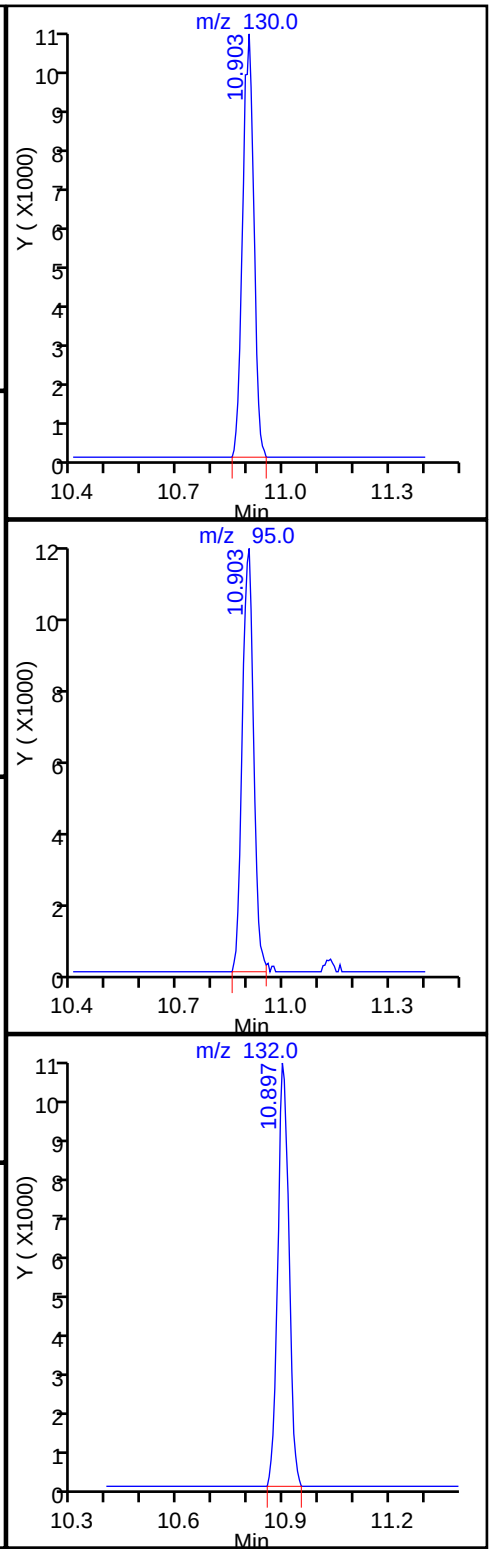


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P109.D		
Injection Date:	10-Mar-2017 17:41:30	Instrument ID:	MG
Lims ID:	140-7358-A-4	Lab Sample ID:	140-7358-4
Client ID:	BLDG-A EFFLUENT		
Operator ID:	7126	ALS Bottle#:	9 Worklist Smp#: 13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

59 Trichloroethene, CAS: 79-01-6

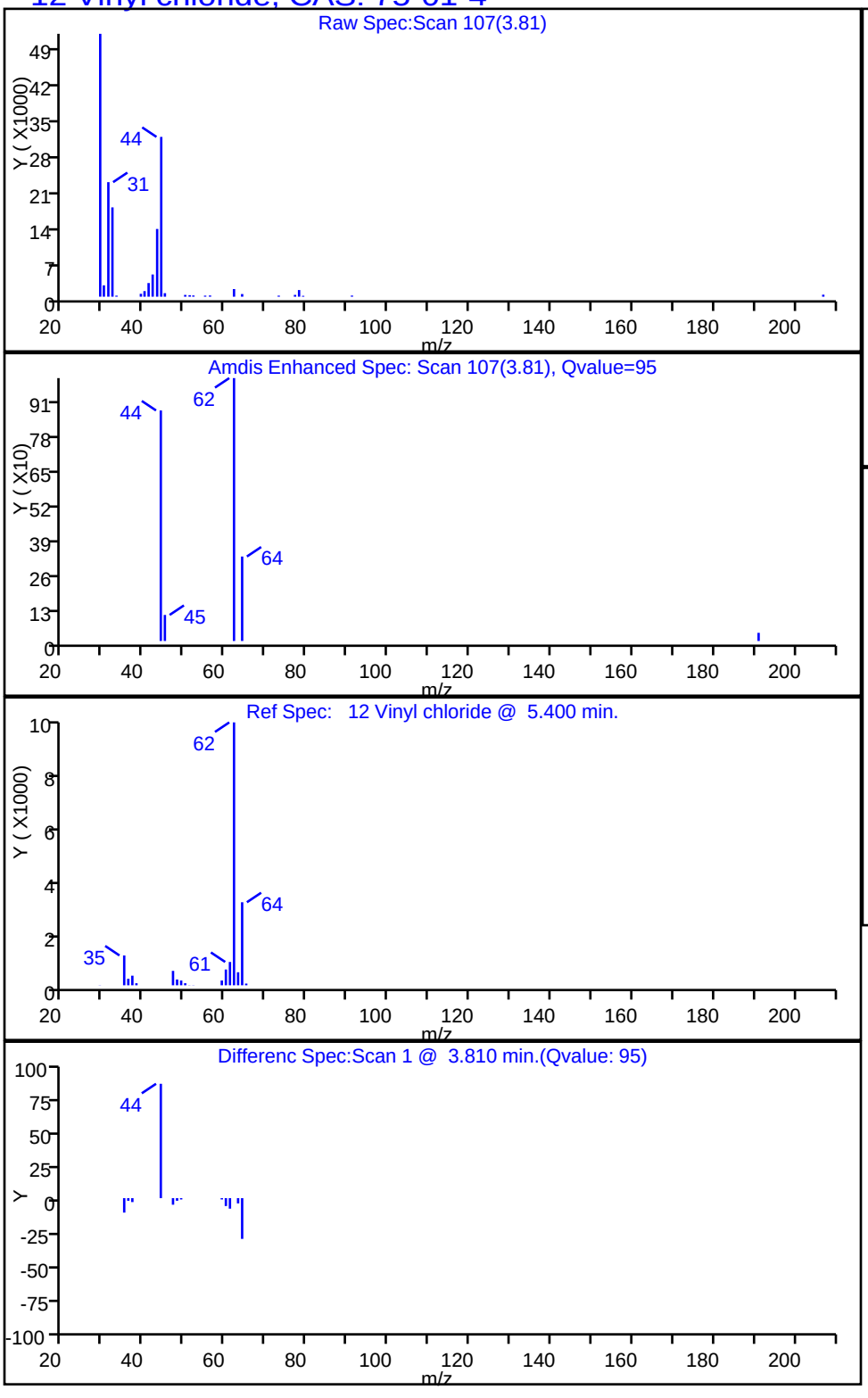


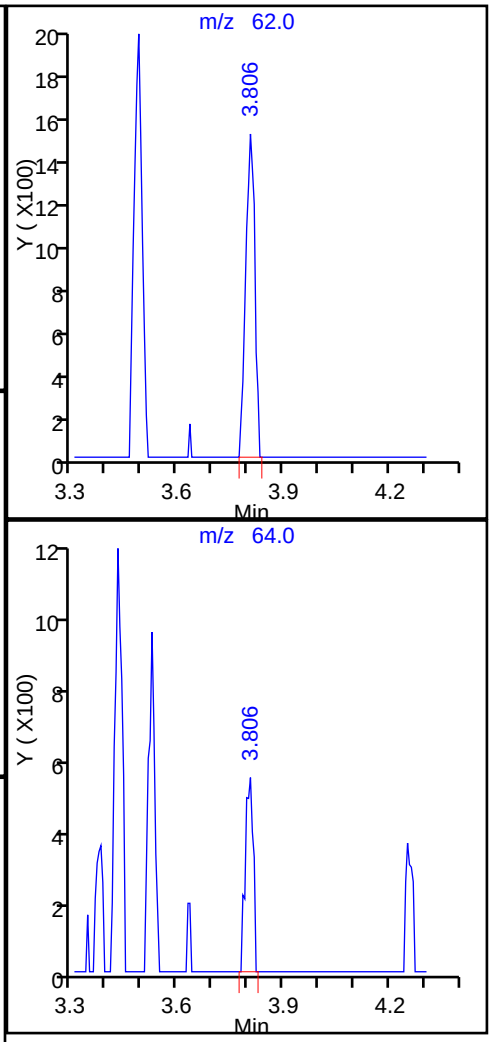


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P109.D				
Injection Date:	10-Mar-2017 17:41:30	Instrument ID:	MG		
Lims ID:	140-7358-A-4	Lab Sample ID:	140-7358-4		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

12 Vinyl chloride, CAS: 75-01-4

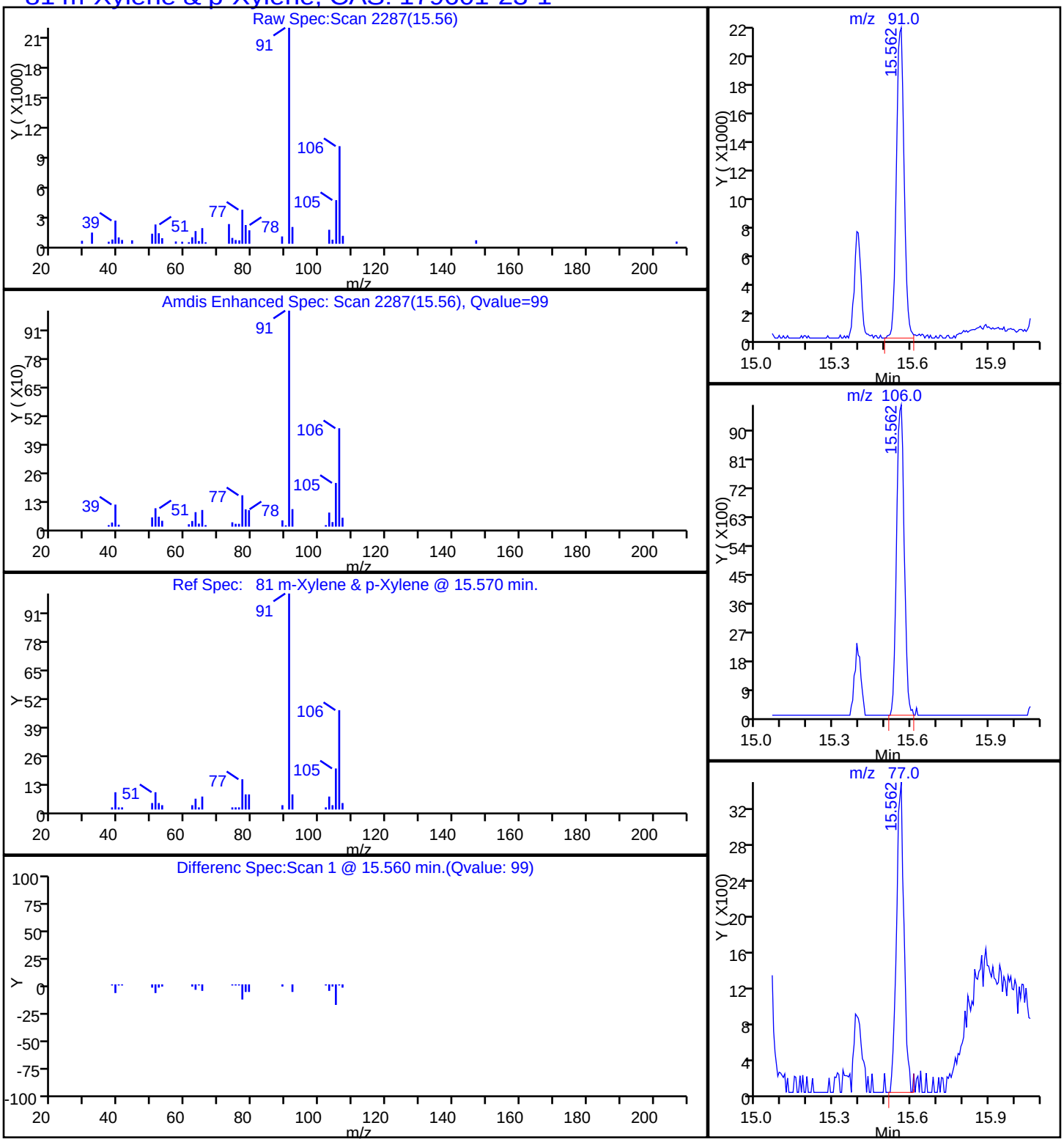




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P109.D				
Injection Date:	10-Mar-2017 17:41:30	Instrument ID:	MG		
Lims ID:	140-7358-A-4	Lab Sample ID:	140-7358-4		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

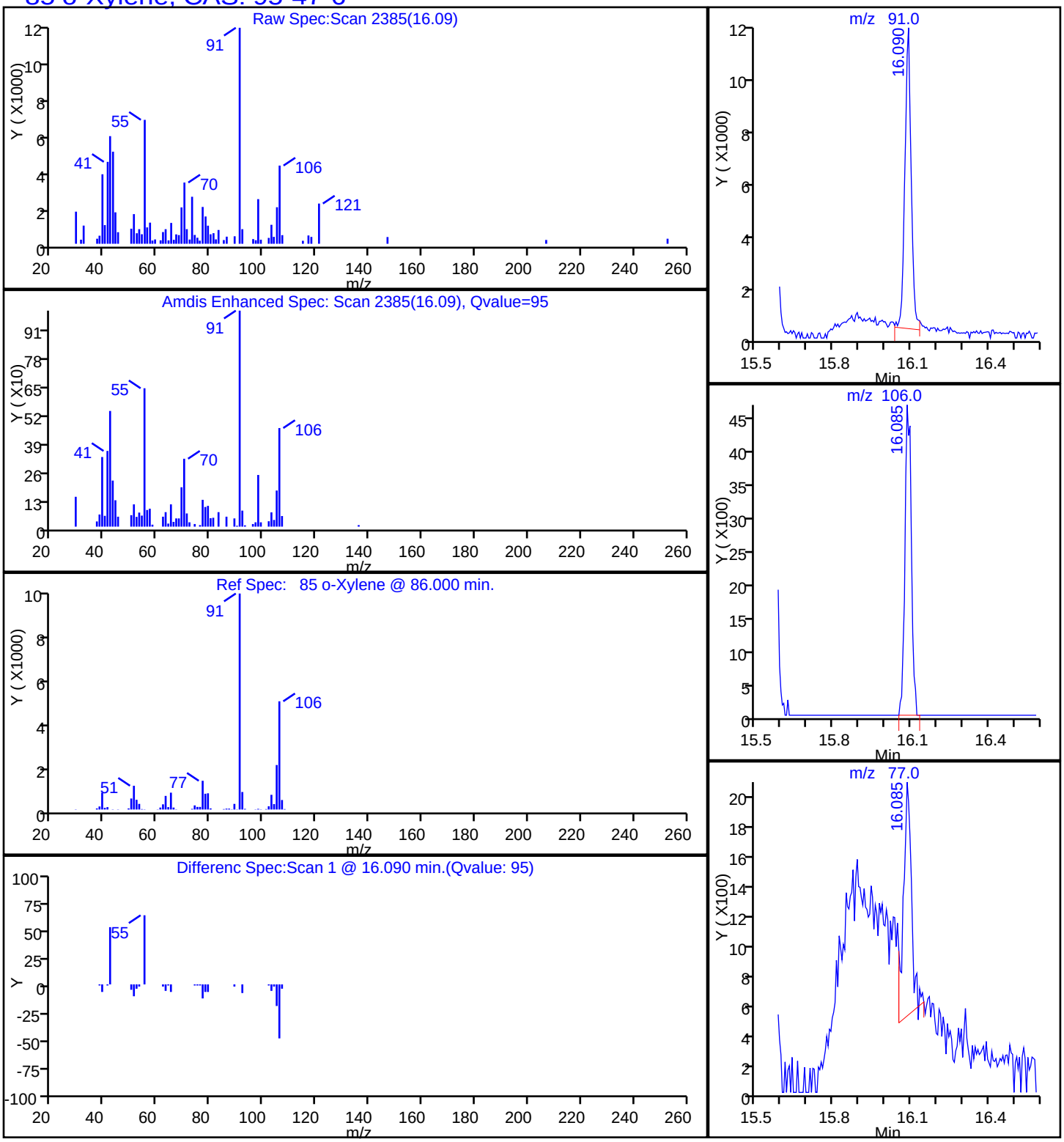
81 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P109.D				
Injection Date:	10-Mar-2017 17:41:30	Instrument ID:	MG		
Lims ID:	140-7358-A-4	Lab Sample ID:	140-7358-4		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

85 o-Xylene, CAS: 95-47-6



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

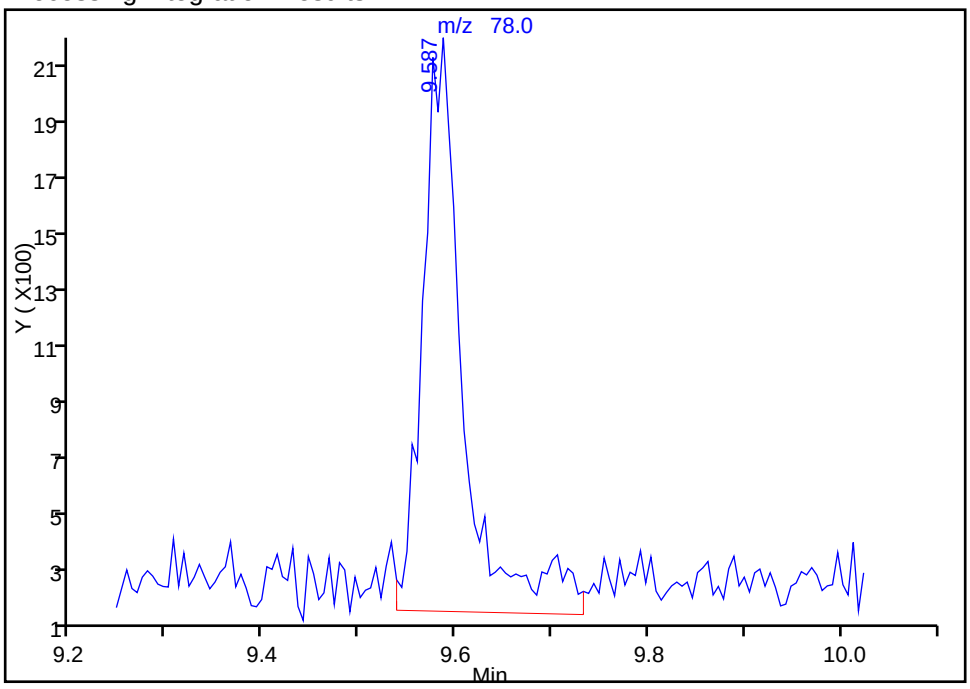
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P109.D				
Injection Date:	10-Mar-2017 17:41:30	Instrument ID:	MG		
Lims ID:	140-7358-A-4	Lab Sample ID:	140-7358-4		
Client ID:	BLDG-A EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

49 Benzene, CAS: 71-43-2

Signal: 1

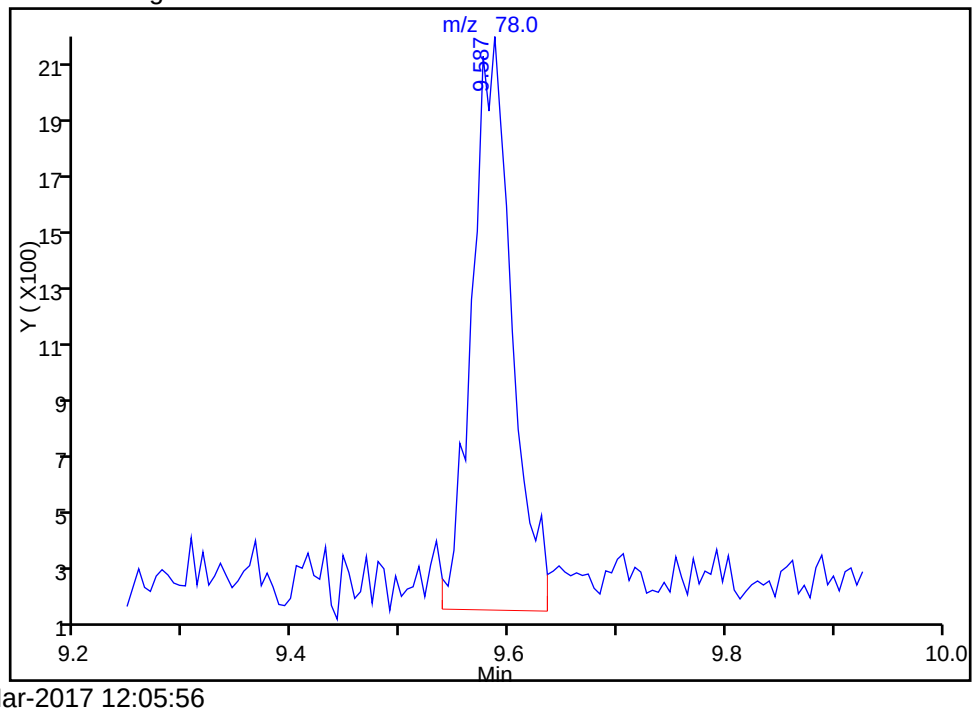
Processing Integration Results

RT: 9.59
Area: 5793
Amount: 0.024006
Amount Units: ppb v/v



Manual Integration Results

RT: 9.59
Area: 5039
Amount: 0.020881
Amount Units: ppb v/v



Reviewer: barlozhetskayaa, 13-Mar-2017 12:05:56

Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7358-1

SDG No.:

Client Sample ID: BLDG-A MIDGAC | Lab Sample ID: 140-7358-5

Matrix: Air | Lab File ID: GC10P110.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 14:28

Sample wt/vol: 100(mL) | Date Analyzed: 03/10/2017 18:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9158 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.37	J	0.40	0.075
67-66-3	Chloroform	119.38	0.14	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	9.3		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	2.7		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	16		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.28	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.68	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.65		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.19	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	29		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.14	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.47		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7358-1

SDG No.:

Client Sample ID: BLDG-A MIDGAC | Lab Sample ID: 140-7358-5

Matrix: Air | Lab File ID: GC10P110.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 14:28

Sample wt/vol: 100(mL) | Date Analyzed: 03/10/2017 18:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9158 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	0.67	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	37		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	11		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	61		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.2	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.75	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	160		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.77	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.3		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P110.D				
Lims ID:	140-7358-A-5				
Client ID:	BLDG-A MIDGAC				
Sample Type:	Client				
Inject. Date:	10-Mar-2017 18:24:30	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004228-014				
Misc. Info.:	140-7358-a-5				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Mar-2017 12:06:47	Calib Date:	02-Mar-2017 20:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK020				
First Level Reviewer: barlozhetskayaa		Date:	13-Mar-2017 12:06:47		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.991	8.001	-0.010	85	306878	4.00	
* 2 1,4-Difluorobenzene	114	10.164	10.169	-0.005	95	1596042	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.033	15.038	-0.005	88	1560804	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.705	16.710	-0.005	94	1229796	4.23	
6 Chlorodifluoromethane	67	3.461	3.461	0.000	89	2205	0.0735	
8 Dichlorodifluoromethane	85	3.510	3.515	-0.005	99	29312	0.1077	
27 1,1-Dichloroethene	96	5.354	5.359	-0.005	98	246524	3.10	
31 Methylene Chloride	84	5.650	5.666	-0.016	89	10028	0.1356	
34 trans-1,2-Dichloroethene	96	6.389	6.400	-0.011	94	3071	0.0380	
37 1,1-Dichloroethane	63	6.772	6.783	-0.011	100	80627	0.5364	
42 cis-1,2-Dichloroethene	96	7.689	7.699	-0.010	97	157144	1.86	
44 Chloroform	83	8.018	8.028	-0.010	89	5591	0.0275	
47 1,1,1-Trichloroethane	97	8.994	9.004	-0.010	95	1289487	5.76	
59 Trichloroethene	130	10.903	10.908	-0.005	92	4120	0.0287	
68 Toluene	91	13.022	13.027	-0.005	93	36946	0.1304	
79 Ethylbenzene	91	15.389	15.394	-0.005	98	21074	0.0566	
81 m-Xylene & p-Xylene	91	15.556	15.567	-0.011	99	67318	0.2307	
85 o-Xylene	91	16.090	16.090	0.000	96	31859	0.1065	
92 1,3,5-Trimethylbenzene	120	17.492	17.492	-0.005	83	4400	0.0229	7
96 1,2,4-Trimethylbenzene	105	17.956	17.956	0.000	98	33527	0.0941	
S 126 Xylenes, Total	100				0		0.3373	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

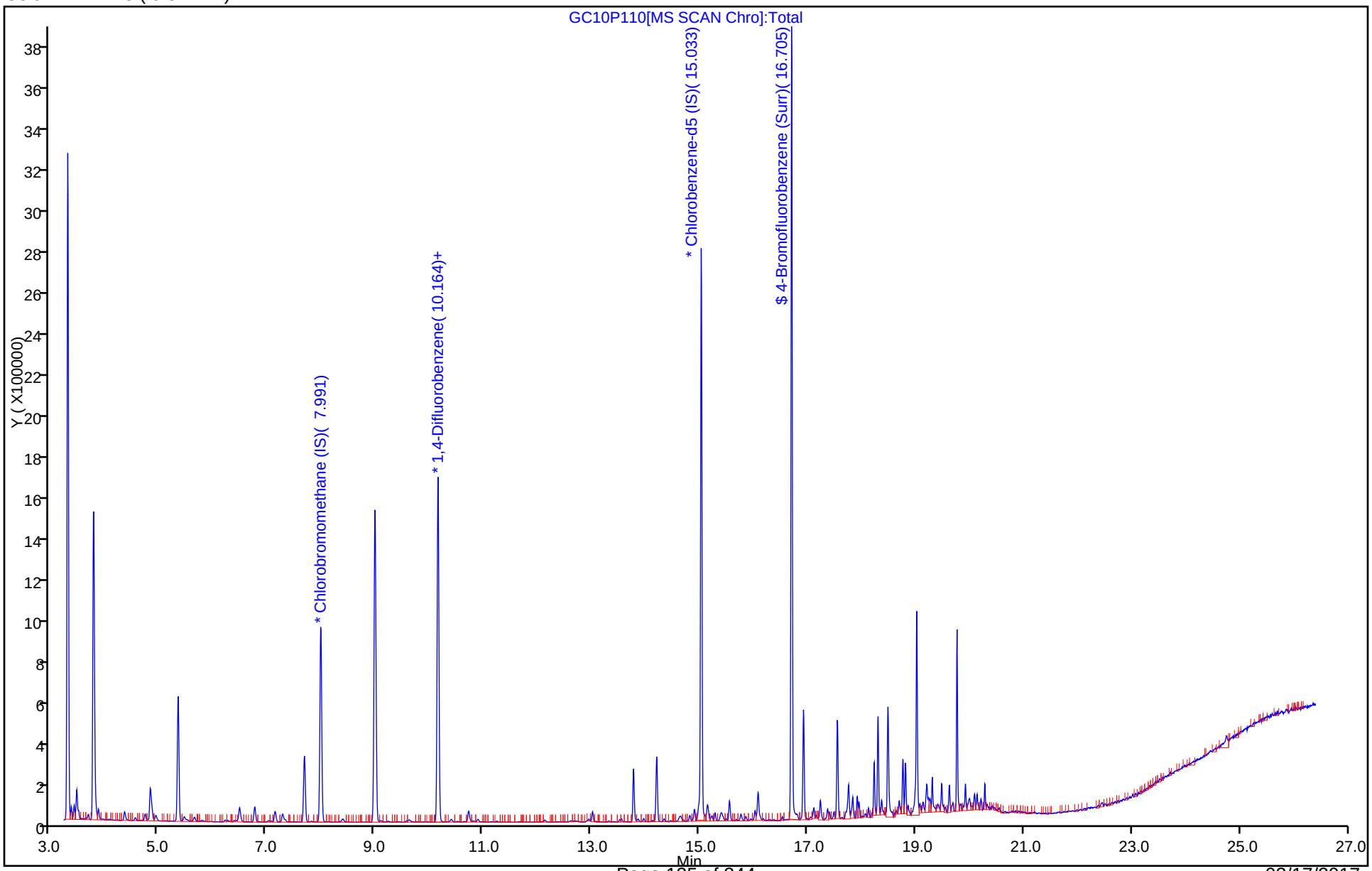
Report Date: 13-Mar-2017 12:06:48 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P110.D

Injection Date:	10-Mar-2017 18:24:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-7358-A-5	Lab Sample ID:	140-7358-5	Worklist Smp#:	14
Client ID:	BLDG-A MIDGAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P110.D				
Lims ID:	140-7358-A-5				
Client ID:	BLDG-A MIDGAC				
Sample Type:	Client				
Inject. Date:	10-Mar-2017 18:24:30	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004228-014				
Misc. Info.:	140-7358-a-5				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Mar-2017 12:06:47	Calib Date:	02-Mar-2017 20:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK020				

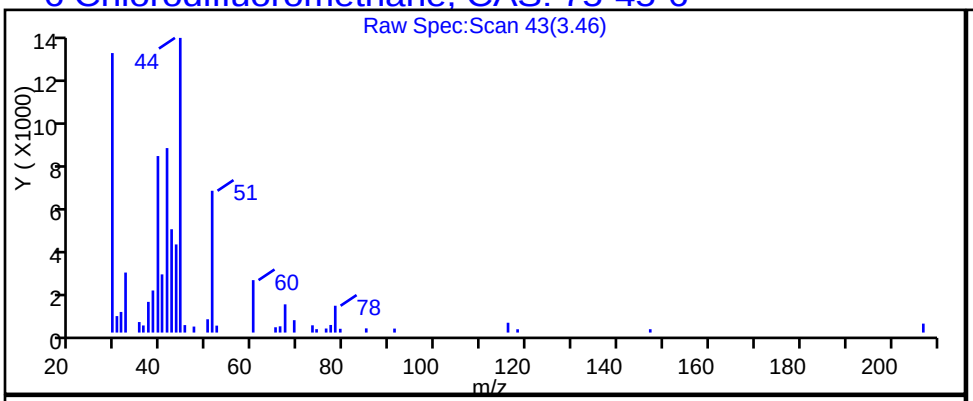
First Level Reviewer: barlozhetskayaa Date: 13-Mar-2017 12:06:47

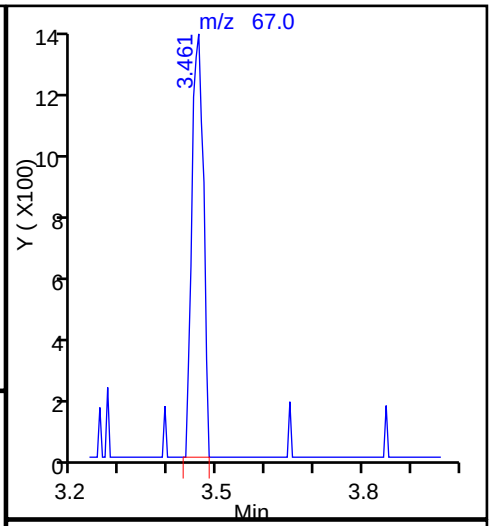
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.23	105.80

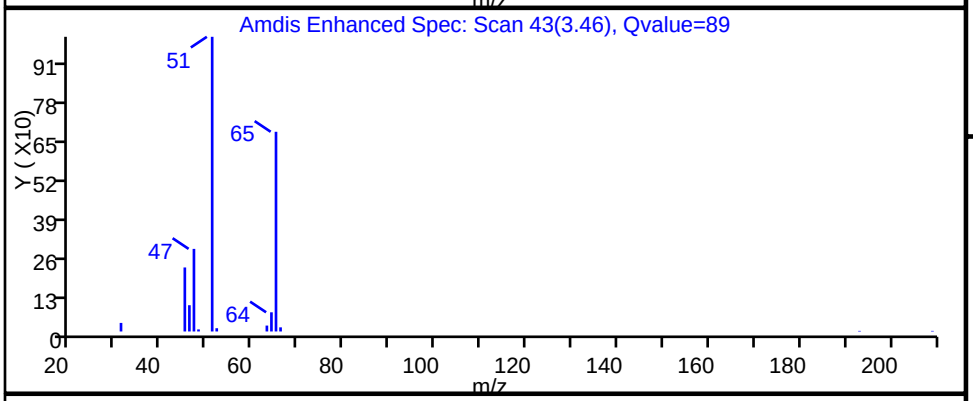
TestAmerica Knoxville

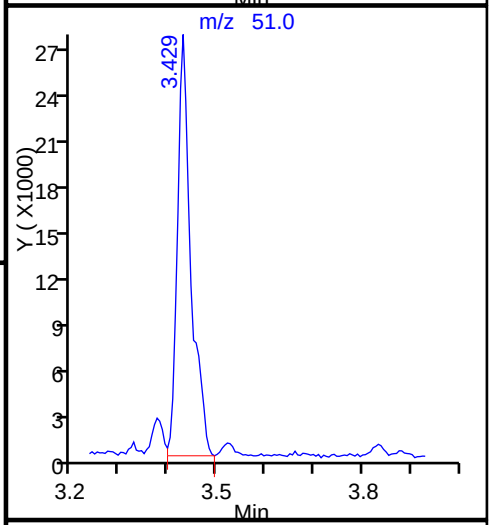
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P110.D				
Injection Date:	10-Mar-2017 18:24:30	Instrument ID:	MG		
Lims ID:	140-7358-A-5	Lab Sample ID:	140-7358-5		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

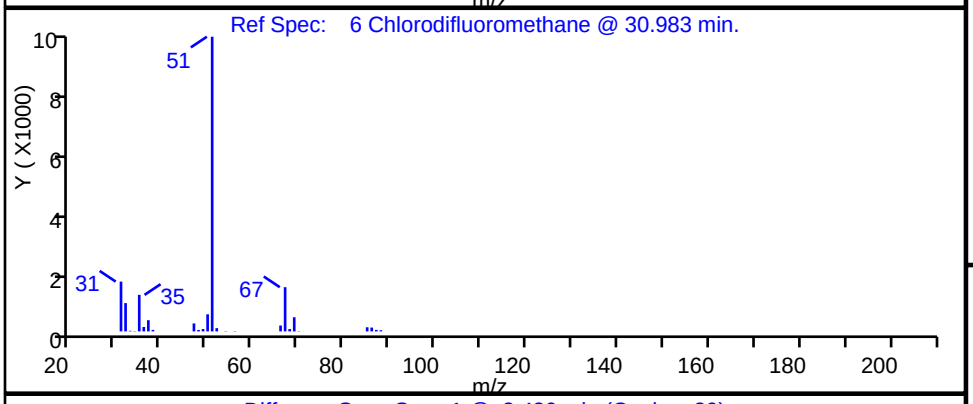
6 Chlorodifluoromethane, CAS: 75-45-6

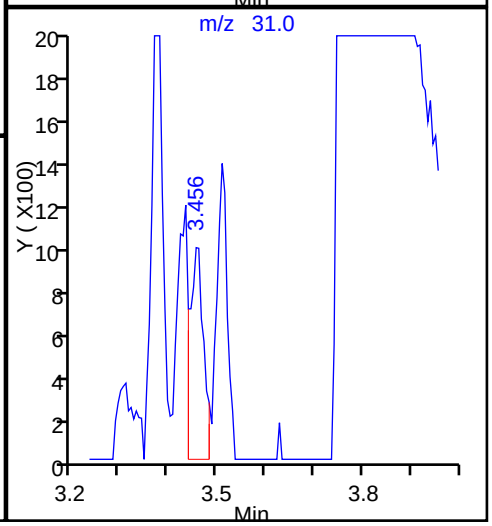


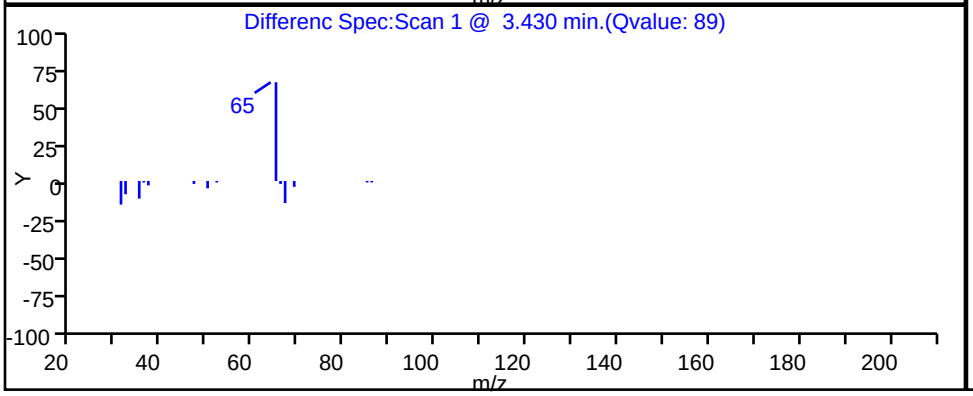








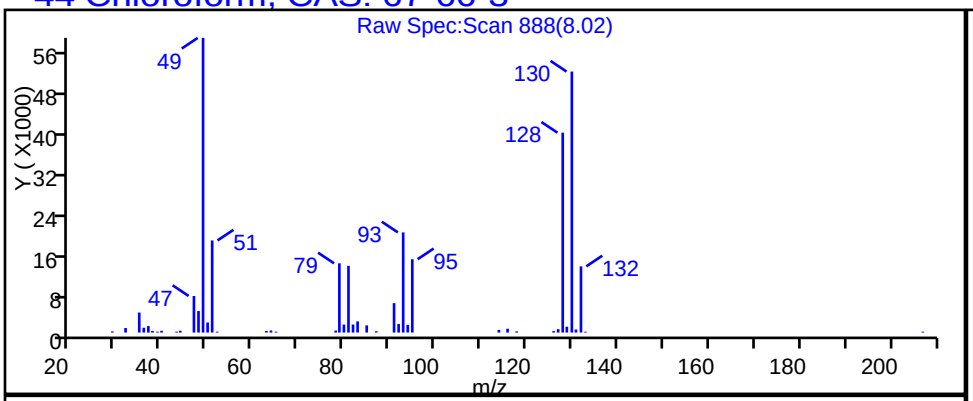


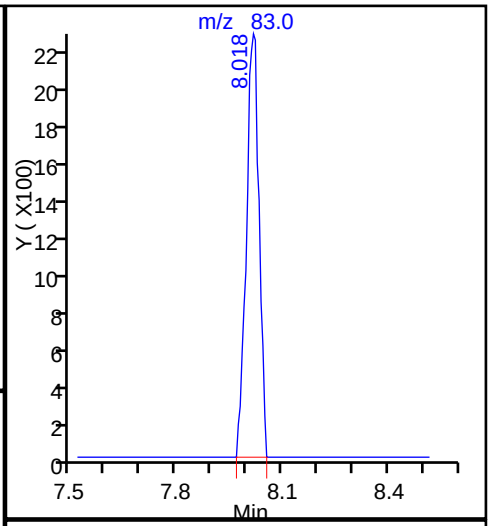


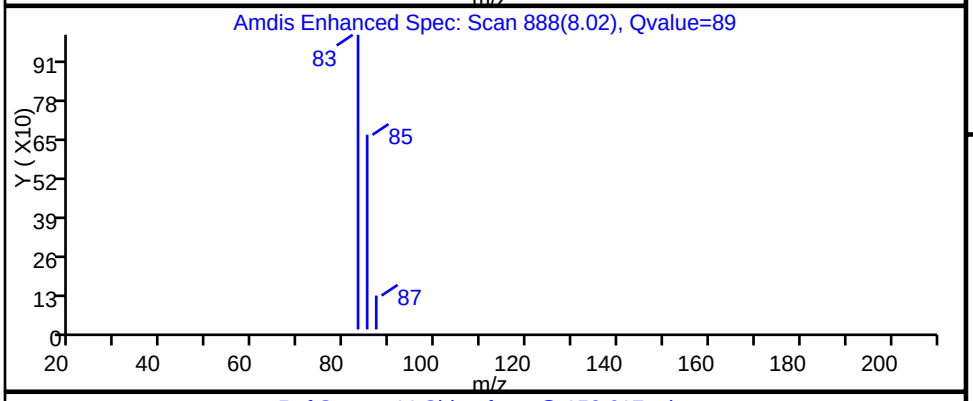
TestAmerica Knoxville

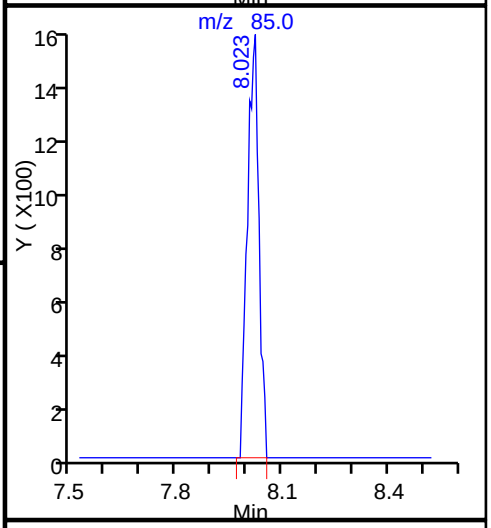
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P110.D		
Injection Date:	10-Mar-2017 18:24:30	Instrument ID:	MG
Lims ID:	140-7358-A-5	Lab Sample ID:	140-7358-5
Client ID:	BLDG-A MIDGAC		
Operator ID:	7126	ALS Bottle#:	10 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

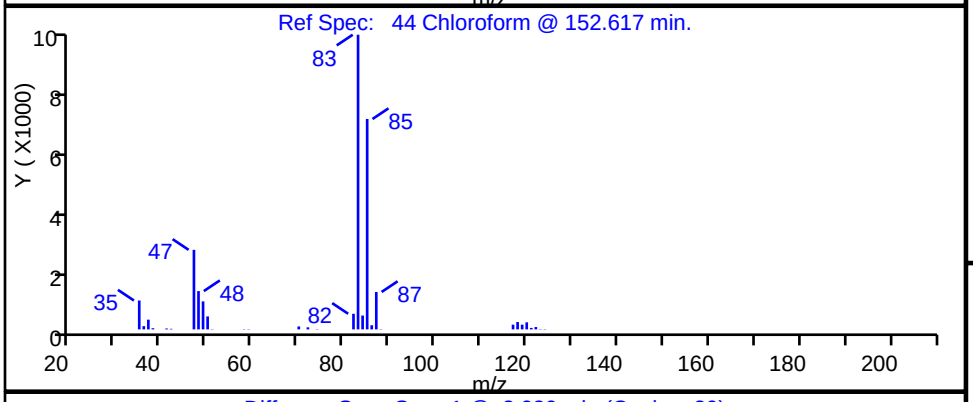
44 Chloroform, CAS: 67-66-3

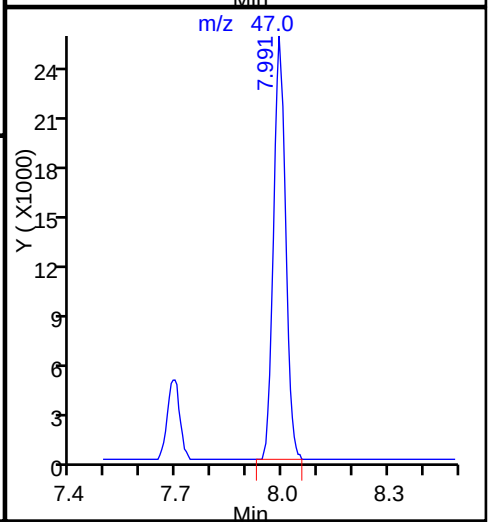


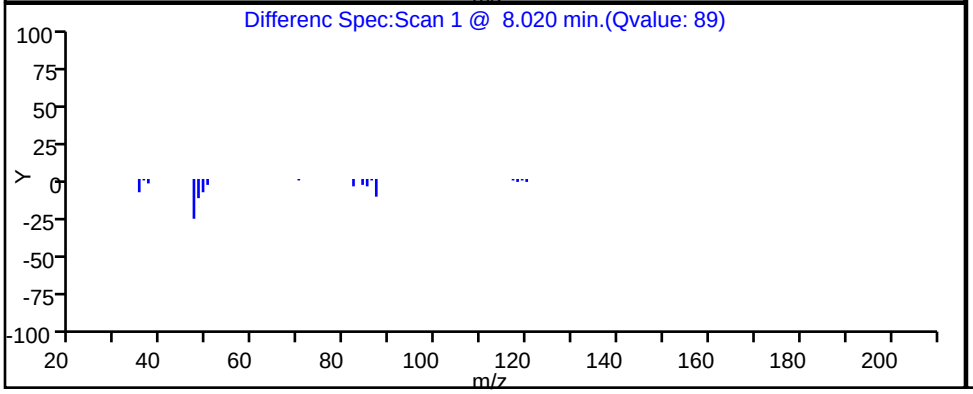








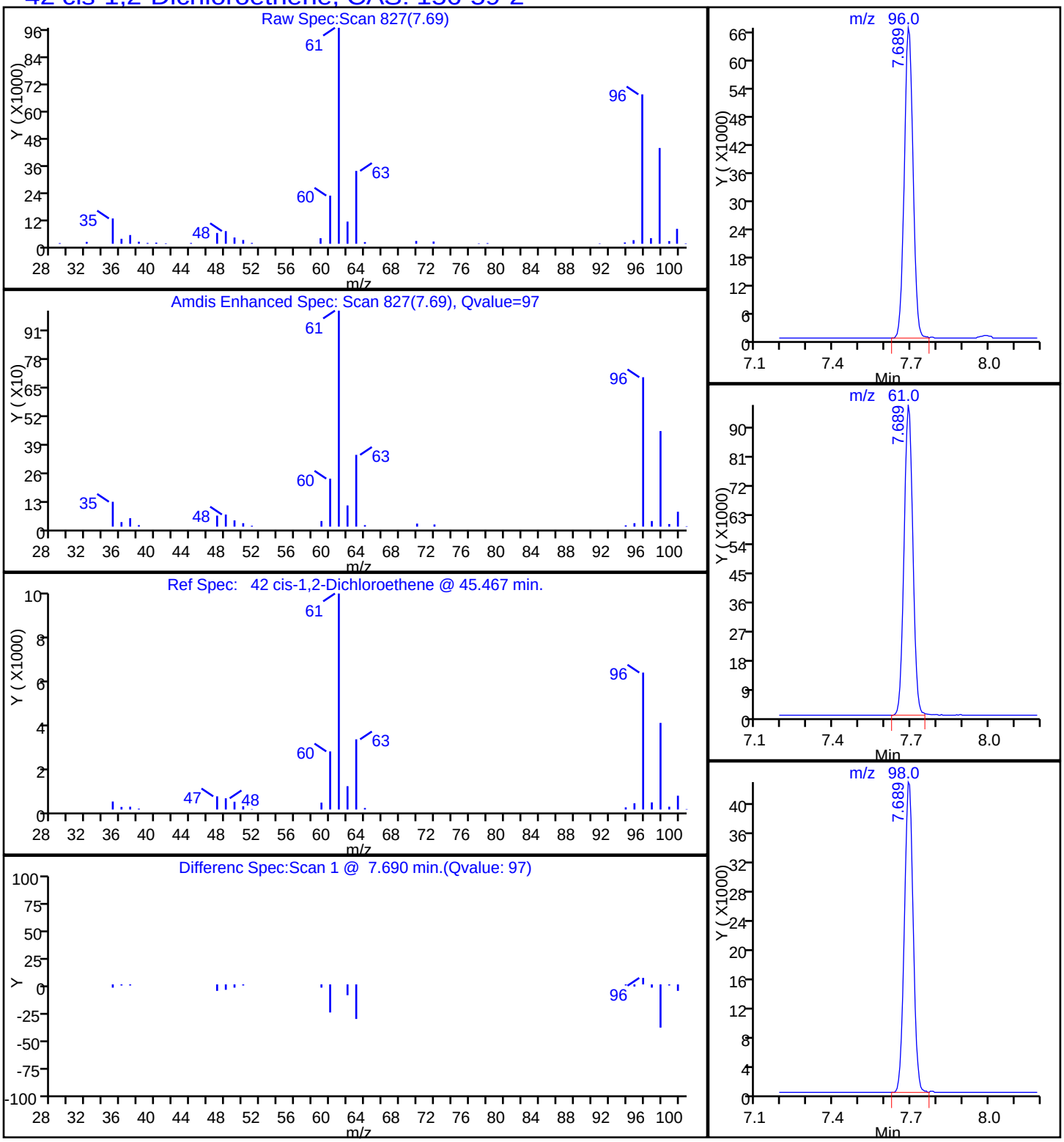




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P110.D				
Injection Date:	10-Mar-2017 18:24:30	Instrument ID:	MG		
Lims ID:	140-7358-A-5	Lab Sample ID:	140-7358-5		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

42 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P110.D				
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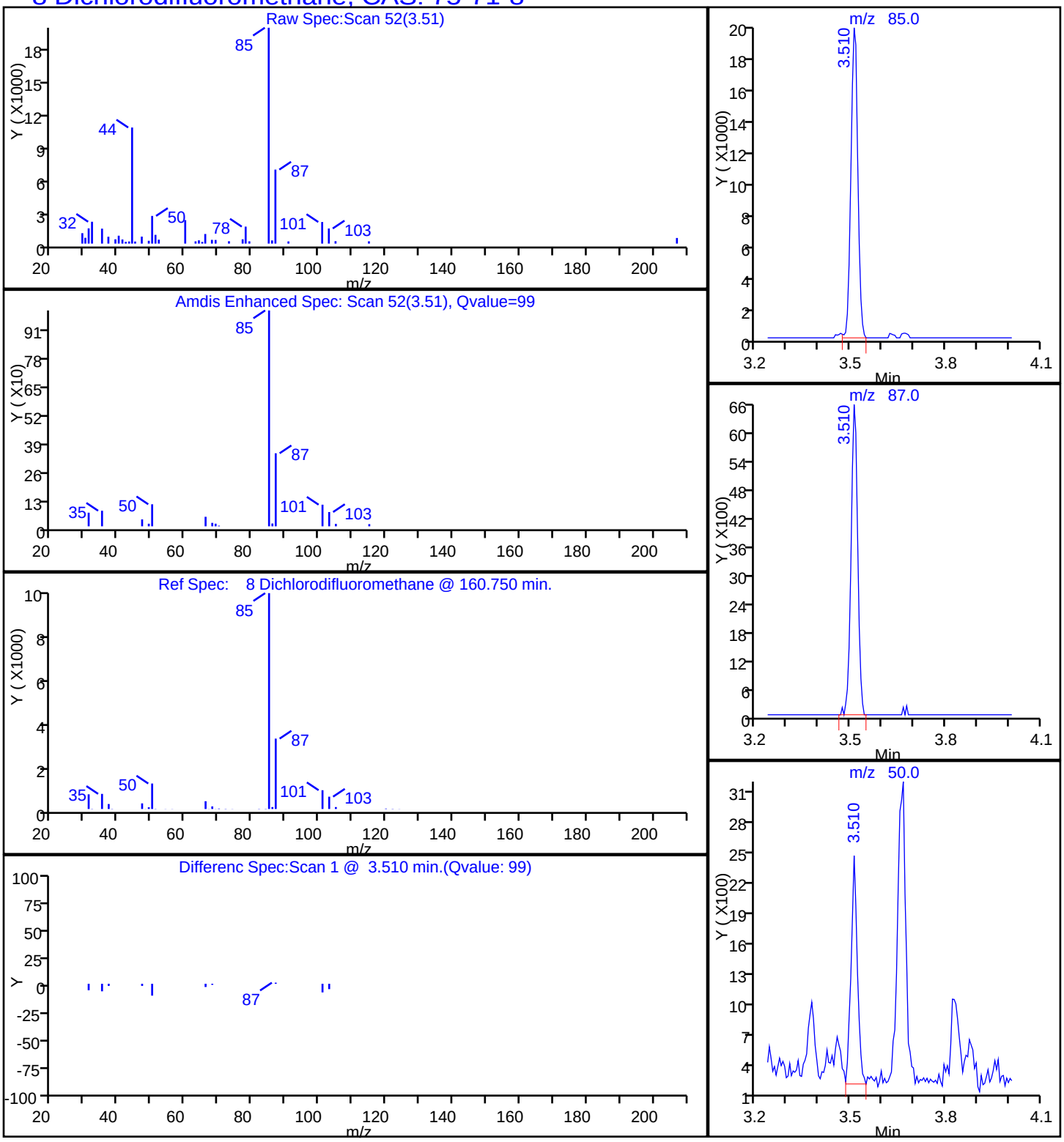
Lims ID:	140-7358-A-5	Lab Sample ID:	140-7358-5		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

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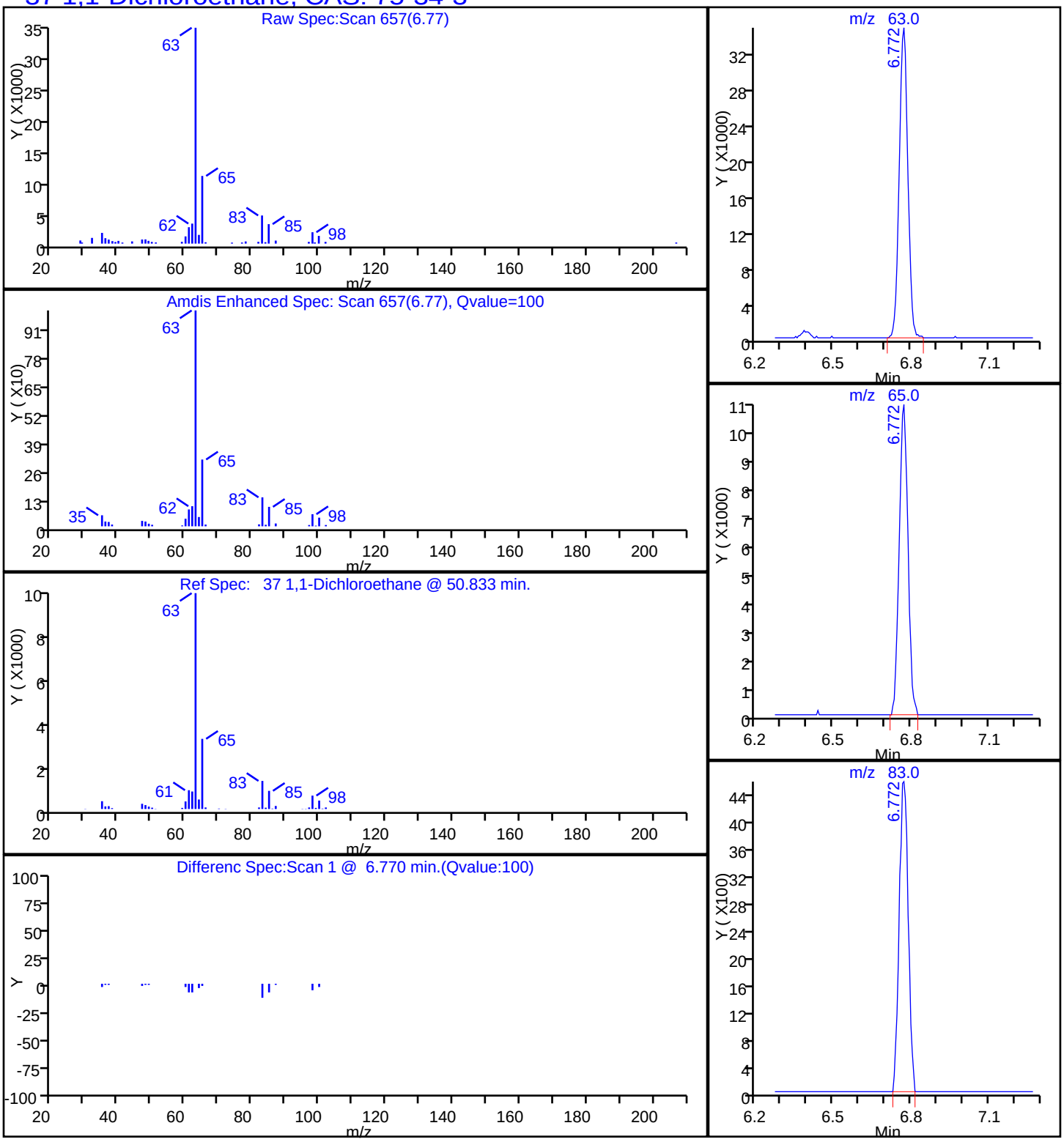
Lims ID:	140-7358-A-5	Lab Sample ID:	140-7358-5		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

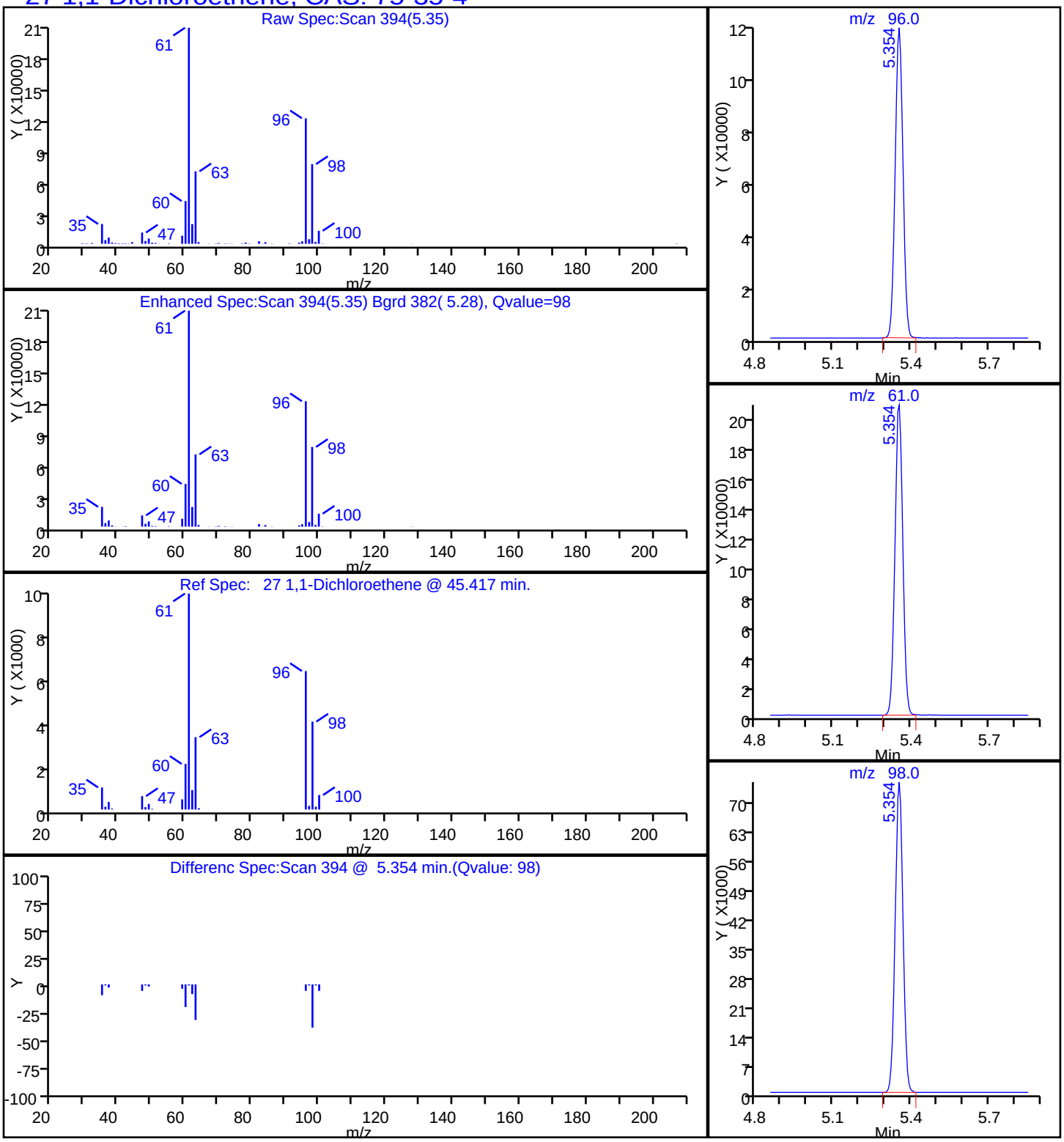
37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P110.D				
Injection Date:	10-Mar-2017 18:24:30	Instrument ID:	MG		
Lims ID:	140-7358-A-5	Lab Sample ID:	140-7358-5		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

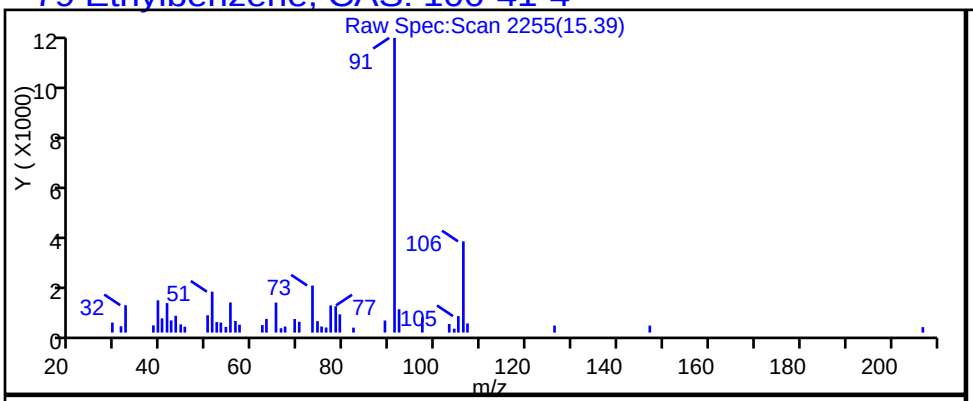
27 1,1-Dichloroethene, CAS: 75-35-4

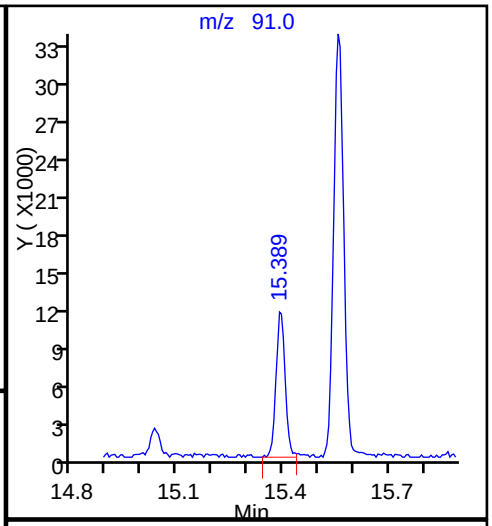


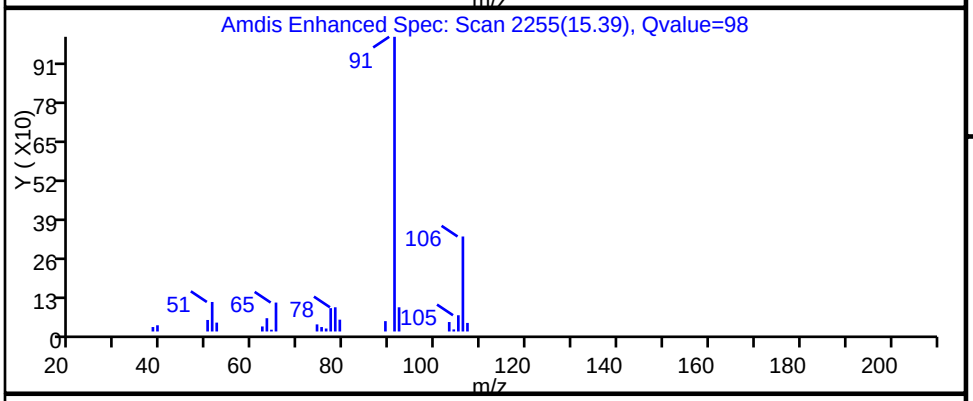
TestAmerica Knoxville

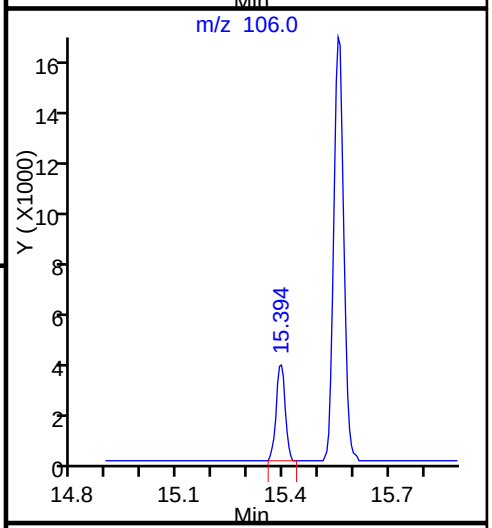
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P110.D				
Injection Date:	10-Mar-2017 18:24:30	Instrument ID:	MG		
Lims ID:	140-7358-A-5	Lab Sample ID:	140-7358-5		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

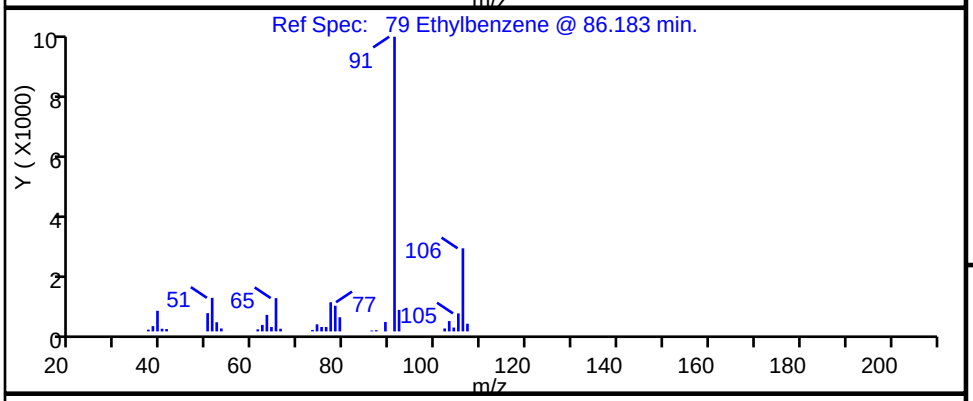
79 Ethylbenzene, CAS: 100-41-4

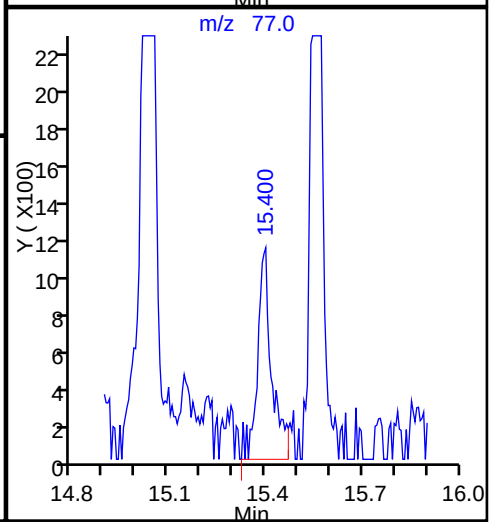


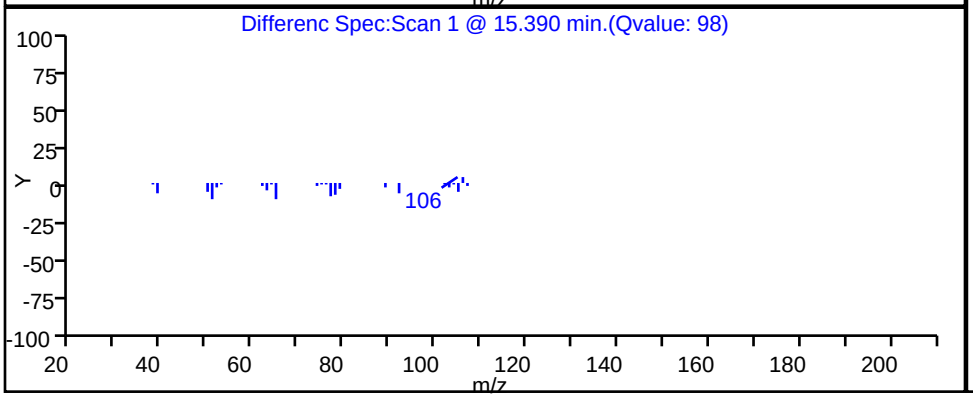












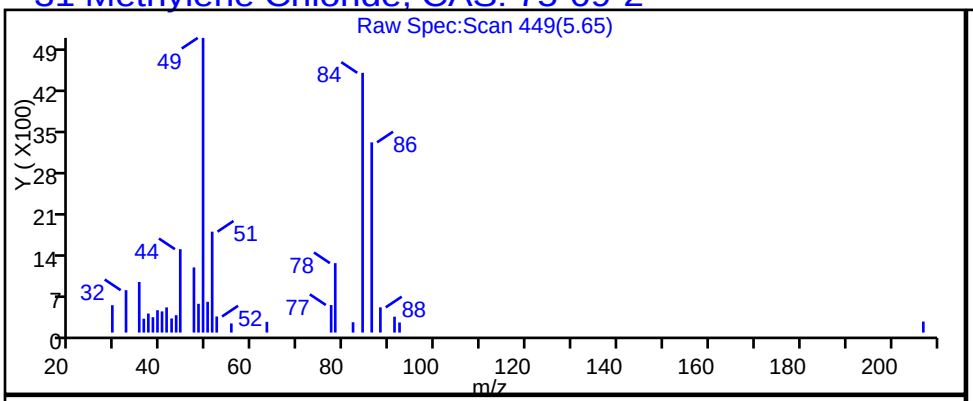
Report Date: 13-Mar-2017 12:06:48 Chrom Revision: 2.2 05-Mar-2017 11:38:00

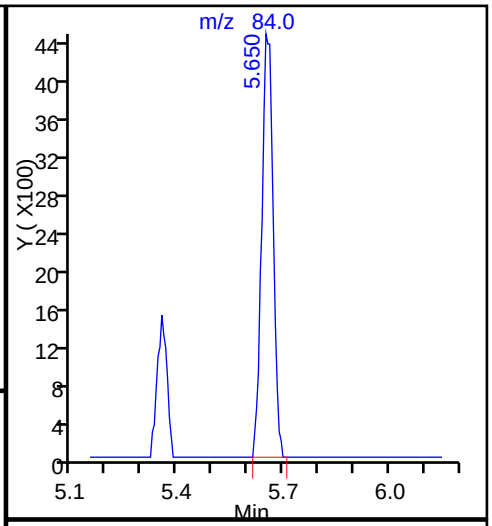
TestAmerica Knoxville

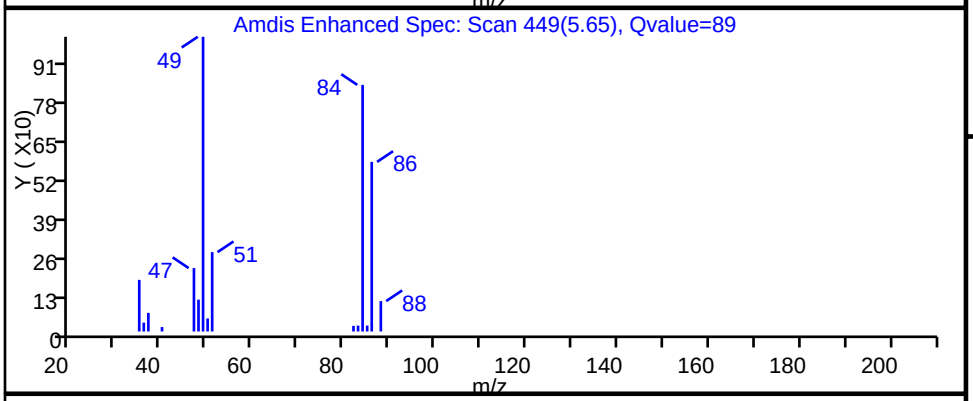
Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P110.D

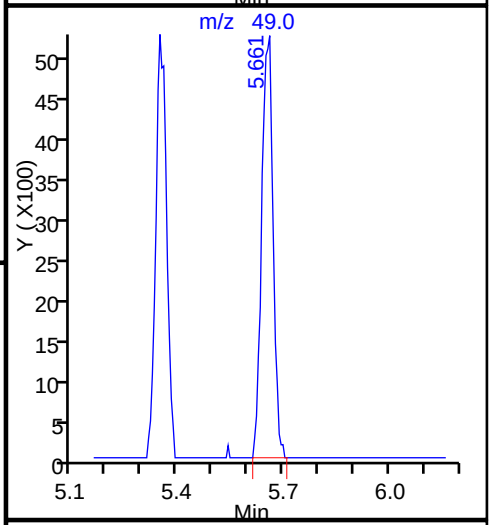
Injection Date:	10-Mar-2017 18:24:30	Instrument ID:	MG		
Lims ID:	140-7358-A-5	Lab Sample ID:	140-7358-5		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

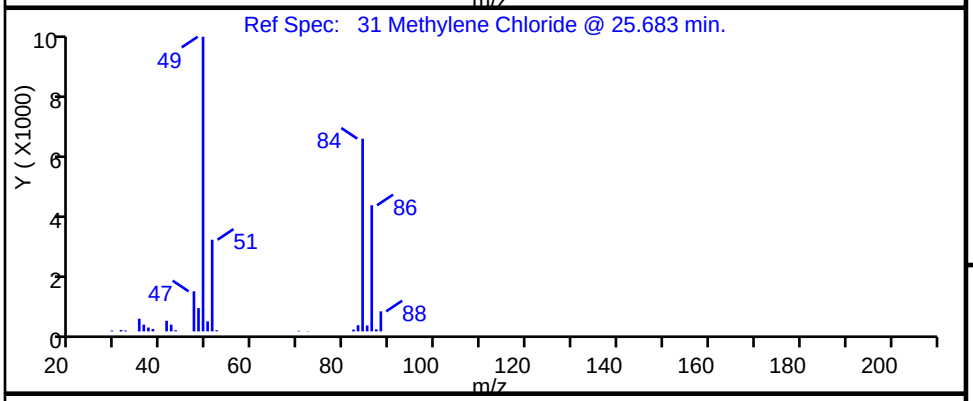
31 Methylene Chloride, CAS: 75-09-2

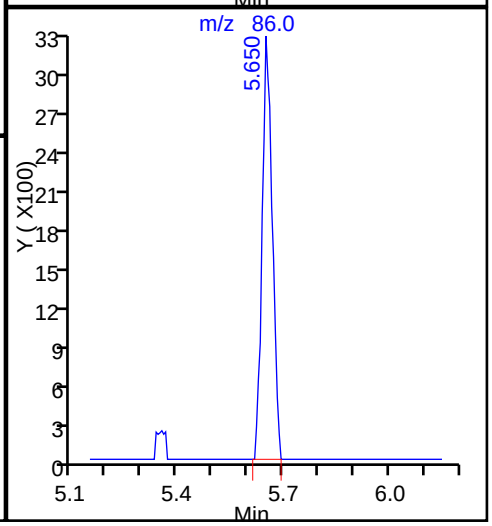


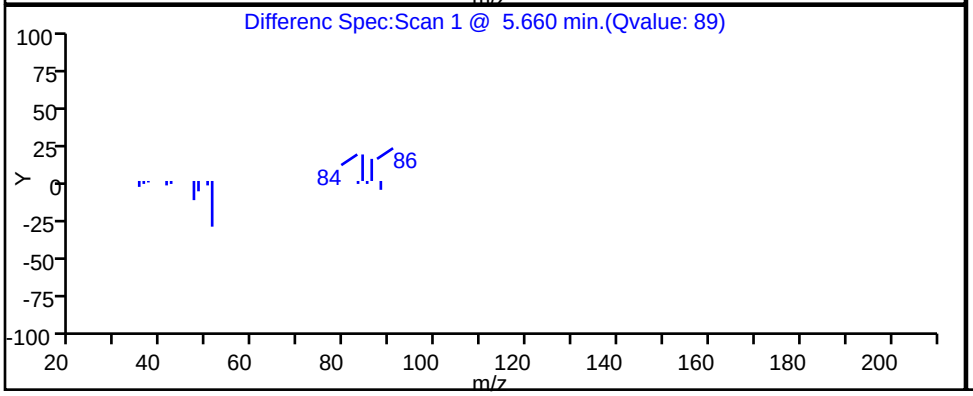








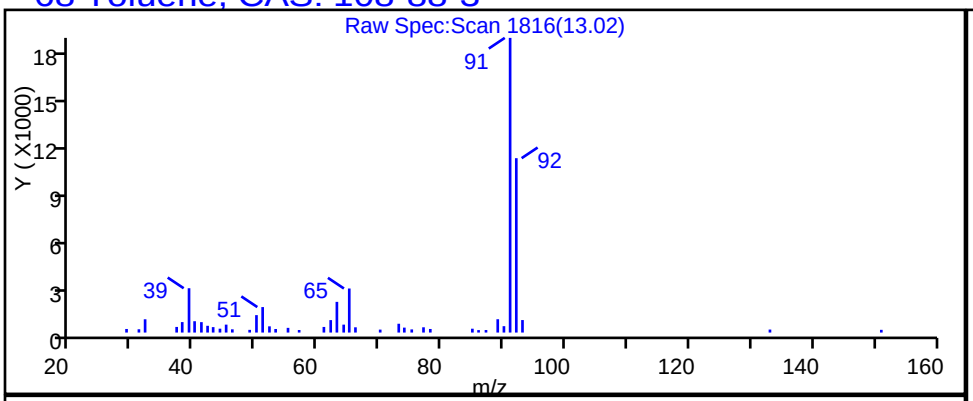


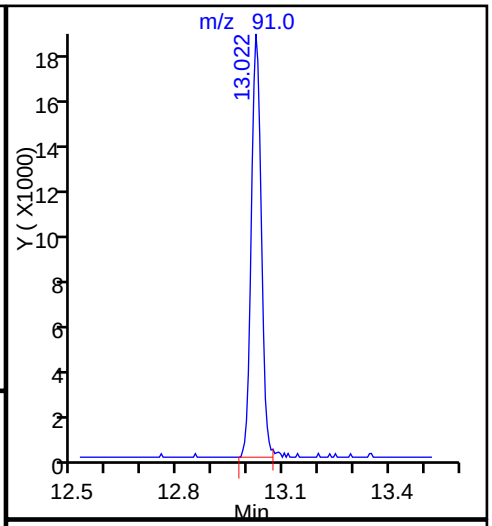


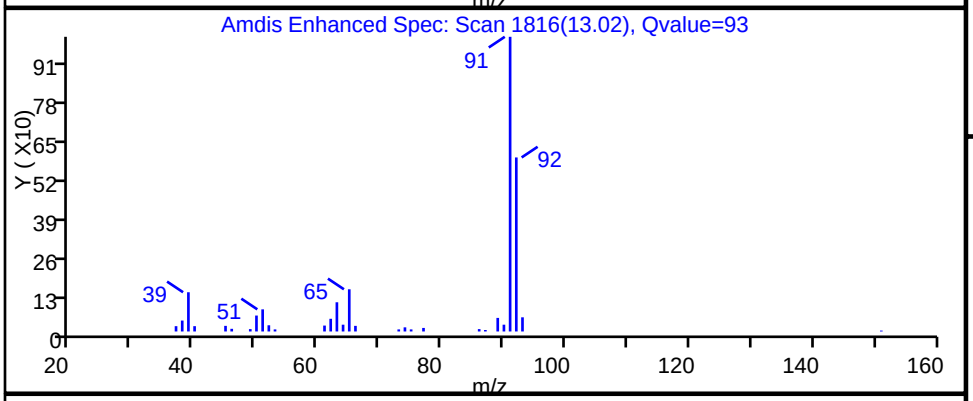
TestAmerica Knoxville

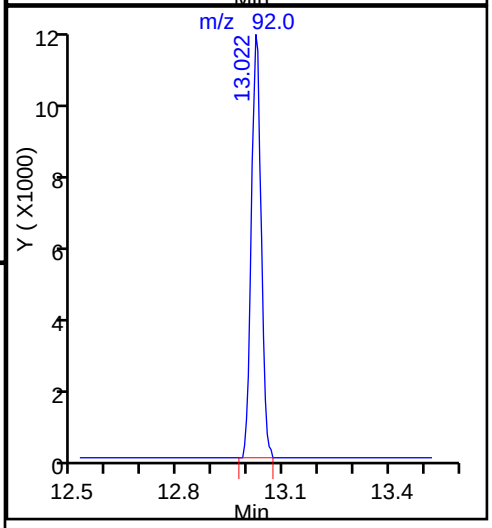
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P110.D		
Injection Date:	10-Mar-2017 18:24:30	Instrument ID:	MG
Lims ID:	140-7358-A-5	Lab Sample ID:	140-7358-5
Client ID:	BLDG-A MIDGAC		
Operator ID:	7126	ALS Bottle#:	10 Worklist Smp#: 14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

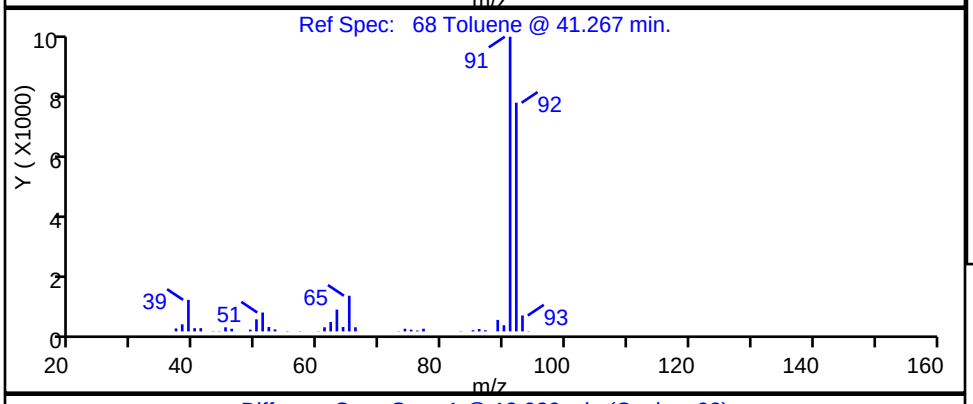
68 Toluene, CAS: 108-88-3

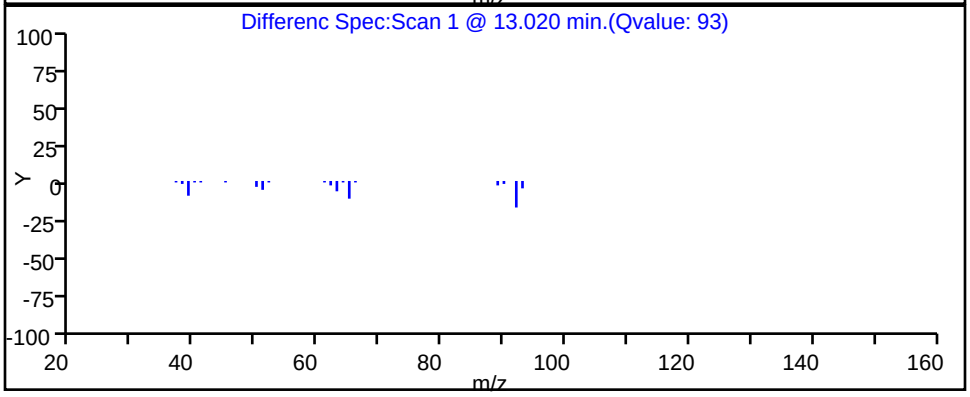












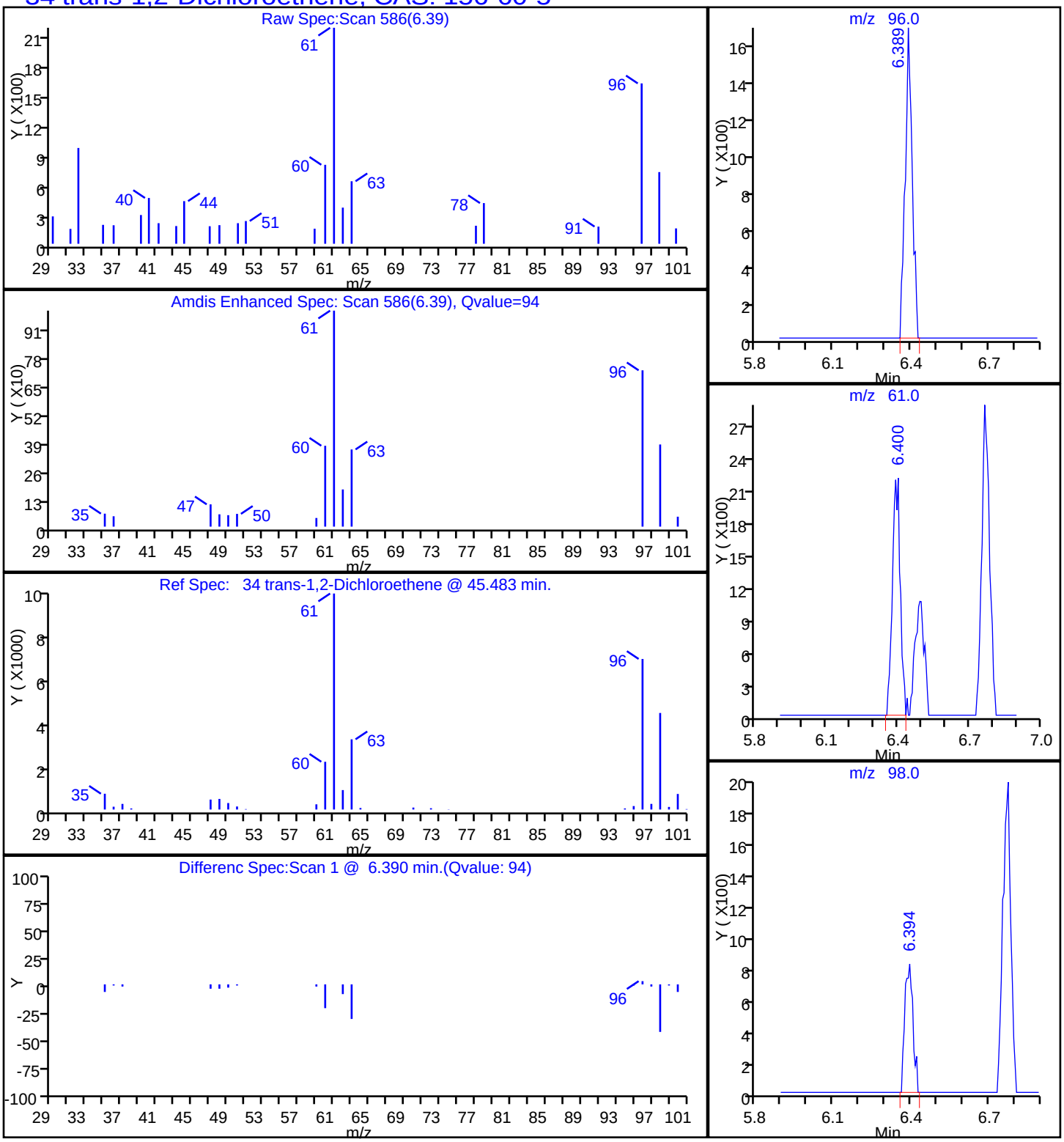
Report Date: 13-Mar-2017 12:06:48 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P110.D

Injection Date:	10-Mar-2017 18:24:30	Instrument ID:	MG		
Lims ID:	140-7358-A-5	Lab Sample ID:	140-7358-5		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

34 trans-1,2-Dichloroethene, CAS: 156-60-5



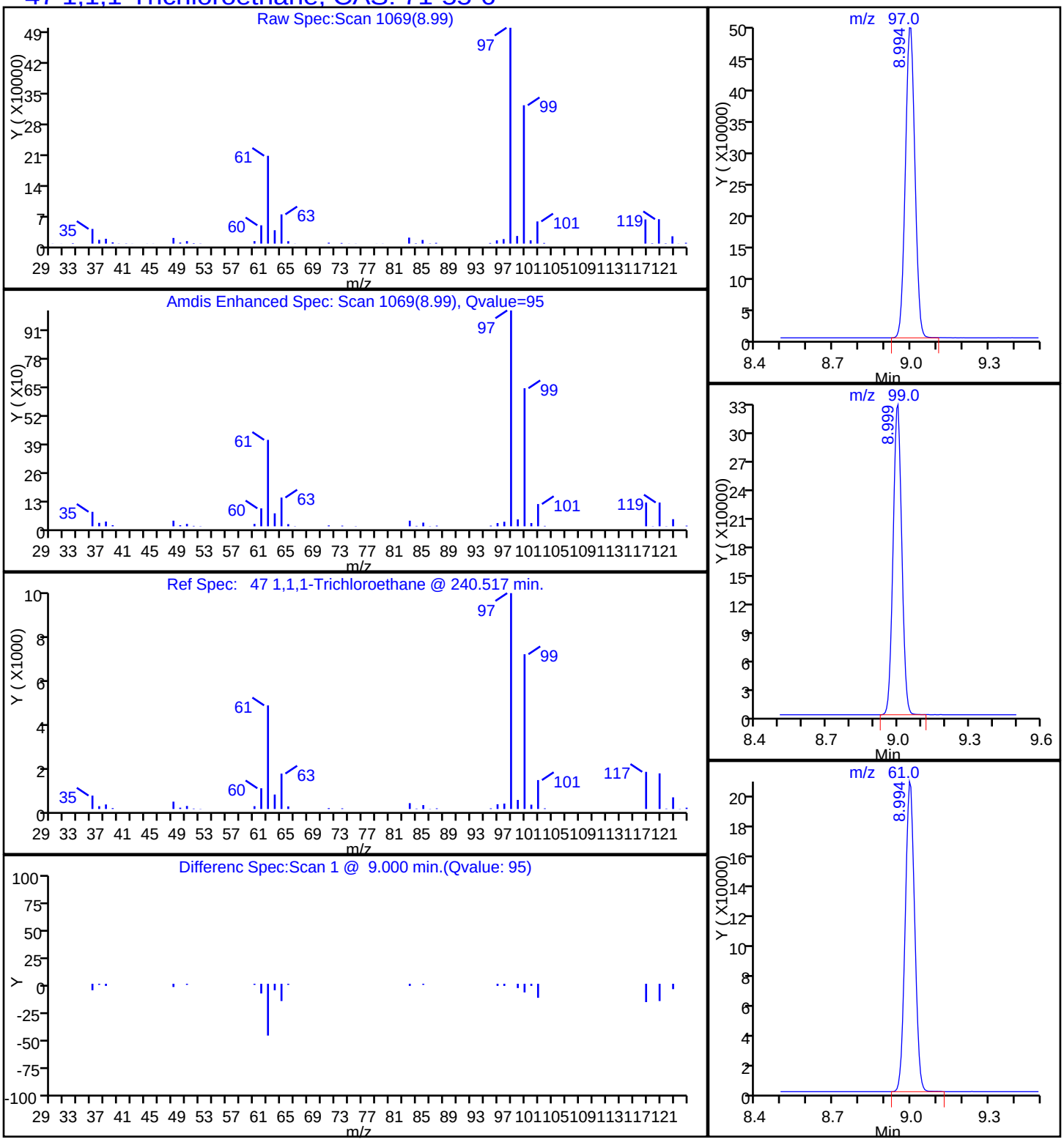
Report Date: 13-Mar-2017 12:06:48 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P110.D

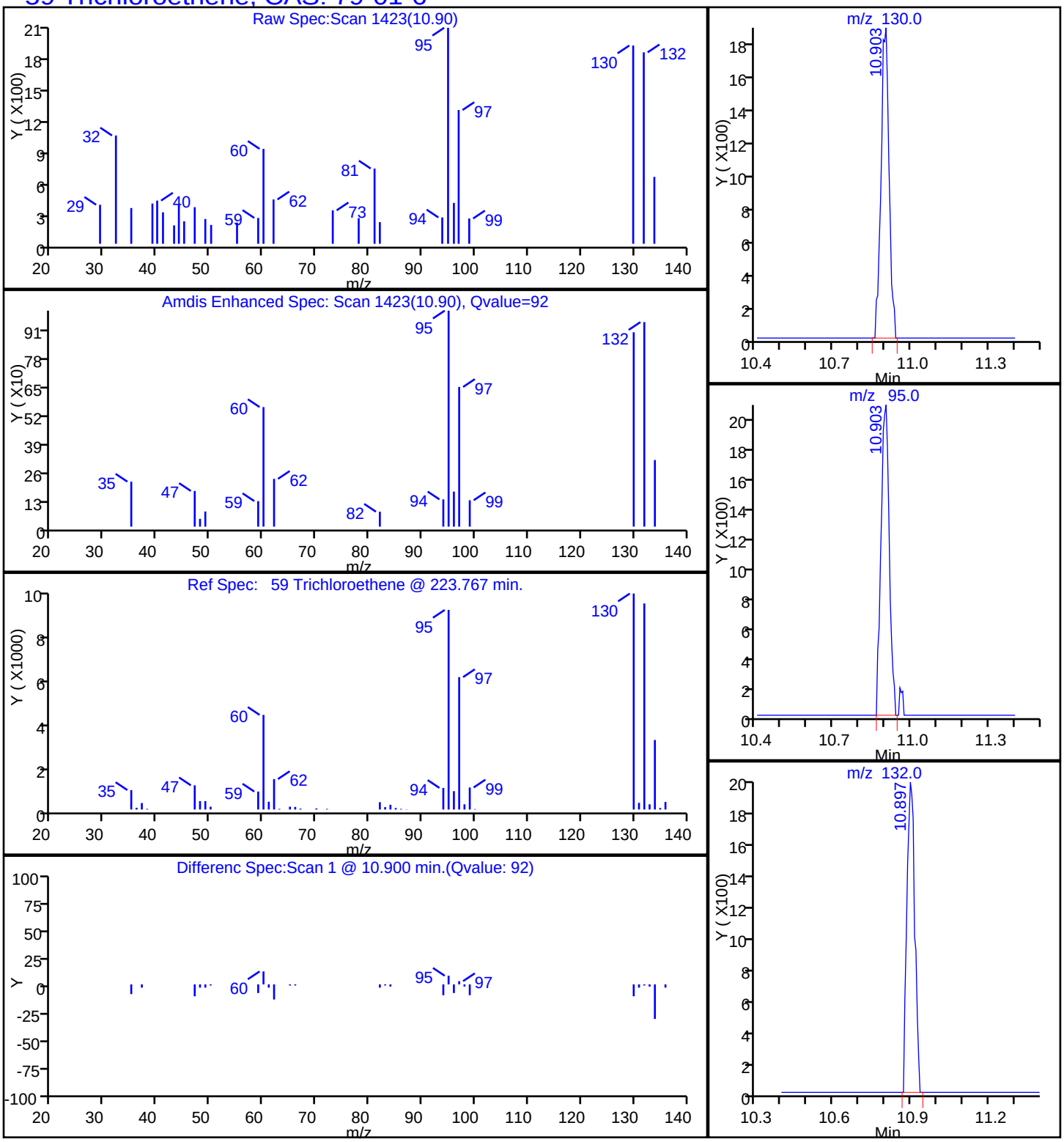
Injection Date:	10-Mar-2017 18:24:30	Instrument ID:	MG		
Lims ID:	140-7358-A-5	Lab Sample ID:	140-7358-5		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

47 1,1,1-Trichloroethane, CAS: 71-55-6



Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P110.D
Injection Date: 10-Mar-2017 18:24:30 Instrument ID: MG
Lims ID: 140-7358-A-5 Lab Sample ID: 140-7358-5
Client ID: BLDG-A MIDGAC
Operator ID: 7126 ALS Bottle#: 10 Worklist Smp#: 14
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

59 Trichloroethene, CAS: 79-01-6

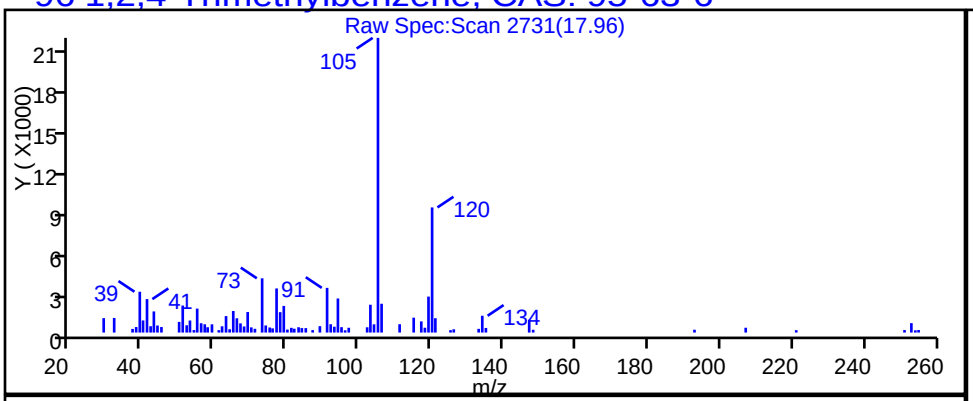


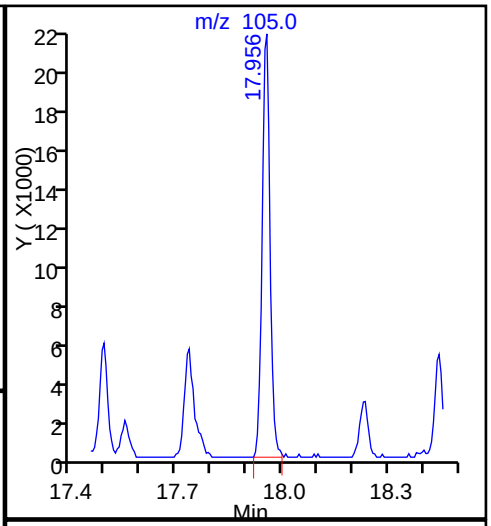
Report Date: 13-Mar-2017 12:06:48 Chrom Revision: 2.2 05-Mar-2017 11:38:00

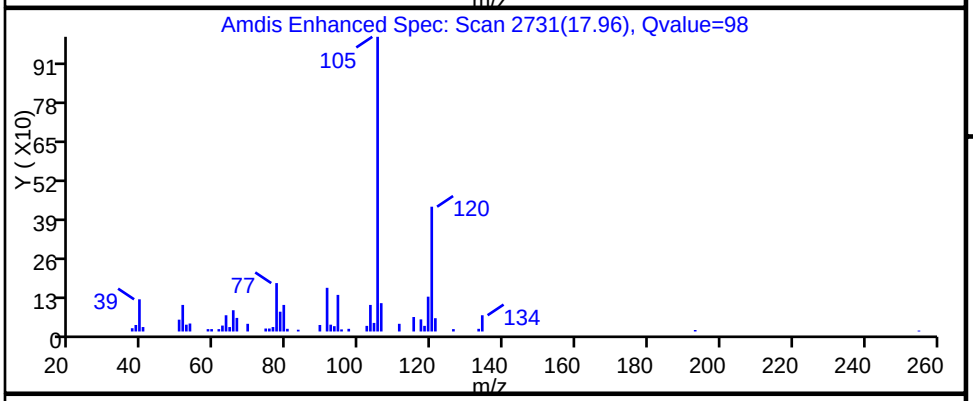
TestAmerica Knoxville

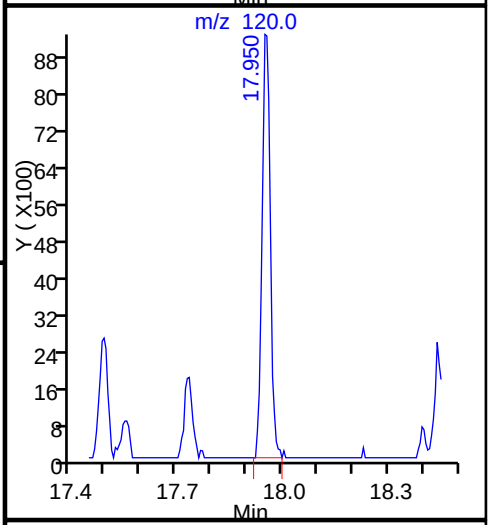
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P110.D				
Injection Date:	10-Mar-2017 18:24:30	Instrument ID:	MG		
Lims ID:	140-7358-A-5	Lab Sample ID:	140-7358-5		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

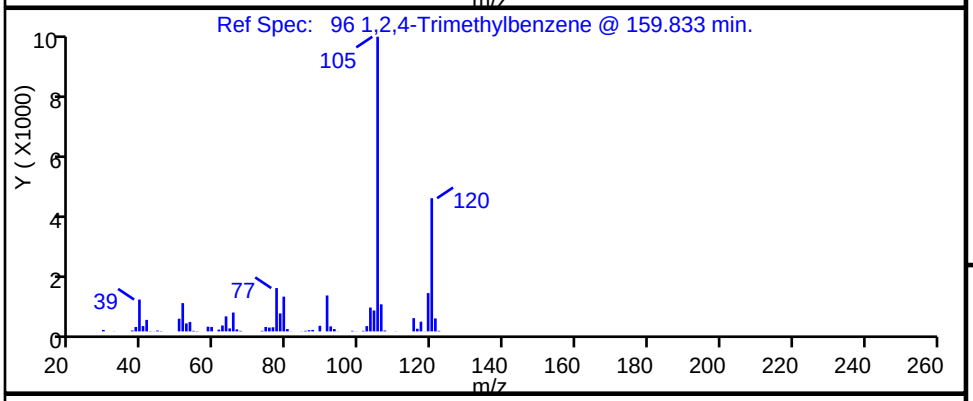
96 1,2,4-Trimethylbenzene, CAS: 95-63-6

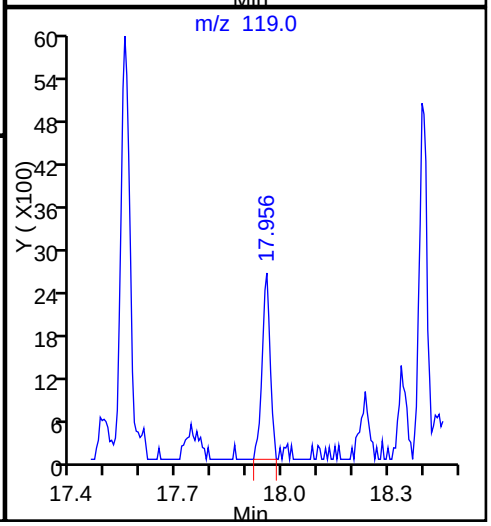


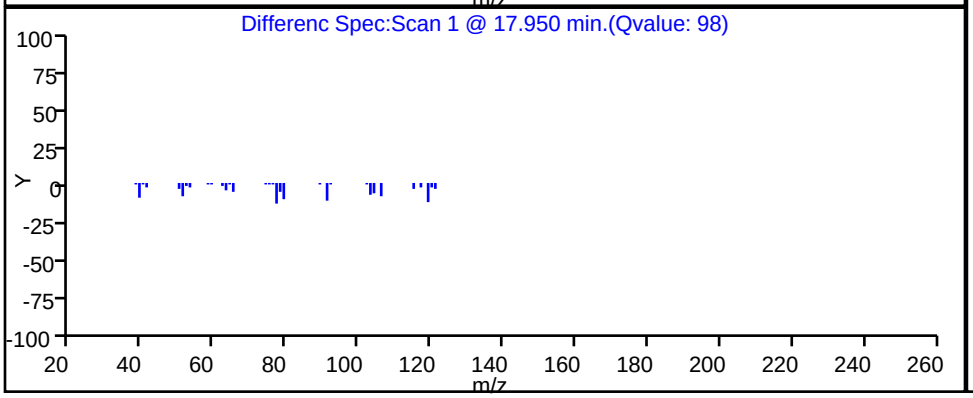








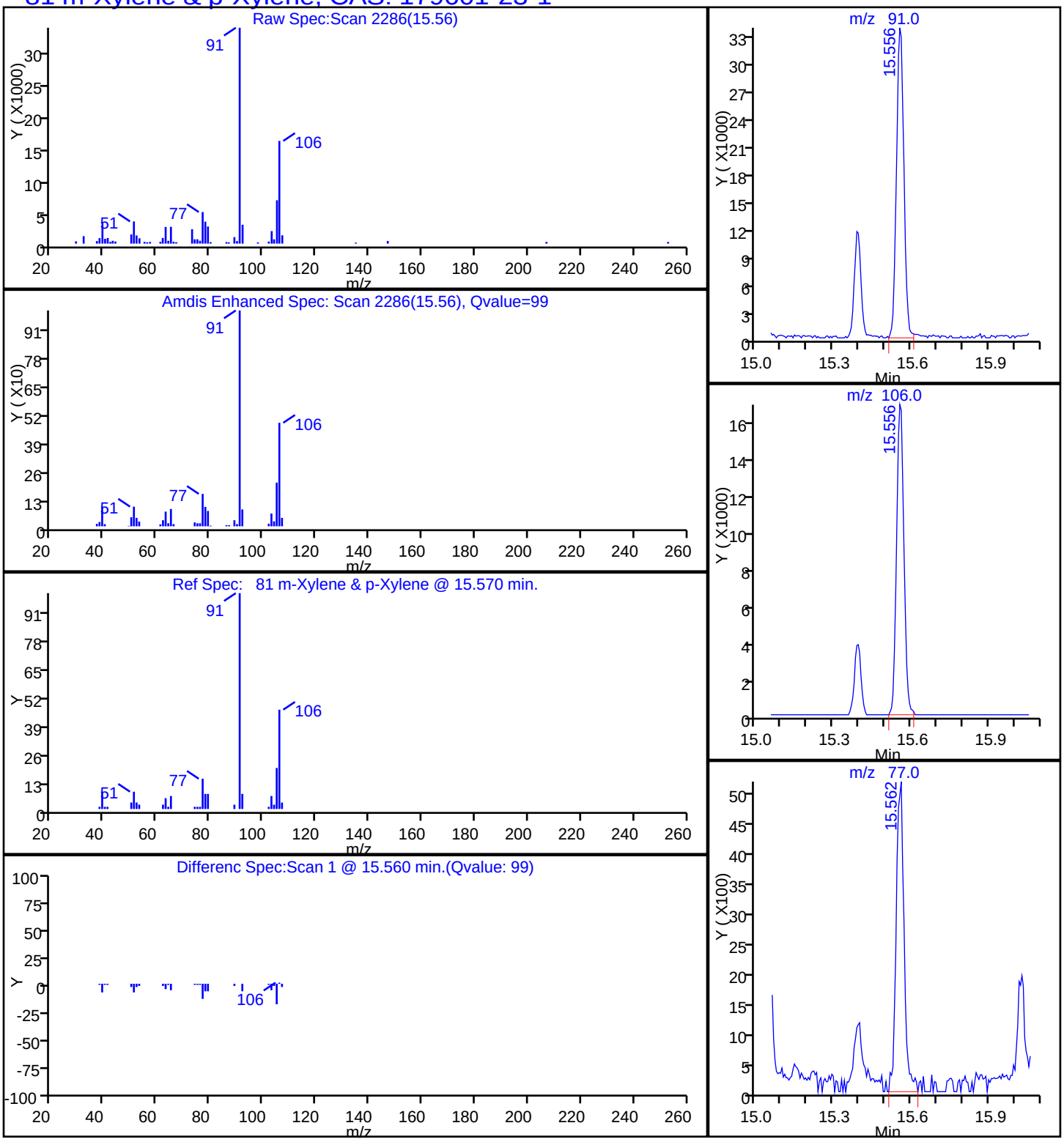




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P110.D				
Injection Date:	10-Mar-2017 18:24:30	Instrument ID:	MG		
Lims ID:	140-7358-A-5	Lab Sample ID:	140-7358-5		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

81 m-Xylene & p-Xylene, CAS: 179601-23-1

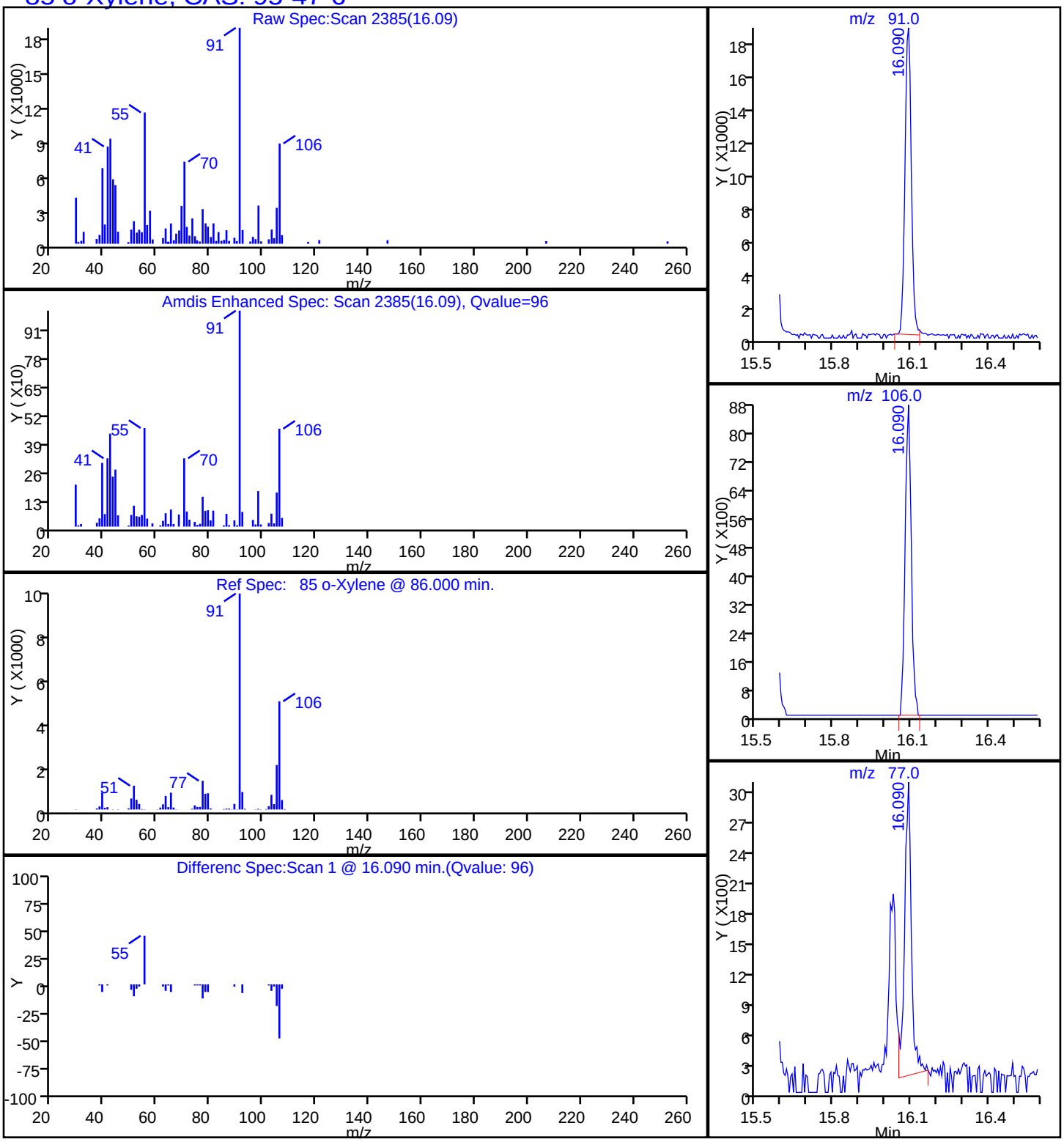


Report Date: 13-Mar-2017 12:06:48 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P110.D				
Injection Date:	10-Mar-2017 18:24:30	Instrument ID:	MG		
Lims ID:	140-7358-A-5	Lab Sample ID:	140-7358-5		
Client ID:	BLDG-A MIDGAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

85 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7358-1

SDG No.:

Client Sample ID: BLDG-A INFLUENT | Lab Sample ID: 140-7358-6

Matrix: Air | Lab File ID: GC10P111.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 14:33

Sample wt/vol: 25(mL) | Date Analyzed: 03/10/2017 19:07

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9158 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	6.5		1.6	0.46
56-23-5	Carbon tetrachloride	153.81	ND		1.6	0.30
75-45-6	Chlorodifluoromethane	86.47	ND		1.6	0.30
67-66-3	Chloroform	119.38	0.41	J	1.6	0.30
156-59-2	cis-1,2-Dichloroethene	96.94	25		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	0.67	J	1.6	0.54
75-34-3	1,1-Dichloroethane	98.96	5.1		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	29		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.6	0.54
75-09-2	Methylene Chloride	84.93	ND		4.0	2.6
1634-04-4	Methyl tert-butyl ether	88.15	ND		8.0	1.4
91-20-3	Naphthalene	128.17	ND		0.80	0.80
127-18-4	Tetrachloroethene	165.83	1.3	J	1.6	0.32
108-88-3	Toluene	92.14	ND		2.4	2.4
156-60-5	trans-1,2-Dichloroethene	96.94	0.55	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		1.6	0.78
71-55-6	1,1,1-Trichloroethane	133.41	110		1.6	0.24
79-00-5	1,1,2-Trichloroethane	133.41	ND		1.6	0.42
79-01-6	Trichloroethene	131.39	190		0.80	0.28
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	1.6	0.68
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		1.6	0.50
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		1.6	0.52
75-01-4	Vinyl chloride	62.50	ND		0.80	0.58
1330-20-7	Xylenes, Total	106.17	ND		3.2	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7358-1

SDG No.:

Client Sample ID: BLDG-A INFLUENT | Lab Sample ID: 140-7358-6

Matrix: Air | Lab File ID: GC10P111.D

Analysis Method: TO 15 LL | Date Collected: 03/08/2017 14:33

Sample wt/vol: 25(mL) | Date Analyzed: 03/10/2017 19:07

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 9158 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	21		5.1	1.5
56-23-5	Carbon tetrachloride	153.81	ND		10	1.9
75-45-6	Chlorodifluoromethane	86.47	ND		5.7	1.1
67-66-3	Chloroform	119.38	2.0	J	7.8	1.5
156-59-2	cis-1,2-Dichloroethene	96.94	100		6.3	1.9
75-71-8	Dichlorodifluoromethane	120.91	3.3	J	7.9	2.7
75-34-3	1,1-Dichloroethane	98.96	21		6.5	0.81
107-06-2	1,2-Dichloroethane	98.96	ND		6.5	1.5
75-35-4	1,1-Dichloroethene	96.94	110		6.3	1.1
100-41-4	Ethylbenzene	106.17	ND		6.9	2.3
75-09-2	Methylene Chloride	84.93	ND		14	9.0
1634-04-4	Methyl tert-butyl ether	88.15	ND		29	4.9
91-20-3	Naphthalene	128.17	ND		4.2	4.2
127-18-4	Tetrachloroethene	165.83	8.5	J	11	2.2
108-88-3	Toluene	92.14	ND		9.0	9.0
156-60-5	trans-1,2-Dichloroethene	96.94	2.2	J	6.3	1.6
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		12	5.8
71-55-6	1,1,1-Trichloroethane	133.41	590		8.7	1.3
79-00-5	1,1,2-Trichloroethane	133.41	ND		8.7	2.3
79-01-6	Trichloroethene	131.39	1000		4.3	1.5
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	7.9	3.3
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		7.9	2.5
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		7.9	2.6
75-01-4	Vinyl chloride	62.50	ND		2.0	1.5
1330-20-7	Xylenes, Total	106.17	ND		14	2.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P111.D				
Lims ID:	140-7358-A-6				
Client ID:	BLDG-A INFLUENT				
Sample Type:	Client				
Inject. Date:	10-Mar-2017 19:07:30	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004228-015				
Misc. Info.:	140-7358-a-6				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Mar-2017 12:07:11	Calib Date:	02-Mar-2017 20:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK020				
First Level Reviewer: barlozhetskayaa		Date:	13-Mar-2017 12:07:11		

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	7.996	8.001	-0.005	85	309209	4.00	
*	2 1,4-Difluorobenzene	114	10.164	10.169	-0.005	95	1576815	4.00	
*	3 Chlorobenzene-d5 (IS)	117	15.033	15.038	-0.005	88	1518283	4.00	
$	4 4-Bromofluorobenzene (Surr	95	16.705	16.710	-0.005	94	1165976	4.12	
	8 Dichlorodifluoromethane	85	3.510	3.515	-0.005	99	9134	0.0333	
	27 1,1-Dichloroethene	96	5.354	5.359	-0.005	97	114807	1.43	
	31 Methylene Chloride	84	5.656	5.666	-0.010	89	7089	0.0952	
	34 trans-1,2-Dichloroethene	96	6.395	6.400	-0.005	95	2223	0.0273	
	37 1,1-Dichloroethane	63	6.772	6.783	-0.011	100	38576	0.2547	
	42 cis-1,2-Dichloroethene	96	7.694	7.699	-0.005	96	107069	1.26	
	44 Chloroform	83	8.018	8.028	-0.010	88	4224	0.0206	
	47 1,1,1-Trichloroethane	97	8.999	9.004	-0.005	94	1222113	5.42	
	49 Benzene	78	9.587	9.592	-0.005	96	80614	0.3264	
	59 Trichloroethene	130	10.903	10.908	-0.005	98	1314493	9.28	
	68 Toluene	91	13.022	13.027	-0.005	91	14019	0.0509	
	76 Tetrachloroethene	129	14.192	14.203	-0.010	92	7608	0.0626	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

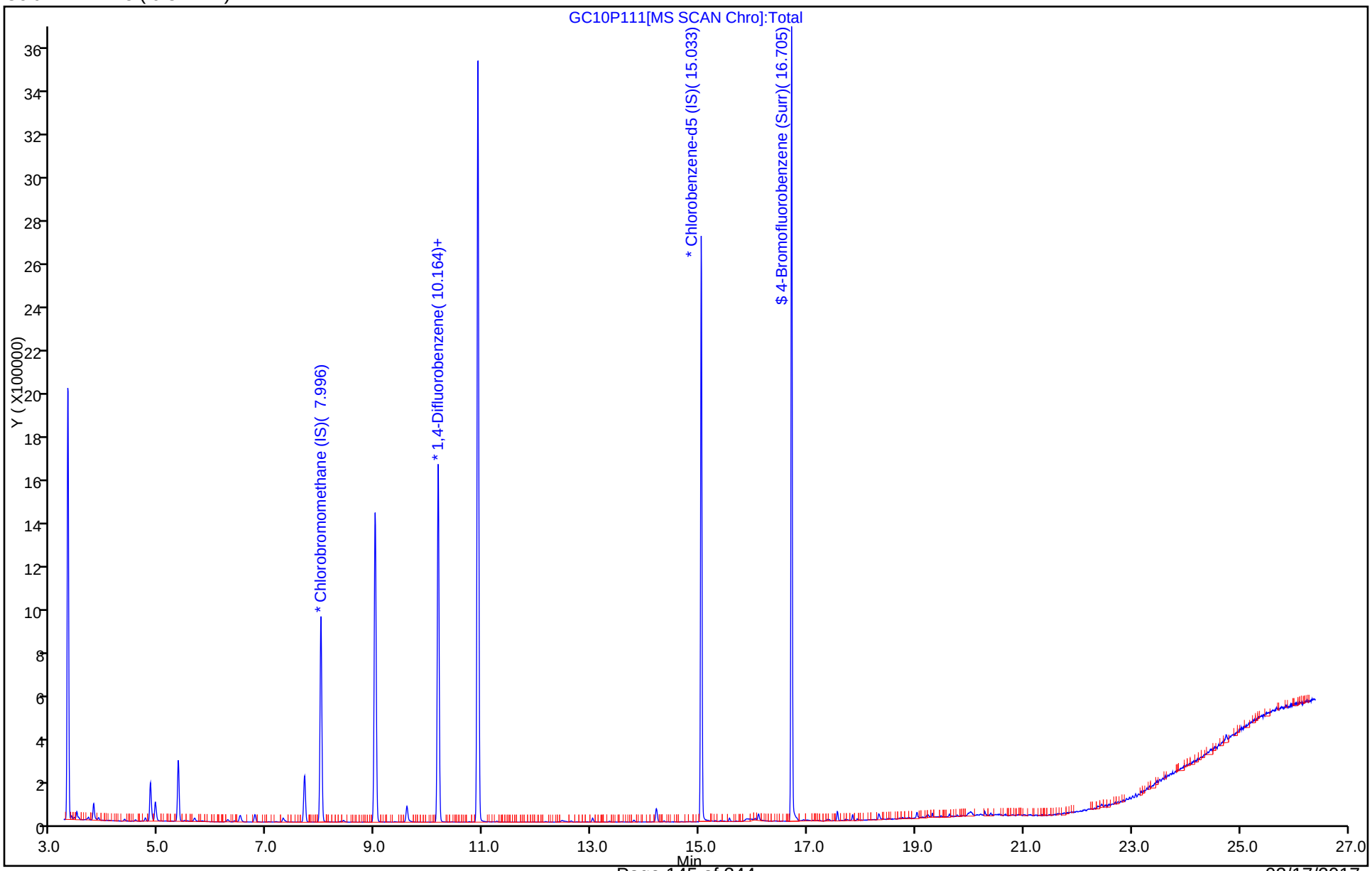
Report Date: 13-Mar-2017 12:07:12 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P111.D

Injection Date:	10-Mar-2017 19:07:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-7358-A-6	Lab Sample ID:	140-7358-6	Worklist Smp#:	15
Client ID:	BLDG-A INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P111.D				
Lims ID:	140-7358-A-6				
Client ID:	BLDG-A INFLUENT				
Sample Type:	Client				
Inject. Date:	10-Mar-2017 19:07:30	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004228-015				
Misc. Info.:	140-7358-a-6				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Mar-2017 12:07:11	Calib Date:	02-Mar-2017 20:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK020				

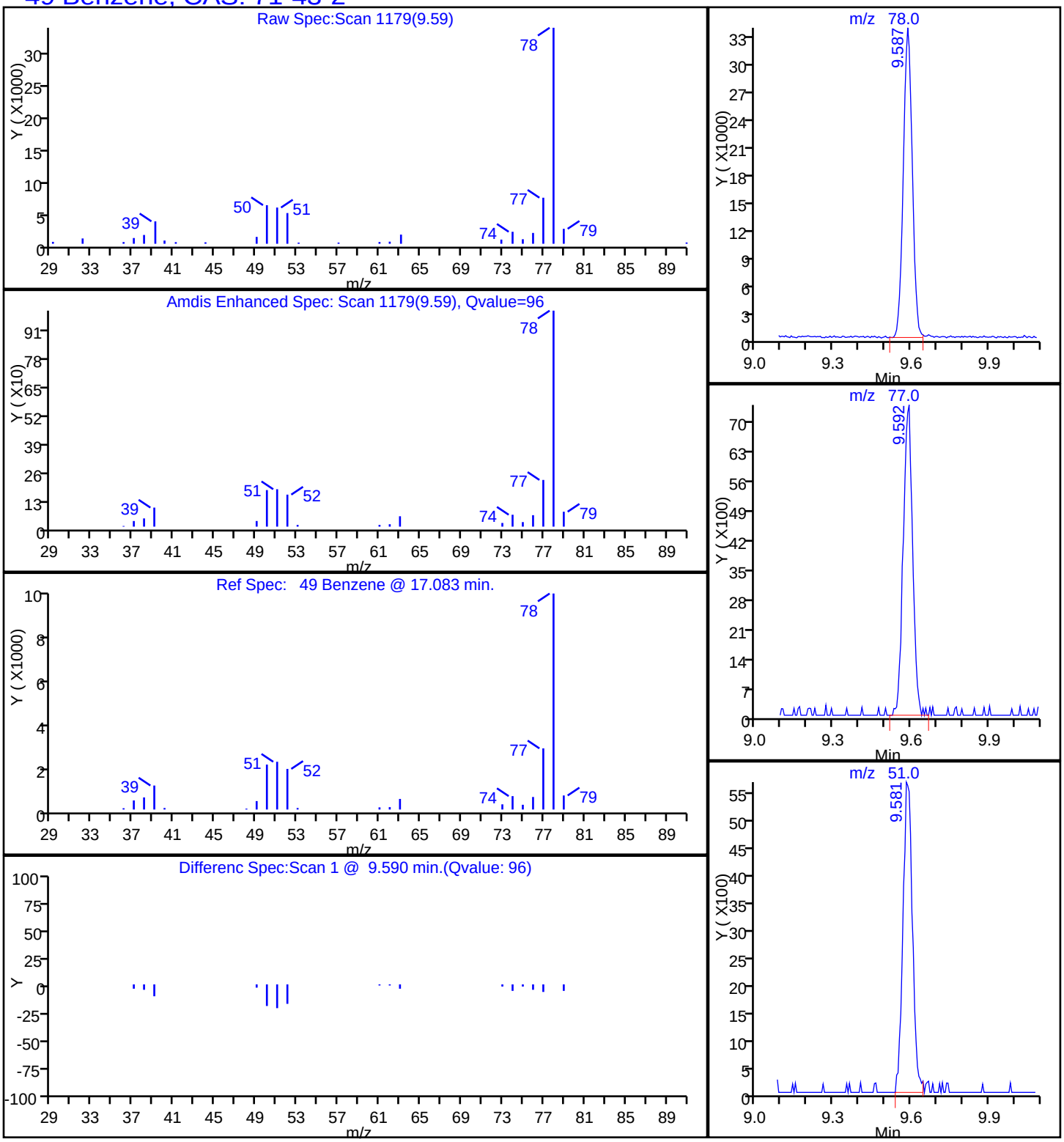
First Level Reviewer: barlozhetskayaa Date: 13-Mar-2017 12:07:11

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.12	103.12

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P111.D				
Injection Date:	10-Mar-2017 19:07:30	Instrument ID:	MG		
Lims ID:	140-7358-A-6	Lab Sample ID:	140-7358-6		
Client ID:	BLDG-A INFLUENT				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

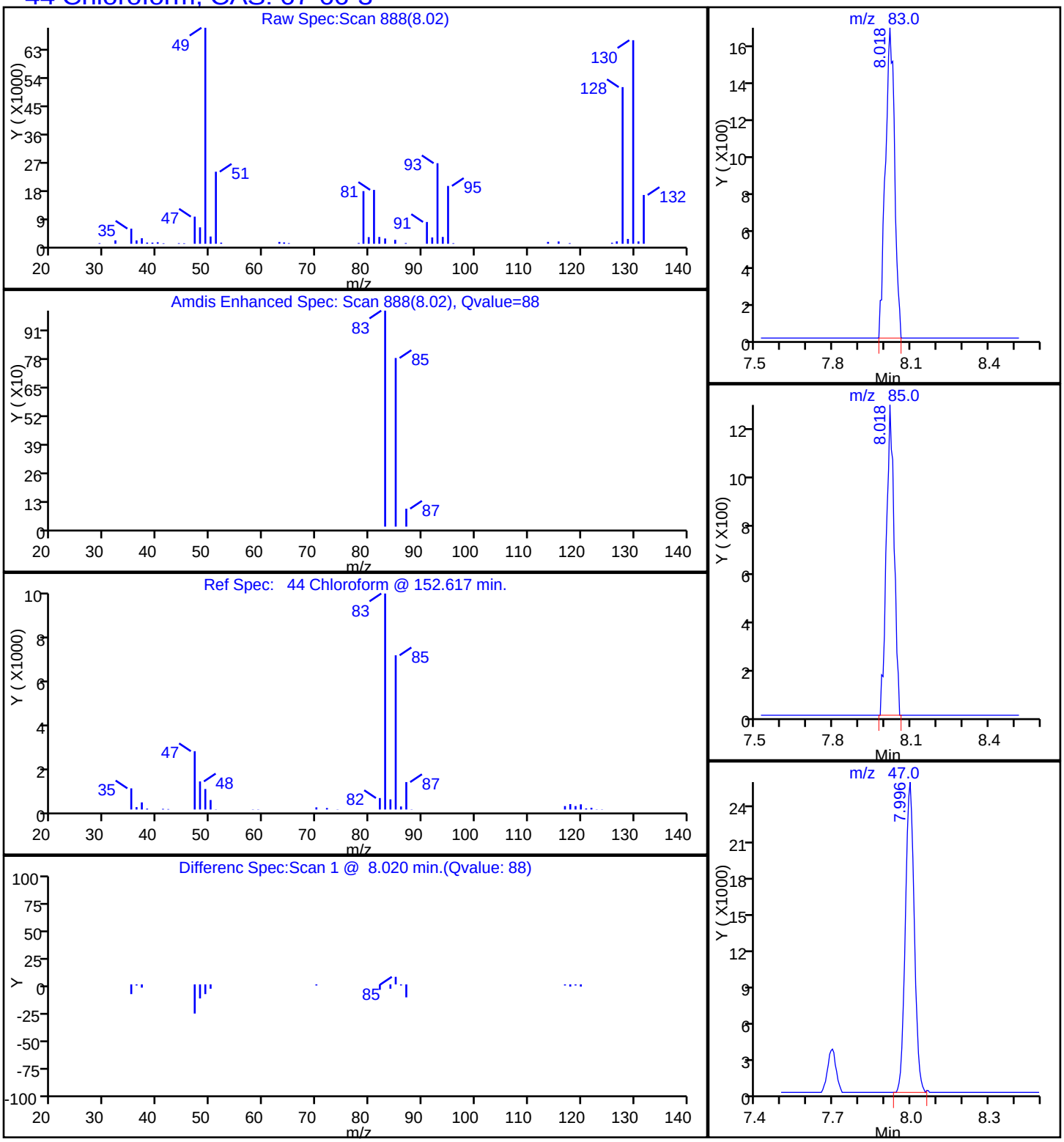
49 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P111.D				
Injection Date:	10-Mar-2017 19:07:30	Instrument ID:	MG		
Lims ID:	140-7358-A-6	Lab Sample ID:	140-7358-6		
Client ID:	BLDG-A INFLUENT				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

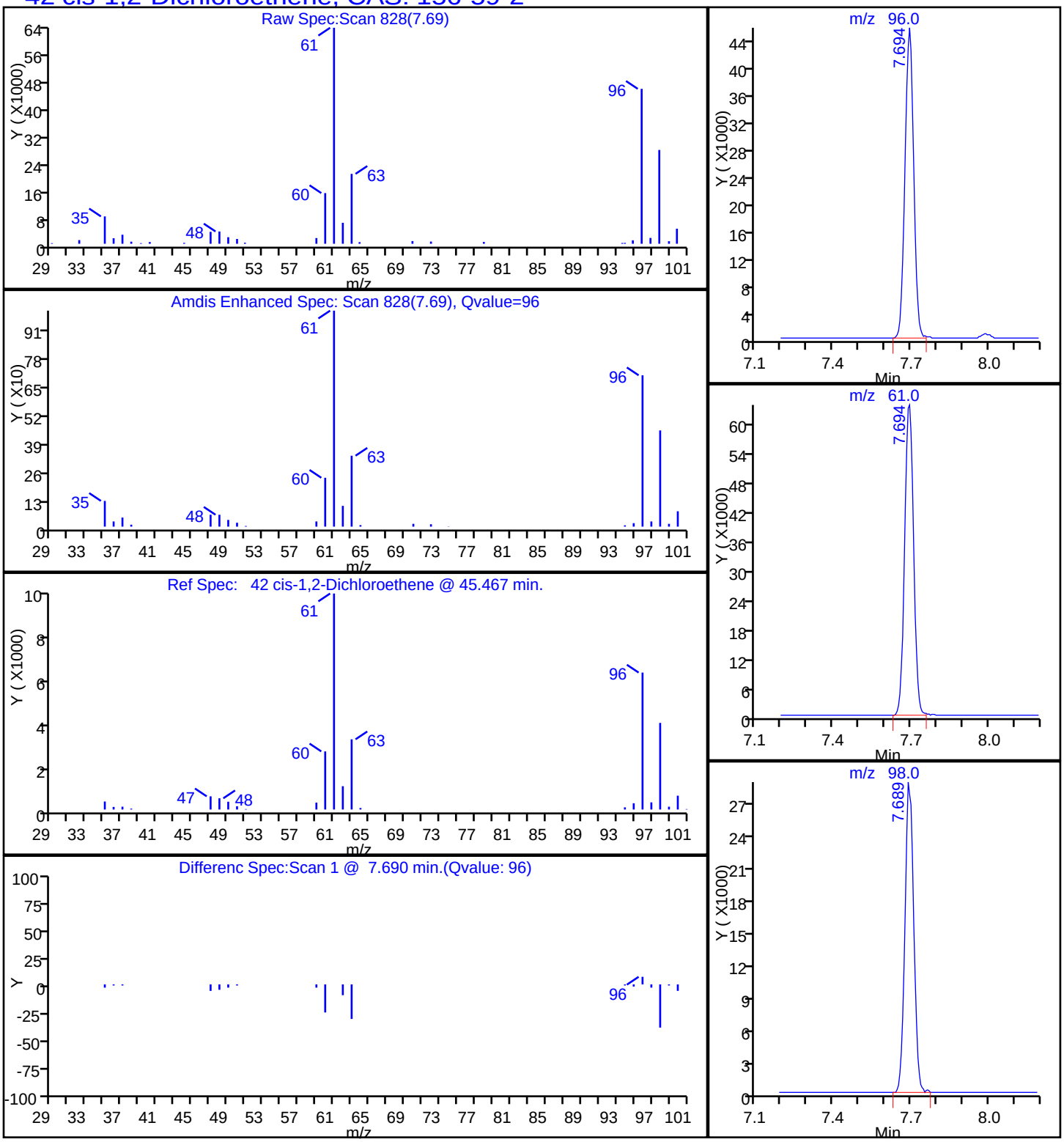
44 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P111.D				
Injection Date:	10-Mar-2017 19:07:30	Instrument ID:	MG		
Lims ID:	140-7358-A-6	Lab Sample ID:	140-7358-6		
Client ID:	BLDG-A INFLUENT				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

42 cis-1,2-Dichloroethene, CAS: 156-59-2



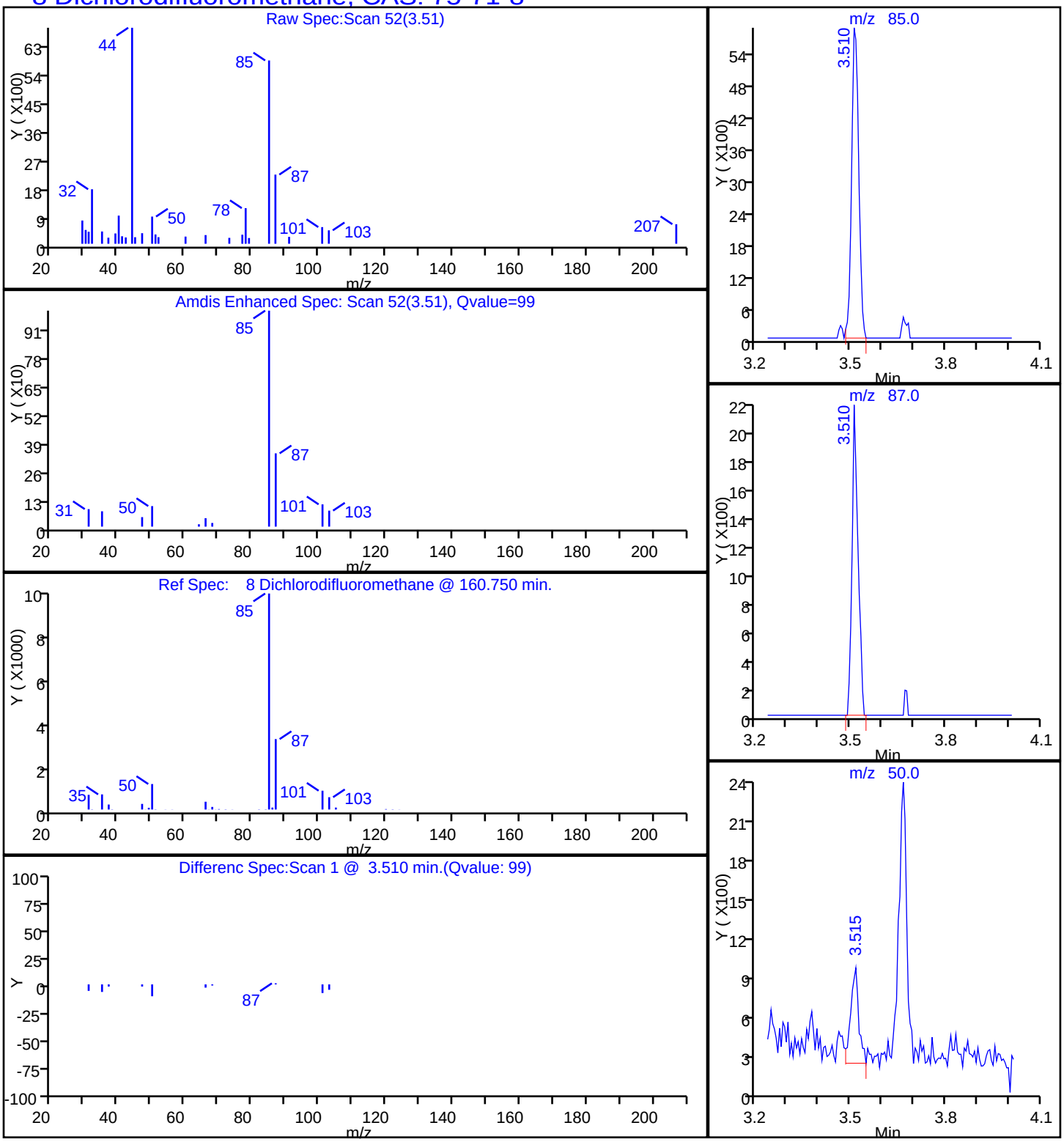
Report Date: 13-Mar-2017 12:07:12 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P111.D

Injection Date:	10-Mar-2017 19:07:30	Instrument ID:	MG		
Lims ID:	140-7358-A-6	Lab Sample ID:	140-7358-6		
Client ID:	BLDG-A INFLUENT				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

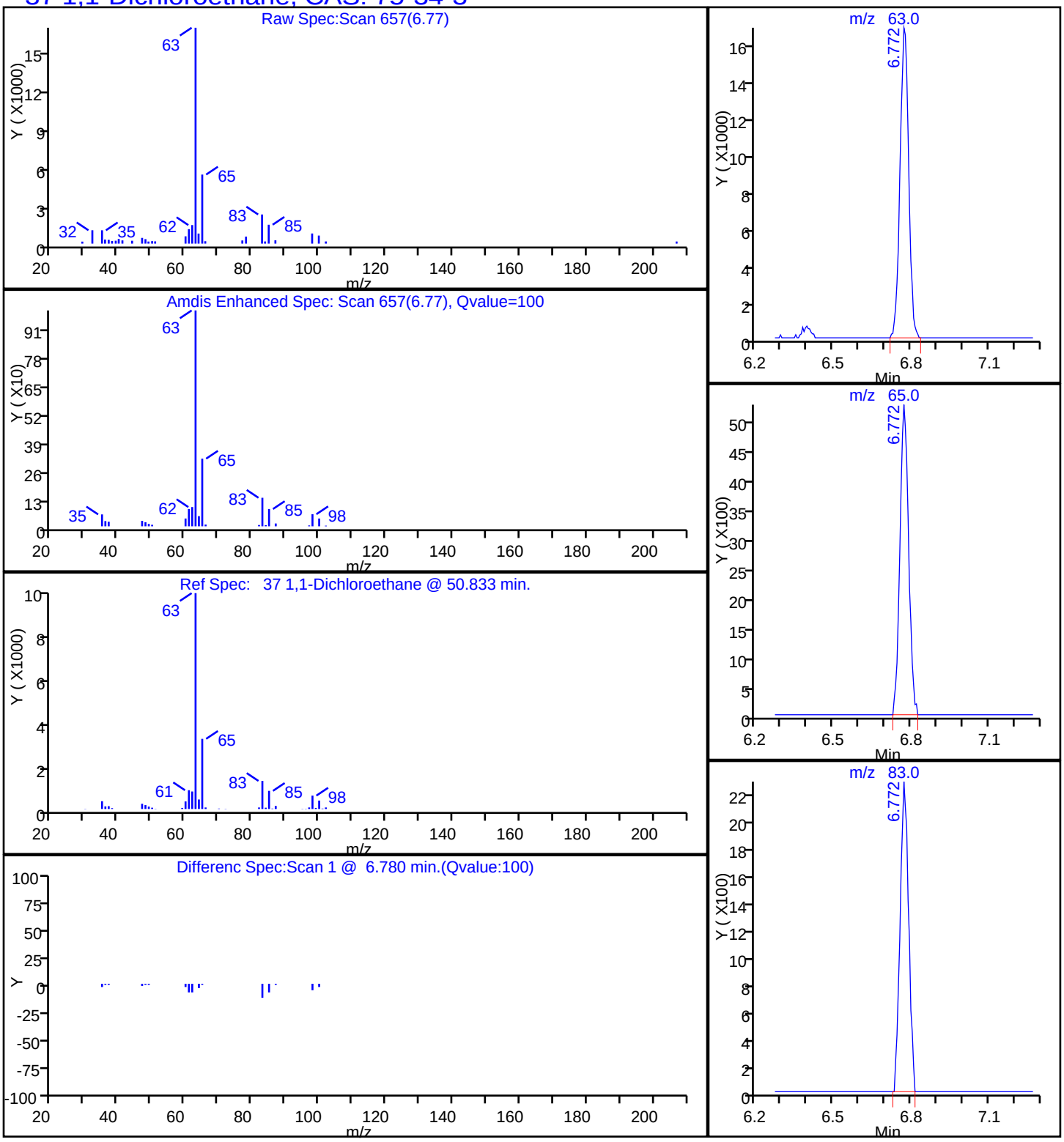
8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P111.D		
Injection Date:	10-Mar-2017 19:07:30	Instrument ID:	MG
Lims ID:	140-7358-A-6	Lab Sample ID:	140-7358-6
Client ID:	BLDG-A INFLUENT		
Operator ID:	7126	ALS Bottle#:	11 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



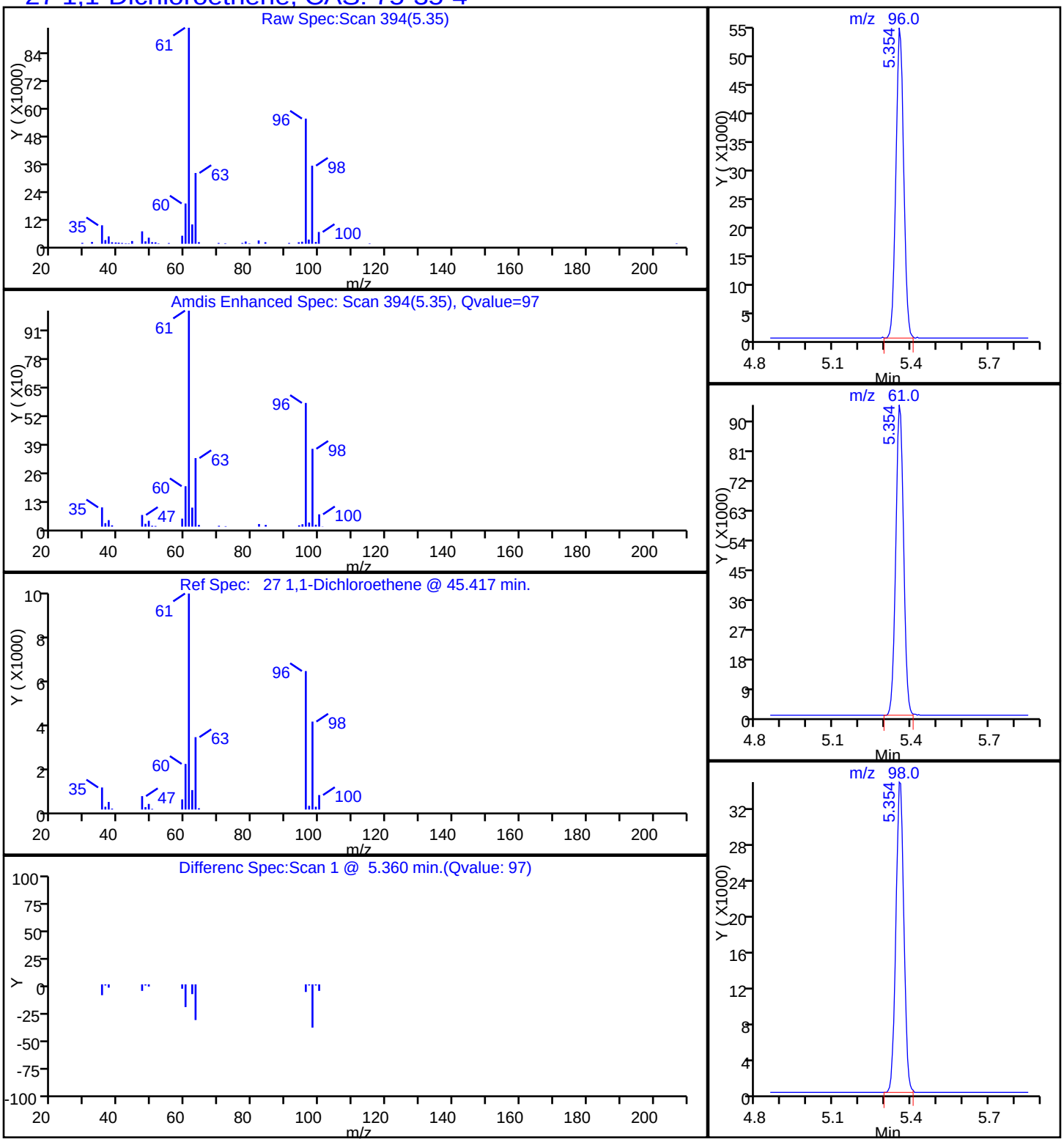
Report Date: 13-Mar-2017 12:07:12 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P111.D

Injection Date:	10-Mar-2017 19:07:30	Instrument ID:	MG		
Lims ID:	140-7358-A-6	Lab Sample ID:	140-7358-6		
Client ID:	BLDG-A INFLUENT				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

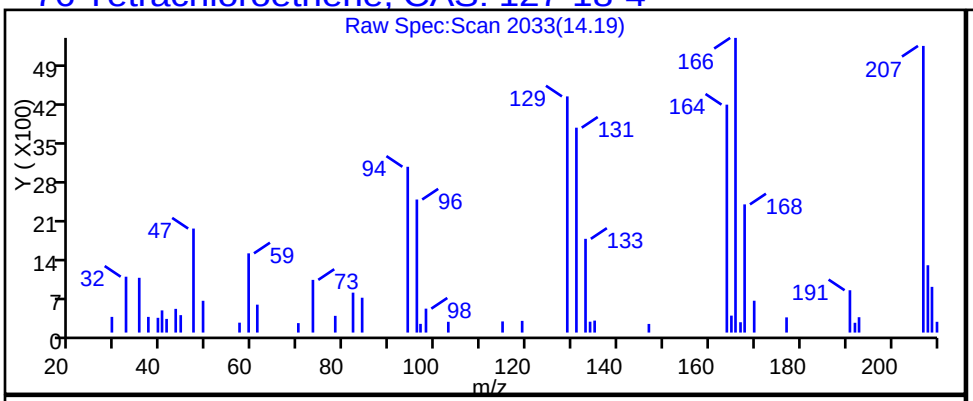
27 1,1-Dichloroethene, CAS: 75-35-4

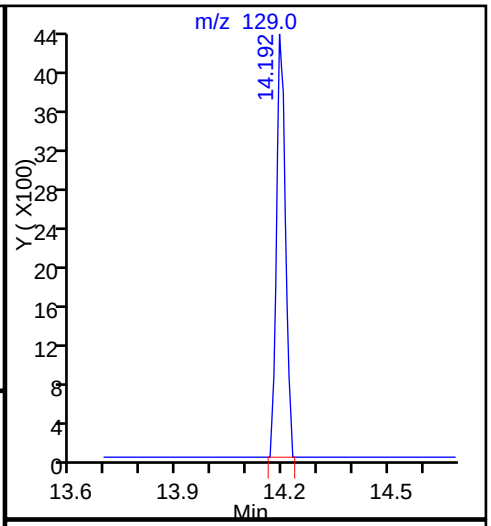


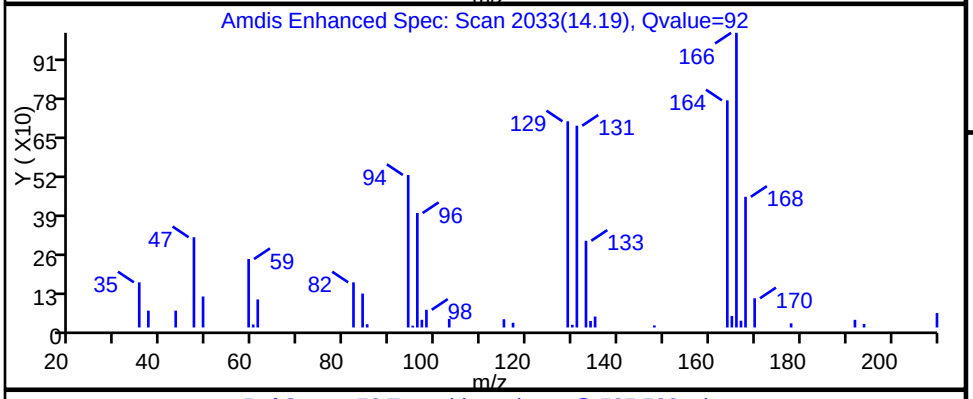
TestAmerica Knoxville

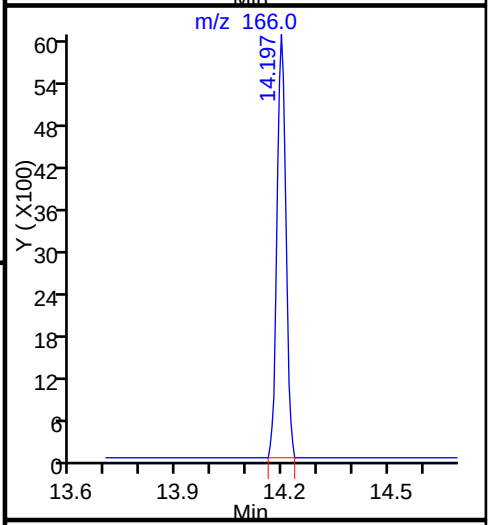
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P111.D		
Injection Date:	10-Mar-2017 19:07:30	Instrument ID:	MG
Lims ID:	140-7358-A-6	Lab Sample ID:	140-7358-6
Client ID:	BLDG-A INFLUENT		
Operator ID:	7126	ALS Bottle#:	11 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

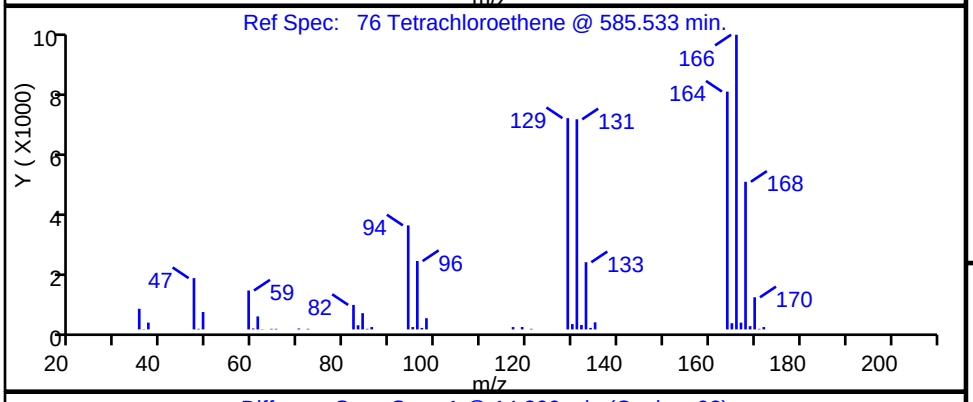
76 Tetrachloroethene, CAS: 127-18-4

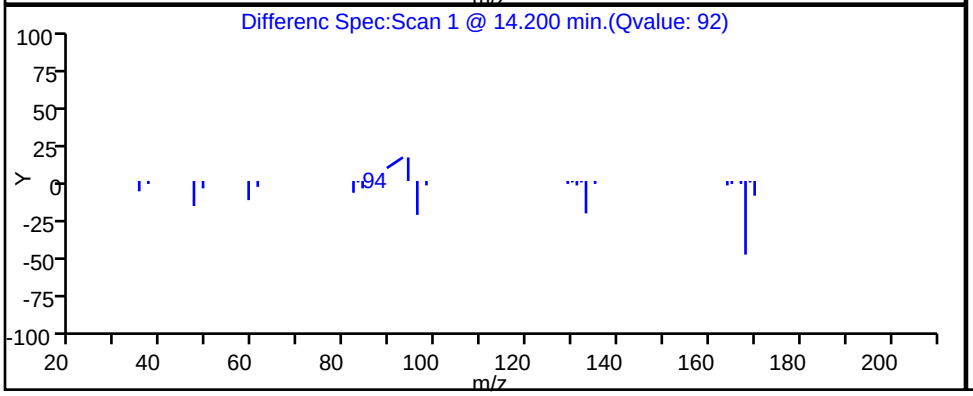


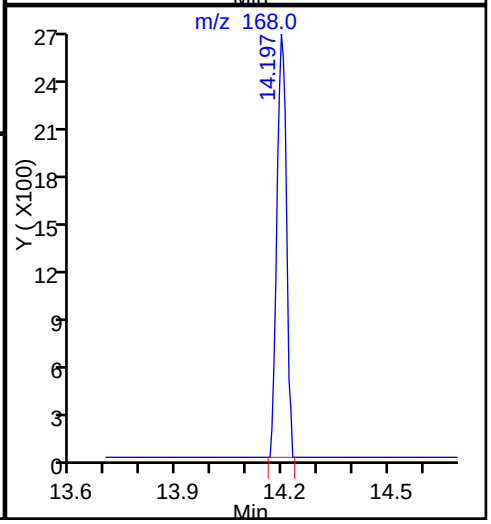






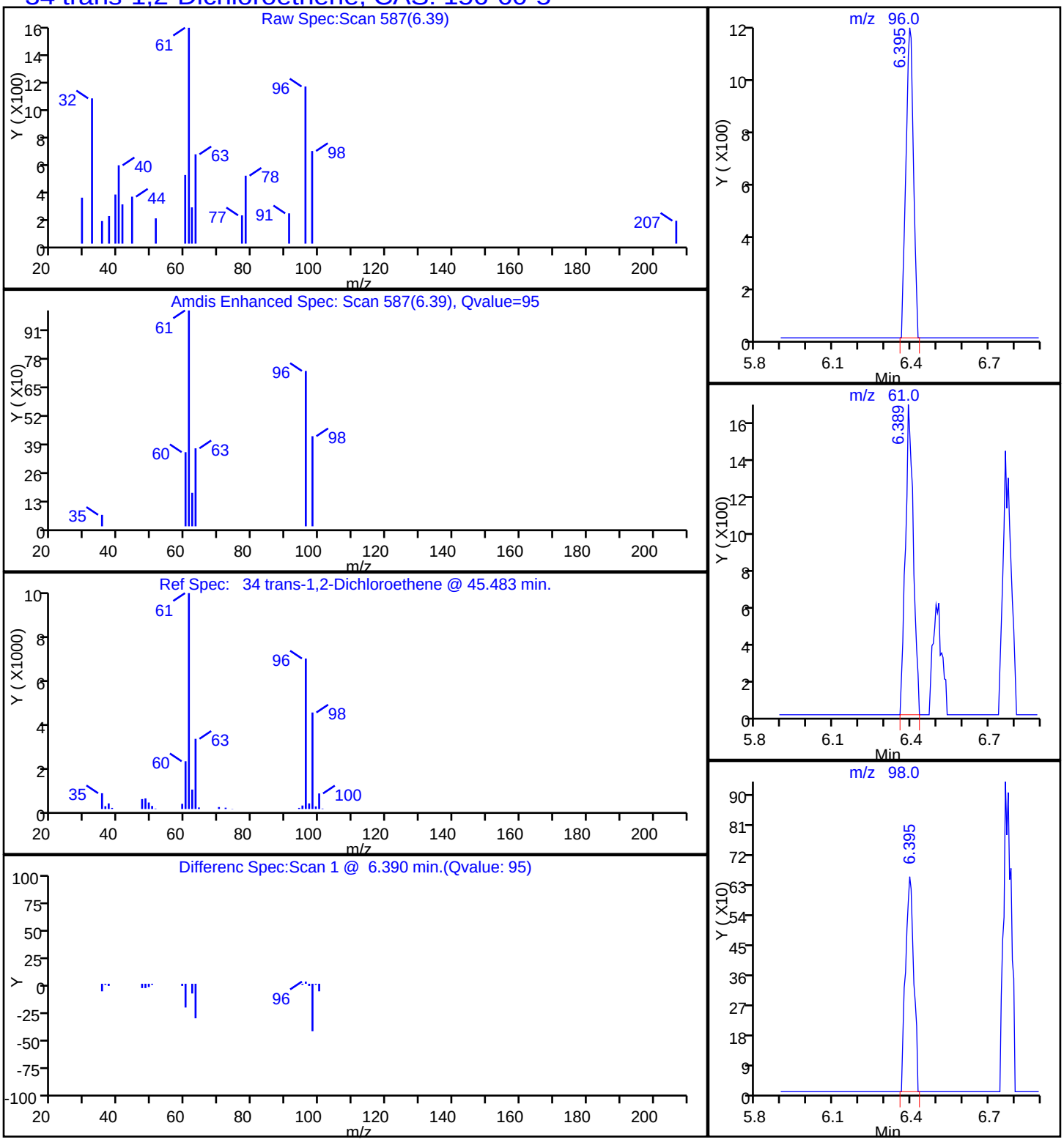






Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P111.D
Injection Date: 10-Mar-2017 19:07:30 Instrument ID: MG
Lims ID: 140-7358-A-6 Lab Sample ID: 140-7358-6
Client ID: BLDG-A INFLUENT
Operator ID: 7126 ALS Bottle#: 11 Worklist Smp#: 15
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

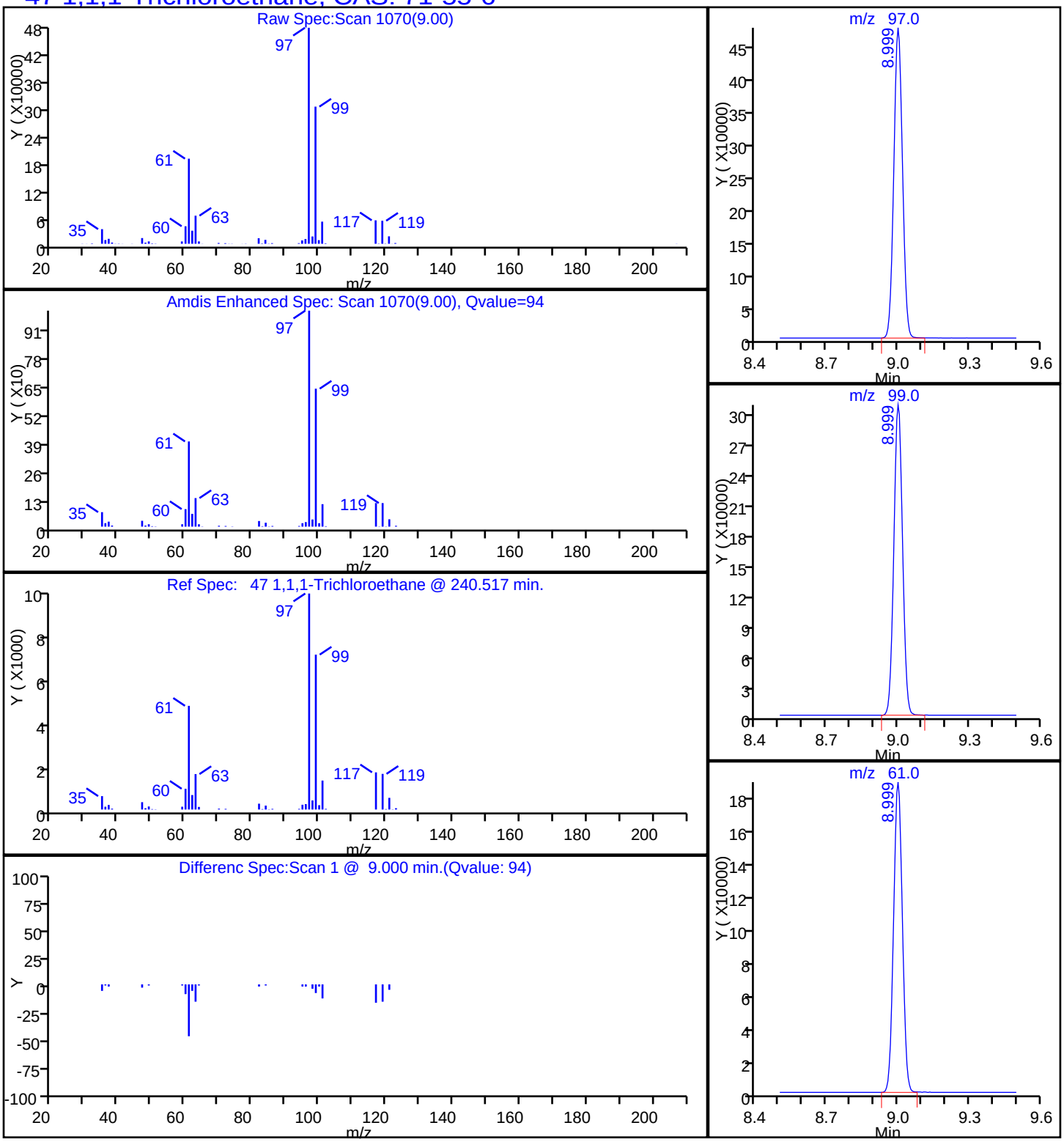
34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P111.D				
Injection Date:	10-Mar-2017 19:07:30	Instrument ID:	MG		
Lims ID:	140-7358-A-6	Lab Sample ID:	140-7358-6		
Client ID:	BLDG-A INFLUENT				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

47 1,1,1-Trichloroethane, CAS: 71-55-6



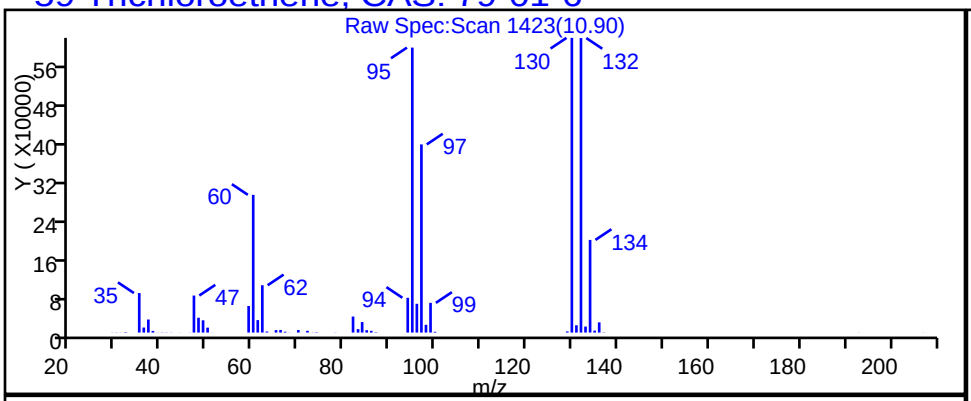
Report Date: 13-Mar-2017 12:07:13 Chrom Revision: 2.2 05-Mar-2017 11:38:00

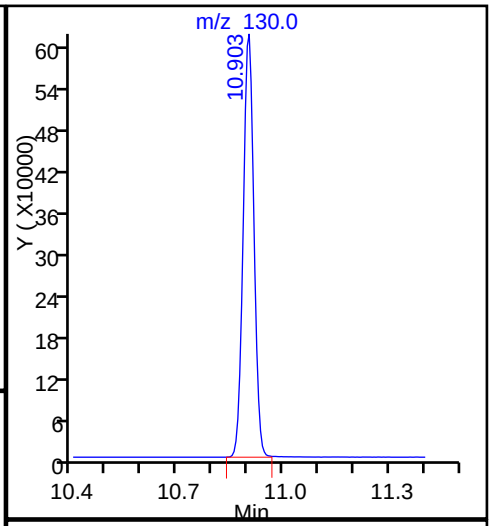
TestAmerica Knoxville

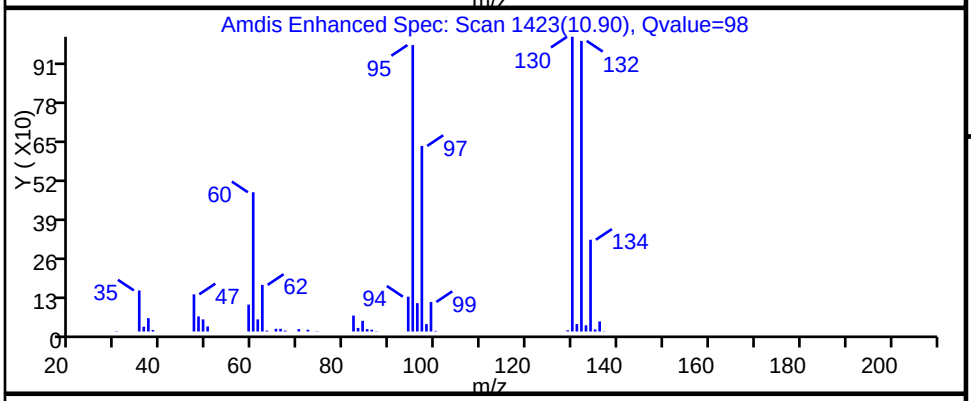
Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GC10P111.D

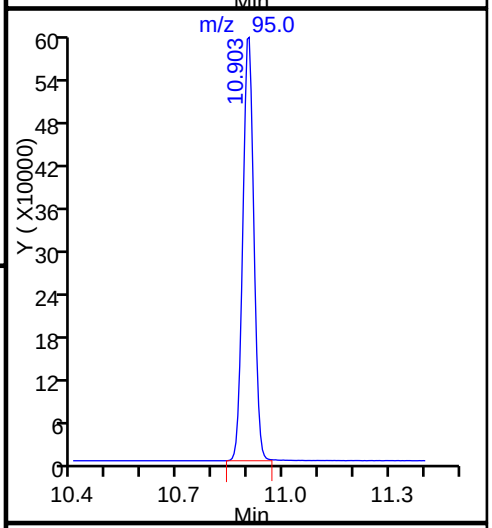
Injection Date:	10-Mar-2017 19:07:30	Instrument ID:	MG
Lims ID:	140-7358-A-6	Lab Sample ID:	140-7358-6
Client ID:	BLDG-A INFLUENT		
Operator ID:	7126	ALS Bottle#:	11 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

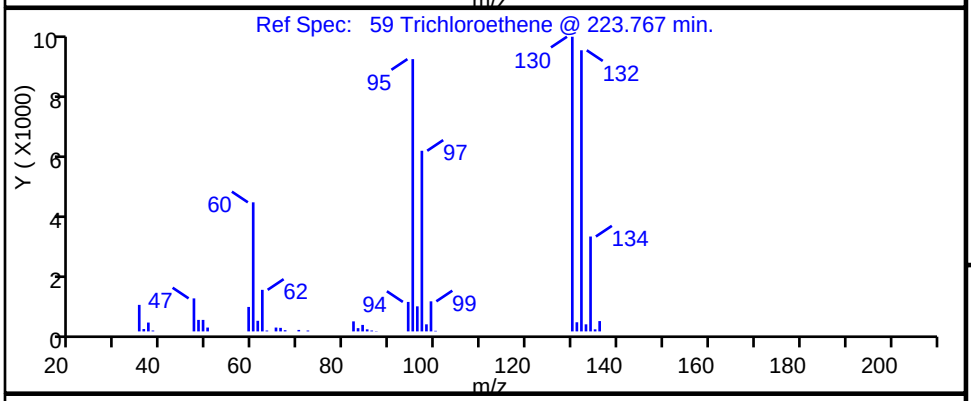
59 Trichloroethene, CAS: 79-01-6

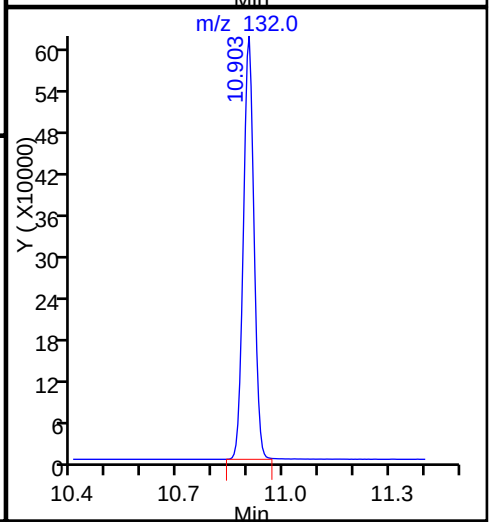


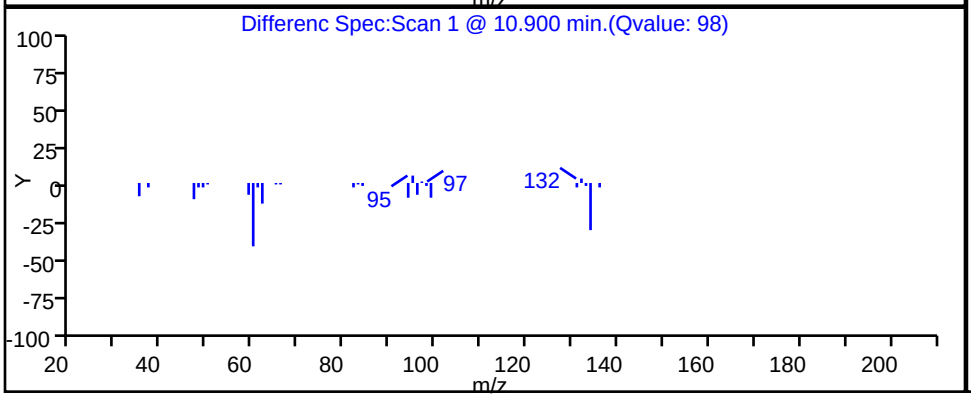












FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-9079/3	GC02IC01.D
Level 2	IC 140-9079/20	GC02IC02R.D
Level 3	IC 140-9079/5	GC02IC03.D
Level 4	IC 140-9079/6	GC02IC04.D
Level 5	IC 140-9079/7	GC02IC05.D
Level 6	ICIS 140-9079/8	GC02IC06.D
Level 7	IC 140-9079/9	GC02IC07.D
Level 8	IC 140-9079/10	GC02IC08.D
Level 9	IC 140-9079/11	GC02IC09.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.3713	0.4829 0.3442	0.4517 0.3643	0.3992 0.3308	0.3847	Ave		0.3912				13.4		30.0			
Propene	+++++ 0.9150	0.9940 0.8405	1.0782 0.8843	0.9663 0.8262	0.9533	Ave		0.9322				9.0		30.0			
Dichlorodifluoromethane	3.9419 3.5248	3.5597 3.3346	3.5281 3.5444	3.6178 3.1809	3.7080	Ave		3.5489				6.0		30.0			
Chloromethane	+++++ 0.2879	+++++ 0.2743	0.3571 0.2675	0.2844 0.2253	0.3080	Ave		0.2864				14.0		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.4106 2.2038	2.2539 1.9847	2.1523 2.0690	2.1642 1.9650	2.2985	Ave		2.1669				6.7		30.0			
Acetaldehyde	+++++ 0.4163	+++++ 0.3781	+++++ 0.3327	0.7190 0.2777	0.4376	Ave		0.4269				36.1	*	30.0			
Vinyl chloride	1.1787 1.1377	1.1356 1.0699	1.1228 1.0419	1.1236 0.8737	1.1841	Ave		1.0965				8.7		30.0			
1,3-Butadiene	0.9259 0.8245	0.8142 0.7719	0.7772 0.7527	0.7789 0.6260	0.8550	Ave		0.7918				10.3		30.0			
Butane	1.8650 1.6959	1.7718 1.6084	1.7079 1.5631	1.6895 1.2632	1.7835	Ave		1.6609				10.5		30.0			
Bromomethane	1.3004 1.1299	1.1620 1.0587	1.1063 1.0311	1.1238 0.9237	1.1815	Ave		1.1130				9.4		30.0			
Chloroethane	0.6834 0.5923	0.5898 0.5611	0.5831 0.5508	0.6053 0.4850	0.6310	Ave		0.5869				9.3		30.0			
Ethanol	+++++ 0.4423	0.4648 0.4163	0.4854 0.4219	0.4806 0.3783	0.4276	Ave		0.4396				8.2		30.0			
Vinyl bromide	1.2190 1.0498	1.1164 0.9598	1.1099 0.9741	1.0661 0.8945	1.1409	Ave		1.0589				9.6		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	+++++ 1.3221	1.3298 1.1980	1.3068 1.1754	1.3375 1.0110	1.4453	Ave		1.2657				10.5		30.0			
Acrolein	+++++ 0.1564	+++++ 0.1564	0.2411 0.1243	0.1533 0.1656	0.1508	Ave		0.1640				22.2		30.0			
Trichlorofluoromethane	4.0976 3.6041	3.8225 3.3210	3.6426 3.4112	3.6556 3.2570	3.9200	Ave		3.6368				7.7		30.0			
Acetonitrile	+++++ 0.3927	+++++ 0.3686	0.4603 0.3673	0.4960 0.3445	0.3843	Ave		0.4020				13.7		30.0			
Acetone	+++++ 0.4276	+++++ 0.3854	+++++ 0.3597	0.6479 0.3201	0.4238	Ave		0.4274				27.0		30.0			
Pentane	+++++ 0.2049	+++++ 0.1908	0.2085 0.1934	0.2059 0.1793	0.2314	Ave		0.2020				8.2		30.0			
Isopropyl alcohol	1.4098 1.3008	1.3158 1.1675	1.4551 1.1539	1.3749 1.0588	1.1732	Ave		1.2677				10.6		30.0			
Ethyl ether	1.3154 1.1717	1.1436 1.1277	1.3702 1.0627	1.1899 1.0209	1.1582	Ave		1.1734				9.4		30.0			
1,1-Dichloroethene	1.2857 1.0102	1.0381 0.9375	1.0194 0.9857	1.0065 0.9350	1.1059	Ave		1.0360				10.3		30.0			
Acrylonitrile	+++++ 0.5118	0.4904 0.5058	0.5108 0.4989	0.5107 0.4719	0.5060	Ave		0.5008				2.7		30.0			
tert-Butyl alcohol	+++++ 1.5862	+++++ 1.4800	1.6761 1.5118	1.5633 1.3704	1.4912	Ave		1.5256				6.3		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	2.4414 2.1749	2.2142 2.0564	2.1355 2.1477	2.1382 2.1010	2.3315	Ave		2.1934				5.5		30.0			
Methylene Chloride	+++++ 0.8715	+++++ 0.8113	1.4672 0.8126	1.0531 0.7603	0.9702	Ave		0.9637				25.3		30.0			
3-Chloropropene	+++++ 1.0547	0.9879 0.9694	1.1709 0.9580	0.9895 0.8404	1.0645	Ave		1.0044				9.6		30.0			
Carbon disulfide	3.0834 2.7502	2.8883 2.5890	2.7972 2.7076	2.6507 2.4966	2.8758	Ave		2.7599				6.4		30.0			
trans-1,2-Dichloroethene	1.1555 1.0341	1.1125 1.0017	1.0142 1.0794	1.0120 0.9936	1.0752	Ave		1.0531				5.3		30.0			
2-Methylpentane	2.1575 2.1113	2.1877 2.0070	2.0221 2.2077	2.0371 1.9323	2.1959	Ave		2.0954				4.7		30.0			
Methyl tert-butyl ether	2.8984 2.6881	2.6226 2.6579	2.8783 2.7985	2.8005 2.8262	2.5675	Ave		2.7487				4.3		30.0			
1,1-Dichloroethane	2.1797 1.9231	2.0450 1.8450	1.9405 1.9159	1.9135 1.8954	1.9760	Ave		1.9593				5.1		30.0			
Vinyl acetate	2.1760 2.1023	1.7777 2.1308	2.1065 2.1743	2.1399 2.3637	1.9326	Ave		2.1004				7.8		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	0.4773 0.4151	0.4409 0.4113	0.5050 0.4233	0.4973 0.4263	0.3898	Ave		0.4429				9.2		30.0			
Hexane	+++++ 0.7971	0.9073 0.7509	0.8517 0.7917	0.7865 0.7267	0.8271	Ave		0.8049				7.1		30.0			
Isopropyl ether	2.8649 2.7962	2.4694 2.7735	2.9472 2.9348	2.9874 2.9506	2.6842	Ave		2.8231				5.9		30.0			
cis-1,2-Dichloroethene	1.2654 1.0628	1.1590 1.0398	1.0839 1.1019	1.0579 1.0543	1.0952	Ave		1.1022				6.4		30.0			
Ethyl acetate	+++++ 1.7048	1.4608 1.7318	1.7602 1.8088	1.7781 1.8837	1.5752	Ave		1.7129				7.9		30.0			
Chloroform	3.0721 2.5787	2.7021 2.4795	2.6749 2.6043	2.6322 2.4369	2.6656	Ave		2.6496				6.9		30.0			
Tert-butyl ethyl ether	2.5945 2.6139	2.3959 2.6097	2.6843 2.7757	2.7006 2.7784	2.5017	Ave		2.6283				4.7		30.0			
Tetrahydrofuran	+++++ 0.9487	0.9556 0.9112	1.1108 0.9744	1.0388 0.9452	0.8547	Ave		0.9674				8.1		30.0			
1,1,1-Trichloroethane	3.2550 2.8890	2.9134 2.7739	2.8971 2.9100	2.8500 2.7901	2.9650	Ave		2.9159				4.8		30.0			
1,2-Dichloroethane	0.3807 0.3548	0.3428 0.3440	0.3554 0.3578	0.3455 0.3575	0.3545	Ave		0.3548				3.2		30.0			
Benzene	0.7029 0.6314	0.6407 0.6304	0.6219 0.6155	0.5993 0.5796	0.6168	Ave		0.6265				5.4		30.0			
Cyclohexane	+++++ 0.1114	0.1272 0.1111	0.1120 0.1072	0.1058 0.0968	0.1111	Ave		0.1103				7.7		30.0			
Carbon tetrachloride	0.5933 0.6165	0.5551 0.6034	0.5657 0.6220	0.4865 0.6226	0.5936	Ave		0.5843				7.5		30.0			
1-Butanol	0.0819 0.0746	0.0629 0.0753	0.0740 0.0820	0.0685 0.0761	0.0640	Ave		0.0732				9.4		30.0			
2,3-Dimethylpentane	0.1825 0.1517	0.1647 0.1469	0.1535 0.1556	0.1459 0.1410	0.1508	Ave		0.1547				8.0		30.0			
Thiophene	0.3794 0.3576	0.3609 0.3508	0.3606 0.3694	0.3445 0.3517	0.3585	Ave		0.3593				2.9		30.0			
Tert-amyl methyl ether	+++++ 0.5564	0.3783 0.5498	0.5207 0.5840	0.5537 0.5662	0.4922	Ave		0.5252				12.5		30.0			
2,2,4-Trimethylpentane	1.0869 0.9840	1.0077 0.9554	0.9925 1.0105	0.9615 0.9044	0.9842	Ave		0.9875				5.0		30.0			
Heptane	0.2616 0.2393	0.2501 0.2358	0.2460 0.2397	0.2323 0.2199	0.2390	Ave		0.2404				4.8		30.0			
1,2-Dichloropropane	0.2489 0.2339	0.2258 0.2281	0.2374 0.2388	0.2223 0.2147	0.2241	Ave		0.2304				4.5		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.3730 0.3630	0.3777 0.3562	0.3448 0.3580	0.3380 0.3483	0.3755	Ave		0.3594				3.9		30.0			
Dibromomethane	+++++ 0.2941	0.3032 0.2914	0.2994 0.2975	0.2784 0.2914	0.2958	Ave		0.2939				2.5		30.0			
Bromodichloromethane	0.4899 0.5399	0.4618 0.5409	0.4956 0.5585	0.4880 0.5377	0.5223	Ave		0.5150				6.3		30.0			
1,4-Dioxane	+++++ 0.0861	0.0800 0.0869	0.0832 0.0880	0.0851 0.0820	0.0786	Ave		0.0837				4.0		30.0			
Methyl methacrylate	0.2194 0.2298	0.2024 0.2357	0.2123 0.2551	0.2136 0.2591	0.1951	Ave		0.2247				9.9		30.0			
Methylcyclohexane	0.5765 0.5119	0.5274 0.5052	0.4975 0.5031	0.4894 0.4749	0.5057	Ave		0.5102				5.6		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.3758	+++++ 0.3711	0.3972 0.4086	0.3922 0.3864	0.3045	Ave		0.3765				9.1		30.0			
cis-1,3-Dichloropropene	0.4225 0.4126	0.3843 0.4046	0.3894 0.4247	0.3884 0.3977	0.4034	Ave		0.4030				3.6		30.0			
trans-1,3-Dichloropropene	0.3773 0.3973	0.3806 0.4036	0.3754 0.4280	0.3646 0.4205	0.3767	Ave		0.3916				5.6		30.0			
Toluene Range	+++++ 1.8053	+++++ 1.7951	+++++ 1.8537	1.7344 1.8102	1.7229	Ave		1.7869				2.8		30.0			
Toluene	0.7711 0.7126	0.7162 0.7433	0.7274 0.7628	0.6783 0.7504	0.6716	Ave		0.7260				4.8		30.0			
1,1,2-Trichloroethane	0.2346 0.2200	0.2167 0.2286	0.2159 0.2328	0.2117 0.2272	0.2052	Ave		0.2214				4.5		30.0			
2-Methylthiophene	0.6288 0.6354	0.6323 0.6581	0.6048 0.6746	0.6036 0.6550	0.6088	Ave		0.6335				4.0		30.0			
3-Methylthiophene	0.6220 0.6244	0.6149 0.6487	0.6149 0.6739	0.6011 0.6453	0.6011	Ave		0.6274				3.8		30.0			
2-Hexanone	+++++ 0.1824	+++++ 0.1874	0.1851 0.2087	0.1784 0.1989	0.1483	Ave		0.1842				10.3		30.0			
Octane	0.2808 0.2637	0.2753 0.2726	0.2627 0.2674	0.2561 0.2585	0.2623	Ave		0.2666				3.1		30.0			
C8 Range	+++++ 3.3336	+++++ 2.7089	+++++ 2.7845	3.8895 2.0971	4.0217	Ave		3.1392				23.7		30.0			
Dibromochloromethane	0.3658 0.5286	0.4016 0.5615	0.4242 0.5887	0.4305 0.6242	0.4870	Ave		0.4903				18.5		30.0			
1,2-Dibromoethane (EDB)	0.4195 0.4523	0.4210 0.4737	0.4087 0.4807	0.4123 0.4860	0.4290	Ave		0.4426				7.0		30.0			
Tetrachloroethene	0.3265 0.3133	0.3269 0.3179	0.3021 0.3344	0.2982 0.3561	0.3054	Ave		0.3201				5.7		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorobenzene	0.6378 0.6263	0.6543 0.6550	0.6088 0.6675	0.5969 0.6724	0.6134	Ave		0.6369				4.3		30.0			
2,3-Dimethylheptane	0.7298 0.6387	0.6528 0.6720	0.6471 0.6565	0.6346 0.5664	0.6399	Ave		0.6487				6.5		30.0			
Ethylbenzene	0.9354 0.9400	0.9245 0.9958	0.9270 1.0212	0.9360 1.0251	0.8787	Ave		0.9537				5.2		30.0			
2-Ethylthiophene	0.7774 0.7653	0.7278 0.8083	0.7405 0.8222	0.7507 0.8282	0.7197	Ave		0.7711				5.3		30.0			
m-Xylene & p-Xylene	0.7465 0.7403	0.6914 0.7782	0.7334 0.7900	0.7385 0.8170	0.6937	Ave		0.7477				5.6		30.0			
Bromoform	+++++ 0.4984	0.3242 0.5626	0.3549 0.6144	0.3533 0.6816	0.4308	Ave		0.4775				27.9		30.0			
Styrene	0.4838 0.5570	0.4547 0.5679	0.4739 0.5967	0.5026 0.6341	0.4994	Ave		0.5300				11.6		30.0			
Nonane	0.5411 0.4846	0.5367 0.4726	0.4787 0.4453	0.4749 0.3983	0.4842	Ave		0.4796				9.0		30.0			
o-Xylene	0.7933 0.7508	0.7152 0.7913	0.7611 0.8122	0.7535 0.8224	0.6981	Ave		0.7664				5.5		30.0			
1,1,2,2-Tetrachloroethane	0.4823 0.5023	0.4635 0.5417	0.4856 0.5522	0.4828 0.5559	0.4596	Ave		0.5029				7.5		30.0			
1,2,3-Trichloropropane	0.1701 0.1683	0.1670 0.1770	0.1662 0.1836	0.1686 0.1883	0.1568	Ave		0.1718				5.6		30.0			
Isopropylbenzene	1.2326 1.0738	1.0842 1.0968	1.1242 1.1363	1.0859 1.1921	1.0079	Ave		1.1149				6.0		30.0			
Propylbenzene	0.2758 0.2957	0.2723 0.3225	0.2890 0.3215	0.2831 0.3466	0.2661	Ave		0.2970				9.2		30.0			
2-Chlorotoluene	0.2773 0.2839	0.2761 0.3061	0.2812 0.3013	0.2687 0.3196	0.2674	Ave		0.2868				6.3		30.0			
4-Ethyltoluene	1.0167 1.0329	0.9877 1.1175	1.0185 1.1423	1.0205 1.1986	0.9369	Ave		1.0524				7.9		30.0			
1,3,5-Trimethylbenzene	0.4375 0.4881	0.4637 0.5310	0.4701 0.5417	0.4713 0.5872	0.4372	Ave		0.4920				10.4		30.0			
Alpha Methyl Styrene	0.3568 0.4189	0.3295 0.4693	0.3595 0.4944	0.3667 0.5331	0.3682	Ave		0.4107				17.5		30.0			
Decane	0.6012 0.5948	0.6176 0.6146	0.5894 0.5680	0.5667 0.5153	0.5867	Ave		0.5838				5.3		30.0			
tert-Butylbenzene	0.9434 1.0008	0.9204 1.0324	0.9462 1.1038	0.9528 1.2001	0.8852	Ave		0.9984				10.0		30.0			
1,2,4-Trimethylbenzene	0.8573 0.9161	0.8501 0.9444	0.8848 0.9960	0.8783 1.0739	0.8172	Ave		0.9131				8.8		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,3-Dichlorobenzene	0.6600 0.7459	0.7453 0.7649	0.6648 0.8573	0.6577 0.9387	0.6849	Ave		0.7466				13.0		30.0			
sec-Butylbenzene	1.1859 1.3433	1.2224 1.3600	1.2505 1.4707	1.2539 1.5387	1.1711	Ave		1.3107				9.8		30.0			
Benzyl chloride	0.7098 0.8659	0.7639 0.9136	0.7754 0.8903	0.7932 1.0007	0.7575	Ave		0.8300				11.2		30.0			
1,4-Dichlorobenzene	0.6888 0.7315	0.7564 0.7485	0.6795 0.8122	0.6592 0.9042	0.6702	Ave		0.7389				10.7		30.0			
4-Isopropyltoluene	1.0407 1.1378	1.0633 1.2007	1.0789 1.2610	1.0886 1.3435	1.0082	Ave		1.1358				9.8		30.0			
1,2,3-Trimethylbenzene	0.6316 0.6658	0.6389 0.7216	0.6747 0.7456	0.6650 0.7612	0.6064	Ave		0.6790				7.8		30.0			
Butylcyclohexane	0.8000 0.7925	0.8740 0.7953	0.7546 0.7850	0.7551 0.7630	0.7958	Ave		0.7906				4.6		30.0			
1,2-Dichlorobenzene	0.6228 0.6928	0.6806 0.7058	0.6392 0.7936	0.6184 0.8738	0.6254	Ave		0.6947				12.6		30.0			
Indane	0.7592 0.8705	0.7952 0.8888	0.8007 0.9739	0.7944 1.0584	0.7642	Ave		0.8561				12.0		30.0			
Indene	0.5669 0.6213	0.5859 0.6863	0.5640 0.7065	0.5682 0.7753	0.5551	Ave		0.6255				12.6		30.0			
Butylbenzene	1.0095 1.0552	1.0462 1.1041	1.0120 1.1114	1.0319 1.1392	0.9573	Ave		1.0519				5.5		30.0			
Undecane	0.6494 0.6237	0.6794 0.6564	0.6228 0.6227	0.6097 0.5466	0.6316	Ave		0.6269				5.9		30.0			
1,2-Dimethyl-4-Ethylbenzene	0.7435 0.8392	0.8211 0.9129	0.7564 0.9162	0.7739 0.9719	0.7552	Ave		0.8323				10.1		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.2858	0.2343 0.3191	0.2314 0.3271	0.2096 0.3606	0.2400	Ave		0.2760				19.9		30.0			
1,2,4,5-Tetramethylbenzene	0.8881 1.0306	1.0116 1.1035	0.9247 1.1545	0.8913 1.2049	0.9061	Ave		1.0128				11.8		30.0			
1,2,3,5-Tetramethylbenzene	0.5575 0.6091	0.6324 0.6464	0.5681 0.6727	0.5450 0.6855	0.5273	Ave		0.6049				9.6		30.0			
1,2,3,4-Tetramethylbenzene	0.7687 0.8435	0.9229 0.9067	0.7703 0.9302	0.7228 0.9148	0.7149	Ave		0.8328				10.7		30.0			
Dodecane	0.6486 0.5643	0.6823 0.5802	0.6341 0.5823	0.5328 0.3868	0.5873	Ave		0.5776				14.7		30.0			
1,2,4-Trichlorobenzene	0.5078 0.6098	0.7842 0.6410	0.5267 0.7310	0.4730 0.6435	0.5274	Ave		0.6049				17.5		30.0			
Naphthalene	1.0739 1.2747	1.8066 1.3578	1.1594 1.3739	0.9994 1.2327	1.0730	Ave		1.2613				19.2		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	+++++ 0.7413	+++++ 0.7885	0.6615 0.8003	0.5858 0.6798	0.6396	Ave		0.6995				11.4		30.0			
Hexachlorobutadiene	0.5816 0.5568	0.6333 0.5954	0.5542 0.7024	0.5089 0.5999	0.5805	Ave		0.5903				9.2		30.0			
1,2,3-Trichlorobenzene	+++++ 0.5976	+++++ 0.5787	0.5581 0.6573	0.4833 0.4310	0.5390	Ave		0.5493				13.6		30.0			
2-Methylnaphthalene	+++++ 0.2993	+++++ 0.2684	0.2482 0.2821	0.1885 +++++	0.2565	Ave		0.2572				14.9		50.0			
1-Methylnaphthalene	+++++ 0.2469	+++++ 0.2085	0.1965 0.2096	0.1589 +++++	0.2225	Ave		0.2071				14.1		50.0			
4-Bromofluorobenzene (Surr)	0.7462 0.7318	0.7456 0.7488	0.7448 0.7235	0.7532 0.7564	0.7523	Ave		0.7447				1.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-9079/3	GC02IC01.D
Level 2	IC 140-9079/20	GC02IC02R.D
Level 3	IC 140-9079/5	GC02IC03.D
Level 4	IC 140-9079/6	GC02IC04.D
Level 5	IC 140-9079/7	GC02IC05.D
Level 6	ICIS 140-9079/8	GC02IC06.D
Level 7	IC 140-9079/9	GC02IC07.D
Level 8	IC 140-9079/10	GC02IC08.D
Level 9	IC 140-9079/11	GC02IC09.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 73615	4117 149012	6808 306956	14940 593423	36701	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Propene	CBM	Ave	+++++ 181398	8474 363824	16251 745153	36163 1481915	90943	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Dichlorodifluoromethane	CBM	Ave	14956 698780	30346 1443467	53178 2986792	135386 5705597	353716	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Chloromethane	CBM	Ave	+++++ 57078	+++++ 118748	5382 225417	10642 404153	29383	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	9146 436894	19214 859118	32441 1743498	80988 3524679	219262	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Acetaldehyde	CBM	Ave	+++++ 412654	+++++ 818363	+++++ 1401677	134527 2490767	208740	+++++ 9.99	+++++ 20.0	+++++ 40.0	2.00 80.0	4.99
Vinyl chloride	CBM	Ave	4472 225546	9681 463110	16924 878033	42048 1567179	112960	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,3-Butadiene	CBM	Ave	3513 163453	6941 334116	11714 634250	29149 1122777	81559	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Butane	CBM	Ave	7076 336204	15104 696236	25743 1317188	63224 2265735	170131	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Bromomethane	CBM	Ave	4934 223993	9906 458263	16675 868899	42057 1656810	112705	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Chloroethane	CBM	Ave	2593 117430	5028 242874	8789 464117	22651 869966	60191	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Ethanol	CBM	Ave	+++++ 438460	19813 900932	36579 1777636	89923 3392647	203965	+++++ 9.99	0.397 20.0	0.793 40.0	2.00 80.0	4.99
Vinyl bromide	CBM	Ave	4625 208124	9517 415451	16729 820833	39895 1604482	108833	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
2-Methylbutane	CBM	Ave	+++++ 262104	11336 518587	19697 990458	50052 1813405	137869	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Acrolein	CBM	Ave	+++++ 31009	+++++ 67683	3634 104747	5738 297063	14386	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
Trichlorofluoromethane	CBM	Ave	15547 714498	32586 1437541	54904 2874535	136800 5842137	373948	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Acetonitrile	CBM	Ave	+++++ 77854	+++++ 159557	6938 309526	18563 617927	36659	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
Acetone	CBM	Ave	+++++ 254325	+++++ 500469	+++++ 909490	72746 1722579	121293	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.00
Pentane	CBM	Ave	+++++ 40620	+++++ 82609	3142 162991	7706 321694	22070	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
Isopropyl alcohol	CBM	Ave	16048 773681	33653 1516171	65802 2917385	154370 5697995	335763	0.118 5.99	0.238 12.0	0.476 24.0	1.20 48.0	3.00
Ethyl ether	CBM	Ave	4991 232288	9749 488155	20652 895503	44528 1831153	110481	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,1-Dichloroethene	CBM	Ave	4878 200269	8850 405837	15365 830595	37664 1677086	105498	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Acrylonitrile	CBM	Ave	+++++ 101460	4181 218964	7699 420450	19112 846465	48269	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
tert-Butyl alcohol	CBM	Ave	+++++ 314466	+++++ 640651	25264 1273967	58501 2458156	142251	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	9263 431163	18876 890153	32187 1809809	80017 3768634	222408	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Methylene Chloride	CBM	Ave	+++++ 172766	+++++ 351168	22114 684793	39408 1363735	92548	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
3-Chloropropene	CBM	Ave	+++++ 209098	8422 419643	17649 807303	37029 1507366	101547	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Carbon disulfide	CBM	Ave	11699 545212	24622 1120712	42161 2281669	99197 4478149	274333	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
trans-1,2-Dichloroethene	CBM	Ave	4384 205008	9484 433627	15286 909558	37871 1782185	102572	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
2-Methylpentane	CBM	Ave	8186 418548	18650 868758	30478 1860362	76233 3465926	209472	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Methyl tert-butyl ether	CBM	Ave	10997 532900	22357 1150545	43383 2358248	104801 5069342	244925	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,1-Dichloroethane	CBM	Ave	8270 381249	17433 798627	29248 1614530	71609 3399866	188496	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Vinyl acetate	CBM	Ave	8256 416770	15155 922344	31751 1832225	80081 4239860	184358	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
2-Butanone (MEK)	CBM	Ave	1811 82283	3759 178044	7612 356743	18610 764742	37188	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Hexane	CBM	Ave	+++++ 158031	7735 325047	12837 667134	29431 1303527	78896	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isopropyl ether	CBM	Ave	10870 554336	21051 1200569	44422 2473083	111795 5292599	256058	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
cis-1,2-Dichloroethene	CBM	Ave	4801 210694	9880 450081	16338 928515	39588 1891071	104471	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Ethyl acetate	CBM	Ave	+++++ 337970	12453 749629	26531 1524276	66540 3378757	150266	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Chloroform	CBM	Ave	11656 511221	23035 1073295	40318 2194591	98505 4371168	254283	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Tert-butyl ethyl ether	CBM	Ave	9844 518203	20425 1129672	40459 2339030	101064 4983675	238643	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Tetrahydrofuran	CBM	Ave	+++++ 188075	8146 394414	16742 821113	38873 1695370	81529	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,1,1-Trichloroethane	CBM	Ave	12350 572725	24836 1200734	43667 2452233	106654 5004599	282846	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dichloroethane	DFBZ	Ave	7484 353536	14813 743733	27616 1507864	67542 3179877	175618	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Benzene	DFBZ	Ave	13817 629128	27690 1362801	48318 2593773	117159 5155161	305578	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Cyclohexane	DFBZ	Ave	+++++ 110969	5499 240083	8701 451811	20685 860520	55034	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Carbon tetrachloride	DFBZ	Ave	11663 614207	23989 1304352	43951 2621123	95114 5537304	294089	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1-Butanol	DFBZ	Ave	1610 74293	2718 162687	5747 345495	13386 676762	31686	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
2,3-Dimethylpentane	DFBZ	Ave	3587 151135	7119 317495	11928 655602	28526 1254475	74710	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Thiophene	DFBZ	Ave	7458 356253	15596 758324	28016 1556761	67355 3127741	177621	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Tert-amyl methyl ether	DFBZ	Ave	+++++ 554414	16350 1188591	40454 2461073	108255 5035512	243858	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
2,2,4-Trimethylpentane	DFBZ	Ave	21366 980383	43551 2065349	77114 4258623	187987 8044250	487596	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Heptane	DFBZ	Ave	5142 238440	10809 509798	19116 1009968	45416 1955729	118391	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dichloropropane	DFBZ	Ave	4893 233060	9757 493172	18448 1006262	43467 1909170	110995	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Trichloroethene	DFBZ	Ave	7333 361708	16324 770017	26791 1508689	66089 3097983	186014	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Dibromomethane	DFBZ	Ave	+++++ 293074	13104 630013	23258 1253711	54422 2591765	146524	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Bromodichloromethane	DFBZ	Ave	9630 537969	19956 1169408	38506 2353711	95415 4782156	258735	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DFBZ	Ave	+++++ 85834	3457 187768	6467 370975	16645 729179	38926	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Methyl methacrylate	DFBZ	Ave	4314 228935	8746 509515	16492 1074957	41751 2304384	96652	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Methylcyclohexane	DFBZ	Ave	11334 510072	22792 1092146	38650 2120127	95681 4223787	250534	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	+++++ 374418	+++++ 802345	30859 1721840	76682 3436700	150862	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
cis-1,3-Dichloropropene	DFBZ	Ave	8305 411086	16607 874614	30253 1789747	75926 3537072	199844	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
trans-1,3-Dichloropropene	CBZd 5	Ave	7511 406181	16151 860494	29964 1762176	71985 3639858	190582	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Toluene Range	DFBZ	Ave	+++++ 1798669	+++++ 3880684	+++++ 7812063	339092 16100078	853542	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	0.999
Toluene	CBZd 5	Ave	15348 728639	30391 1584870	58057 3140955	133914 6495080	339763	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,1,2-Trichloroethane	CBZd 5	Ave	4669 224974	9194 487400	17236 958533	41787 1966781	103808	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
2-Methylthiophene	CBZd 5	Ave	12517 649696	26831 1403012	48275 2777537	119176 5668799	307996	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
3-Methylthiophene	CBZd 5	Ave	12381 638468	26092 1383056	49080 2774725	118682 5585386	304111	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
2-Hexanone	CBZd 5	Ave	+++++ 186539	+++++ 399503	14771 859377	35230 1721121	75024	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
Octane	CBZd 5	Ave	5590 269612	11680 581291	20968 1101196	50555 2237695	132681	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
C8 Range	DFBZ	Ave	+++++ 3321390	+++++ 5856098	+++++ 11734517	760418 18652465	1992357	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	0.999
Dibromochloromethane	CBZd 5	Ave	7282 540498	17043 1197096	33862 2424106	84996 5402658	246365	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dibromoethane (EDB)	CBZd 5	Ave	8350 462418	17865 1009922	32620 1979331	81398 4206014	217002	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Tetrachloroethene	CBZd 5	Ave	6499 320386	13873 677805	24115 1376890	58871 3082194	154481	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Chlorobenzene	CBZd 5	Ave	12695 640391	27763 1396401	48589 2748594	117838 5819873	310288	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
2,3-Dimethylheptane	CBZd 5	Ave	14526 653073	27702 1432853	51653 2703240	125279 4902679	323718	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Ethylbenzene	CBZd 5	Ave	18619 961131	39230 2123060	73987 4204604	184802 8872329	444543	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
2-Ethylthiophene	CBZd 5	Ave	15473 782539	30884 1723412	59106 3385428	148208 7168291	364072	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m-Xylene & p-Xylene	CBZd 5	Ave	29718 1513863	58678 3318439	117078 6505497	291621 14143266	701860	0.0784 3.99	0.159 8.00	0.317 16.0	0.800 32.0	2.00
Bromoform	CBZd 5	Ave	+++++ 509620	13758 1199597	28324 2529774	69748 5899101	217947	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Styrene	CBZd 5	Ave	9629 569507	19295 1210797	37823 2456959	99226 5488449	252653	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Nonane	CBZd 5	Ave	10771 495537	22773 1007618	38208 1833592	93758 3447492	244961	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
o-Xylene	CBZd 5	Ave	15791 767665	30347 1687122	60752 3344040	148753 7117819	353133	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	9601 513576	19669 1155005	38761 2273528	95320 4811457	232481	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2,3-Trichloropropane	CBZd 5	Ave	3385 172113	7086 377370	13265 755995	33294 1629852	79343	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Isopropylbenzene	CBZd 5	Ave	24534 1097926	46007 2338552	89734 4678588	214385 10317786	509862	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Propylbenzene	CBZd 5	Ave	5490 302377	11555 687647	23064 1323708	55901 2999820	134620	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
2-Chlorotoluene	CBZd 5	Ave	5519 290310	11716 652552	22442 1240764	53040 2766057	135297	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
4-Ethyltoluene	CBZd 5	Ave	20237 1056133	41911 2382649	81294 4703566	201470 10374169	473972	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,3,5-Trimethylbenzene	CBZd 5	Ave	8708 499066	19678 1132222	37525 2230504	93050 5082507	221193	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Alpha Methyl Styrene	CBZd 5	Ave	7102 428360	13981 1000574	28693 2035483	72396 4614322	186268	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Decane	CBZd 5	Ave	11966 608205	26206 1310271	47043 2338575	111892 4459815	296801	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
tert-Butylbenzene	CBZd 5	Ave	18779 1023334	39057 2201186	75521 4544874	188113 10386644	447831	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2,4-Trimethylbenzene	CBZd 5	Ave	17065 936657	36071 2013472	70625 4100916	173408 9294406	413399	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,3-Dichlorobenzene	CBZd 5	Ave	13137 762687	31625 1630912	53064 3530077	129852 8124131	346492	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
sec-Butylbenzene	CBZd 5	Ave	23605 1373491	51871 2899550	99807 6055449	247548 13317673	592460	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Benzyl chloride	CBZd 5	Ave	14129 885361	32413 1947940	61888 3665923	156606 8661607	383181	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,4-Dichlorobenzene	CBZd 5	Ave	13711 747931	32098 1595871	54236 3344089	130139 7825807	339022	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
4-Isopropyltoluene	CBZd 5	Ave	20714 1163365	45117 2559983	86111 5192056	214918 11628572	510030	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZd 5	Ave	12572 680764	27110 1538574	53855 3069806	131293 6588120	306762	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Butylcyclohexane	CBZd 5	Ave	15924 810366	37084 1695670	60233 3232242	149071 6603806	402561	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dichlorobenzene	CBZd 5	Ave	12396 708335	28881 1504756	51022 3267696	122080 7562744	316358	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Indane	CBZd 5	Ave	15111 890055	33742 1895000	63910 4009906	156836 9160313	386578	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Indene	CBZd 5	Ave	11285 635278	24860 1463201	45014 2908946	112170 6710686	280824	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Butylbenzene	CBZd 5	Ave	20094 1078971	44394 2354005	80776 4576198	203720 9859788	484303	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Undecane	CBZd 5	Ave	12926 637737	28830 1399535	49706 2564058	120374 4731040	319511	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	Ave	14800 858063	34842 1946396	60370 3772393	152789 8411661	382029	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	+++++ 292233	9943 680296	18473 1346687	41383 3121002	121417	+++++ 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	17677 1053727	42923 2352685	73810 4753691	175959 10428510	458404	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	11096 622820	26835 1378186	45344 2770005	107601 5932758	266757	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	15300 862421	39160 1933165	61486 3830160	142698 7918123	361637	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Dodecane	CBZd 5	Ave	12911 576970	28951 1237066	50609 2397668	105194 3347426	297125	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2,4-Trichlorobenzene	CBZd 5	Ave	10108 623511	33274 1366584	42037 3009702	93377 5569204	266823	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Naphthalene	CBZd 5	Ave	21376 1303379	76660 2895014	92541 5657107	197303 10668835	542795	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
Benzo(b)thiophene	CBZd 5	Ave	+++++ 758002	+++++ 1681098	52800 3295063	115646 5884116	323541	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
Hexachlorobutadiene	CBZd 5	Ave	11577 569346	26871 1269541	44234 2891958	100465 5192024	293683	0.0392 2.00	0.0793 4.00	0.159 8.00	0.400 16.0	0.999
1,2,3-Trichlorobenzene	CBZd 5	Ave	+++++ 611029	+++++ 1233859	44545 2706266	95414 3730627	272663	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	0.999
2-Methylnaphthalene	CBZd 5	Ave	+++++ 956277	+++++ 1788441	61911 3629803	116309 +++++	405427	+++++ 6.24	+++++ 12.5	0.496 25.0	1.25 +++++	3.12
1-Methylnaphthalene	CBZd 5	Ave	+++++ 788833	+++++ 1389272	48997 2696789	98052 +++++	351664	+++++ 6.24	+++++ 12.5	0.496 25.0	1.25 +++++	3.12
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1515557 1498532	1595251 1596553	1498709 1489493	1486983 1636640	1524315	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1 Analy Batch No.: 9079

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/02/2017 13:34 Calibration End Date: 03/02/2017 20:31 Calibration ID: 934

Curve Type Legend:
Ave = Average ISTD

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC01.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 02-Mar-2017 13:34:30 ALS Bottle#: 1 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004202-003
Misc. Info.: 073145
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Mar-2017 15:07:56 Calib Date: 02-Mar-2017 20:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa Date: 02-Mar-2017 14:23:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.012	8.012	0.000	84	387158	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.174	10.179	-0.005	95	2005953	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.044	15.046	-0.002	87	2031101	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.715	16.717	-0.002	93	1515557	4.00	4.01	
6 Chlorodifluoromethane	67	3.472	3.463	0.009	96	1783	0.0392	0.0471	
7 Propene	41	3.477	3.471	0.006	89	5219	0.0392	0.0578	
8 Dichlorodifluoromethane	85	3.520	3.514	0.006	99	14956	0.0392	0.0435	
9 Chloromethane	52	3.666	3.665	0.001	66	1681	0.0392	0.0606	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.682	3.675	0.007	91	9146	0.0392	0.0436	
11 Acetaldehyde	44	3.795	3.793	0.002	88	50592	0.1960	1.22	
12 Vinyl chloride	62	3.812	3.809	0.003	31	4472	0.0392	0.0421	
13 Butadiene	54	3.887	3.883	0.004	70	3513	0.0392	0.0458	
14 Butane	43	3.887	3.885	0.002	85	7076	0.0392	0.0440	
15 Bromomethane	94	4.157	4.149	0.008	95	4934	0.0392	0.0458	
16 Chloroethane	64	4.270	4.267	0.003	96	2593	0.0392	0.0456	
17 Ethanol	31	4.388	4.372	0.016	97	11095	0.1960	0.2607	
18 Vinyl bromide	106	4.529	4.522	0.007	96	4625	0.0392	0.0451	
19 2-Methylbutane	43	4.572	4.569	0.003	88	6280	0.0392	0.0513	
21 Trichlorofluoromethane	101	4.755	4.753	0.002	99	15547	0.0392	0.0442	
22 Acetonitrile	40	4.825	4.808	0.017	52	2214	0.0392	0.0569	
23 Acetone	58	4.868	4.849	0.019	99	9828	0.1176	0.2376	
24 Pentane	72	4.955	4.949	0.006	96	751	0.0392	0.0384	
25 Isopropyl alcohol	45	4.982	4.963	0.019	95	16048	0.1176	0.1308	
26 Ethyl ether	31	5.111	5.090	0.021	86	4991	0.0392	0.0439	
27 1,1-Dichloroethene	96	5.375	5.367	0.008	97	4878	0.0392	0.0486	
28 Acrylonitrile	53	5.456	5.450	0.006	90	1975	0.0392	0.0407	
29 2-Methyl-2-propanol	59	5.532	5.494	0.038	59	5577	0.0392	0.0378	
30 1,1,2-Trichloro-1,2,2-trif	101	5.548	5.536	0.012	94	9263	0.0392	0.0436	
31 Methylene Chloride	84	5.672	5.669	0.003	93	11118	0.0392	0.1192	
32 3-Chloro-1-propene	39	5.688	5.684	0.004	95	8084	0.0392	0.0832	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.817	5.810	0.007	98	11699	0.0392	0.0438	
34 trans-1,2-Dichloroethene	96	6.405	6.406	-0.001	96	4384	0.0392	0.0430	
35 2-Methylpentane	43	6.443	6.439	0.004	93	8186	0.0392	0.0404	
36 Methyl tert-butyl ether	73	6.572	6.533	0.039	95	10997	0.0392	0.0413	
37 1,1-Dichloroethane	63	6.783	6.787	-0.004	98	8270	0.0392	0.0436	
38 Vinyl acetate	43	6.907	6.898	0.009	99	8256	0.0392	0.0406	
39 2-Butanone (MEK)	72	7.333	7.305	0.028	89	1811	0.0392	0.0422	
40 Hexane	56	7.349	7.350	-0.001	92	4408	0.0392	0.0566	
41 Isopropyl ether	45	7.527	7.502	0.025	94	10870	0.0392	0.0398	
42 cis-1,2-Dichloroethene	96	7.705	7.707	-0.002	94	4801	0.0392	0.0450	
43 Ethyl acetate	43	7.926	7.901	0.025	97	6611	0.0392	0.0399	
44 Chloroform	83	8.034	8.035	-0.001	88	11656	0.0392	0.0455	
45 Tert-butyl ethyl ether	59	8.169	8.144	0.025	96	9844	0.0392	0.0387	
46 Tetrahydrofuran	42	8.449	8.410	0.039	83	5698	0.0392	0.0609	
47 1,1,1-Trichloroethane	97	9.015	9.013	0.002	96	12350	0.0392	0.0438	
48 1,2-Dichloroethane	62	9.107	9.106	0.001	98	7484	0.0392	0.0421	
49 Benzene	78	9.598	9.599	-0.001	96	13817	0.0392	0.0440	
50 Cyclohexane	69	9.603	9.604	-0.001	80	2831	0.0392	0.0512	
52 Carbon tetrachloride	117	9.624	9.629	-0.005	97	11663	0.0392	0.0398	
51 n-Butanol	31	9.705	9.647	0.058	68	1610	0.0392	0.0438	
53 2,3-Dimethylpentane	71	9.754	9.754	0.000	89	3587	0.0392	0.0462	
54 Thiophene	84	9.873	9.873	0.000	96	7458	0.0392	0.0414	
56 Isooctane	57	10.433	10.430	0.003	97	21366	0.0392	0.0431	
57 n-Heptane	71	10.827	10.831	-0.004	91	5142	0.0392	0.0427	
58 1,2-Dichloropropane	63	10.859	10.862	-0.003	83	4893	0.0392	0.0423	
59 Trichloroethene	130	10.908	10.913	-0.005	96	7333	0.0392	0.0407	
60 Dibromomethane	93	10.978	10.978	0.000	92	7071	0.0392	0.0480	
61 Dichlorobromomethane	83	11.140	11.143	-0.003	97	9630	0.0392	0.0373	
62 1,4-Dioxane	88	11.204	11.173	0.031	84	1238	0.0392	0.0295	
63 Methyl methacrylate	41	11.285	11.278	0.007	90	4314	0.0392	0.0383	
64 Methylcyclohexane	83	11.722	11.718	0.004	94	11334	0.0392	0.0443	
65 4-Methyl-2-pentanone (MIBK	43	12.175	12.153	0.022	95	6654	0.0392	0.0352	
66 cis-1,3-Dichloropropene	75	12.191	12.190	0.001	97	8305	0.0392	0.0411	
67 trans-1,3-Dichloropropene	75	12.908	12.911	-0.003	97	7511	0.0392	0.0378	
68 Toluene	91	13.032	13.035	-0.003	92	15348	0.0392	0.0416	
69 1,1,2-Trichloroethane	83	13.103	13.106	-0.003	96	4669	0.0392	0.0415	
70 2-Methylthiophene	97	13.183	13.186	-0.003	96	12517	0.0392	0.0389	
71 3-Methylthiophene	97	13.388	13.394	-0.006	97	12381	0.0392	0.0389	
72 2-Hexanone	58	13.556	13.535	0.021	94	3114	0.0392	0.0333	
73 n-Octane	85	13.793	13.792	0.001	92	5590	0.0392	0.0413	
74 Chlorodibromomethane	129	13.814	13.816	-0.002	95	7282	0.0392	0.0293	
75 Ethylene Dibromide	107	14.100	14.106	-0.006	99	8350	0.0392	0.0372	
76 Tetrachloroethene	129	14.208	14.207	0.001	93	6499	0.0392	0.0400	
77 Chlorobenzene	112	15.092	15.095	-0.003	92	12695	0.0392	0.0393	
78 2,3-Dimethylheptane	43	15.162	15.165	-0.003	92	14526	0.0392	0.0441	
79 Ethylbenzene	91	15.400	15.402	-0.002	98	18619	0.0392	0.0384	
80 2-Ethylthiophene	97	15.502	15.502	0.000	98	15473	0.0392	0.0395	
81 m-Xylene & p-Xylene	91	15.572	15.572	0.000	99	29718	0.0784	0.0783	
82 Bromoform	173	15.993	15.991	0.002	91	2701	0.0392	0.0111	
84 Styrene	104	16.036	16.037	-0.001	97	9629	0.0392	0.0358	
83 n-Nonane	57	16.036	16.038	-0.002	87	10771	0.0392	0.0442	
85 o-Xylene	91	16.095	16.099	-0.004	99	15791	0.0392	0.0406	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 1,1,2,2-Tetrachloroethane	83	16.419	16.422	-0.003	97	9601	0.0392	0.0376	
87 1,2,3-Trichloropropane	110	16.575	16.577	-0.002	96	3385	0.0392	0.0388	
88 Isopropylbenzene	105	16.705	16.703	0.002	93	24534	0.0392	0.0433	
89 N-Propylbenzene	120	17.255	17.257	-0.002	98	5490	0.0392	0.0364	
90 2-Chlorotoluene	126	17.292	17.288	0.004	97	5519	0.0392	0.0379	
91 4-Ethyltoluene	105	17.416	17.418	-0.002	98	20237	0.0392	0.0379	
92 1,3,5-Trimethylbenzene	120	17.497	17.502	-0.005	91	8708	0.0392	0.0349	
93 Alpha Methyl Styrene	118	17.740	17.744	-0.004	87	7102	0.0392	0.0341	
94 n-Decane	57	17.842	17.846	-0.004	93	11966	0.0392	0.0404	
95 tert-Butylbenzene	119	17.945	17.949	-0.004	92	18779	0.0392	0.0370	
96 1,2,4-Trimethylbenzene	105	17.961	17.963	-0.002	96	17065	0.0392	0.0368	
97 1,3-Dichlorobenzene	146	18.231	18.232	-0.001	73	13137	0.0392	0.0347	
98 sec-Butylbenzene	105	18.231	18.235	-0.004	97	23605	0.0392	0.0355	
99 Benzyl chloride	91	18.312	18.311	0.001	98	14129	0.0392	0.0335	
100 1,4-Dichlorobenzene	146	18.322	18.324	-0.002	93	13711	0.0392	0.0365	
101 4-Isopropyltoluene	119	18.409	18.410	-0.001	97	20714	0.0392	0.0359	
102 1,2,3-Trimethylbenzene	105	18.452	18.454	-0.002	97	12572	0.0392	0.0365	
103 Butylcyclohexane	83	18.527	18.527	0.000	95	15924	0.0392	0.0397	
104 1,2-Dichlorobenzene	146	18.694	18.698	-0.004	91	12396	0.0392	0.0351	
105 2,3-Dihydroindene	117	18.700	18.702	-0.002	93	15111	0.0392	0.0348	
106 Indene	116	18.829	18.833	-0.004	92	11285	0.0392	0.0355	
107 n-Butylbenzene	91	18.862	18.862	0.000	97	20094	0.0392	0.0376	
108 Undecane	57	19.218	19.217	0.001	94	12926	0.0392	0.0406	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.244	19.247	-0.003	96	14800	0.0392	0.0350	
110 1,2-Dibromo-3-Chloropropan	157	19.315	19.317	-0.002	83	1891	0.0392	0.0135	
111 1,2,4,5-Tetramethylbenzene	119	19.644	19.642	0.002	95	17677	0.0392	0.0344	
112 1,2,3,5-Tetramethylbenzene	119	19.697	19.696	0.001	93	11096	0.0392	0.0361	
113 1,2,3,4-Tetramethylbenzene	119	20.091	20.092	-0.001	96	15300	0.0392	0.0362	
114 Dodecane	57	20.285	20.286	-0.001	93	12911	0.0392	0.0440	
115 1,2,4-Trichlorobenzene	180	20.425	20.427	-0.002	93	10108	0.0392	0.0329	
116 Naphthalene	128	20.555	20.555	0.000	99	21376	0.0392	0.0334	
117 Benzo(b)thiophene	134	20.652	20.653	-0.001	98	12572	0.0392	0.0354	
118 Hexachlorobutadiene	225	20.781	20.783	-0.002	92	11577	0.0392	0.0386	
119 1,2,3-Trichlorobenzene	180	20.830	20.831	-0.001	95	10864	0.0392	0.0390	
120 2-Methylnaphthalene	142	21.628	21.628	0.000	99	13785	0.1225	0.1056	
121 1-Methylnaphthalene	142	21.806	21.808	-0.002	98	13113	0.1225	0.1247	
A 124 Toluene Range	1	13.027	(12.992-13.062)		0	34105	0.0392	0.0381	
A 125 C8 Range	1	13.798	(13.783-13.813)		0	75709	0.0392	0.0481	
S 126 Xylenes, Total	100				0		0.1176	0.1189	
S 127 1,2-Dichloroethene, Total	1				0		0.0784	0.0880	

Reagents:

40L12DNP_00009	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

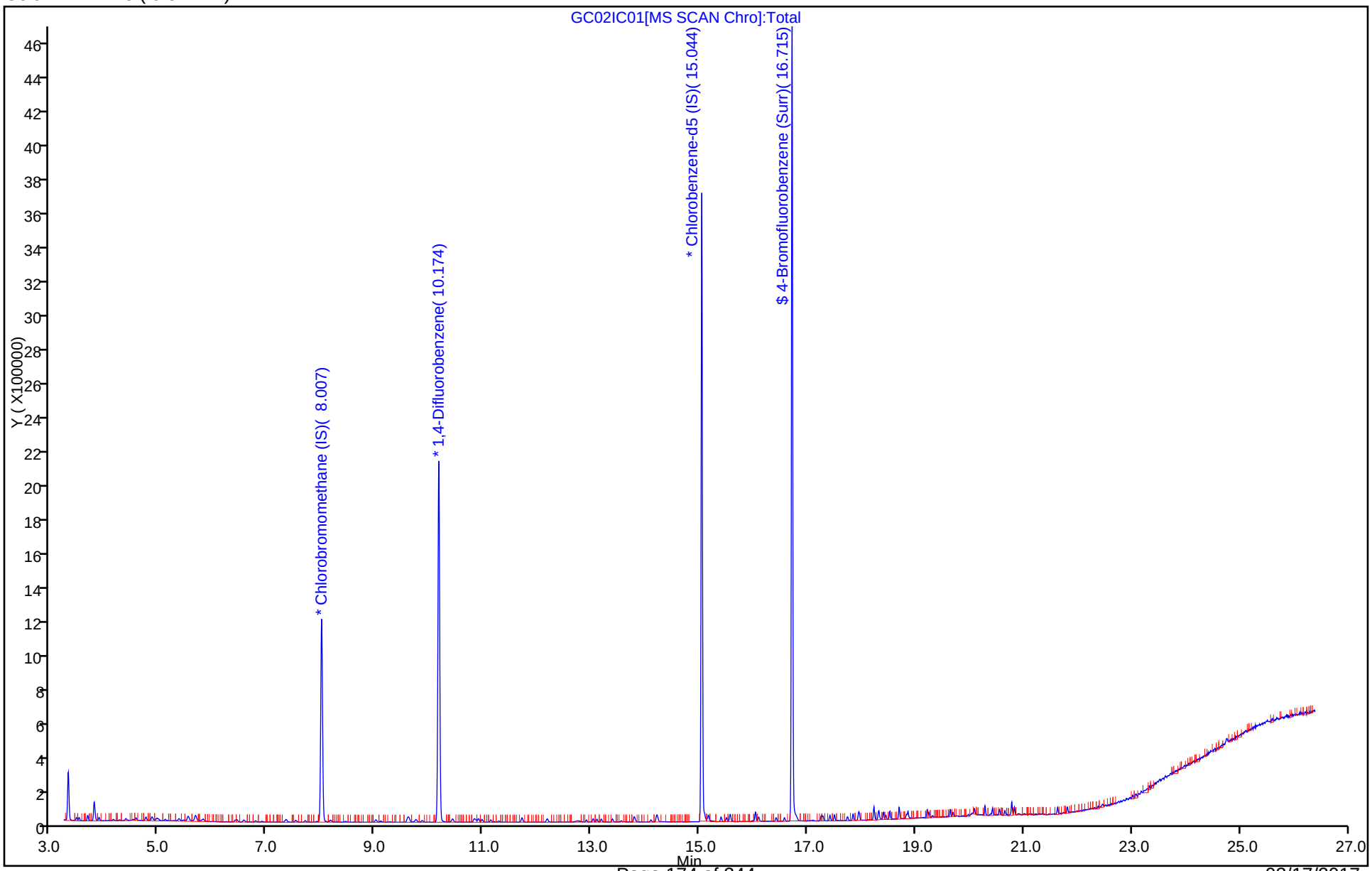
Report Date: 03-Mar-2017 15:07:57 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC01.D

Injection Date:	02-Mar-2017 13:34:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	IC L1			Worklist Smp#:	3
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

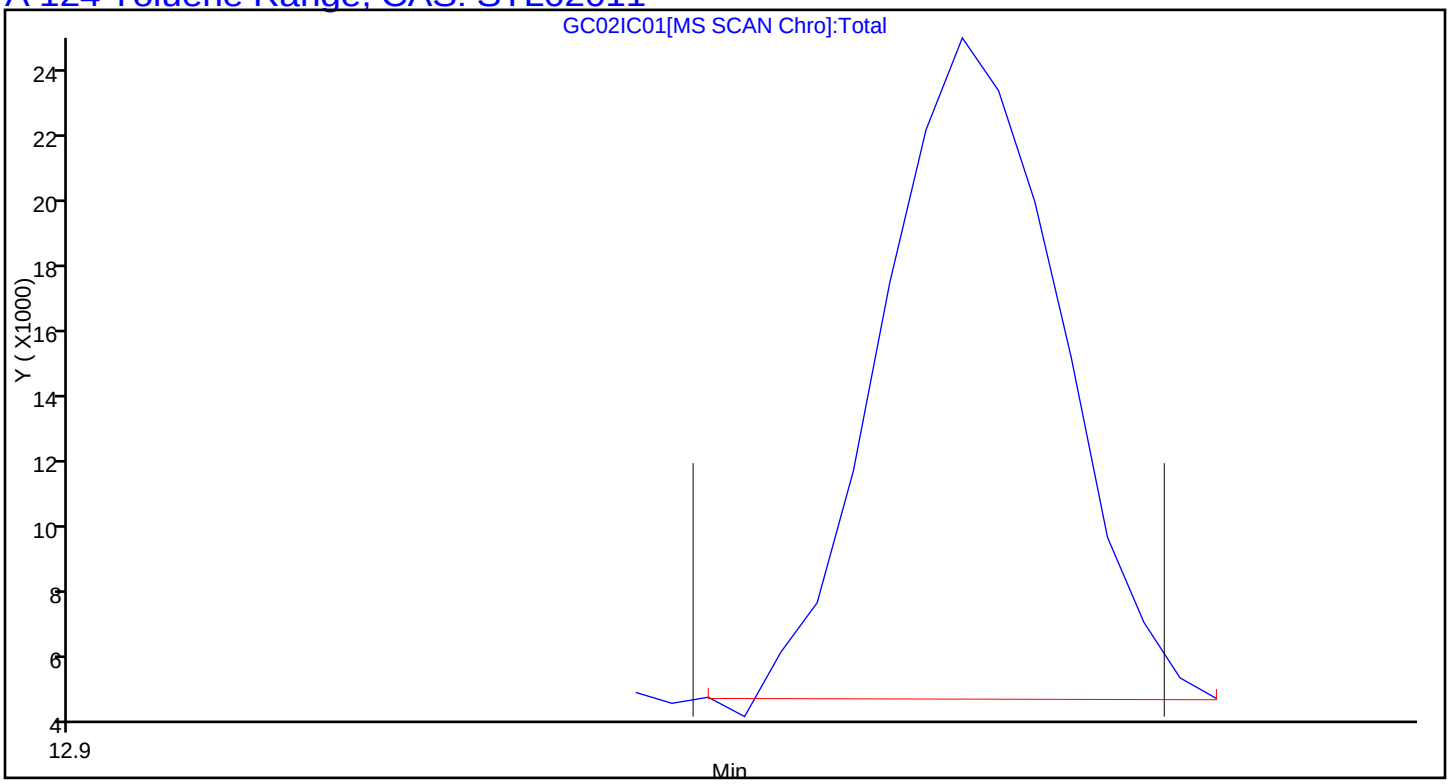


Report Date: 03-Mar-2017 15:07:57 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC01.D				
Injection Date:	02-Mar-2017 13:34:30	Instrument ID:	MG		
Lims ID:	IC L1				
Client ID:					
Operator ID:	7126	ALS Bottle#:	1	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

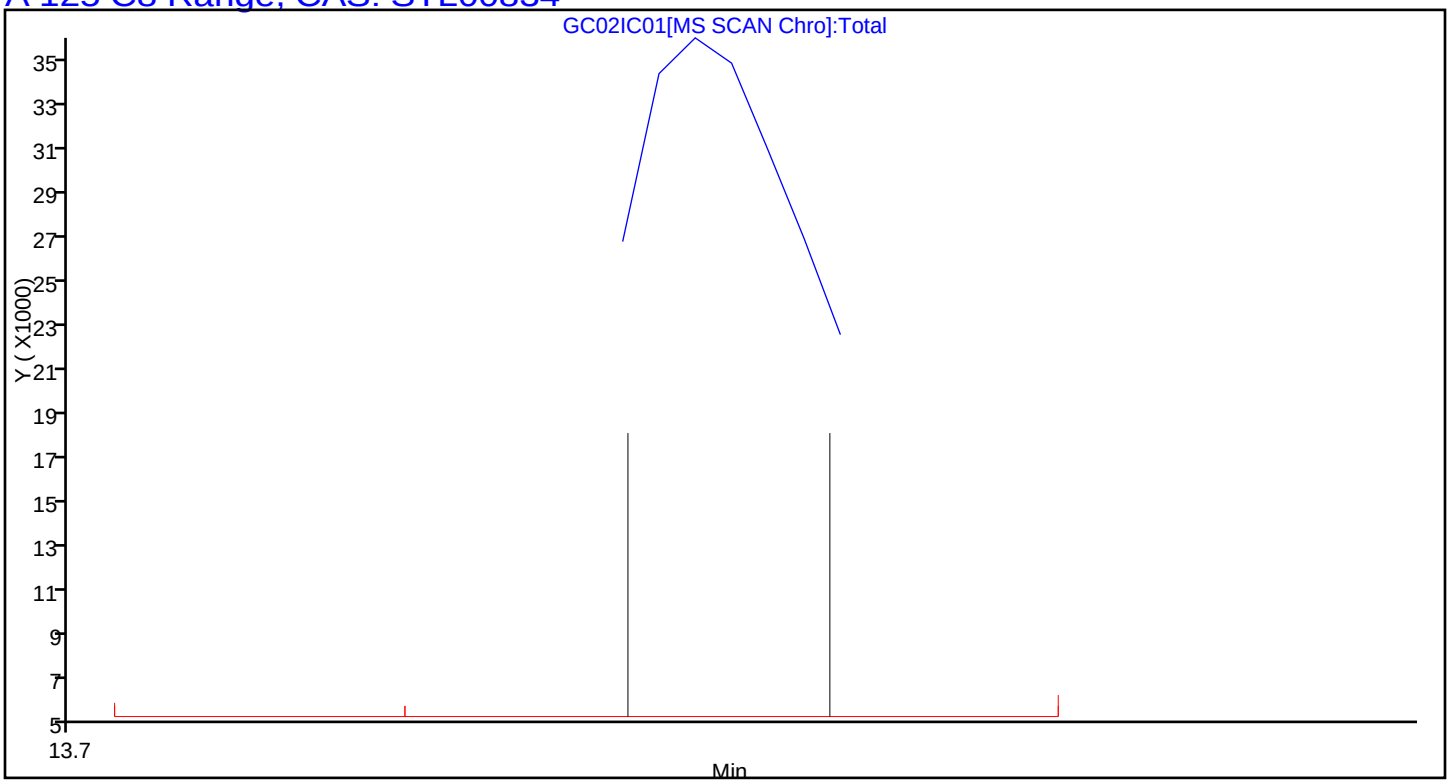


Report Date: 03-Mar-2017 15:07:57 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC01.D				
Injection Date:	02-Mar-2017 13:34:30	Instrument ID:	MG		
Lims ID:	IC L1				
Client ID:					
Operator ID:	7126	ALS Bottle#:	1	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC03.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 02-Mar-2017 14:57:30 ALS Bottle#: 2 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004202-005
Misc. Info.: 073146
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Mar-2017 15:11:10 Calib Date: 02-Mar-2017 20:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 02-Mar-2017 15:32:47

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.007	8.012	-0.005	85	379983	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.175	10.179	-0.004	95	1958683	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.044	15.046	-0.002	87	2012188	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.716	16.717	-0.001	93	1498709	4.00	4.00	
6 Chlorodifluoromethane	67	3.461	3.463	-0.002	97	6808	0.1587	0.1832	
7 Propene	41	3.472	3.471	0.001	96	16251	0.1587	0.1835	
8 Dichlorodifluoromethane	85	3.515	3.514	0.001	100	53178	0.1587	0.1577	
9 Chloromethane	52	3.666	3.665	0.001	63	5382	0.1587	0.1978	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.677	3.675	0.002	91	32441	0.1587	0.1576	
11 Acetaldehyde	44	3.795	3.793	0.002	88	80566	0.7933	1.99	
12 Vinyl chloride	62	3.812	3.809	0.003	99	16924	0.1587	0.1625	
13 Butadiene	54	3.887	3.883	0.004	66	11714	0.1587	0.1557	
14 Butane	43	3.887	3.885	0.002	85	25743	0.1587	0.1632	
15 Bromomethane	94	4.151	4.149	0.002	97	16675	0.1587	0.1577	
16 Chloroethane	64	4.270	4.267	0.003	91	8789	0.1587	0.1577	
17 Ethanol	31	4.367	4.372	-0.005	96	36579	0.7933	0.8758	
18 Vinyl bromide	106	4.523	4.522	0.001	97	16729	0.1587	0.1663	
19 2-Methylbutane	43	4.572	4.569	0.003	91	19697	0.1587	0.1638	
20 Acrolein	56	4.755	4.732	0.023	29	3634	0.1587	0.2333	
21 Trichlorofluoromethane	101	4.755	4.753	0.002	100	54904	0.1587	0.1589	
22 Acetonitrile	40	4.809	4.808	0.001	98	6938	0.1587	0.1817	
23 Acetone	58	4.852	4.849	0.003	99	34826	0.4760	0.8577	
24 Pentane	72	4.955	4.949	0.006	78	3142	0.1587	0.1637	
25 Isopropyl alcohol	45	4.949	4.963	-0.014	80	65802	0.4760	0.5464	
26 Ethyl ether	31	5.095	5.090	0.005	90	20652	0.1587	0.1853	
27 1,1-Dichloroethene	96	5.365	5.367	-0.002	96	15365	0.1587	0.1561	
28 Acrylonitrile	53	5.445	5.450	-0.005	98	7699	0.1587	0.1618	
29 2-Methyl-2-propanol	59	5.483	5.494	-0.011	94	25264	0.1587	0.1743	
30 1,1,2-Trichloro-1,2,2-trif	101	5.537	5.536	0.001	96	32187	0.1587	0.1545	
31 Methylene Chloride	84	5.661	5.669	-0.008	93	22114	0.1587	0.2416	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.683	5.684	-0.001	96	17649	0.1587	0.1850	
33 Carbon disulfide	76	5.812	5.810	0.002	99	42161	0.1587	0.1608	
34 trans-1,2-Dichloroethene	96	6.405	6.406	-0.001	97	15286	0.1587	0.1528	
35 2-Methylpentane	43	6.438	6.439	-0.001	93	30478	0.1587	0.1531	
36 Methyl tert-butyl ether	73	6.535	6.533	0.002	96	43383	0.1587	0.1661	
37 1,1-Dichloroethane	63	6.783	6.787	-0.004	100	29248	0.1587	0.1571	
38 Vinyl acetate	43	6.896	6.898	-0.002	99	31751	0.1587	0.1591	
39 2-Butanone (MEK)	72	7.300	7.305	-0.005	99	7612	0.1587	0.1809	
40 Hexane	56	7.354	7.350	0.004	81	12837	0.1587	0.1679	
41 Isopropyl ether	45	7.505	7.502	0.003	94	44422	0.1587	0.1656	
42 cis-1,2-Dichloroethene	96	7.705	7.707	-0.002	96	16338	0.1587	0.1560	
43 Ethyl acetate	43	7.899	7.901	-0.002	98	26531	0.1587	0.1630	
44 Chloroform	83	8.028	8.035	-0.007	94	40318	0.1587	0.1602	
45 Tert-butyl ethyl ether	59	8.147	8.144	0.003	95	40459	0.1587	0.1620	
46 Tetrahydrofuran	42	8.411	8.410	0.001	94	16742	0.1587	0.1822	
47 1,1,1-Trichloroethane	97	9.010	9.013	-0.003	95	43667	0.1587	0.1576	
48 1,2-Dichloroethane	62	9.096	9.106	-0.010	99	27616	0.1587	0.1590	
49 Benzene	78	9.592	9.599	-0.007	96	48318	0.1587	0.1575	
50 Cyclohexane	69	9.598	9.604	-0.006	89	8701	0.1587	0.1611	
52 Carbon tetrachloride	117	9.625	9.629	-0.004	97	43951	0.1587	0.1536	
51 n-Butanol	31	9.646	9.647	-0.001	63	5747	0.1587	0.1603	
53 2,3-Dimethylpentane	71	9.749	9.754	-0.005	90	11928	0.1587	0.1574	
54 Thiophene	84	9.867	9.873	-0.006	95	28016	0.1587	0.1593	
55 Tert-amyl methyl ether	73	10.121	10.121	0.000	99	40454	0.1587	0.1573	
56 Isooctane	57	10.423	10.430	-0.007	97	77114	0.1587	0.1595	
57 n-Heptane	71	10.827	10.831	-0.004	91	19116	0.1587	0.1624	
58 1,2-Dichloropropane	63	10.854	10.862	-0.008	85	18448	0.1587	0.1635	
59 Trichloroethene	130	10.908	10.913	-0.005	96	26791	0.1587	0.1522	
60 Dibromomethane	93	10.973	10.978	-0.005	94	23258	0.1587	0.1616	
61 Dichlorobromomethane	83	11.140	11.143	-0.003	97	38506	0.1587	0.1527	
62 1,4-Dioxane	88	11.172	11.173	-0.001	93	6467	0.1587	0.1577	
63 Methyl methacrylate	41	11.275	11.278	-0.003	94	16492	0.1587	0.1499	
64 Methylcyclohexane	83	11.717	11.718	-0.001	95	38650	0.1587	0.1547	
65 4-Methyl-2-pentanone (MIBK	43	12.154	12.153	0.001	96	30859	0.1587	0.1674	
66 cis-1,3-Dichloropropene	75	12.186	12.190	-0.004	97	30253	0.1587	0.1533	
67 trans-1,3-Dichloropropene	75	12.909	12.911	-0.002	98	29964	0.1587	0.1521	
68 Toluene	91	13.033	13.035	-0.002	93	58057	0.1587	0.1590	
69 1,1,2-Trichloroethane	83	13.103	13.106	-0.003	97	17236	0.1587	0.1547	
70 2-Methylthiophene	97	13.184	13.186	-0.002	96	48275	0.1587	0.1515	
71 3-Methylthiophene	97	13.388	13.394	-0.006	98	49080	0.1587	0.1555	
72 2-Hexanone	58	13.529	13.535	-0.006	94	14771	0.1587	0.1594	
73 n-Octane	85	13.787	13.792	-0.005	91	20968	0.1587	0.1563	
74 Chlorodibromomethane	129	13.809	13.816	-0.007	97	33862	0.1587	0.1373	
75 Ethylene Dibromide	107	14.100	14.106	-0.006	98	32620	0.1587	0.1465	
76 Tetrachloroethene	129	14.203	14.207	-0.004	94	24115	0.1587	0.1498	
77 Chlorobenzene	112	15.092	15.095	-0.003	93	48589	0.1587	0.1517	
78 2,3-Dimethylheptane	43	15.163	15.165	-0.002	94	51653	0.1587	0.1583	
79 Ethylbenzene	91	15.400	15.402	-0.002	99	73987	0.1587	0.1542	
80 2-Ethylthiophene	97	15.497	15.502	-0.005	98	59106	0.1587	0.1524	
81 m-Xylene & p-Xylene	91	15.567	15.572	-0.005	99	117078	0.3173	0.3113	
82 Bromoform	173	15.988	15.991	-0.003	95	28324	0.1587	0.1179	
84 Styrene	104	16.036	16.037	-0.001	98	37823	0.1587	0.1419	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
83 n-Nonane	57	16.036	16.038	-0.002	90	38208	0.1587	0.1584	
85 o-Xylene	91	16.095	16.099	-0.004	97	60752	0.1587	0.1576	
86 1,1,2,2-Tetrachloroethane	83	16.419	16.422	-0.003	99	38761	0.1587	0.1532	
87 1,2,3-Trichloropropane	110	16.570	16.577	-0.007	97	13265	0.1587	0.1535	
88 Isopropylbenzene	105	16.699	16.703	-0.004	97	89734	0.1587	0.1600	
89 N-Propylbenzene	120	17.255	17.257	-0.002	99	23064	0.1587	0.1544	
90 2-Chlorotoluene	126	17.282	17.288	-0.006	96	22442	0.1587	0.1555	
91 4-Ethyltoluene	105	17.411	17.418	-0.007	98	81294	0.1587	0.1536	
92 1,3,5-Trimethylbenzene	120	17.497	17.502	-0.005	93	37525	0.1587	0.1516	
93 Alpha Methyl Styrene	118	17.740	17.744	-0.004	87	28693	0.1587	0.1389	
94 n-Decane	57	17.843	17.846	-0.003	93	47043	0.1587	0.1602	
95 tert-Butylbenzene	119	17.945	17.949	-0.004	91	75521	0.1587	0.1504	
96 1,2,4-Trimethylbenzene	105	17.956	17.963	-0.007	96	70625	0.1587	0.1538	
97 1,3-Dichlorobenzene	146	18.225	18.232	-0.007	97	53064	0.1587	0.1413	
98 sec-Butylbenzene	105	18.231	18.235	-0.004	98	99807	0.1587	0.1514	
99 Benzyl chloride	91	18.306	18.311	-0.005	98	61888	0.1587	0.1482	
100 1,4-Dichlorobenzene	146	18.317	18.324	-0.007	93	54236	0.1587	0.1459	
101 4-Isopropyltoluene	119	18.409	18.410	-0.001	97	86111	0.1587	0.1507	
102 1,2,3-Trimethylbenzene	105	18.447	18.454	-0.008	98	53855	0.1587	0.1577	
103 Butylcyclohexane	83	18.522	18.527	-0.005	93	60233	0.1587	0.1515	
104 1,2-Dichlorobenzene	146	18.695	18.698	-0.003	93	51022	0.1587	0.1460	
105 2,3-Dihydroindene	117	18.700	18.702	-0.002	93	63910	0.1587	0.1484	
106 Indene	116	18.829	18.833	-0.004	93	45014	0.1587	0.1431	
107 n-Butylbenzene	91	18.862	18.862	0.000	98	80776	0.1587	0.1527	
108 Undecane	57	19.218	19.217	0.001	94	49706	0.1587	0.1576	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.245	19.247	-0.002	97	60370	0.1587	0.1442	
110 1,2-Dibromo-3-Chloropropan	157	19.315	19.317	-0.002	87	18473	0.1587	0.1331	
111 1,2,4,5-Tetramethylbenzene	119	19.638	19.642	-0.004	96	73810	0.1587	0.1449	
112 1,2,3,5-Tetramethylbenzene	119	19.692	19.696	-0.004	96	45344	0.1587	0.1490	
113 1,2,3,4-Tetramethylbenzene	119	20.091	20.092	-0.001	96	61486	0.1587	0.1468	
114 Dodecane	57	20.285	20.286	-0.001	95	50609	0.1587	0.1742	
115 1,2,4-Trichlorobenzene	180	20.426	20.427	-0.001	93	42037	0.1587	0.1381	
116 Naphthalene	128	20.555	20.555	0.000	99	92541	0.1587	0.1459	
117 Benzo(b)thiophene	134	20.652	20.653	-0.001	99	52800	0.1587	0.1500	
118 Hexachlorobutadiene	225	20.781	20.783	-0.002	94	44234	0.1587	0.1490	
119 1,2,3-Trichlorobenzene	180	20.830	20.831	-0.001	95	44545	0.1587	0.1612	
120 2-Methylnaphthalene	142	21.628	21.628	0.000	100	61911	0.4958	0.4785	
121 1-Methylnaphthalene	142	21.806	21.808	-0.002	100	48997	0.4958	0.4702	
A 124 Toluene Range	1	13.028	(12.993-13.063)		0	143509	0.1587	0.1640	
A 125 C8 Range	1	13.792	(13.777-13.807)		0	312006	0.1587	0.2030	
S 126 Xylenes, Total	100				0		0.4760	0.4689	
S 127 1,2-Dichloroethene, Total	1				0		0.3173	0.3088	

Reagents:

40L3DNP_00010	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

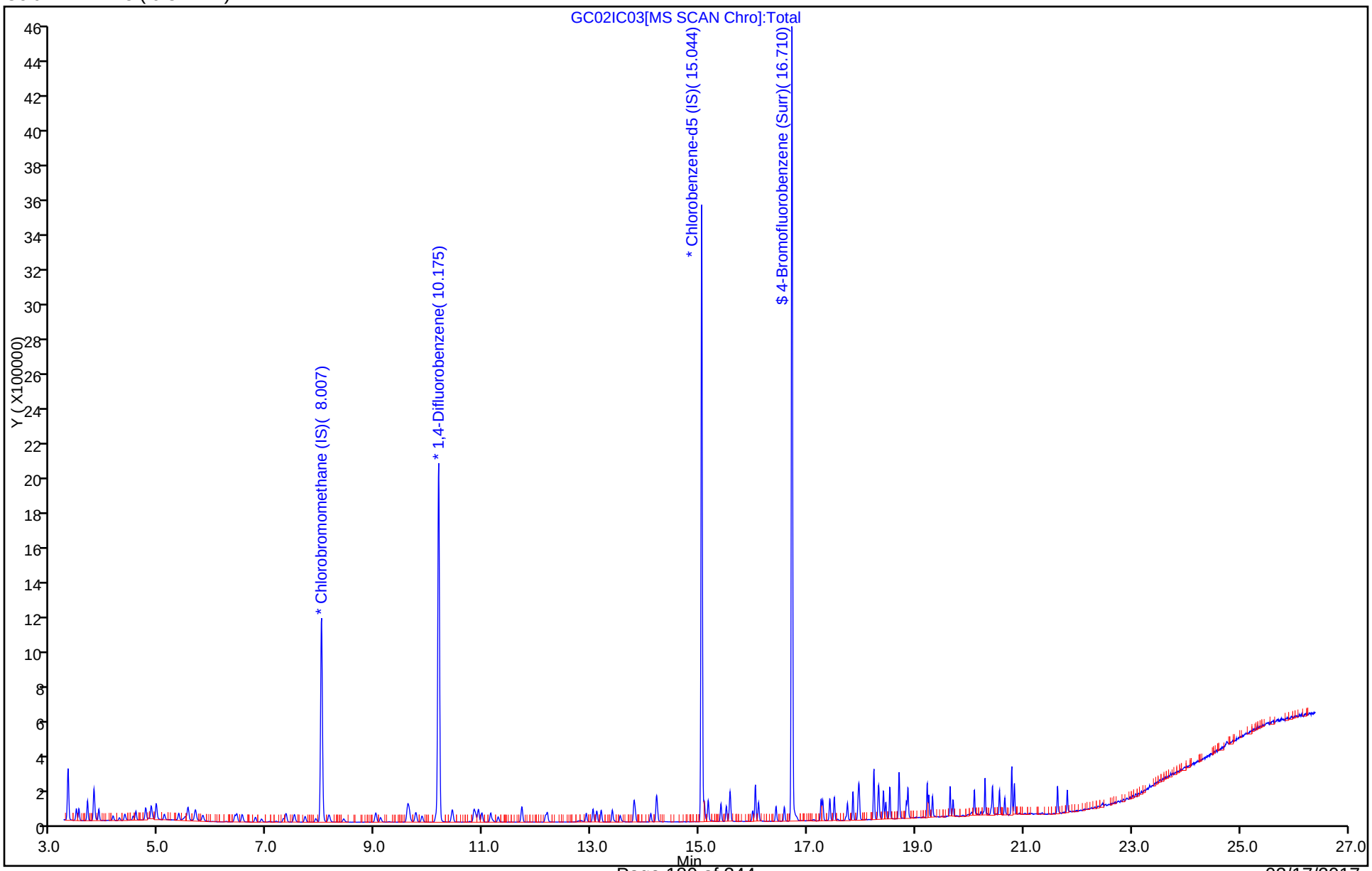
Report Date: 03-Mar-2017 15:11:12 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC03.D

Injection Date:	02-Mar-2017 14:57:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	IC L3			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

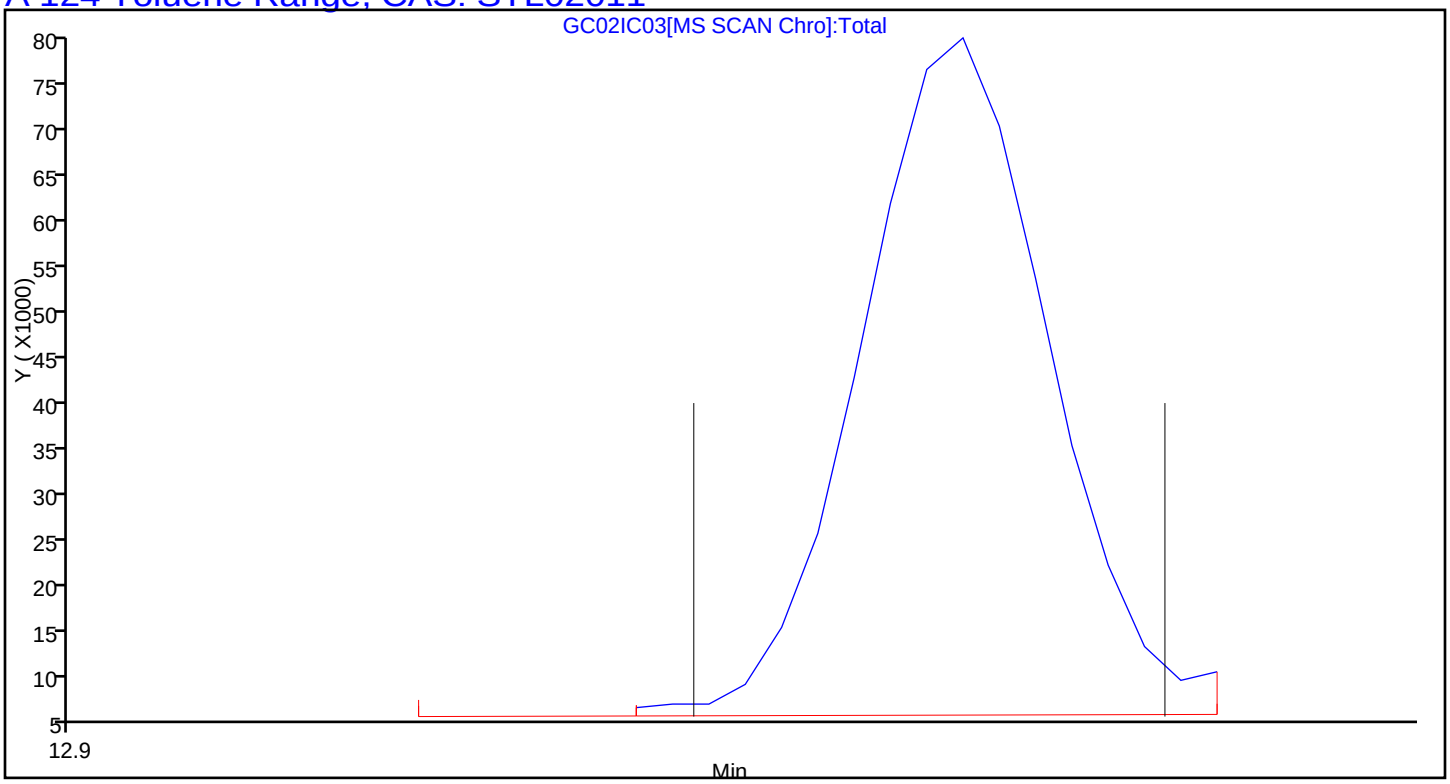


Report Date: 03-Mar-2017 15:11:12 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC03.D				
Injection Date:	02-Mar-2017 14:57:30	Instrument ID:	MG		
Lims ID:	IC L3				
Client ID:					
Operator ID:	7126	ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

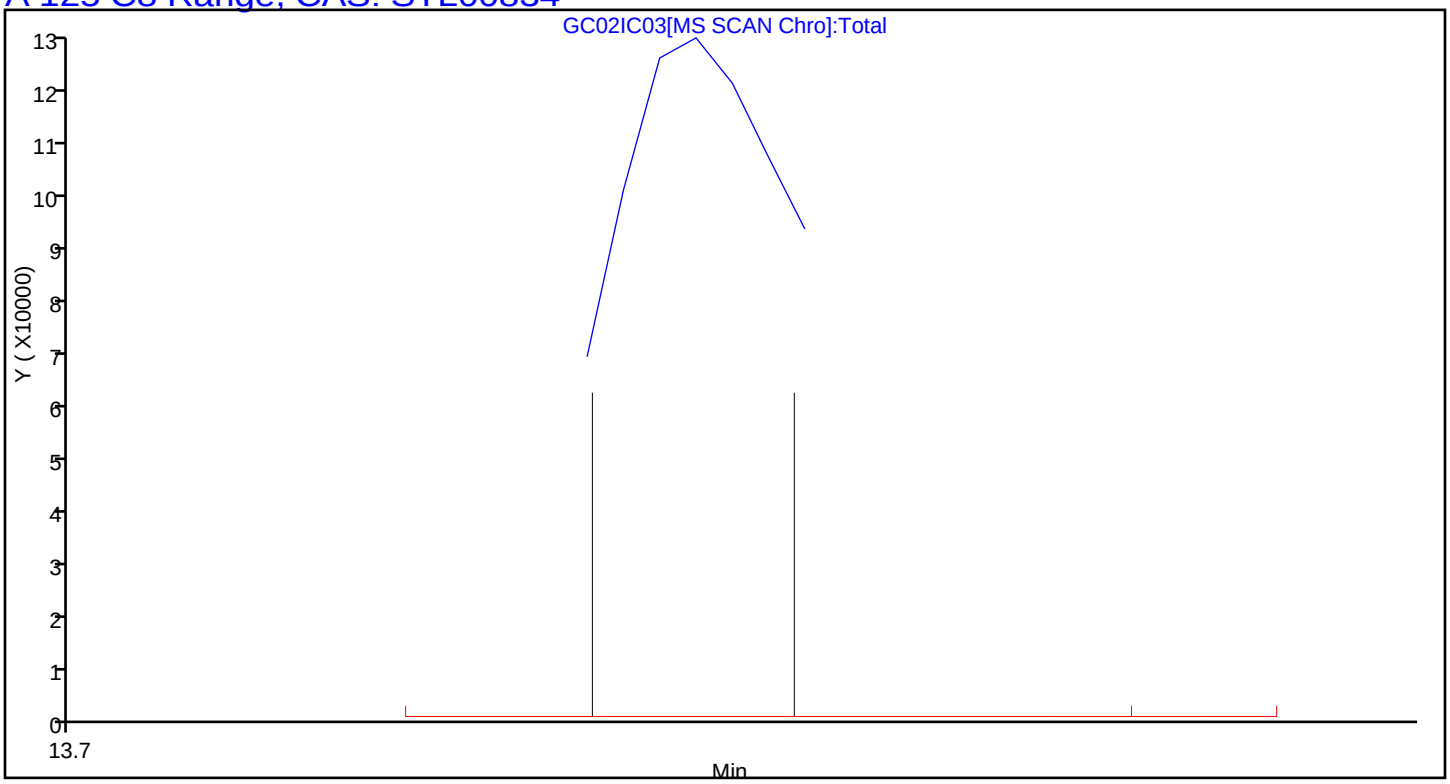


Report Date: 03-Mar-2017 15:11:12 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC03.D				
Injection Date:	02-Mar-2017 14:57:30	Instrument ID:	MG		
Lims ID:	IC L3				
Client ID:					
Operator ID:	7126	ALS Bottle#:	2	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC04.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 02-Mar-2017 15:39:30 ALS Bottle#: 3 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004202-006
Misc. Info.: 073144
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Mar-2017 15:12:05 Calib Date: 02-Mar-2017 20:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 02-Mar-2017 16:19:02

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.002	8.012	-0.010	85	374224	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.169	10.179	-0.010	95	1955072	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.039	15.046	-0.007	87	1974284	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.710	16.717	-0.007	94	1486983	4.00	4.05	
6 Chlorodifluoromethane	67	3.456	3.463	-0.007	97	14940	0.4000	0.4083	
7 Propene	41	3.467	3.471	-0.004	97	36163	0.4000	0.4146	
8 Dichlorodifluoromethane	85	3.510	3.514	-0.004	100	135386	0.4000	0.4078	
9 Chloromethane	52	3.661	3.665	-0.004	56	10642	0.4000	0.3972	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.666	3.675	-0.009	92	80988	0.4000	0.3995	
11 Acetaldehyde	44	3.785	3.793	-0.008	89	134527	2.00	3.37	
12 Vinyl chloride	62	3.801	3.809	-0.008	99	42048	0.4000	0.4099	
13 Butadiene	54	3.876	3.883	-0.007	84	29149	0.4000	0.3935	
14 Butane	43	3.876	3.885	-0.009	93	63224	0.4000	0.4069	
15 Bromomethane	94	4.141	4.149	-0.008	98	42057	0.4000	0.4039	
16 Chloroethane	64	4.259	4.267	-0.008	92	22651	0.4000	0.4126	
17 Ethanol	31	4.345	4.372	-0.027	97	89923	2.00	2.19	
18 Vinyl bromide	106	4.513	4.522	-0.009	97	39895	0.4000	0.4027	
19 2-Methylbutane	43	4.561	4.569	-0.008	93	50052	0.4000	0.4227	
20 Acrolein	56	4.739	4.732	0.007	29	5738	0.4000	0.3740	
21 Trichlorofluoromethane	101	4.745	4.753	-0.009	100	136800	0.4000	0.4021	
22 Acetonitrile	40	4.793	4.808	-0.015	94	18563	0.4000	0.4936	
23 Acetone	58	4.836	4.849	-0.013	100	72746	1.20	1.82	
24 Pentane	72	4.939	4.949	-0.010	95	7706	0.4000	0.4077	
25 Isopropyl alcohol	45	4.922	4.963	-0.041	96	154370	1.20	1.30	
26 Ethyl ether	31	5.079	5.090	-0.011	92	44528	0.4000	0.4056	
27 1,1-Dichloroethene	96	5.359	5.367	-0.008	96	37664	0.4000	0.3886	
28 Acrylonitrile	53	5.440	5.450	-0.010	94	19112	0.4000	0.4079	
29 2-Methyl-2-propanol	59	5.451	5.494	-0.043	96	58501	0.4000	0.4099	
30 1,1,2-Trichloro-1,2,2-trif	101	5.526	5.536	-0.010	96	80017	0.4000	0.3899	
31 Methylene Chloride	84	5.656	5.669	-0.013	92	39408	0.4000	0.4371	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.672	5.684	-0.012	97	37029	0.4000	0.3941	
33 Carbon disulfide	76	5.801	5.810	-0.009	100	99197	0.4000	0.3842	
34 trans-1,2-Dichloroethene	96	6.400	6.406	-0.006	99	37871	0.4000	0.3844	
35 2-Methylpentane	43	6.427	6.439	-0.012	93	76233	0.4000	0.3889	
36 Methyl tert-butyl ether	73	6.519	6.533	-0.014	96	104801	0.4000	0.4075	
37 1,1-Dichloroethane	63	6.777	6.787	-0.010	100	71609	0.4000	0.3906	
38 Vinyl acetate	43	6.885	6.898	-0.013	99	80081	0.4000	0.4075	
39 2-Butanone (MEK)	72	7.290	7.305	-0.015	99	18610	0.4000	0.4491	
40 Hexane	56	7.338	7.350	-0.012	86	29431	0.4000	0.3908	
41 Isopropyl ether	45	7.489	7.502	-0.013	95	111795	0.4000	0.4233	
42 cis-1,2-Dichloroethene	96	7.694	7.707	-0.013	95	39588	0.4000	0.3839	
43 Ethyl acetate	43	7.883	7.901	-0.018	98	66540	0.4000	0.4152	
44 Chloroform	83	8.023	8.035	-0.012	95	98505	0.4000	0.3974	
45 Tert-butyl ethyl ether	59	8.131	8.144	-0.013	95	101064	0.4000	0.4110	
46 Tetrahydrofuran	42	8.401	8.410	-0.009	91	38873	0.4000	0.4295	
47 1,1,1-Trichloroethane	97	9.004	9.013	-0.009	94	106654	0.4000	0.3910	
48 1,2-Dichloroethane	62	9.091	9.106	-0.015	99	67542	0.4000	0.3895	
49 Benzene	78	9.592	9.599	-0.007	96	117159	0.4000	0.3826	
50 Cyclohexane	69	9.603	9.604	-0.001	92	20685	0.4000	0.3836	
52 Carbon tetrachloride	117	9.619	9.629	-0.010	97	95114	0.4000	0.3331	
51 n-Butanol	31	9.603	9.647	-0.044	67	13386	0.4000	0.3740	
53 2,3-Dimethylpentane	71	9.743	9.754	-0.011	90	28526	0.4000	0.3772	
54 Thiophene	84	9.862	9.873	-0.011	96	67355	0.4000	0.3836	
55 Tert-amyl methyl ether	73	10.110	10.121	-0.011	98	108255	0.4000	0.4217	
56 Isooctane	57	10.423	10.430	-0.007	96	187987	0.4000	0.3895	
57 n-Heptane	71	10.822	10.831	-0.009	91	45416	0.4000	0.3865	
58 1,2-Dichloropropane	63	10.854	10.862	-0.008	89	43467	0.4000	0.3859	
59 Trichloroethene	130	10.908	10.913	-0.005	96	66089	0.4000	0.3762	
60 Dibromomethane	93	10.967	10.978	-0.011	95	54422	0.4000	0.3789	
61 Dichlorobromomethane	83	11.134	11.143	-0.009	98	95415	0.4000	0.3791	
62 1,4-Dioxane	88	11.156	11.173	-0.017	92	16645	0.4000	0.4067	
63 Methyl methacrylate	41	11.264	11.278	-0.014	94	41751	0.4000	0.3801	
64 Methylcyclohexane	83	11.711	11.718	-0.007	95	95681	0.4000	0.3837	
65 4-Methyl-2-pentanone (MIBK	43	12.137	12.153	-0.016	96	76682	0.4000	0.4166	
66 cis-1,3-Dichloropropene	75	12.181	12.190	-0.009	94	75926	0.4000	0.3854	
67 trans-1,3-Dichloropropene	75	12.903	12.911	-0.008	97	71985	0.4000	0.3725	
68 Toluene	91	13.027	13.035	-0.008	93	133914	0.4000	0.3737	
69 1,1,2-Trichloroethane	83	13.097	13.106	-0.009	98	41787	0.4000	0.3824	
70 2-Methylthiophene	97	13.178	13.186	-0.008	97	119176	0.4000	0.3811	
71 3-Methylthiophene	97	13.388	13.394	-0.006	99	118682	0.4000	0.3833	
72 2-Hexanone	58	13.523	13.535	-0.012	95	35230	0.4000	0.3876	
73 n-Octane	85	13.788	13.792	-0.004	91	50555	0.4000	0.3842	
74 Chlorodibromomethane	129	13.809	13.816	-0.007	97	84996	0.4000	0.3513	
75 Ethylene Dibromide	107	14.100	14.106	-0.006	98	81398	0.4000	0.3726	
76 Tetrachloroethene	129	14.203	14.207	-0.004	94	58871	0.4000	0.3726	
77 Chlorobenzene	112	15.087	15.095	-0.008	93	117838	0.4000	0.3748	
78 2,3-Dimethylheptane	43	15.163	15.165	-0.002	92	125279	0.4000	0.3913	
79 Ethylbenzene	91	15.394	15.402	-0.008	99	184802	0.4000	0.3926	
80 2-Ethylthiophene	97	15.497	15.502	-0.005	98	148208	0.4000	0.3894	
81 m-Xylene & p-Xylene	91	15.567	15.572	-0.005	99	291621	0.8000	0.7902	
82 Bromoform	173	15.982	15.991	-0.009	95	69748	0.4000	0.2959	
84 Styrene	104	16.031	16.037	-0.006	98	99226	0.4000	0.3793	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
83 n-Nonane	57	16.036	16.038	-0.002	89	93758	0.4000	0.3961	
85 o-Xylene	91	16.095	16.099	-0.004	98	148753	0.4000	0.3932	
86 1,1,2,2-Tetrachloroethane	83	16.414	16.422	-0.008	99	95320	0.4000	0.3840	
87 1,2,3-Trichloropropane	110	16.570	16.577	-0.007	97	33294	0.4000	0.3927	
88 Isopropylbenzene	105	16.699	16.703	-0.004	97	214385	0.4000	0.3896	
89 N-Propylbenzene	120	17.249	17.257	-0.008	99	55901	0.4000	0.3814	
90 2-Chlorotoluene	126	17.282	17.288	-0.006	97	53040	0.4000	0.3746	
91 4-Ethyltoluene	105	17.411	17.418	-0.007	98	201470	0.4000	0.3879	
92 1,3,5-Trimethylbenzene	120	17.492	17.502	-0.010	92	93050	0.4000	0.3832	
93 Alpha Methyl Styrene	118	17.740	17.744	-0.004	86	72396	0.4000	0.3571	
94 n-Decane	57	17.843	17.846	-0.003	93	111892	0.4000	0.3883	
95 tert-Butylbenzene	119	17.945	17.949	-0.004	90	188113	0.4000	0.3818	
96 1,2,4-Trimethylbenzene	105	17.956	17.963	-0.007	96	173408	0.4000	0.3848	
97 1,3-Dichlorobenzene	146	18.225	18.232	-0.007	97	129852	0.4000	0.3524	
98 sec-Butylbenzene	105	18.231	18.235	-0.004	98	247548	0.4000	0.3827	
99 Benzyl chloride	91	18.306	18.311	-0.005	97	156606	0.4000	0.3823	
100 1,4-Dichlorobenzene	146	18.317	18.324	-0.007	95	130139	0.4000	0.3568	
101 4-Isopropyltoluene	119	18.403	18.410	-0.007	97	214918	0.4000	0.3834	
102 1,2,3-Trimethylbenzene	105	18.447	18.454	-0.007	98	131293	0.4000	0.3918	
103 Butylcyclohexane	83	18.522	18.527	-0.005	95	149071	0.4000	0.3820	
104 1,2-Dichlorobenzene	146	18.695	18.698	-0.003	93	122080	0.4000	0.3560	
105 2,3-Dihydroindene	117	18.700	18.702	-0.002	94	156836	0.4000	0.3712	
106 Indene	116	18.829	18.833	-0.004	91	112170	0.4000	0.3633	
107 n-Butylbenzene	91	18.856	18.862	-0.006	98	203720	0.4000	0.3924	
108 Undecane	57	19.212	19.217	-0.005	94	120374	0.4000	0.3890	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.245	19.247	-0.002	97	152789	0.4000	0.3720	
110 1,2-Dibromo-3-Chloropropan	157	19.315	19.317	-0.002	93	41383	0.4000	0.3038	
111 1,2,4,5-Tetramethylbenzene	119	19.638	19.642	-0.004	96	175959	0.4000	0.3520	
112 1,2,3,5-Tetramethylbenzene	119	19.692	19.696	-0.004	94	107601	0.4000	0.3604	
113 1,2,3,4-Tetramethylbenzene	119	20.091	20.092	-0.001	96	142698	0.4000	0.3472	
114 Dodecane	57	20.285	20.286	-0.001	94	105194	0.4000	0.3690	
115 1,2,4-Trichlorobenzene	180	20.426	20.427	-0.001	94	93377	0.4000	0.3127	
116 Naphthalene	128	20.555	20.555	0.000	99	197303	0.4000	0.3169	
117 Benzo(b)thiophene	134	20.652	20.653	-0.001	99	115646	0.4000	0.3349	
118 Hexachlorobutadiene	225	20.781	20.783	-0.002	88	100465	0.4000	0.3448	
119 1,2,3-Trichlorobenzene	180	20.830	20.831	-0.001	95	95414	0.4000	0.3519	
120 2-Methylnaphthalene	142	21.628	21.628	0.000	99	116309	1.25	0.9163	
121 1-Methylnaphthalene	142	21.806	21.808	-0.002	100	98052	1.25	0.9590	
A 124 Toluene Range	1	13.022	(12.987-13.057)		0	339092	0.4000	0.3882	
A 125 C8 Range	1	13.793	(13.778-13.808)		0	760418	0.4000	0.4956	
S 126 Xylenes, Total	100				0		1.20	1.18	
S 127 1,2-Dichloroethene, Total	1				0		0.8000	0.7683	

Reagents:

40L4DNP_00009	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

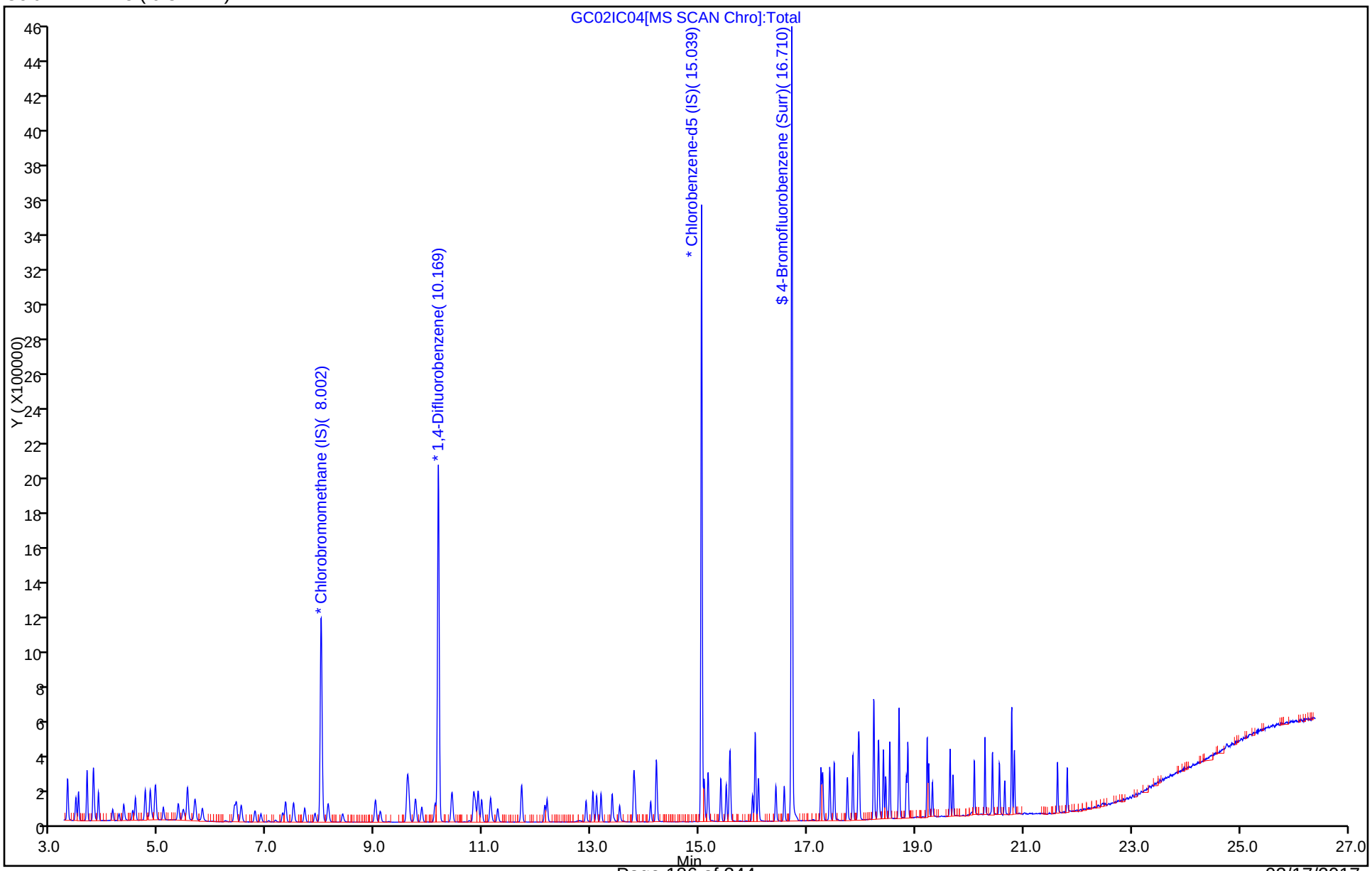
Report Date: 03-Mar-2017 15:12:07 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC04.D

Injection Date:	02-Mar-2017 15:39:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	IC L4			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

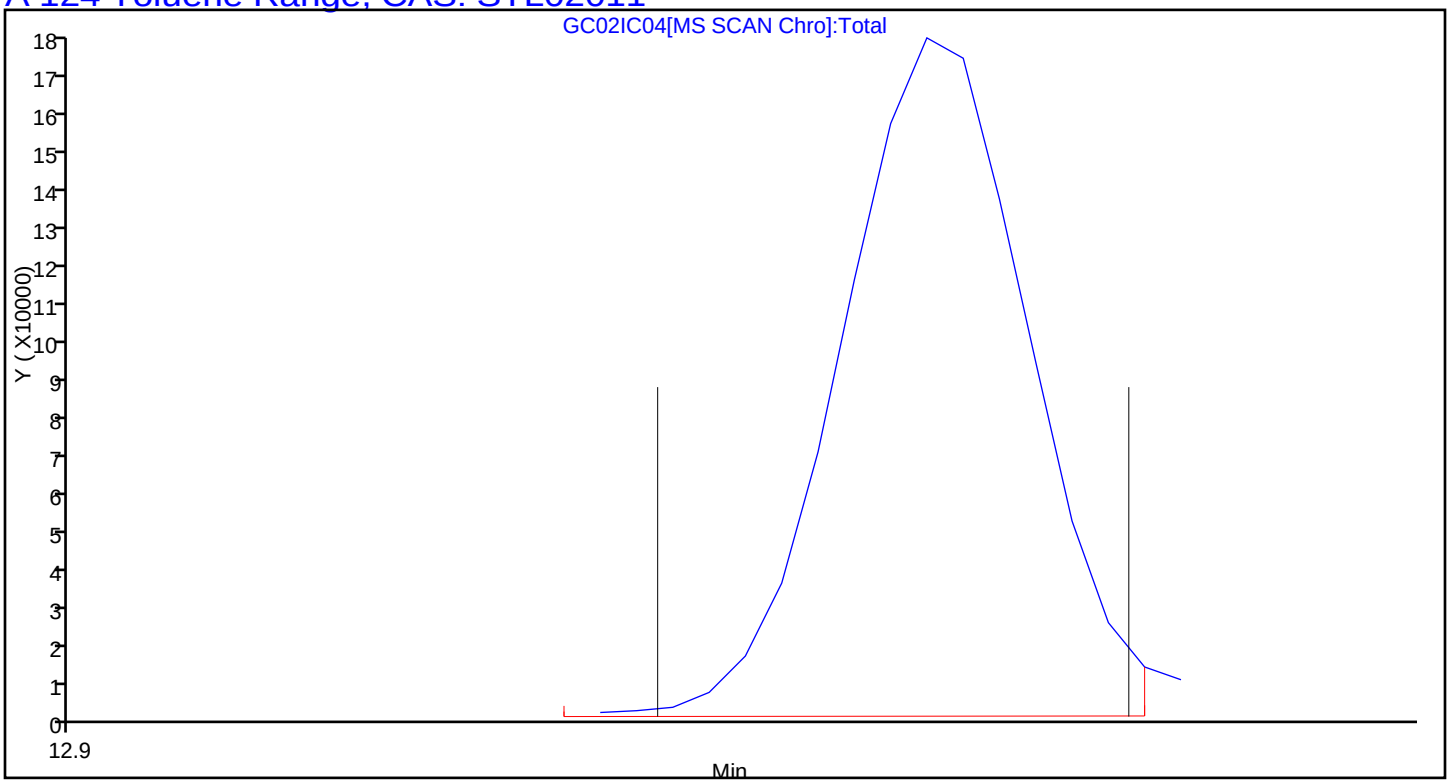


Report Date: 03-Mar-2017 15:12:07 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC04.D				
Injection Date:	02-Mar-2017 15:39:30	Instrument ID:	MG		
Lims ID:	IC L4				
Client ID:					
Operator ID:	7126	ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

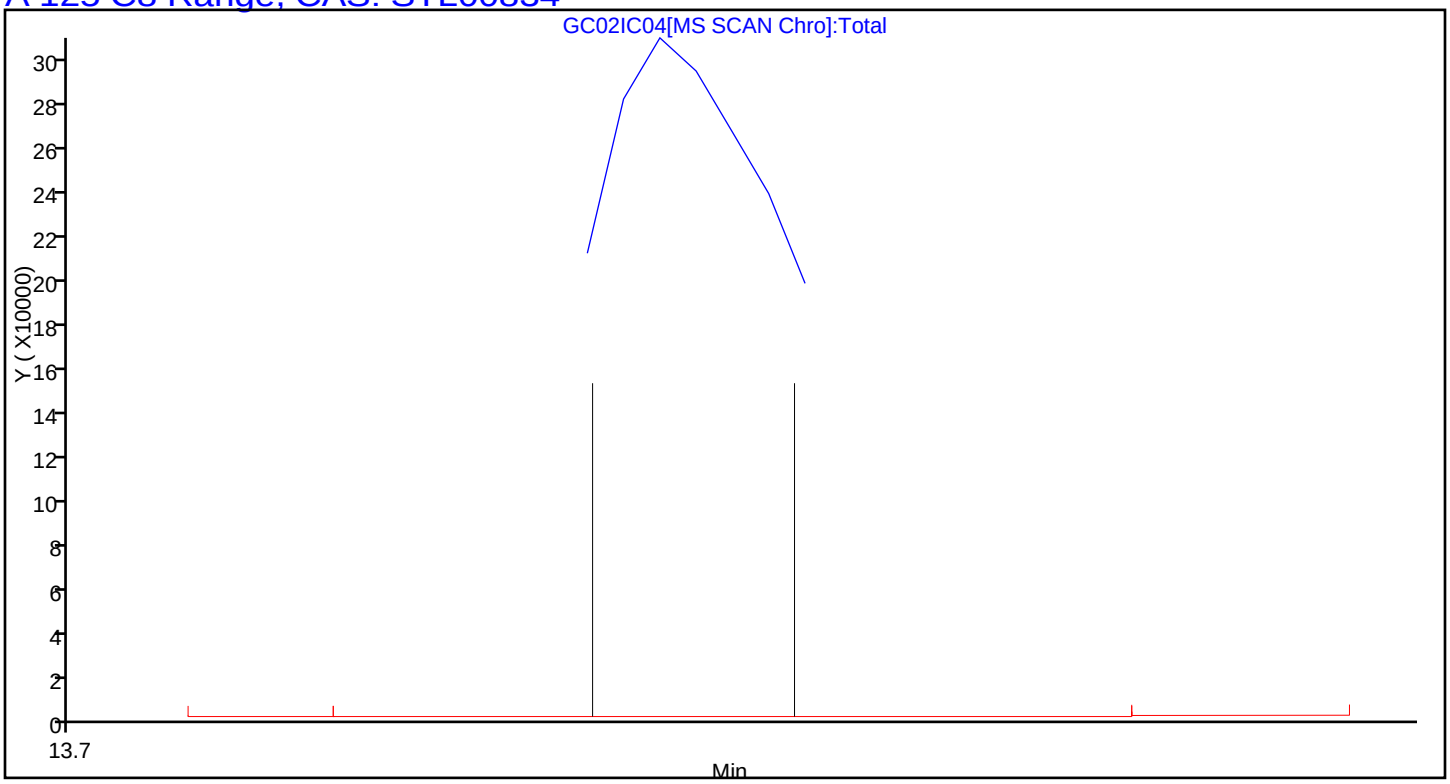


Report Date: 03-Mar-2017 15:12:07 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC04.D				
Injection Date:	02-Mar-2017 15:39:30	Instrument ID:	MG		
Lims ID:	IC L4				
Client ID:					
Operator ID:	7126	ALS Bottle#:	3	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC05.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 02-Mar-2017 16:20:30 ALS Bottle#: 4 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004202-007
Misc. Info.: 073142
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Mar-2017 15:13:19 Calib Date: 02-Mar-2017 20:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa Date: 03-Mar-2017 12:01:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.007	8.012	-0.005	85	382085	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.174	10.179	-0.005	95	1984249	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.044	15.046	-0.002	87	2026230	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.715	16.717	-0.002	93	1524315	4.00	4.04	
6 Chlorodifluoromethane	67	3.461	3.463	-0.002	97	36701	1.00	0.9823	
7 Propene	41	3.466	3.471	-0.005	98	90943	1.00	1.02	
8 Dichlorodifluoromethane	85	3.515	3.514	0.001	100	353716	1.00	1.04	
9 Chloromethane	52	3.660	3.665	-0.005	97	29383	1.00	1.07	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.671	3.675	-0.004	92	219262	1.00	1.06	
11 Acetaldehyde	44	3.790	3.793	-0.003	89	208740	4.99	5.12	
12 Vinyl chloride	62	3.806	3.809	-0.003	99	112960	1.00	1.08	
13 Butadiene	54	3.882	3.883	-0.001	87	81559	1.00	1.08	
14 Butane	43	3.882	3.885	-0.003	95	170131	1.00	1.07	
15 Bromomethane	94	4.146	4.149	-0.003	98	112705	1.00	1.06	
16 Chloroethane	64	4.264	4.267	-0.003	91	60191	1.00	1.07	
17 Ethanol	31	4.356	4.372	-0.016	97	203965	4.99	4.86	
18 Vinyl bromide	106	4.518	4.522	-0.004	97	108833	1.00	1.08	
19 2-Methylbutane	43	4.566	4.569	-0.003	92	137869	1.00	1.14	
20 Acrolein	56	4.744	4.732	0.012	28	14386	1.00	0.9184	
21 Trichlorofluoromethane	101	4.750	4.753	-0.003	100	373948	1.00	1.08	
22 Acetonitrile	40	4.798	4.808	-0.010	98	36659	1.00	0.9548	
23 Acetone	58	4.841	4.849	-0.008	99	121293	3.00	2.97	
24 Pentane	72	4.944	4.949	-0.005	97	22070	1.00	1.14	
25 Isopropyl alcohol	45	4.938	4.963	-0.025	94	335763	3.00	2.77	
26 Ethyl ether	31	5.084	5.090	-0.006	90	110481	1.00	0.9857	
27 1,1-Dichloroethene	96	5.364	5.367	-0.003	96	105498	1.00	1.07	
28 Acrylonitrile	53	5.440	5.450	-0.010	95	48269	1.00	1.01	
29 2-Methyl-2-propanol	59	5.462	5.494	-0.032	96	142251	1.00	0.9762	
30 1,1,2-Trichloro-1,2,2-trif	101	5.532	5.536	-0.004	96	222408	1.00	1.06	
31 Methylene Chloride	84	5.666	5.669	-0.003	94	92548	1.00	1.01	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.677	5.684	-0.007	96	101547	1.00	1.06	
33 Carbon disulfide	76	5.807	5.810	-0.003	100	274333	1.00	1.04	
34 trans-1,2-Dichloroethene	96	6.400	6.406	-0.006	97	102572	1.00	1.02	
35 2-Methylpentane	43	6.438	6.439	-0.001	93	209472	1.00	1.05	
36 Methyl tert-butyl ether	73	6.524	6.533	-0.009	96	244925	1.00	0.9329	
37 1,1-Dichloroethane	63	6.783	6.787	-0.004	100	188496	1.00	1.01	
38 Vinyl acetate	43	6.890	6.898	-0.008	99	184358	1.00	0.9189	
39 2-Butanone (MEK)	72	7.290	7.305	-0.015	99	37188	1.00	0.8789	
40 Hexane	56	7.343	7.350	-0.007	85	78896	1.00	1.03	
41 Isopropyl ether	45	7.489	7.502	-0.013	95	256058	1.00	0.9495	
42 cis-1,2-Dichloroethene	96	7.699	7.707	-0.008	96	104471	1.00	0.99	
43 Ethyl acetate	43	7.888	7.901	-0.013	98	150266	1.00	0.9184	
44 Chloroform	83	8.028	8.035	-0.007	96	254283	1.00	1.00	
45 Tert-butyl ethyl ether	59	8.131	8.144	-0.013	95	238643	1.00	0.9505	
46 Tetrahydrofuran	42	8.400	8.410	-0.010	91	81529	1.00	0.8823	
47 1,1,1-Trichloroethane	97	9.010	9.013	-0.003	95	282846	1.00	1.02	
48 1,2-Dichloroethane	62	9.101	9.106	-0.005	99	175618	1.00	1.00	
49 Benzene	78	9.592	9.599	-0.007	96	305578	1.00	0.9833	
50 Cyclohexane	69	9.597	9.604	-0.007	94	55034	1.00	1.01	
52 Carbon tetrachloride	117	9.624	9.629	-0.005	98	294089	1.00	1.01	
51 n-Butanol	31	9.635	9.647	-0.012	69	31686	1.00	0.8722	
53 2,3-Dimethylpentane	71	9.748	9.754	-0.006	89	74710	1.00	0.9733	
54 Thiophene	84	9.867	9.873	-0.006	95	177621	1.00	1.00	
55 Tert-amyl methyl ether	73	10.110	10.121	-0.011	98	243858	1.00	0.9361	
56 Isooctane	57	10.422	10.430	-0.008	97	487596	1.00	1.00	
57 n-Heptane	71	10.827	10.831	-0.004	90	118391	1.00	0.99	
58 1,2-Dichloropropane	63	10.859	10.862	-0.003	85	110995	1.00	0.9710	
59 Trichloroethene	130	10.908	10.913	-0.005	96	186014	1.00	1.04	
60 Dibromomethane	93	10.973	10.978	-0.006	95	146524	1.00	1.01	
61 Dichlorobromomethane	83	11.134	11.143	-0.009	98	258735	1.00	1.01	
62 1,4-Dioxane	88	11.161	11.173	-0.012	92	38926	1.00	0.9370	
63 Methyl methacrylate	41	11.269	11.278	-0.009	93	96652	1.00	0.8671	
64 Methylcyclohexane	83	11.711	11.718	-0.007	95	250534	1.00	0.9899	
65 4-Methyl-2-pentanone (MIBK	43	12.143	12.153	-0.010	97	150862	1.00	0.8076	
66 cis-1,3-Dichloropropene	75	12.186	12.190	-0.004	95	199844	1.00	1.00	
67 trans-1,3-Dichloropropene	75	12.903	12.911	-0.008	97	190582	1.00	0.9608	
68 Toluene	91	13.032	13.035	-0.003	94	339763	1.00	0.9239	
69 1,1,2-Trichloroethane	83	13.103	13.106	-0.004	99	103808	1.00	0.9256	
70 2-Methylthiophene	97	13.183	13.186	-0.003	97	307996	1.00	0.9598	
71 3-Methylthiophene	97	13.388	13.394	-0.006	99	304111	1.00	0.9569	
72 2-Hexanone	58	13.523	13.535	-0.012	93	75024	1.00	0.8042	
73 n-Octane	85	13.787	13.792	-0.005	91	132681	1.00	0.9824	
74 Chlorodibromomethane	129	13.809	13.816	-0.007	97	246365	1.00	0.99	
75 Ethylene Dibromide	107	14.100	14.106	-0.006	98	217002	1.00	0.9680	
76 Tetrachloroethene	129	14.203	14.207	-0.004	94	154481	1.00	0.9527	
77 Chlorobenzene	112	15.092	15.095	-0.003	93	310288	1.00	0.9617	
78 2,3-Dimethylheptane	43	15.162	15.165	-0.003	92	323718	1.00	0.9852	
79 Ethylbenzene	91	15.400	15.402	-0.002	99	444543	1.00	0.9201	
80 2-Ethylthiophene	97	15.497	15.502	-0.005	98	364072	1.00	0.9320	
81 m-Xylene & p-Xylene	91	15.567	15.572	-0.005	99	701860	2.00	1.85	
82 Bromoform	173	15.987	15.991	-0.004	96	217947	1.00	0.9010	
84 Styrene	104	16.031	16.037	-0.006	97	252653	1.00	0.9410	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
83 n-Nonane	57	16.036	16.038	-0.002	88	244961	1.00	1.01	
85 o-Xylene	91	16.095	16.099	-0.004	98	353133	1.00	0.9096	
86 1,1,2,2-Tetrachloroethane	83	16.419	16.422	-0.003	99	232481	1.00	0.9126	
87 1,2,3-Trichloropropane	110	16.570	16.577	-0.007	97	79343	1.00	0.9118	
88 Isopropylbenzene	105	16.699	16.703	-0.004	98	509862	1.00	0.9028	
89 N-Propylbenzene	120	17.255	17.257	-0.002	99	134620	1.00	0.8949	
90 2-Chlorotoluene	126	17.282	17.288	-0.006	97	135297	1.00	0.9311	
91 4-Ethyltoluene	105	17.416	17.418	-0.002	98	473972	1.00	0.8891	
92 1,3,5-Trimethylbenzene	120	17.497	17.502	-0.005	92	221193	1.00	0.8875	
93 Alpha Methyl Styrene	118	17.740	17.744	-0.004	88	186268	1.00	0.8953	
94 n-Decane	57	17.842	17.846	-0.004	93	296801	1.00	1.00	
95 tert-Butylbenzene	119	17.945	17.949	-0.004	91	447831	1.00	0.8855	
96 1,2,4-Trimethylbenzene	105	17.961	17.963	-0.002	95	413399	1.00	0.8937	
97 1,3-Dichlorobenzene	146	18.231	18.232	-0.001	97	346492	1.00	0.9161	
98 sec-Butylbenzene	105	18.231	18.235	-0.004	98	592460	1.00	0.8923	
99 Benzyl chloride	91	18.306	18.311	-0.005	98	383181	1.00	0.9113	
100 1,4-Dichlorobenzene	146	18.322	18.324	-0.002	96	339022	1.00	0.9057	
101 4-Isopropyltoluene	119	18.409	18.410	-0.001	97	510030	1.00	0.8864	
102 1,2,3-Trimethylbenzene	105	18.452	18.454	-0.002	98	306762	1.00	0.8919	
103 Butylcyclohexane	83	18.527	18.527	0.000	96	402561	1.00	1.01	
104 1,2-Dichlorobenzene	146	18.694	18.698	-0.004	93	316358	1.00	0.8990	
105 2,3-Dihydroindene	117	18.700	18.702	-0.002	93	386578	1.00	0.8914	
106 Indene	116	18.829	18.833	-0.004	92	280824	1.00	0.8863	
107 n-Butylbenzene	91	18.856	18.862	-0.006	98	484303	1.00	0.9089	
108 Undecane	57	19.217	19.217	0.000	94	319511	1.00	1.01	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.244	19.247	-0.003	97	382029	1.00	0.9062	
110 1,2-Dibromo-3-Chloropropan	157	19.315	19.317	-0.003	96	121417	1.00	0.8685	
111 1,2,4,5-Tetramethylbenzene	119	19.638	19.642	-0.004	96	458404	1.00	0.8935	
112 1,2,3,5-Tetramethylbenzene	119	19.692	19.696	-0.004	94	266757	1.00	0.8706	
113 1,2,3,4-Tetramethylbenzene	119	20.091	20.092	-0.001	97	361637	1.00	0.8573	
114 Dodecane	57	20.285	20.286	-0.001	94	297125	1.00	1.02	
115 1,2,4-Trichlorobenzene	180	20.425	20.427	-0.002	94	266823	1.00	0.8708	
116 Naphthalene	128	20.555	20.555	0.000	99	542795	1.00	0.8496	
117 Benzo(b)thiophene	134	20.652	20.653	-0.001	99	323541	1.00	0.9130	
118 Hexachlorobutadiene	225	20.781	20.783	-0.002	95	293683	1.00	0.9821	
119 1,2,3-Trichlorobenzene	180	20.830	20.831	-0.001	94	272663	1.00	0.9799	
120 2-Methylnaphthalene	142	21.628	21.628	0.000	99	405427	3.12	3.11	
121 1-Methylnaphthalene	142	21.806	21.808	-0.002	100	351664	3.12	3.35	
A 124 Toluene Range	1	13.027	(12.992-13.062)		0	853542	1.00	0.9629	
A 125 C8 Range	1	13.792	(13.777-13.807)		0	1992357	1.00	1.28	
S 126 Xylenes, Total	100				0		3.00	2.76	
S 127 1,2-Dichloroethene, Total	1				0		2.00	2.01	

Reagents:

40L6DNP_00010	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

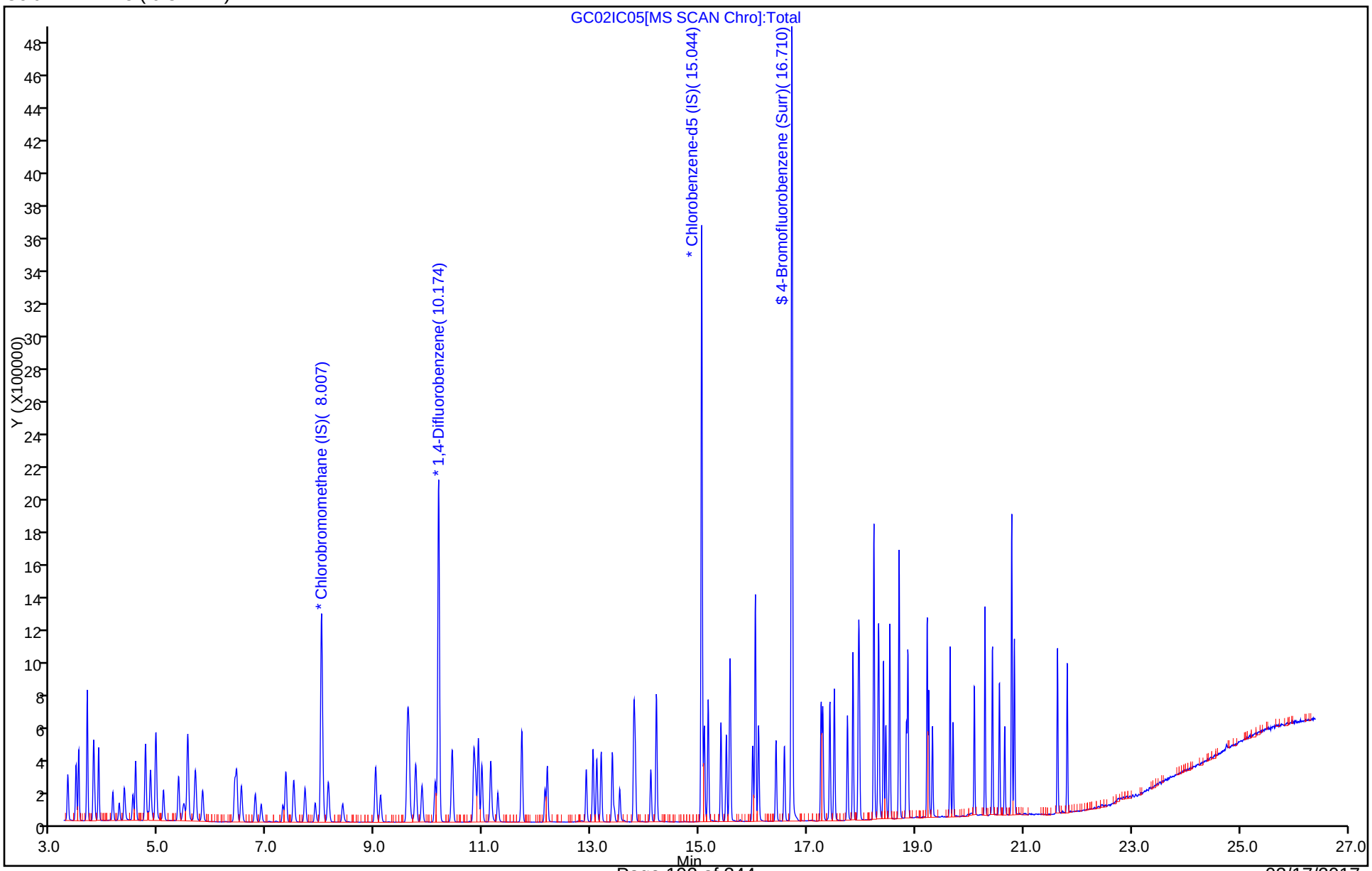
Report Date: 03-Mar-2017 15:13:21 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC05.D

Injection Date:	02-Mar-2017 16:20:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	IC L5			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

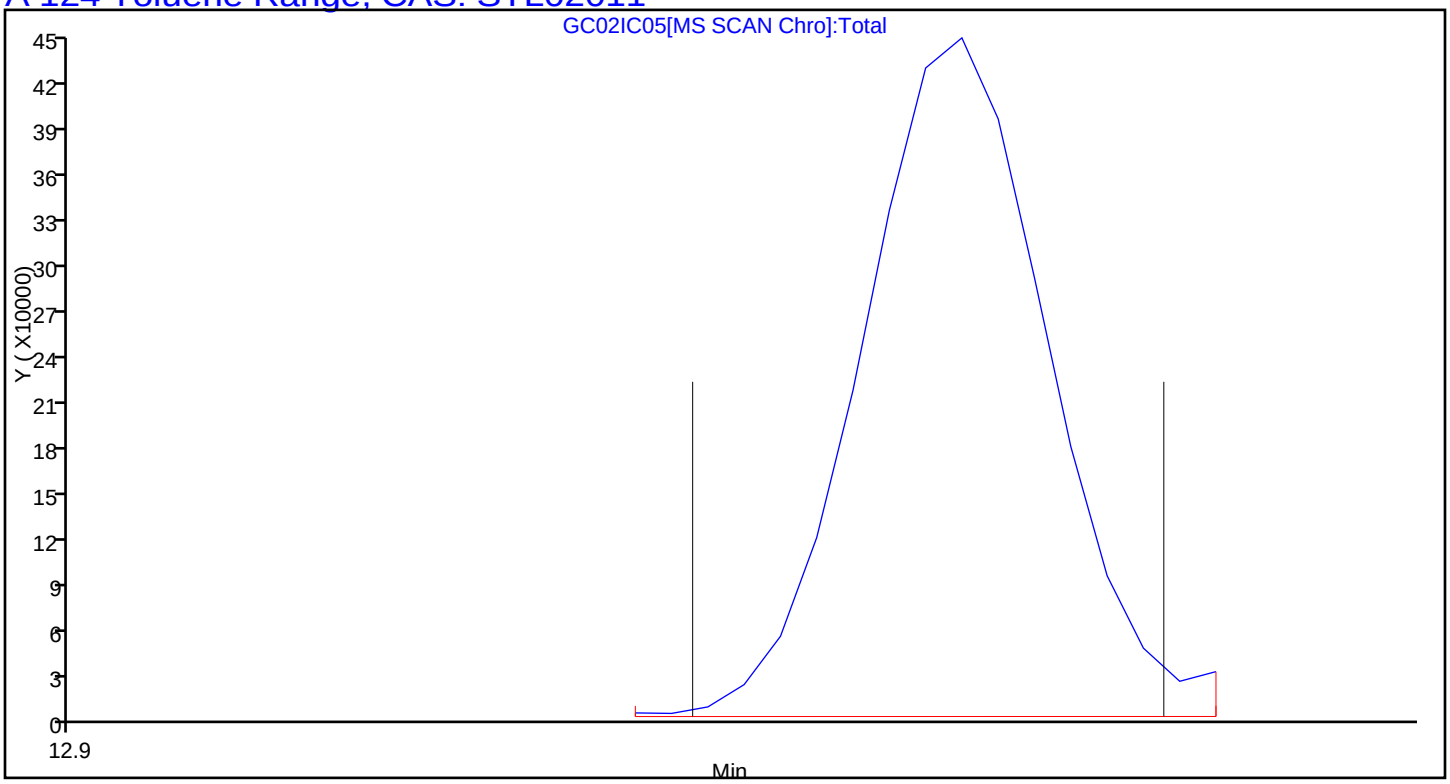


Report Date: 03-Mar-2017 15:13:21 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC05.D				
Injection Date:	02-Mar-2017 16:20:30	Instrument ID:	MG		
Lims ID:	IC L5				
Client ID:					
Operator ID:	7126	ALS Bottle#:	4	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

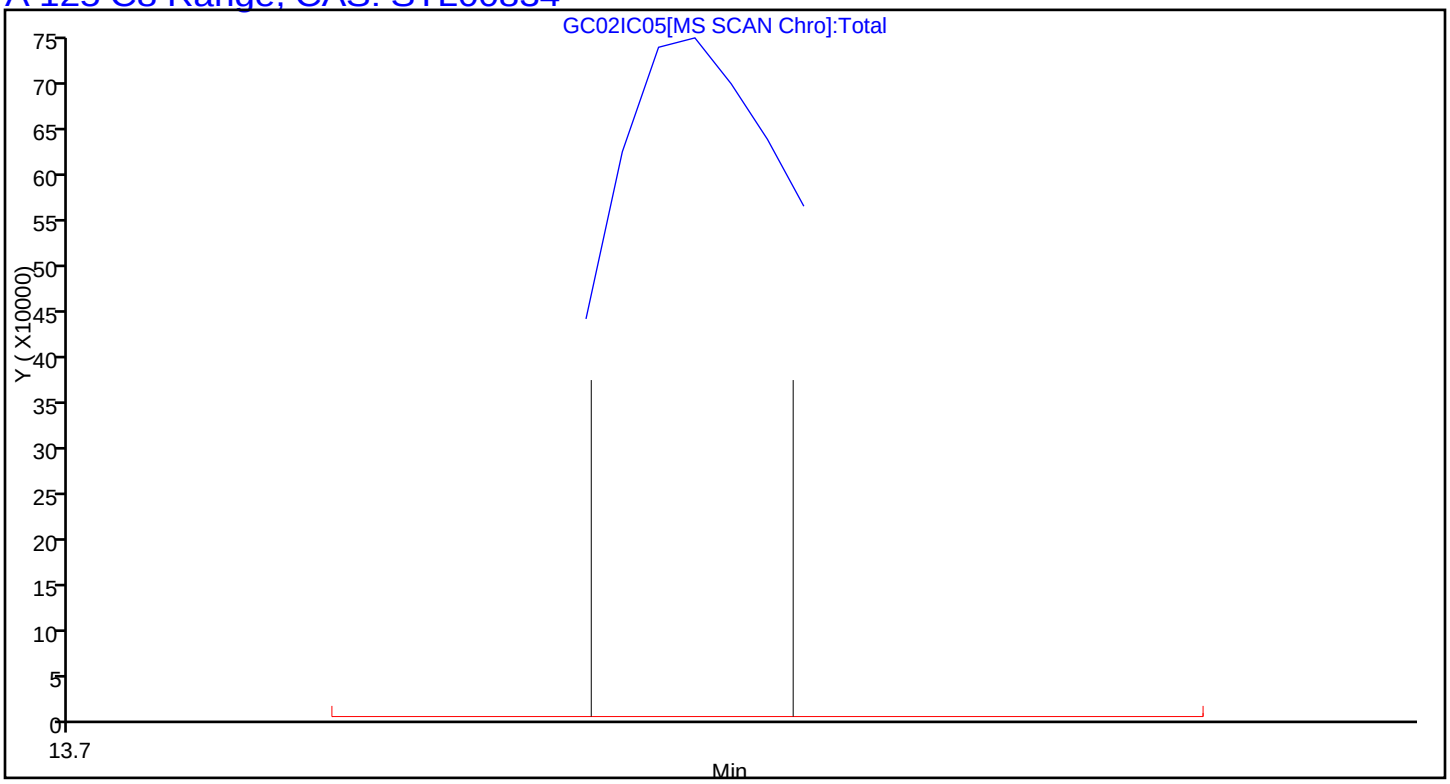


Report Date: 03-Mar-2017 15:13:21 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC05.D				
Injection Date:	02-Mar-2017 16:20:30	Instrument ID:	MG		
Lims ID:	IC L5				
Client ID:					
Operator ID:	7126	ALS Bottle#:	4	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC06.D
Lims ID: ICIS L6
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 02-Mar-2017 17:02:30 ALS Bottle#: 5 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004202-008
Misc. Info.: 073142
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Mar-2017 15:14:02 Calib Date: 02-Mar-2017 20:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa Date: 03-Mar-2017 10:05:01

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.012	8.012	0.000	85	397020	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.180	10.179	0.001	95	1995357	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.044	15.046	-0.002	87	2047691	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.715	16.717	-0.002	96	1498532	4.00	3.93	
6 Chlorodifluoromethane	67	3.466	3.463	0.003	97	73615	2.00	1.90	
7 Propene	41	3.472	3.471	0.001	98	181398	2.00	1.96	
8 Dichlorodifluoromethane	85	3.515	3.514	0.001	100	698780	2.00	1.98	
9 Chloromethane	52	3.666	3.665	0.001	97	57078	2.00	2.01	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.677	3.675	0.002	92	436894	2.00	2.03	
11 Acetaldehyde	44	3.795	3.793	0.002	89	412654	9.99	9.74	
12 Vinyl chloride	62	3.811	3.809	0.002	99	225546	2.00	2.07	
13 Butadiene	54	3.887	3.883	0.004	66	163453	2.00	2.08	
14 Butane	43	3.887	3.885	0.002	86	336204	2.00	2.04	
15 Bromomethane	94	4.151	4.149	0.002	98	223993	2.00	2.03	
16 Chloroethane	64	4.264	4.267	-0.003	91	117430	2.00	2.02	
17 Ethanol	31	4.367	4.372	-0.005	96	438460	9.99	10.0	
18 Vinyl bromide	106	4.523	4.522	0.001	97	208124	2.00	1.98	
19 2-Methylbutane	43	4.572	4.569	0.003	92	262104	2.00	2.09	
20 Acrolein	56	4.750	4.732	0.018	29	31009	2.00	1.91	
21 Trichlorofluoromethane	101	4.755	4.753	0.002	100	714498	2.00	1.98	
22 Acetonitrile	40	4.804	4.808	-0.004	98	77854	2.00	1.95	
23 Acetone	58	4.841	4.849	-0.008	99	254325	5.99	5.99	
24 Pentane	72	4.949	4.949	0.000	97	40620	2.00	2.03	
25 Isopropyl alcohol	45	4.955	4.963	-0.008	93	773681	5.99	6.15	
26 Ethyl ether	31	5.084	5.090	-0.006	90	232288	2.00	1.99	
27 1,1-Dichloroethene	96	5.364	5.367	-0.003	96	200269	2.00	1.95	
28 Acrylonitrile	53	5.445	5.450	-0.005	95	101460	2.00	2.04	
29 2-Methyl-2-propanol	59	5.478	5.494	-0.016	93	314466	2.00	2.08	
30 1,1,2-Trichloro-1,2,2-trif	101	5.537	5.536	0.001	96	431163	2.00	1.98	
31 Methylene Chloride	84	5.672	5.669	0.003	94	172766	2.00	1.81	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.688	5.684	0.004	97	209098	2.00	2.10	
33 Carbon disulfide	76	5.812	5.810	0.002	100	545212	2.00	1.99	
34 trans-1,2-Dichloroethene	96	6.405	6.406	-0.001	98	205008	2.00	1.96	
35 2-Methylpentane	43	6.438	6.439	-0.001	93	418548	2.00	2.01	
36 Methyl tert-butyl ether	73	6.524	6.533	-0.009	95	532900	2.00	1.95	
37 1,1-Dichloroethane	63	6.788	6.787	0.001	100	381249	2.00	1.96	
38 Vinyl acetate	43	6.896	6.898	-0.002	100	416770	2.00	2.00	
39 2-Butanone (MEK)	72	7.295	7.305	-0.010	99	82283	2.00	1.87	
40 Hexane	56	7.349	7.350	-0.001	86	158031	2.00	1.98	
41 Isopropyl ether	45	7.494	7.502	-0.008	95	554336	2.00	1.98	
42 cis-1,2-Dichloroethene	96	7.710	7.707	0.003	95	210694	2.00	1.93	
43 Ethyl acetate	43	7.893	7.901	-0.008	98	337970	2.00	1.99	
44 Chloroform	83	8.034	8.035	-0.001	96	511221	2.00	1.94	
45 Tert-butyl ethyl ether	59	8.136	8.144	-0.008	95	518203	2.00	1.99	
46 Tetrahydrofuran	42	8.395	8.410	-0.015	91	188075	2.00	1.96	
47 1,1,1-Trichloroethane	97	9.015	9.013	0.002	94	572725	2.00	1.98	
48 1,2-Dichloroethane	62	9.107	9.106	0.001	99	353536	2.00	2.00	
49 Benzene	78	9.603	9.599	0.004	96	629128	2.00	2.01	
50 Cyclohexane	69	9.603	9.604	-0.001	92	110969	2.00	2.02	
52 Carbon tetrachloride	117	9.630	9.629	0.001	97	614207	2.00	2.11	
51 n-Butanol	31	9.619	9.647	-0.028	69	74293	2.00	2.03	
53 2,3-Dimethylpentane	71	9.754	9.754	0.000	90	151135	2.00	1.96	
54 Thiophene	84	9.872	9.873	-0.001	95	356253	2.00	1.99	
55 Tert-amyl methyl ether	73	10.115	10.121	-0.006	98	554414	2.00	2.12	
56 Isooctane	57	10.428	10.430	-0.002	97	980383	2.00	1.99	
57 n-Heptane	71	10.832	10.831	0.001	90	238440	2.00	1.99	
58 1,2-Dichloropropane	63	10.865	10.862	0.003	86	233060	2.00	2.03	
59 Trichloroethene	130	10.913	10.913	0.000	96	361708	2.00	2.02	
60 Dibromomethane	93	10.978	10.978	0.000	94	293074	2.00	2.00	
61 Dichlorobromomethane	83	11.145	11.143	0.002	98	537969	2.00	2.09	
62 1,4-Dioxane	88	11.156	11.173	-0.017	92	85834	2.00	2.05	
63 Methyl methacrylate	41	11.274	11.278	-0.004	94	228935	2.00	2.04	
64 Methylcyclohexane	83	11.717	11.718	-0.001	96	510072	2.00	2.00	
65 4-Methyl-2-pentanone (MIBK	43	12.143	12.153	-0.010	97	374418	2.00	1.99	
66 cis-1,3-Dichloropropene	75	12.191	12.190	0.001	95	411086	2.00	2.04	
67 trans-1,3-Dichloropropene	75	12.908	12.911	-0.003	97	406181	2.00	2.03	
68 Toluene	91	13.038	13.035	0.003	94	728639	2.00	1.96	
69 1,1,2-Trichloroethane	83	13.103	13.106	-0.004	99	224974	2.00	1.98	
70 2-Methylthiophene	97	13.183	13.186	-0.003	97	649696	2.00	2.00	
71 3-Methylthiophene	97	13.394	13.394	0.000	99	638468	2.00	1.99	
72 2-Hexanone	58	13.529	13.535	-0.007	93	186539	2.00	1.98	
73 n-Octane	85	13.793	13.792	0.001	91	269612	2.00	1.98	
74 Chlorodibromomethane	129	13.814	13.816	-0.002	97	540498	2.00	2.15	
75 Ethylene Dibromide	107	14.105	14.106	-0.001	97	462418	2.00	2.04	
76 Tetrachloroethene	129	14.208	14.207	0.001	95	320386	2.00	1.96	
77 Chlorobenzene	112	15.092	15.095	-0.003	93	640391	2.00	1.96	
78 2,3-Dimethylheptane	43	15.162	15.165	-0.003	92	653073	2.00	1.97	
79 Ethylbenzene	91	15.400	15.402	-0.002	99	961131	2.00	1.97	
80 2-Ethylthiophene	97	15.502	15.502	0.000	98	782539	2.00	1.98	
81 m-Xylene & p-Xylene	91	15.572	15.572	0.000	99	1513863	3.99	3.96	
82 Bromoform	173	15.987	15.991	-0.004	96	509620	2.00	2.08	
84 Styrene	104	16.036	16.037	-0.001	97	569507	2.00	2.10	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
83 n-Nonane	57	16.036	16.038	-0.002	88	495537	2.00	2.02	
85 o-Xylene	91	16.095	16.099	-0.004	98	767665	2.00	1.96	
86 1,1,2,2-Tetrachloroethane	83	16.419	16.422	-0.003	99	513576	2.00	1.99	
87 1,2,3-Trichloropropane	110	16.575	16.577	-0.002	97	172113	2.00	1.96	
88 Isopropylbenzene	105	16.699	16.703	-0.004	98	1097926	2.00	1.92	
89 N-Propylbenzene	120	17.255	17.257	-0.002	99	302377	2.00	1.99	
90 2-Chlorotoluene	126	17.287	17.288	-0.001	97	290310	2.00	1.98	
91 4-Ethyltoluene	105	17.416	17.418	-0.002	98	1056133	2.00	1.96	
92 1,3,5-Trimethylbenzene	120	17.503	17.502	0.001	93	499066	2.00	1.98	
93 Alpha Methyl Styrene	118	17.745	17.744	0.001	88	428360	2.00	2.04	
94 n-Decane	57	17.842	17.846	-0.004	93	608205	2.00	2.04	
95 tert-Butylbenzene	119	17.950	17.949	0.001	93	1023334	2.00	2.00	
96 1,2,4-Trimethylbenzene	105	17.961	17.963	-0.002	96	936657	2.00	2.00	
97 1,3-Dichlorobenzene	146	18.231	18.232	-0.001	98	762687	2.00	2.00	
98 sec-Butylbenzene	105	18.236	18.235	0.001	98	1373491	2.00	2.05	
99 Benzyl chloride	91	18.312	18.311	0.001	98	885361	2.00	2.08	
100 1,4-Dichlorobenzene	146	18.322	18.324	-0.002	95	747931	2.00	1.98	
101 4-Isopropyltoluene	119	18.409	18.410	-0.001	97	1163365	2.00	2.00	
102 1,2,3-Trimethylbenzene	105	18.452	18.454	-0.002	97	680764	2.00	1.96	
103 Butylcyclohexane	83	18.527	18.527	0.000	95	810366	2.00	2.00	
104 1,2-Dichlorobenzene	146	18.694	18.698	-0.004	94	708335	2.00	1.99	
105 2,3-Dihydroindene	117	18.700	18.702	-0.002	94	890055	2.00	2.03	
106 Indene	116	18.835	18.833	0.002	92	635278	2.00	1.98	
107 n-Butylbenzene	91	18.862	18.862	0.000	98	1078971	2.00	2.00	
108 Undecane	57	19.217	19.217	0.000	93	637737	2.00	1.99	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.244	19.247	-0.003	97	858063	2.00	2.01	
110 1,2-Dibromo-3-Chloropropan	157	19.315	19.317	-0.002	98	292233	2.00	2.07	
111 1,2,4,5-Tetramethylbenzene	119	19.643	19.642	0.001	96	1053727	2.00	2.03	
112 1,2,3,5-Tetramethylbenzene	119	19.697	19.696	0.001	95	622820	2.00	2.01	
113 1,2,3,4-Tetramethylbenzene	119	20.091	20.092	-0.001	97	862421	2.00	2.02	
114 Dodecane	57	20.285	20.286	-0.001	94	576970	2.00	1.95	
115 1,2,4-Trichlorobenzene	180	20.425	20.427	-0.002	94	623511	2.00	2.01	
116 Naphthalene	128	20.555	20.555	0.000	99	1303379	2.00	2.02	
117 Benzo(b)thiophene	134	20.652	20.653	-0.001	99	758002	2.00	2.12	
118 Hexachlorobutadiene	225	20.781	20.783	-0.002	95	569346	2.00	1.88	
119 1,2,3-Trichlorobenzene	180	20.830	20.831	-0.001	95	611029	2.00	2.17	
120 2-Methylnaphthalene	142	21.628	21.628	0.000	100	956277	6.24	7.26	
121 1-Methylnaphthalene	142	21.806	21.808	-0.002	100	788833	6.24	7.44	
A 124 Toluene Range	1	13.033	(12.998-13.068)		0	1798669	2.00	2.02	
A 125 C8 Range	1	13.798	(13.783-13.813)		0	3321390	2.00	2.12	M
S 126 Xylenes, Total	100				0		5.99	5.91	
S 127 1,2-Dichloroethene, Total	1				0		3.99	3.89	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L6DNP_00010	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

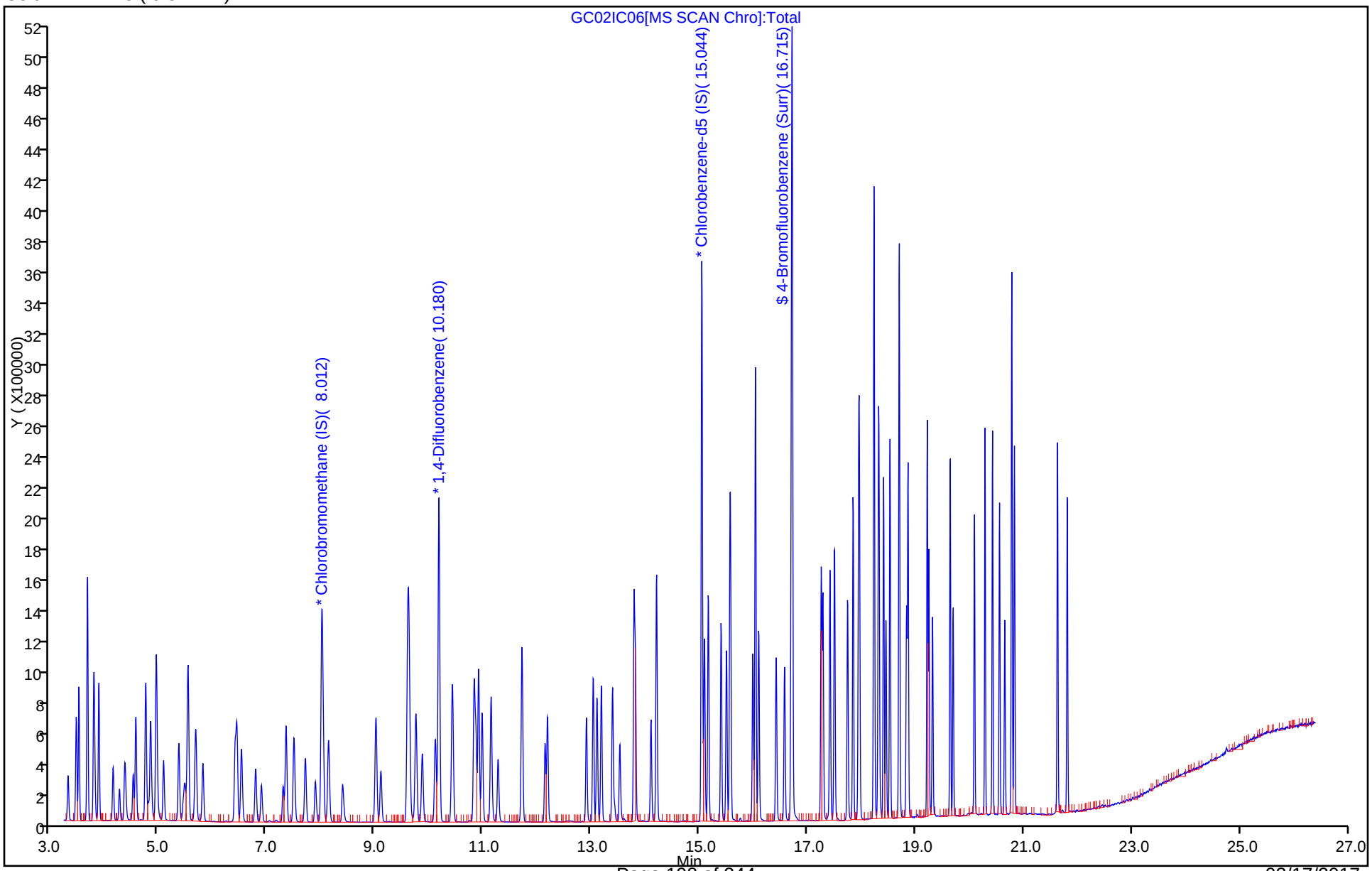
Report Date: 03-Mar-2017 15:14:03 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC06.D

Injection Date:	02-Mar-2017 17:02:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	ICIS L6			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

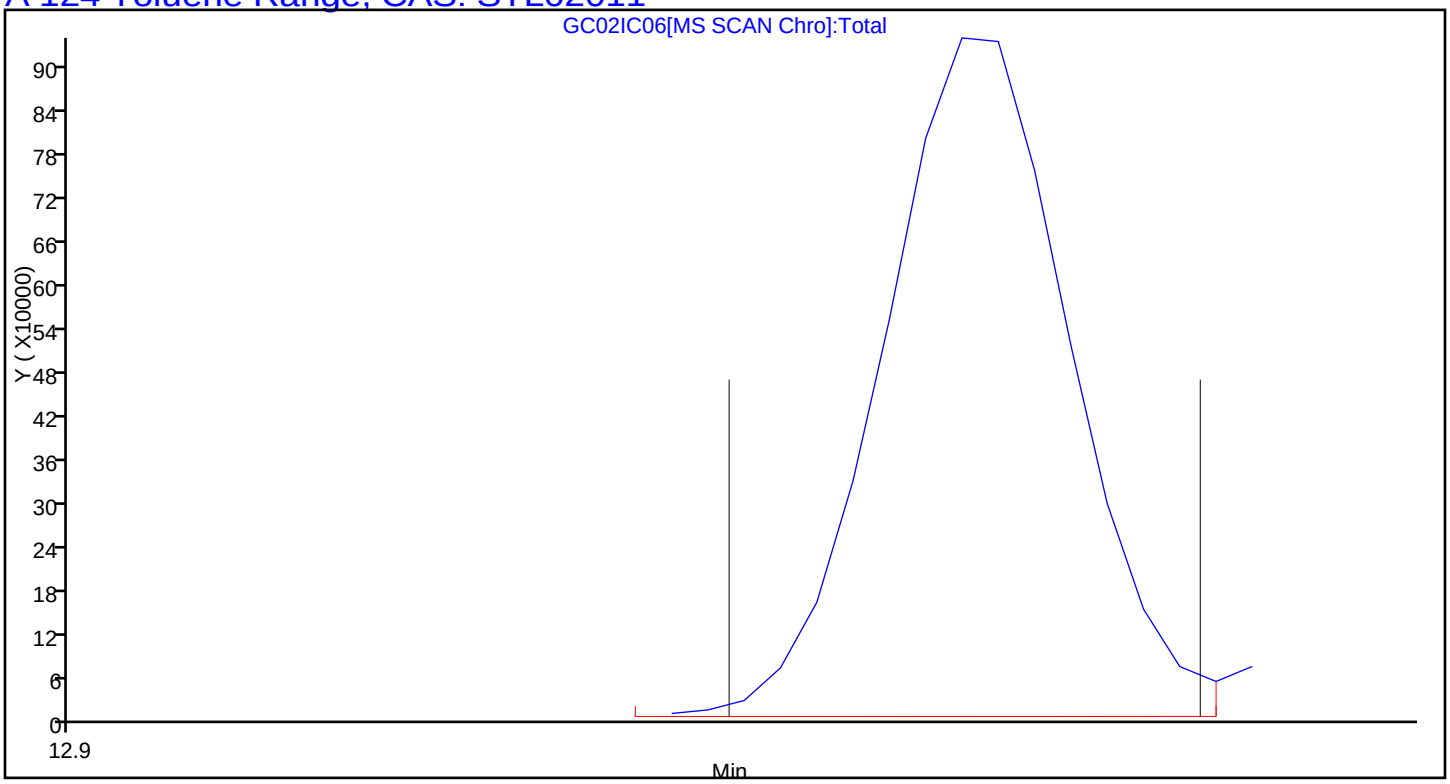


Report Date: 03-Mar-2017 15:14:03 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC06.D				
Injection Date:	02-Mar-2017 17:02:30	Instrument ID:	MG		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	7126	ALS Bottle#:	5	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

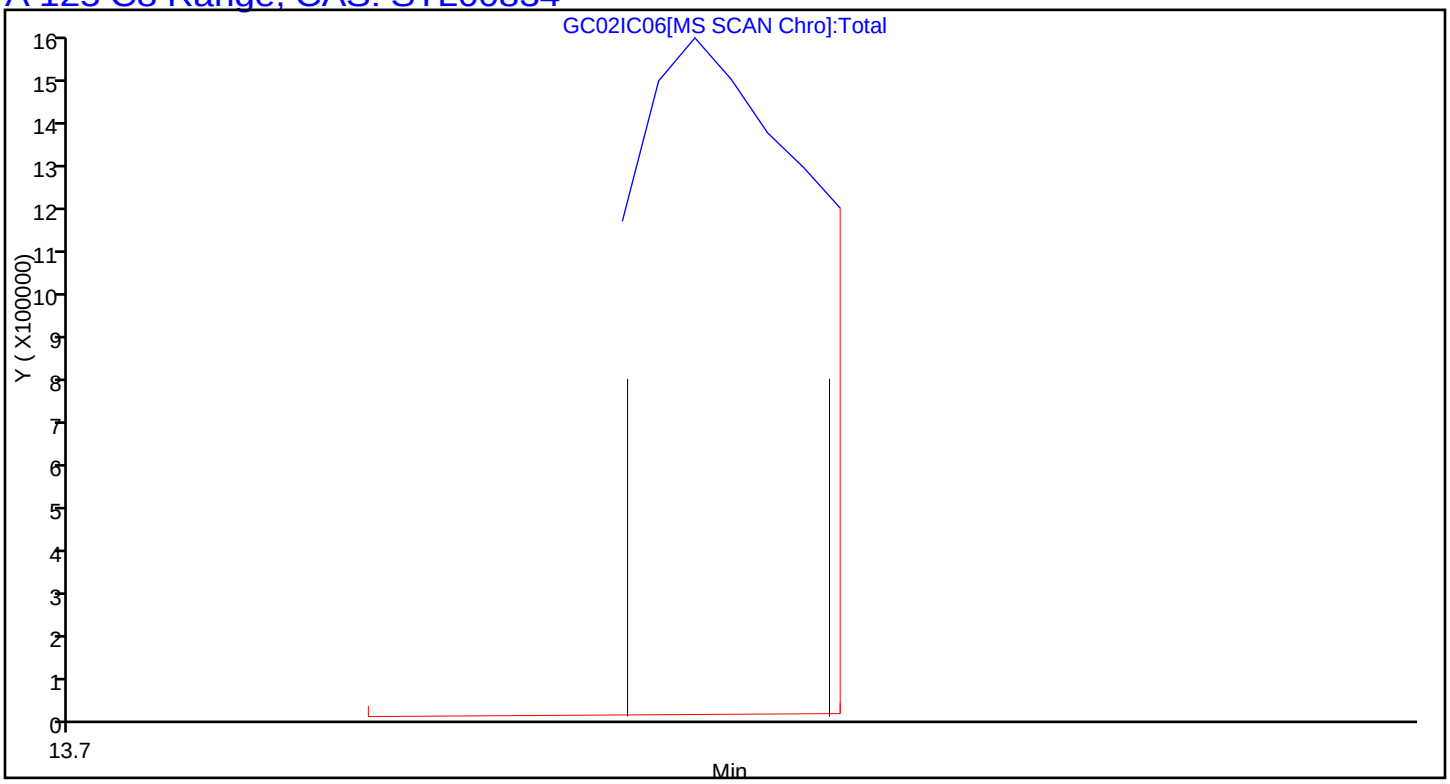


Report Date: 03-Mar-2017 15:14:03 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC06.D				
Injection Date:	02-Mar-2017 17:02:30	Instrument ID:	MG		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	7126	ALS Bottle#:	5	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

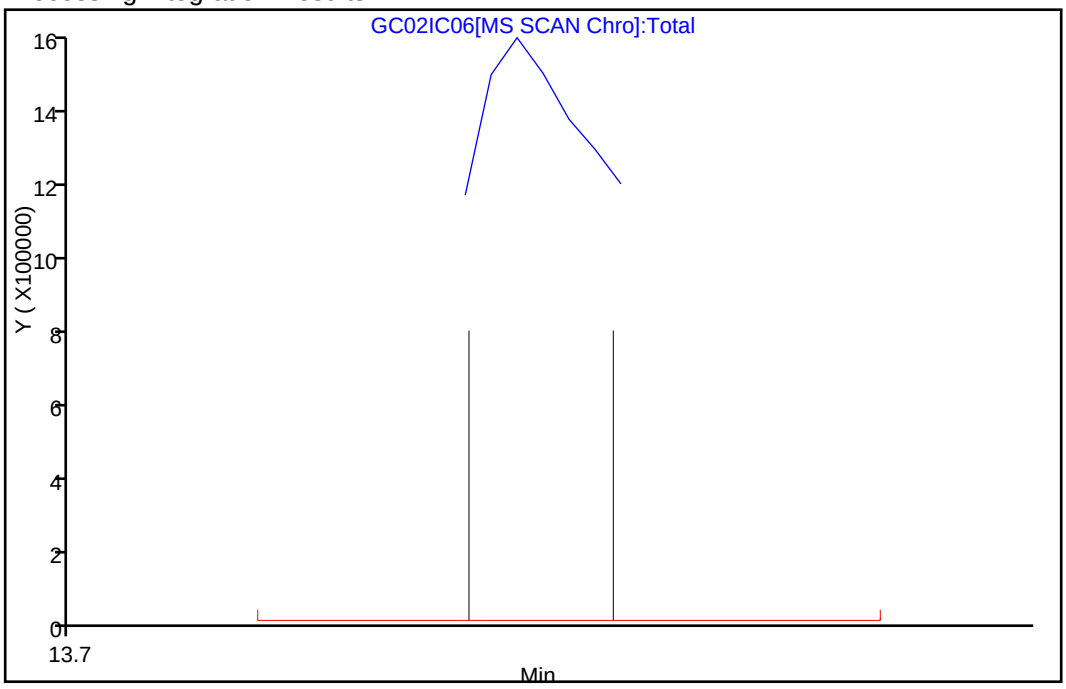
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC06.D				
Injection Date:	02-Mar-2017 17:02:30	Instrument ID:	MG		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	7126	ALS Bottle#:	5	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, RT: 13.798, CAS: STL00834

Signal: 1

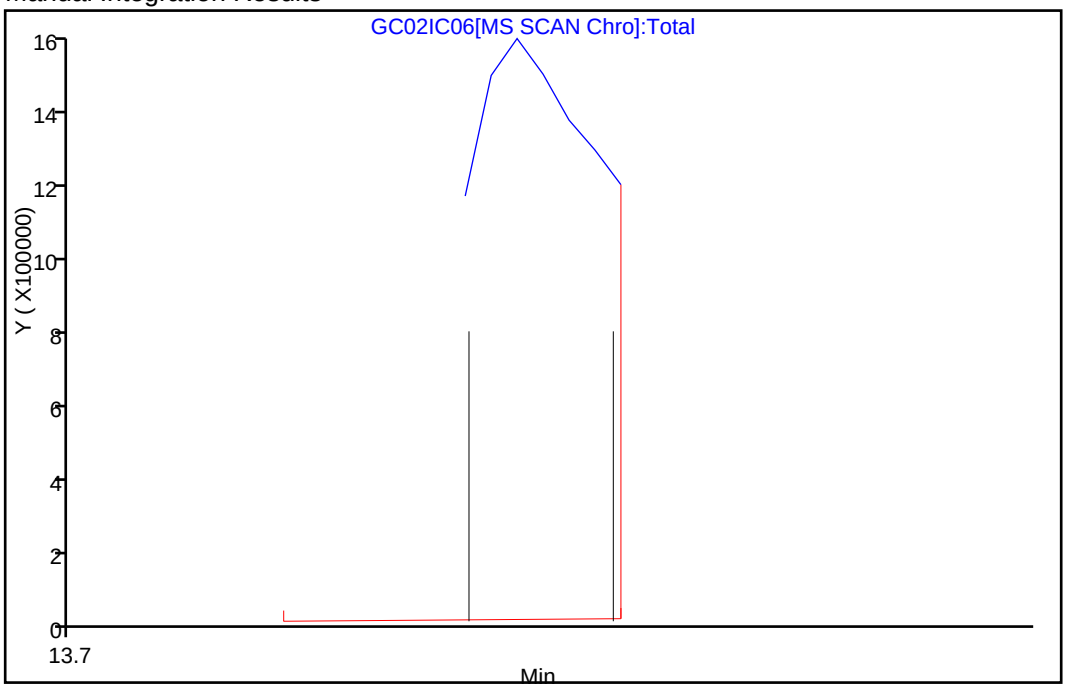
Processing Integration Results

RT: 13.80
Response: 4159754
Amount: 2.378888



Manual Integration Results

RT: 13.80
Response: 3321390
Amount: 2.120993



Reviewer: tajh, 03-Mar-2017 15:13:23

Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC07.D
Lims ID: IC L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 02-Mar-2017 17:44:30 ALS Bottle#: 6 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004202-009
Misc. Info.: 073141
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Mar-2017 15:14:40 Calib Date: 02-Mar-2017 20:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 03-Mar-2017 13:03:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.018	8.012	0.006	88	432870	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.185	10.179	0.006	94	2161798	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.049	15.046	0.003	88	2132071	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.721	16.717	0.004	93	1596553	4.00	4.02	
6 Chlorodifluoromethane	67	3.466	3.463	0.003	97	149012	4.00	3.52	
7 Propene	41	3.472	3.471	0.001	98	363824	4.00	3.61	
8 Dichlorodifluoromethane	85	3.515	3.514	0.001	100	1443467	4.00	3.76	
9 Chloromethane	52	3.666	3.665	0.001	98	118748	4.00	3.83	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.677	3.675	0.002	93	859118	4.00	3.66	
11 Acetaldehyde	44	3.795	3.793	0.002	89	818363	20.0	17.7	
12 Vinyl chloride	62	3.812	3.809	0.003	99	463110	4.00	3.90	
13 Butadiene	54	3.887	3.883	0.004	66	334116	4.00	3.90	
14 Butane	43	3.887	3.885	0.002	86	696236	4.00	3.87	
15 Bromomethane	94	4.151	4.149	0.002	98	458263	4.00	3.80	
16 Chloroethane	64	4.270	4.267	0.003	91	242874	4.00	3.82	
17 Ethanol	31	4.378	4.372	0.006	97	900932	20.0	18.9	
18 Vinyl bromide	106	4.523	4.522	0.001	97	415451	4.00	3.63	
19 2-Methylbutane	43	4.572	4.569	0.003	91	518587	4.00	3.79	
20 Acrolein	56	4.750	4.732	0.018	29	67683	4.00	3.81	
21 Trichlorofluoromethane	101	4.755	4.753	0.002	99	1437541	4.00	3.65	
22 Acetonitrile	40	4.804	4.808	-0.004	99	159557	4.00	3.67	
23 Acetone	58	4.847	4.849	-0.002	99	500469	12.0	10.8	
24 Pentane	72	4.949	4.949	0.000	96	82609	4.00	3.78	
25 Isopropyl alcohol	45	4.971	4.963	0.008	94	1516171	12.0	11.1	
26 Ethyl ether	31	5.084	5.090	-0.006	90	488155	4.00	3.84	
27 1,1-Dichloroethene	96	5.370	5.367	0.003	97	405837	4.00	3.62	
28 Acrylonitrile	53	5.451	5.450	0.001	96	218964	4.00	4.04	
29 2-Methyl-2-propanol	59	5.494	5.494	0.000	96	640651	4.00	3.88	
30 1,1,2-Trichloro-1,2,2-trif	101	5.537	5.536	0.001	96	890153	4.00	3.75	
31 Methylene Chloride	84	5.672	5.669	0.003	93	351168	4.00	3.37	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.688	5.684	0.004	97	419643	4.00	3.86	
33 Carbon disulfide	76	5.812	5.810	0.002	100	1120712	4.00	3.75	
34 trans-1,2-Dichloroethene	96	6.411	6.406	0.005	98	433627	4.00	3.80	
35 2-Methylpentane	43	6.443	6.439	0.004	93	868758	4.00	3.83	
36 Methyl tert-butyl ether	73	6.524	6.533	-0.009	96	1150545	4.00	3.87	
37 1,1-Dichloroethane	63	6.788	6.787	0.001	100	798627	4.00	3.77	
38 Vinyl acetate	43	6.901	6.898	0.003	100	922344	4.00	4.06	
39 2-Butanone (MEK)	72	7.300	7.305	-0.005	99	178044	4.00	3.71	
40 Hexane	56	7.354	7.350	0.004	85	325047	4.00	3.73	
41 Isopropyl ether	45	7.500	7.502	-0.002	94	1200569	4.00	3.93	
42 cis-1,2-Dichloroethene	96	7.710	7.707	0.003	95	450081	4.00	3.77	
43 Ethyl acetate	43	7.899	7.901	-0.002	98	749629	4.00	4.04	
44 Chloroform	83	8.045	8.035	0.010	96	1073295	4.00	3.74	
45 Tert-butyl ethyl ether	59	8.136	8.144	-0.008	95	1129672	4.00	3.97	
46 Tetrahydrofuran	42	8.400	8.410	-0.010	91	394414	4.00	3.77	
47 1,1,1-Trichloroethane	97	9.015	9.013	0.002	95	1200734	4.00	3.81	
48 1,2-Dichloroethane	62	9.112	9.106	0.006	99	743733	4.00	3.88	
49 Benzene	78	9.603	9.599	0.004	96	1362801	4.00	4.02	
50 Cyclohexane	69	9.603	9.604	-0.001	92	240083	4.00	4.03	
52 Carbon tetrachloride	117	9.635	9.629	0.006	98	1304352	4.00	4.13	
51 n-Butanol	31	9.630	9.647	-0.017	75	162687	4.00	4.11	
53 2,3-Dimethylpentane	71	9.759	9.754	0.005	90	317495	4.00	3.80	
54 Thiophene	84	9.878	9.873	0.005	95	758324	4.00	3.91	
55 Tert-amyl methyl ether	73	10.115	10.121	-0.006	98	1188591	4.00	4.19	
56 Isooctane	57	10.433	10.430	0.003	97	2065349	4.00	3.87	
57 n-Heptane	71	10.832	10.831	0.001	91	509798	4.00	3.92	
58 1,2-Dichloropropane	63	10.865	10.862	0.003	85	493172	4.00	3.96	
59 Trichloroethene	130	10.919	10.913	0.006	96	770017	4.00	3.96	
60 Dibromomethane	93	10.983	10.978	0.005	94	630013	4.00	3.97	
61 Dichlorobromomethane	83	11.145	11.143	0.002	98	1169408	4.00	4.20	
62 1,4-Dioxane	88	11.167	11.173	-0.006	91	187768	4.00	4.15	
63 Methyl methacrylate	41	11.280	11.278	0.002	94	509515	4.00	4.20	
64 Methylcyclohexane	83	11.717	11.718	-0.001	95	1092146	4.00	3.96	
65 4-Methyl-2-pentanone (MIBK	43	12.148	12.153	-0.005	97	802345	4.00	3.94	
66 cis-1,3-Dichloropropene	75	12.191	12.190	0.001	95	874614	4.00	4.02	
67 trans-1,3-Dichloropropene	75	12.914	12.911	0.003	98	860494	4.00	4.12	
68 Toluene	91	13.038	13.035	0.003	94	1584870	4.00	4.10	
69 1,1,2-Trichloroethane	83	13.108	13.106	0.002	99	487400	4.00	4.13	
70 2-Methylthiophene	97	13.189	13.186	0.003	97	1403012	4.00	4.16	
71 3-Methylthiophene	97	13.394	13.394	0.000	99	1383056	4.00	4.14	
72 2-Hexanone	58	13.529	13.535	-0.006	94	399503	4.00	4.07	
73 n-Octane	85	13.793	13.792	0.001	92	581291	4.00	4.09	
74 Chlorodibromomethane	129	13.820	13.816	0.004	97	1197096	4.00	4.58	
75 Ethylene Dibromide	107	14.111	14.106	0.005	98	1009922	4.00	4.28	
76 Tetrachloroethene	129	14.208	14.207	0.001	95	677805	4.00	3.97	
77 Chlorobenzene	112	15.098	15.095	0.003	93	1396401	4.00	4.11	
78 2,3-Dimethylheptane	43	15.168	15.165	0.003	93	1432853	4.00	4.14	
79 Ethylbenzene	91	15.405	15.402	0.003	98	2123060	4.00	4.18	
80 2-Ethylthiophene	97	15.508	15.502	0.006	98	1723412	4.00	4.19	
81 m-Xylene & p-Xylene	91	15.572	15.572	0.000	99	3318439	8.00	8.33	
82 Bromoform	173	15.993	15.991	0.002	96	1199597	4.00	4.71	
84 Styrene	104	16.041	16.037	0.004	98	1210797	4.00	4.29	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
83 n-Nonane	57	16.041	16.038	0.003	88	1007618	4.00	3.94	
85 o-Xylene	91	16.101	16.099	0.002	98	1687122	4.00	4.13	
86 1,1,2,2-Tetrachloroethane	83	16.424	16.422	0.002	99	1155005	4.00	4.31	
87 1,2,3-Trichloropropane	110	16.581	16.577	0.004	97	377370	4.00	4.12	
88 Isopropylbenzene	105	16.705	16.703	0.002	97	2338552	4.00	3.94	
89 N-Propylbenzene	120	17.260	17.257	0.003	99	687647	4.00	4.34	
90 2-Chlorotoluene	126	17.292	17.288	0.004	97	652552	4.00	4.27	
91 4-Ethyltoluene	105	17.422	17.418	0.004	98	2382649	4.00	4.25	
92 1,3,5-Trimethylbenzene	120	17.503	17.502	0.001	93	1132222	4.00	4.32	
93 Alpha Methyl Styrene	118	17.745	17.744	0.001	88	1000574	4.00	4.57	
94 n-Decane	57	17.848	17.846	0.002	93	1310271	4.00	4.21	
95 tert-Butylbenzene	119	17.950	17.949	0.001	92	2201186	4.00	4.14	
96 1,2,4-Trimethylbenzene	105	17.966	17.963	0.003	95	2013472	4.00	4.14	
97 1,3-Dichlorobenzene	146	18.236	18.232	0.004	98	1630912	4.00	4.10	
98 sec-Butylbenzene	105	18.236	18.235	0.001	97	2899550	4.00	4.15	
99 Benzyl chloride	91	18.312	18.311	0.001	98	1947940	4.00	4.40	
100 1,4-Dichlorobenzene	146	18.328	18.324	0.004	95	1595871	4.00	4.05	
101 4-Isopropyltoluene	119	18.414	18.410	0.004	97	2559983	4.00	4.23	
102 1,2,3-Trimethylbenzene	105	18.457	18.454	0.003	97	1538574	4.00	4.25	
103 Butylcyclohexane	83	18.527	18.527	0.000	94	1695670	4.00	4.02	
104 1,2-Dichlorobenzene	146	18.700	18.698	0.002	94	1504756	4.00	4.06	
105 2,3-Dihydroindene	117	18.705	18.702	0.003	94	1895000	4.00	4.15	
106 Indene	116	18.835	18.833	0.002	92	1463201	4.00	4.39	
107 n-Butylbenzene	91	18.862	18.862	0.000	98	2354005	4.00	4.20	
108 Undecane	57	19.218	19.217	0.001	94	1399535	4.00	4.19	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.250	19.247	0.003	97	1946396	4.00	4.39	
110 1,2-Dibromo-3-Chloropropan	157	19.320	19.317	0.003	99	680296	4.00	4.62	
111 1,2,4,5-Tetramethylbenzene	119	19.644	19.642	0.002	97	2352685	4.00	4.36	
112 1,2,3,5-Tetramethylbenzene	119	19.697	19.696	0.001	95	1378186	4.00	4.27	
113 1,2,3,4-Tetramethylbenzene	119	20.091	20.092	-0.001	97	1933165	4.00	4.36	
114 Dodecane	57	20.285	20.286	-0.001	94	1237066	4.00	4.02	
115 1,2,4-Trichlorobenzene	180	20.425	20.427	-0.002	94	1366584	4.00	4.24	
116 Naphthalene	128	20.555	20.555	0.000	99	2895014	4.00	4.31	
117 Benzo(b)thiophene	134	20.652	20.653	-0.001	99	1681098	4.00	4.51	
118 Hexachlorobutadiene	225	20.781	20.783	-0.002	96	1269541	4.00	4.03	
119 1,2,3-Trichlorobenzene	180	20.830	20.831	-0.001	95	1233859	4.00	4.21	
120 2-Methylnaphthalene	142	21.628	21.628	0.000	100	1788441	12.5	13.0	
121 1-Methylnaphthalene	142	21.811	21.808	0.003	100	1389272	12.5	12.6	
A 124 Toluene Range	1	13.033	(12.998-13.068)		0	3880684	4.00	4.02	
A 125 C8 Range	1	13.798	(13.783-13.813)		0	5856098	4.00	3.45	M
S 126 Xylenes, Total	100				0		12.0	12.5	
S 127 1,2-Dichloroethene, Total	1				0		8.00	7.58	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L7DNP_00009	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

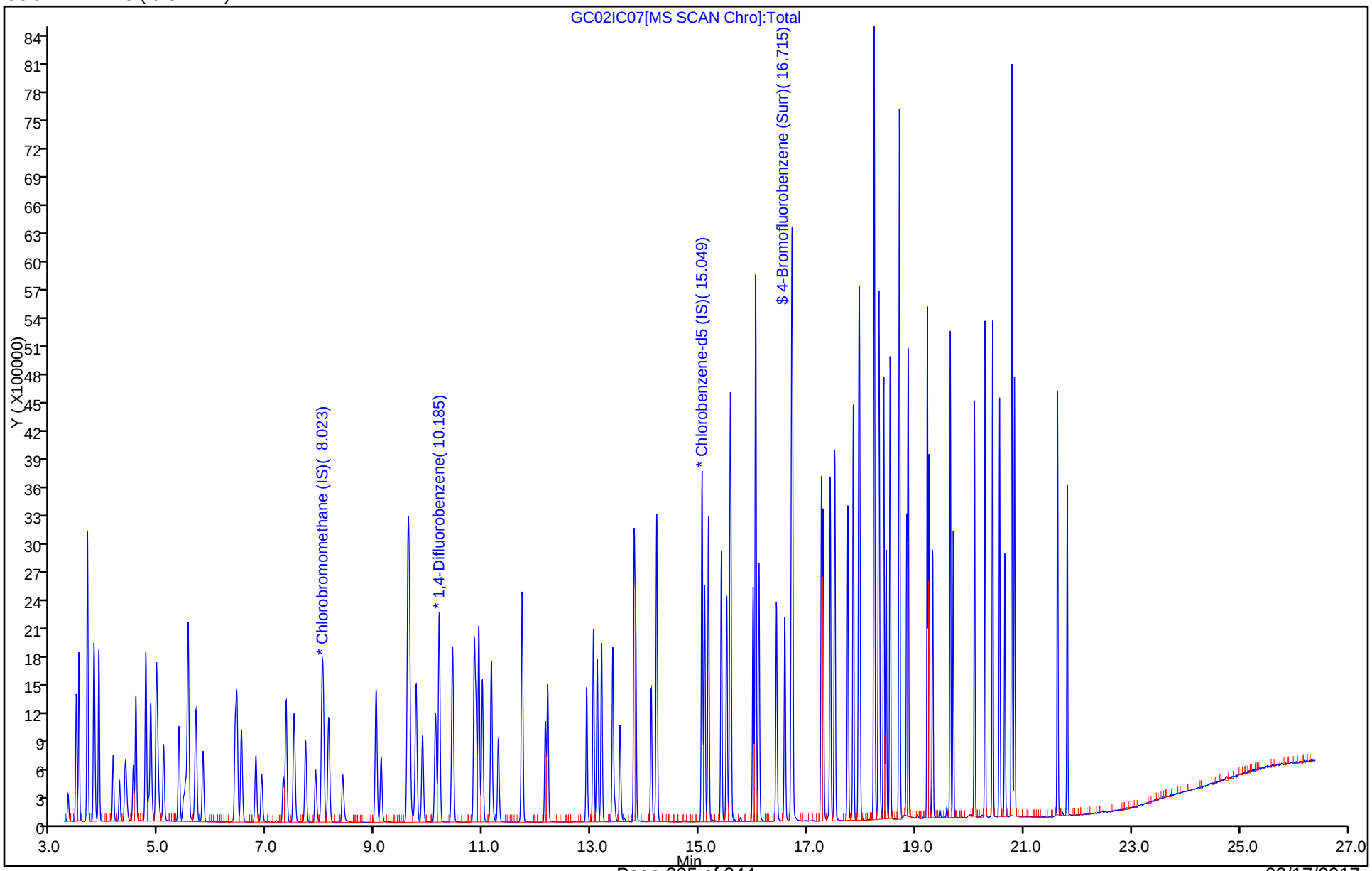
Report Date: 03-Mar-2017 15:14:42 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC07.D

Injection Date:	02-Mar-2017 17:44:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	IC L7			Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

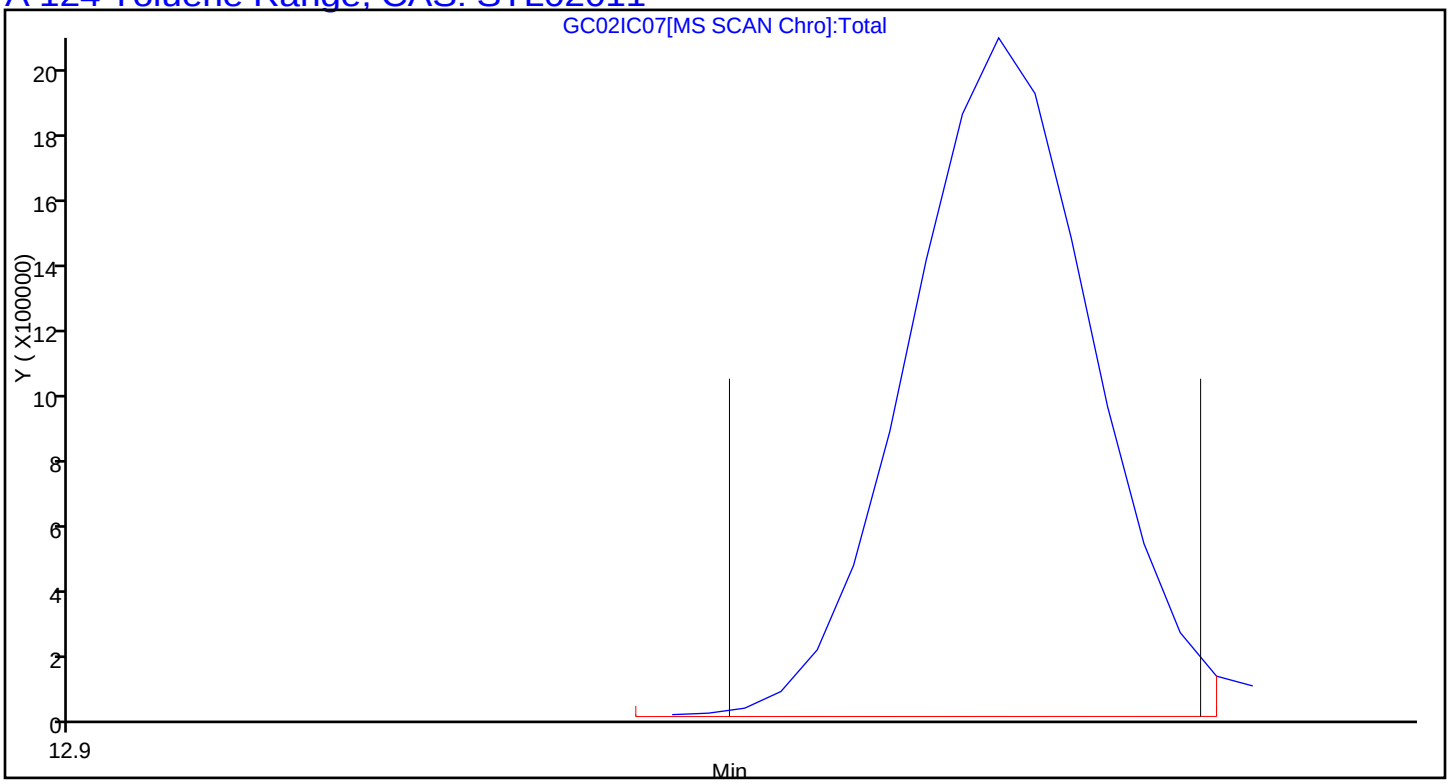


Report Date: 03-Mar-2017 15:14:42 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC07.D				
Injection Date:	02-Mar-2017 17:44:30	Instrument ID:	MG		
Lims ID:	IC L7				
Client ID:					
Operator ID:	7126	ALS Bottle#:	6	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

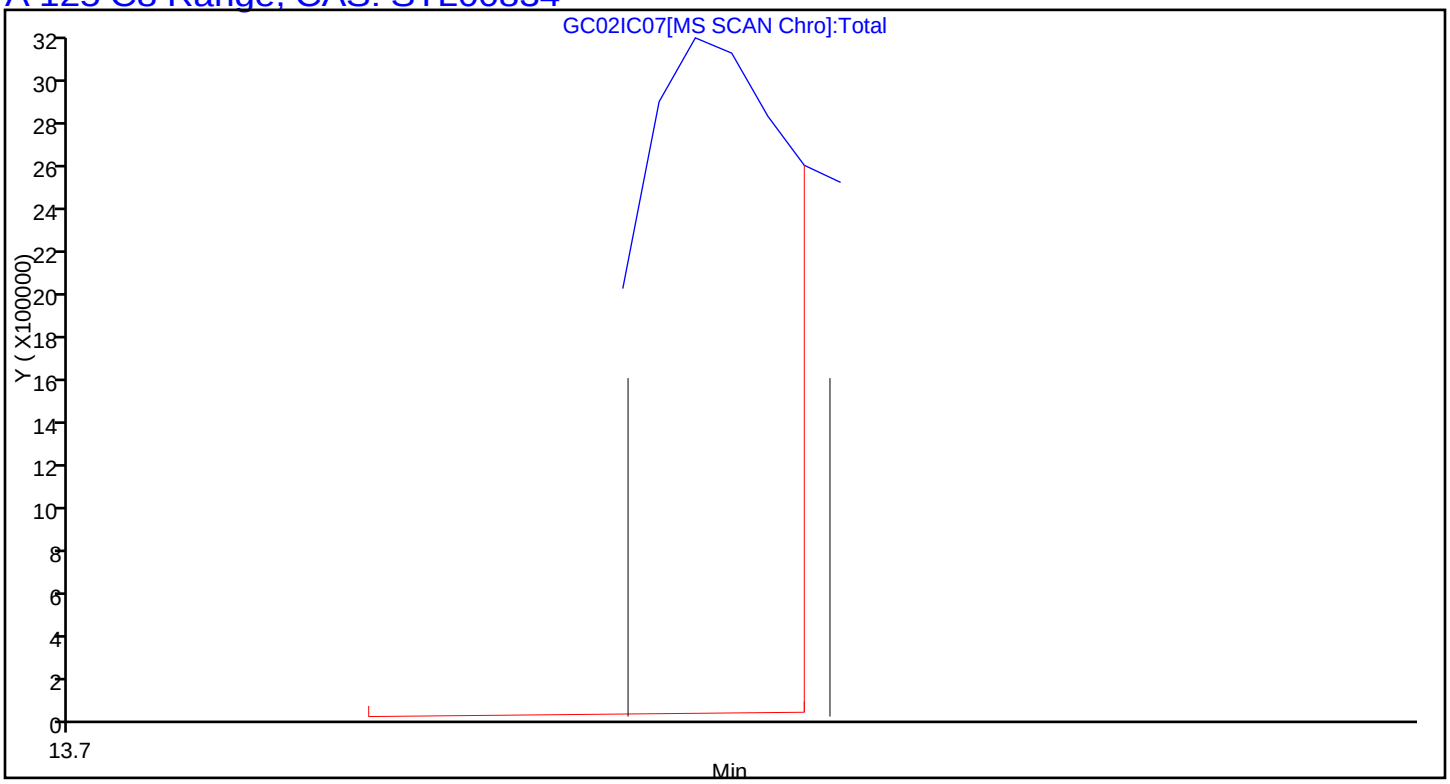


Report Date: 03-Mar-2017 15:14:42 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC07.D				
Injection Date:	02-Mar-2017 17:44:30	Instrument ID:	MG		
Lims ID:	IC L7				
Client ID:					
Operator ID:	7126	ALS Bottle#:	6	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

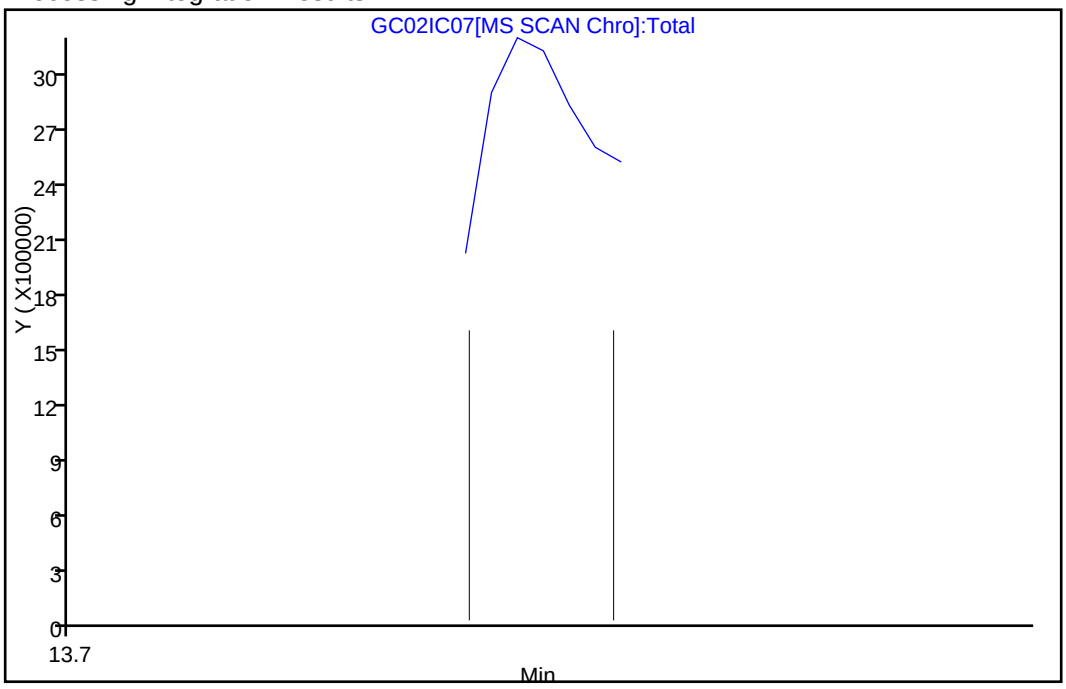
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC07.D				
Injection Date:	02-Mar-2017 17:44:30	Instrument ID:	MG		
Lims ID:	IC L7				
Client ID:					
Operator ID:	7126	ALS Bottle#:	6	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, RT: 13.798, CAS: STL00834

Signal: 1

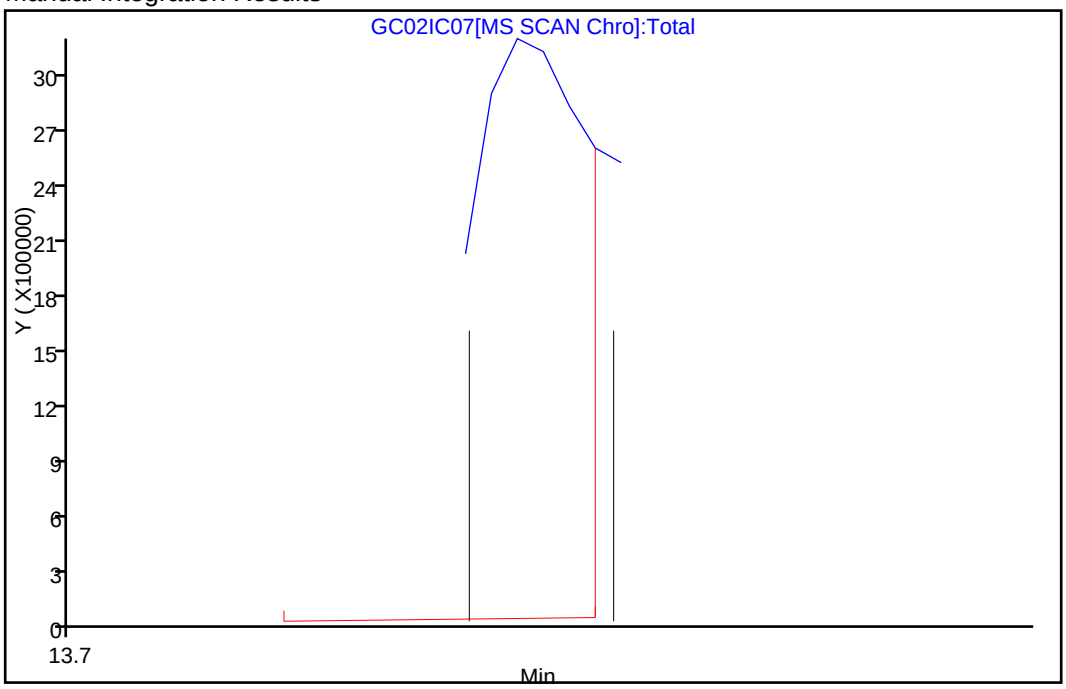
Processing Integration Results

RT: 13.80
Response: 9090782
Amount: 4.479872



Manual Integration Results

RT: 13.80
Response: 5856098
Amount: 3.451702



Reviewer: tajh, 03-Mar-2017 15:14:06

Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC08.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 02-Mar-2017 18:26:30 ALS Bottle#: 7 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004202-010
Misc. Info.: 073140
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Mar-2017 15:15:35 Calib Date: 02-Mar-2017 20:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa Date: 03-Mar-2017 10:10:18

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.018	8.012	0.006	89	421342	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.185	10.179	0.006	94	2107145	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.049	15.046	0.003	88	2058729	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.721	16.717	0.004	96	1489493	4.00	3.89	
6 Chlorodifluoromethane	67	3.456	3.463	-0.007	97	306956	8.00	7.45	
7 Propene	41	3.466	3.471	-0.005	98	745153	8.00	7.59	
8 Dichlorodifluoromethane	85	3.510	3.514	-0.004	100	2986792	8.00	7.99	
9 Chloromethane	52	3.661	3.665	-0.004	98	225417	8.00	7.47	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.671	3.675	-0.004	91	1743498	8.00	7.64	
11 Acetaldehyde	44	3.790	3.793	-0.003	92	1401677	40.0	31.2	
12 Vinyl chloride	62	3.806	3.809	-0.003	99	878033	8.00	7.60	
13 Butadiene	54	3.876	3.883	-0.007	69	634250	8.00	7.60	
14 Butane	43	3.882	3.885	-0.003	86	1317188	8.00	7.53	
15 Bromomethane	94	4.146	4.149	-0.003	98	868899	8.00	7.41	
16 Chloroethane	64	4.265	4.267	-0.002	91	464117	8.00	7.51	
17 Ethanol	31	4.378	4.372	0.006	96	1777636	40.0	38.4	
18 Vinyl bromide	106	4.518	4.522	-0.004	97	820833	8.00	7.36	
19 2-Methylbutane	43	4.567	4.569	-0.002	91	990458	8.00	7.43	
20 Acrolein	56	4.744	4.732	0.012	97	104747	8.00	6.06	
21 Trichlorofluoromethane	101	4.750	4.753	-0.003	99	2874535	8.00	7.50	
22 Acetonitrile	40	4.804	4.808	-0.004	98	309526	8.00	7.31	
23 Acetone	58	4.842	4.849	-0.007	99	909490	24.0	20.2	
24 Pentane	72	4.944	4.949	-0.005	98	162991	8.00	7.66	
25 Isopropyl alcohol	45	4.971	4.963	0.008	96	2917385	24.0	21.8	
26 Ethyl ether	31	5.079	5.090	-0.011	91	895503	8.00	7.25	
27 1,1-Dichloroethene	96	5.365	5.367	-0.002	97	830595	8.00	7.61	
28 Acrylonitrile	53	5.451	5.450	0.001	96	420450	8.00	7.97	
29 2-Methyl-2-propanol	59	5.494	5.494	0.000	96	1273967	8.00	7.93	
30 1,1,2-Trichloro-1,2,2-trif	101	5.532	5.536	-0.004	95	1809809	8.00	7.83	
31 Methylene Chloride	84	5.672	5.669	0.003	91	684793	8.00	6.75	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.683	5.684	-0.001	96	807303	8.00	7.63	
33 Carbon disulfide	76	5.807	5.810	-0.003	100	2281669	8.00	7.85	
34 trans-1,2-Dichloroethene	96	6.405	6.406	-0.001	98	909558	8.00	8.20	
35 2-Methylpentane	43	6.438	6.439	-0.001	94	1860362	8.00	8.43	
36 Methyl tert-butyl ether	73	6.519	6.533	-0.014	96	2358248	8.00	8.15	
37 1,1-Dichloroethane	63	6.788	6.787	0.001	100	1614530	8.00	7.82	
38 Vinyl acetate	43	6.896	6.898	-0.002	99	1832225	8.00	8.28	
39 2-Butanone (MEK)	72	7.300	7.305	-0.005	99	356743	8.00	7.65	
40 Hexane	56	7.349	7.350	-0.001	86	667134	8.00	7.87	
41 Isopropyl ether	45	7.495	7.502	-0.007	94	2473083	8.00	8.32	
42 cis-1,2-Dichloroethene	96	7.710	7.707	0.003	94	928515	8.00	8.00	
43 Ethyl acetate	43	7.894	7.901	-0.007	98	1524276	8.00	8.45	
44 Chloroform	83	8.039	8.035	0.004	96	2194591	8.00	7.86	
45 Tert-butyl ethyl ether	59	8.136	8.144	-0.008	95	2339030	8.00	8.45	
46 Tetrahydrofuran	42	8.395	8.410	-0.015	90	821113	8.00	8.06	
47 1,1,1-Trichloroethane	97	9.015	9.013	0.002	95	2452233	8.00	7.98	
48 1,2-Dichloroethane	62	9.112	9.106	0.006	99	1507864	8.00	8.07	
49 Benzene	78	9.603	9.599	0.004	96	2593773	8.00	7.86	
50 Cyclohexane	69	9.608	9.604	0.004	92	451811	8.00	7.77	
52 Carbon tetrachloride	117	9.630	9.629	0.001	99	2621123	8.00	8.52	
51 n-Butanol	31	9.630	9.647	-0.017	69	345495	8.00	8.96	
53 2,3-Dimethylpentane	71	9.754	9.754	0.000	91	655602	8.00	8.04	
54 Thiophene	84	9.878	9.873	0.005	94	1556761	8.00	8.23	
55 Tert-amyl methyl ether	73	10.115	10.121	-0.006	98	2461073	8.00	8.90	
56 Isooctane	57	10.433	10.430	0.003	97	4258623	8.00	8.19	
57 n-Heptane	71	10.832	10.831	0.001	91	1009968	8.00	7.97	
58 1,2-Dichloropropane	63	10.870	10.862	0.008	85	1006262	8.00	8.29	
59 Trichloroethene	130	10.919	10.913	0.006	96	1508689	8.00	7.97	
60 Dibromomethane	93	10.983	10.978	0.005	93	1253711	8.00	8.10	
61 Dichlorobromomethane	83	11.151	11.143	0.008	98	2353711	8.00	8.68	
62 1,4-Dioxane	88	11.167	11.173	-0.006	92	370975	8.00	8.41	
63 Methyl methacrylate	41	11.280	11.278	0.002	93	1074957	8.00	9.08	
64 Methylcyclohexane	83	11.722	11.718	0.004	96	2120127	8.00	7.89	
65 4-Methyl-2-pentanone (MIBK	43	12.148	12.153	-0.005	97	1721840	8.00	8.68	
66 cis-1,3-Dichloropropene	75	12.197	12.190	0.007	96	1789747	8.00	8.43	
67 trans-1,3-Dichloropropene	75	12.919	12.911	0.008	98	1762176	8.00	8.74	
68 Toluene	91	13.038	13.035	0.003	94	3140955	8.00	8.41	
69 1,1,2-Trichloroethane	83	13.113	13.106	0.007	99	958533	8.00	8.41	
70 2-Methylthiophene	97	13.194	13.186	0.008	97	2777537	8.00	8.52	
71 3-Methylthiophene	97	13.399	13.394	0.005	99	2774725	8.00	8.59	
72 2-Hexanone	58	13.534	13.535	-0.001	93	859377	8.00	9.07	
73 n-Octane	85	13.793	13.792	0.001	90	1101196	8.00	8.03	
74 Chlorodibromomethane	129	13.820	13.816	0.004	97	2424106	8.00	9.61	
75 Ethylene Dibromide	107	14.111	14.106	0.005	98	1979331	8.00	8.69	
76 Tetrachloroethene	129	14.213	14.207	0.006	95	1376890	8.00	8.36	
77 Chlorobenzene	112	15.098	15.095	0.003	93	2748594	8.00	8.38	
78 2,3-Dimethylheptane	43	15.168	15.165	0.003	92	2703240	8.00	8.10	
79 Ethylbenzene	91	15.405	15.402	0.003	99	4204604	8.00	8.57	
80 2-Ethylthiophene	97	15.508	15.502	0.006	98	3385428	8.00	8.53	
81 m-Xylene & p-Xylene	91	15.578	15.572	0.006	99	6505497	16.0	16.9	
82 Bromoform	173	15.998	15.991	0.007	97	2529774	8.00	10.3	
84 Styrene	104	16.041	16.037	0.004	97	2456959	8.00	9.01	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
83 n-Nonane	57	16.041	16.038	0.003	88	1833592	8.00	7.43	
85 o-Xylene	91	16.106	16.099	0.007	98	3344040	8.00	8.48	
86 1,1,2,2-Tetrachloroethane	83	16.430	16.422	0.008	99	2273528	8.00	8.78	
87 1,2,3-Trichloropropane	110	16.586	16.577	0.009	97	755995	8.00	8.55	
88 Isopropylbenzene	105	16.705	16.703	0.002	96	4678588	8.00	8.15	
89 N-Propylbenzene	120	17.260	17.257	0.003	99	1323708	8.00	8.66	
90 2-Chlorotoluene	126	17.293	17.288	0.004	97	1240764	8.00	8.40	
91 4-Ethyltoluene	105	17.422	17.418	0.004	98	4703566	8.00	8.68	
92 1,3,5-Trimethylbenzene	120	17.508	17.502	0.006	93	2230504	8.00	8.81	
93 Alpha Methyl Styrene	118	17.751	17.744	0.007	88	2035483	8.00	9.63	
94 n-Decane	57	17.853	17.846	0.007	93	2338575	8.00	7.78	
95 tert-Butylbenzene	119	17.956	17.949	0.007	93	4544874	8.00	8.84	
96 1,2,4-Trimethylbenzene	105	17.972	17.963	0.009	95	4100916	8.00	8.73	
97 1,3-Dichlorobenzene	146	18.236	18.232	0.004	97	3530077	8.00	9.19	
98 sec-Butylbenzene	105	18.242	18.235	0.007	98	6055449	8.00	8.98	
99 Benzyl chloride	91	18.317	18.311	0.006	98	3665923	8.00	8.58	
100 1,4-Dichlorobenzene	146	18.328	18.324	0.004	96	3344089	8.00	8.79	
101 4-Isopropyltoluene	119	18.414	18.410	0.004	97	5192056	8.00	8.88	
102 1,2,3-Trimethylbenzene	105	18.457	18.454	0.003	98	3069806	8.00	8.78	
103 Butylcyclohexane	83	18.533	18.527	0.006	96	3232242	8.00	7.94	
104 1,2-Dichlorobenzene	146	18.705	18.698	0.007	96	3267696	8.00	9.14	
105 2,3-Dihydroindene	117	18.705	18.702	0.003	94	4009906	8.00	9.10	
106 Indene	116	18.840	18.833	0.007	92	2908946	8.00	9.04	
107 n-Butylbenzene	91	18.867	18.862	0.005	97	4576198	8.00	8.45	
108 Undecane	57	19.218	19.217	0.001	92	2564058	8.00	7.95	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.250	19.247	0.003	97	3772393	8.00	8.81	
110 1,2-Dibromo-3-Chloropropan	157	19.320	19.317	0.003	99	1346687	8.00	9.48	
111 1,2,4,5-Tetramethylbenzene	119	19.644	19.642	0.002	97	4753691	8.00	9.12	
112 1,2,3,5-Tetramethylbenzene	119	19.698	19.696	0.002	95	2770005	8.00	8.90	
113 1,2,3,4-Tetramethylbenzene	119	20.091	20.092	-0.001	97	3830160	8.00	8.94	
114 Dodecane	57	20.291	20.286	0.005	93	2397668	8.00	8.06	
115 1,2,4-Trichlorobenzene	180	20.431	20.427	0.004	94	3009702	8.00	9.67	
116 Naphthalene	128	20.555	20.555	0.000	99	5657107	8.00	8.71	
117 Benzo(b)thiophene	134	20.657	20.653	0.004	99	3295063	8.00	9.15	
118 Hexachlorobutadiene	225	20.787	20.783	0.004	96	2891958	8.00	9.52	
119 1,2,3-Trichlorobenzene	180	20.835	20.831	0.004	96	2706266	8.00	9.57	
120 2-Methylnaphthalene	142	21.628	21.628	0.000	100	3629803	25.0	27.4	
121 1-Methylnaphthalene	142	21.811	21.808	0.003	100	2696789	25.0	25.3	
A 124 Toluene Range	1	13.033	(12.998-13.068)		0	7812063	8.00	8.30	
A 125 C8 Range	1	13.798	(13.783-13.813)		0	11734517	8.00	7.10	M
S 126 Xylenes, Total	100				0		24.0	25.4	
S 127 1,2-Dichloroethene, Total	1				0		16.0	16.2	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L8DNP_00009	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

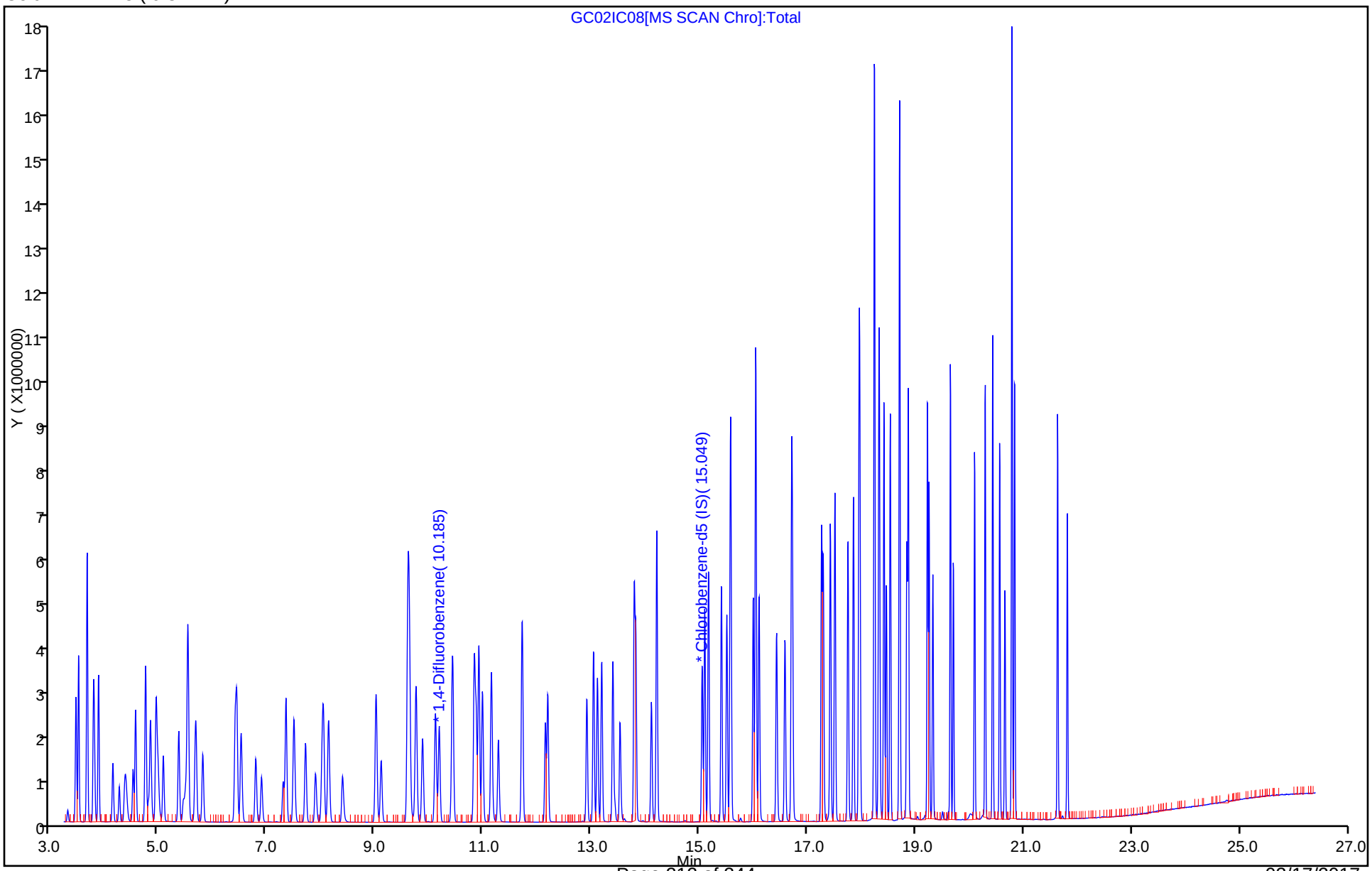
Report Date: 03-Mar-2017 15:15:38 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC08.D

Injection Date:	02-Mar-2017 18:26:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	IC L8			Worklist Smp#:	10
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

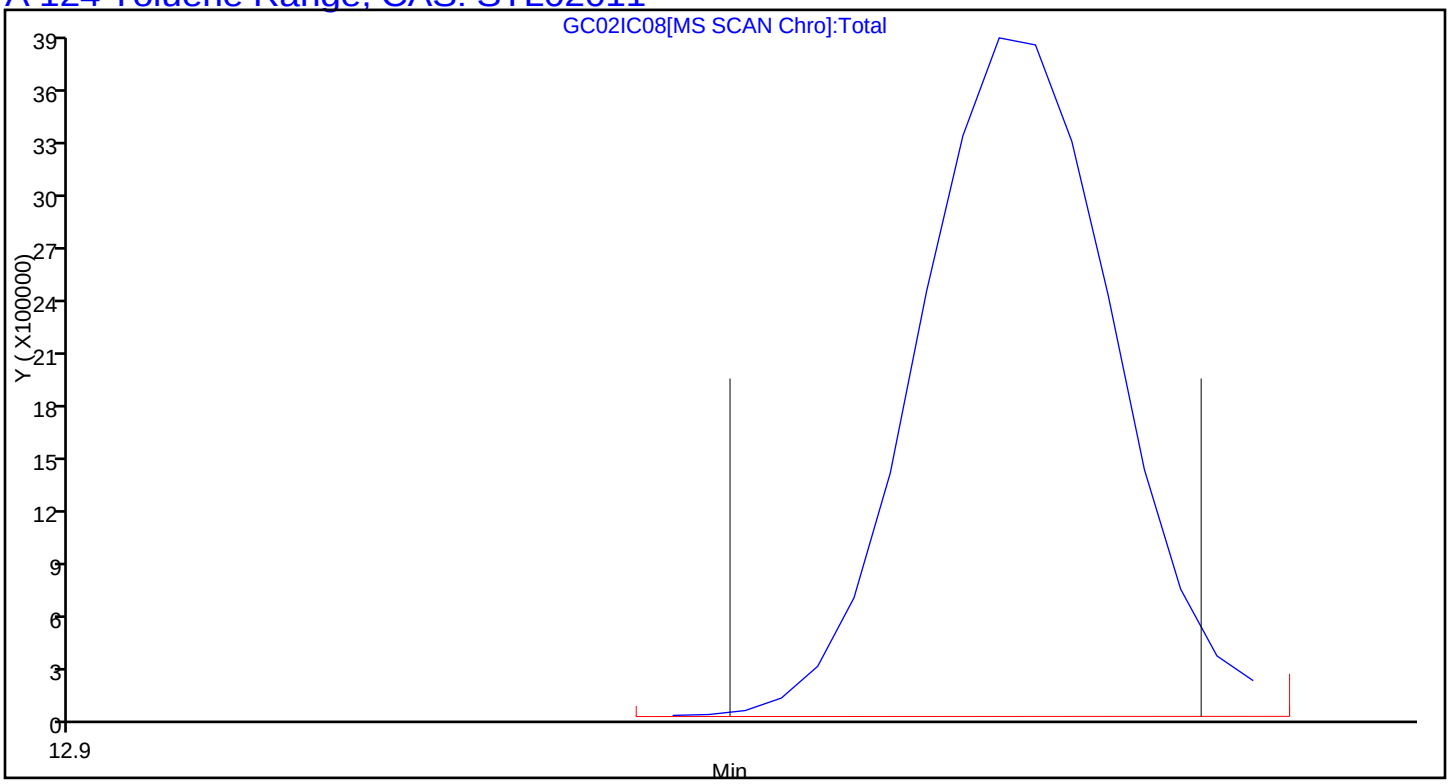


Report Date: 03-Mar-2017 15:15:38 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC08.D				
Injection Date:	02-Mar-2017 18:26:30	Instrument ID:	MG		
Lims ID:	IC L8				
Client ID:					
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

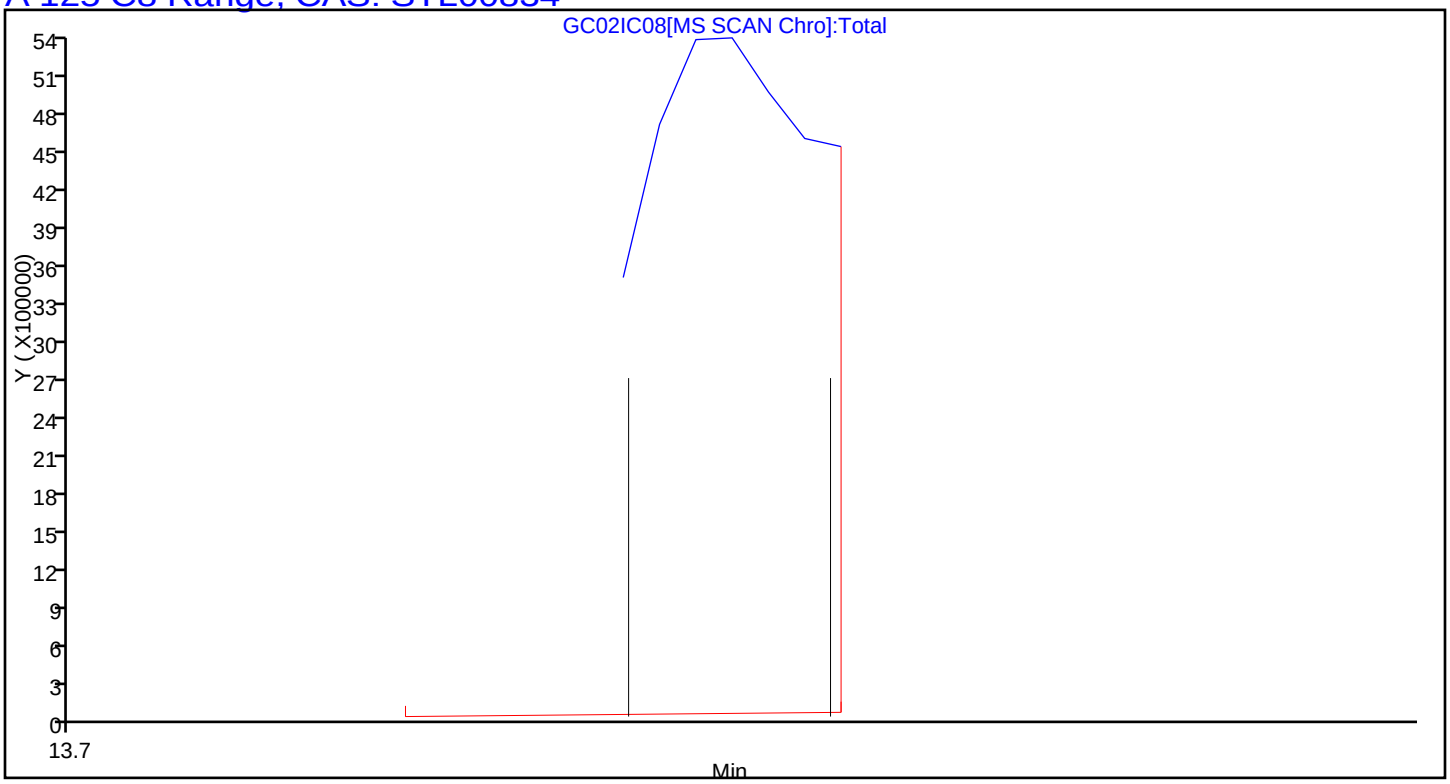


Report Date: 03-Mar-2017 15:15:38 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC08.D				
Injection Date:	02-Mar-2017 18:26:30	Instrument ID:	MG		
Lims ID:	IC L8				
Client ID:					
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

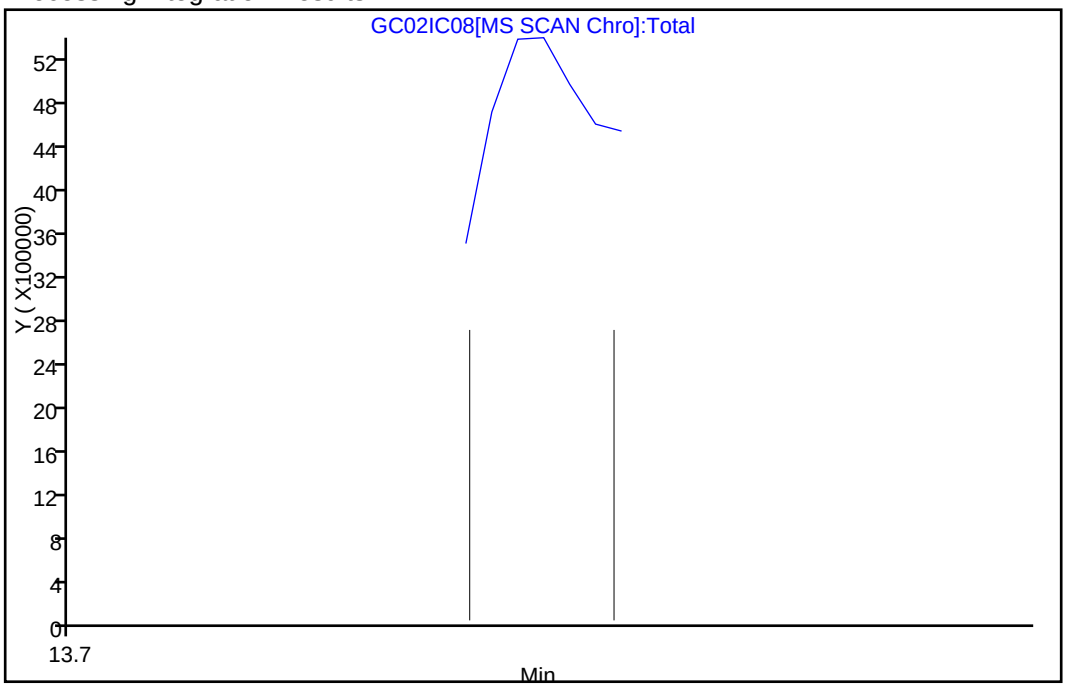
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC08.D				
Injection Date:	02-Mar-2017 18:26:30	Instrument ID:	MG		
Lims ID:	IC L8				
Client ID:					
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, RT: 13.798, CAS: STL00834

Signal: 1

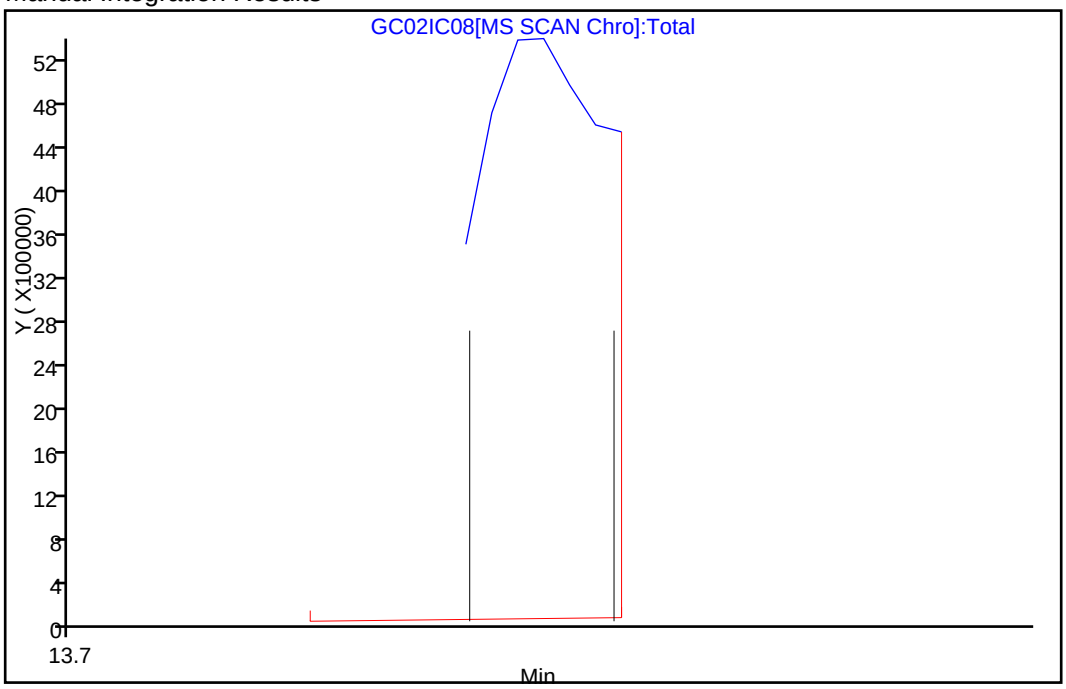
Processing Integration Results

RT: 13.80
Response: 17447001
Amount: 9.842043



Manual Integration Results

RT: 13.80
Response: 11734517
Amount: 7.095955



Reviewer: tajh, 03-Mar-2017 15:14:44

Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC09.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 02-Mar-2017 19:08:30 ALS Bottle#: 8 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004202-011
Misc. Info.: 073138
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Mar-2017 15:04:23 Calib Date: 02-Mar-2017 20:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: tajh Date: 03-Mar-2017 13:09:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.023	8.012	0.011	93	448428	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.196	10.179	0.017	95	2223552	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.060	15.046	0.014	88	2163779	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.726	16.717	0.009	96	1636640	4.00	4.06	
6 Chlorodifluoromethane	67	3.461	3.463	-0.002	97	593423	16.0	13.5	
7 Propene	41	3.467	3.471	-0.004	98	1481915	16.0	14.2	
8 Dichlorodifluoromethane	85	3.510	3.514	-0.004	100	5705597	16.0	14.3	
9 Chloromethane	52	3.661	3.665	-0.004	97	404153	16.0	12.6	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.671	3.675	-0.004	90	3524679	16.0	14.5	
11 Acetaldehyde	44	3.790	3.793	-0.003	90	2490767	80.0	52.0	
12 Vinyl chloride	62	3.806	3.809	-0.003	99	1567179	16.0	12.7	
13 Butadiene	54	3.882	3.883	-0.001	68	1122777	16.0	12.6	
14 Butane	43	3.882	3.885	-0.003	85	2265735	16.0	12.2	
15 Bromomethane	94	4.146	4.149	-0.003	98	1656810	16.0	13.3	
16 Chloroethane	64	4.270	4.267	0.003	91	869966	16.0	13.2	
17 Ethanol	31	4.394	4.372	0.022	96	3392647	80.0	68.8	
18 Vinyl bromide	106	4.523	4.522	0.001	97	1604482	16.0	13.5	
19 2-Methylbutane	43	4.567	4.569	-0.002	90	1813405	16.0	12.8	
20 Acrolein	56	4.750	4.732	0.018	98	297063	16.0	16.2	
21 Trichlorofluoromethane	101	4.755	4.753	0.002	99	5842137	16.0	14.3	
22 Acetonitrile	40	4.815	4.808	0.007	98	617927	16.0	13.7	
23 Acetone	58	4.847	4.849	-0.002	99	1722579	48.0	35.9	
24 Pentane	72	4.949	4.949	0.000	98	321694	16.0	14.2	
25 Isopropyl alcohol	45	5.009	4.963	0.046	97	5697995	48.0	40.1	
26 Ethyl ether	31	5.079	5.090	-0.011	93	1831153	16.0	13.9	
27 1,1-Dichloroethene	96	5.370	5.367	0.003	98	1677086	16.0	14.4	
28 Acrylonitrile	53	5.462	5.450	0.012	96	846465	16.0	15.1	
29 2-Methyl-2-propanol	59	5.537	5.494	0.043	56	2458156	16.0	14.4	
30 1,1,2-Trichloro-1,2,2-trif	101	5.537	5.536	0.001	92	3768634	16.0	15.3	
31 Methylene Chloride	84	5.677	5.669	0.008	89	1363735	16.0	12.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.694	5.684	0.010	98	1507366	16.0	13.4	
33 Carbon disulfide	76	5.812	5.810	0.002	100	4478149	16.0	14.5	
34 trans-1,2-Dichloroethene	96	6.416	6.406	0.010	98	1782185	16.0	15.1	
35 2-Methylpentane	43	6.443	6.439	0.004	95	3465926	16.0	14.8	
36 Methyl tert-butyl ether	73	6.524	6.533	-0.009	96	5069342	16.0	16.5	
37 1,1-Dichloroethane	63	6.799	6.787	0.012	100	3399866	16.0	15.5	
38 Vinyl acetate	43	6.907	6.898	0.009	100	4239860	16.0	18.0	
39 2-Butanone (MEK)	72	7.311	7.305	0.006	99	764742	16.0	15.4	
40 Hexane	56	7.354	7.350	0.004	90	1303527	16.0	14.4	
41 Isopropyl ether	45	7.505	7.502	0.003	95	5292599	16.0	16.7	
42 cis-1,2-Dichloroethene	96	7.721	7.707	0.014	96	1891071	16.0	15.3	
43 Ethyl acetate	43	7.910	7.901	0.009	98	3378757	16.0	17.6	
44 Chloroform	83	8.055	8.035	0.020	97	4371168	16.0	14.7	
45 Tert-butyl ethyl ether	59	8.147	8.144	0.003	95	4983675	16.0	16.9	
46 Tetrahydrofuran	42	8.406	8.410	-0.004	90	1695370	16.0	15.6	
47 1,1,1-Trichloroethane	97	9.026	9.013	0.013	92	5004599	16.0	15.3	
48 1,2-Dichloroethane	62	9.123	9.106	0.017	99	3179877	16.0	16.1	
49 Benzene	78	9.614	9.599	0.015	95	5155161	16.0	14.8	
50 Cyclohexane	69	9.614	9.604	0.010	73	860520	16.0	14.0	
52 Carbon tetrachloride	117	9.641	9.629	0.012	98	5537304	16.0	17.0	
51 n-Butanol	31	9.662	9.647	0.015	81	676762	16.0	16.6	
53 2,3-Dimethylpentane	71	9.765	9.754	0.011	90	1254475	16.0	14.6	
54 Thiophene	84	9.889	9.873	0.016	95	3127741	16.0	15.7	
55 Tert-amyl methyl ether	73	10.126	10.121	0.005	98	5035512	16.0	17.2	
56 Isooctane	57	10.439	10.430	0.009	97	8044250	16.0	14.7	
57 n-Heptane	71	10.843	10.831	0.012	89	1955729	16.0	14.6	
58 1,2-Dichloropropane	63	10.876	10.862	0.014	85	1909170	16.0	14.9	
59 Trichloroethene	130	10.930	10.913	0.017	98	3097983	16.0	15.5	
60 Dibromomethane	93	10.994	10.978	0.016	90	2591765	16.0	15.9	
61 Dichlorobromomethane	83	11.161	11.143	0.018	98	4782156	16.0	16.7	
62 1,4-Dioxane	88	11.183	11.173	0.010	92	729179	16.0	15.7	
63 Methyl methacrylate	41	11.291	11.278	0.013	92	2304384	16.0	18.4	
64 Methylcyclohexane	83	11.728	11.718	0.010	94	4223787	16.0	14.9	
65 4-Methyl-2-pentanone (MIBK	43	12.164	12.153	0.011	97	3436700	16.0	16.4	
66 cis-1,3-Dichloropropene	75	12.202	12.190	0.012	94	3537072	16.0	15.8	
67 trans-1,3-Dichloropropene	75	12.925	12.911	0.014	98	3639858	16.0	17.2	
68 Toluene	91	13.049	13.035	0.014	94	6495080	16.0	16.5	
69 1,1,2-Trichloroethane	83	13.124	13.106	0.018	99	1966781	16.0	16.4	
70 2-Methylthiophene	97	13.200	13.186	0.014	97	5668799	16.0	16.5	
71 3-Methylthiophene	97	13.410	13.394	0.016	99	5585386	16.0	16.5	
72 2-Hexanone	58	13.545	13.535	0.010	93	1721121	16.0	17.3	
73 n-Octane	85	13.798	13.792	0.006	87	2237695	16.0	15.5	
74 Chlorodibromomethane	129	13.831	13.816	0.015	97	5402658	16.0	20.4	
75 Ethylene Dibromide	107	14.122	14.106	0.016	98	4206014	16.0	17.6	
76 Tetrachloroethene	129	14.219	14.207	0.012	96	3082194	16.0	17.8	
77 Chlorobenzene	112	15.109	15.095	0.014	95	5819873	16.0	16.9	
78 2,3-Dimethylheptane	43	15.173	15.165	0.008	87	4902679	16.0	14.0	
79 Ethylbenzene	91	15.416	15.402	0.014	98	8872329	16.0	17.2	
80 2-Ethylthiophene	97	15.513	15.502	0.011	97	7168291	16.0	17.2	
81 m-Xylene & p-Xylene	91	15.583	15.572	0.011	98	14143266	32.0	35.0	
82 Bromoform	173	16.004	15.991	0.013	98	5899101	16.0	22.8	
84 Styrene	104	16.052	16.037	0.015	96	5488449	16.0	19.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
83 n-Nonane	57	16.047	16.038	0.009	85	3447492	16.0	13.3	
85 o-Xylene	91	16.112	16.099	0.013	98	7117819	16.0	17.2	
86 1,1,2,2-Tetrachloroethane	83	16.435	16.422	0.013	99	4811457	16.0	17.7	
87 1,2,3-Trichloropropane	110	16.592	16.577	0.015	96	1629852	16.0	17.5	
88 Isopropylbenzene	105	16.716	16.703	0.013	96	10317786	16.0	17.1	
89 N-Propylbenzene	120	17.266	17.257	0.009	99	2999820	16.0	18.7	
90 2-Chlorotoluene	126	17.298	17.288	0.010	97	2766057	16.0	17.8	
91 4-Ethyltoluene	105	17.433	17.418	0.015	98	10374169	16.0	18.2	
92 1,3,5-Trimethylbenzene	120	17.519	17.502	0.017	93	5082507	16.0	19.1	
93 Alpha Methyl Styrene	118	17.756	17.744	0.012	90	4614322	16.0	20.8	
94 n-Decane	57	17.859	17.846	0.013	94	4459815	16.0	14.1	
95 tert-Butylbenzene	119	17.961	17.949	0.012	94	10386644	16.0	19.2	
96 1,2,4-Trimethylbenzene	105	17.977	17.963	0.014	95	9294406	16.0	18.8	
97 1,3-Dichlorobenzene	146	18.242	18.232	0.010	98	8124131	16.0	20.1	
98 sec-Butylbenzene	105	18.247	18.235	0.012	97	13317673	16.0	18.8	
99 Benzyl chloride	91	18.323	18.311	0.012	99	8661607	16.0	19.3	
100 1,4-Dichlorobenzene	146	18.339	18.324	0.015	96	7825807	16.0	19.6	
101 4-Isopropyltoluene	119	18.420	18.410	0.010	97	11628572	16.0	18.9	
102 1,2,3-Trimethylbenzene	105	18.468	18.454	0.014	98	6588120	16.0	17.9	
103 Butylcyclohexane	83	18.538	18.527	0.011	96	6603806	16.0	15.4	
104 1,2-Dichlorobenzene	146	18.711	18.698	0.013	96	7562744	16.0	20.1	
105 2,3-Dihydroindene	117	18.711	18.702	0.009	94	9160313	16.0	19.8	
106 Indene	116	18.846	18.833	0.013	93	6710686	16.0	19.8	
107 n-Butylbenzene	91	18.873	18.862	0.011	97	9859788	16.0	17.3	
108 Undecane	57	19.223	19.217	0.006	89	4731040	16.0	14.0	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.255	19.247	0.008	97	8411661	16.0	18.7	
110 1,2-Dibromo-3-Chloropropan	157	19.326	19.317	0.009	95	3121002	16.0	20.9	
111 1,2,4,5-Tetramethylbenzene	119	19.649	19.642	0.007	97	10428510	16.0	19.0	
112 1,2,3,5-Tetramethylbenzene	119	19.703	19.696	0.007	95	5932758	16.0	18.1	
113 1,2,3,4-Tetramethylbenzene	119	20.097	20.092	0.005	97	7918123	16.0	17.6	
114 Dodecane	57	20.291	20.286	0.005	93	3347426	16.0	10.7	
115 1,2,4-Trichlorobenzene	180	20.431	20.427	0.004	94	5569204	16.0	17.0	
116 Naphthalene	128	20.560	20.555	0.005	99	10668835	16.0	15.6	
117 Benzo(b)thiophene	134	20.657	20.653	0.004	99	5884116	16.0	15.5	
118 Hexachlorobutadiene	225	20.787	20.783	0.004	94	5192024	16.0	16.3	
119 1,2,3-Trichlorobenzene	180	20.835	20.831	0.004	96	3730627	16.0	12.6	
120 2-Methylnaphthalene	142	21.628	21.628	0.000	100	884406	50.0	6.36	
121 1-Methylnaphthalene	142	21.811	21.808	0.003	100	490550	50.0	4.38	
A 124 Toluene Range	1	13.044	(13.009-13.079)		0	16100078	16.0	16.2	
A 125 C8 Range	1	13.796	(13.788-13.818)		0	18652465	16.0	10.7	
S 126 Xylenes, Total	100				0		48.0	52.1	
S 127 1,2-Dichloroethene, Total	1				0		32.0	30.4	

Reagents:

40L9DNP_00012	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

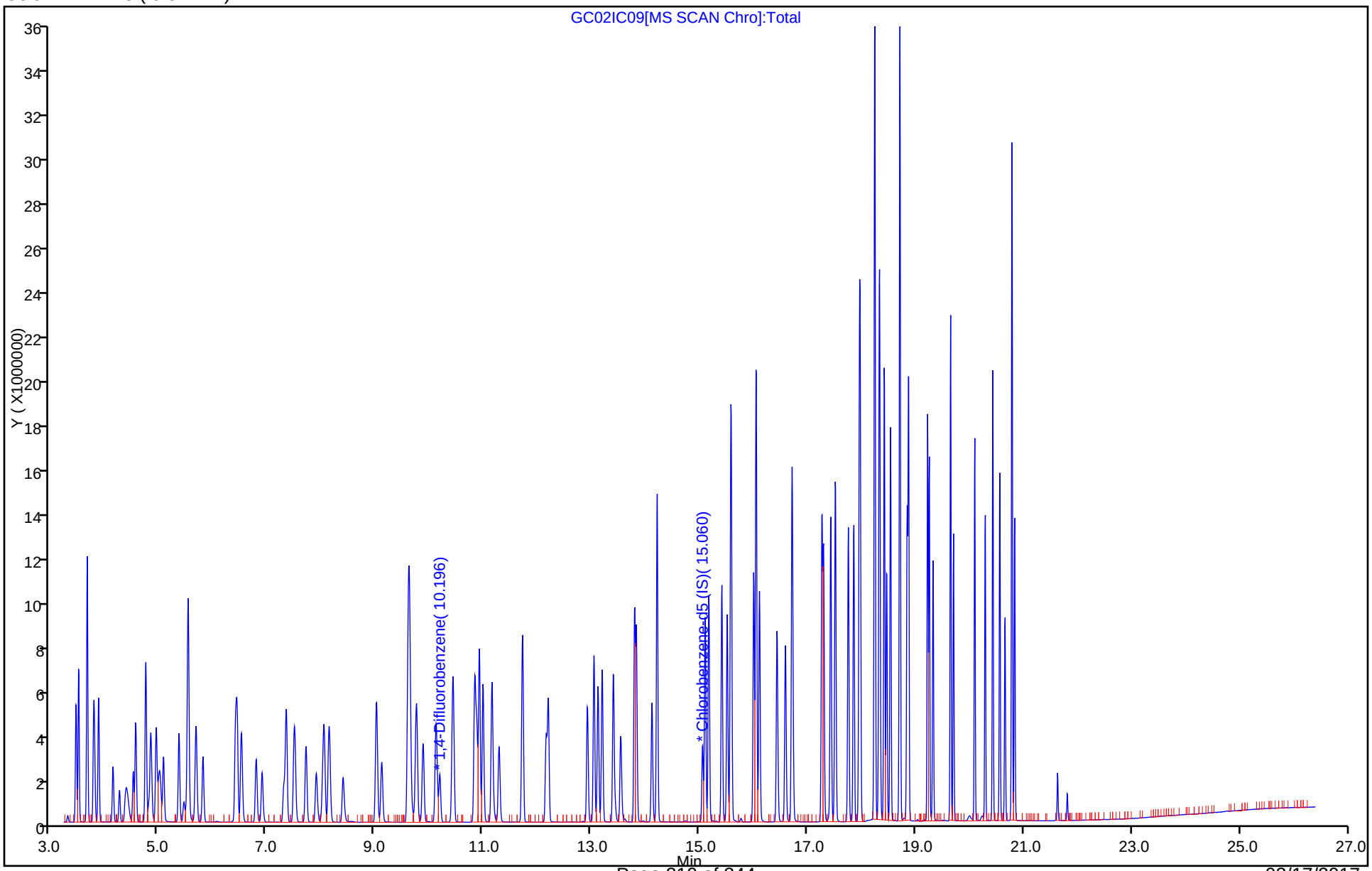
Report Date: 03-Mar-2017 15:04:24 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC09.D

Injection Date:	02-Mar-2017 19:08:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	IC L9			Worklist Smp#:	11
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

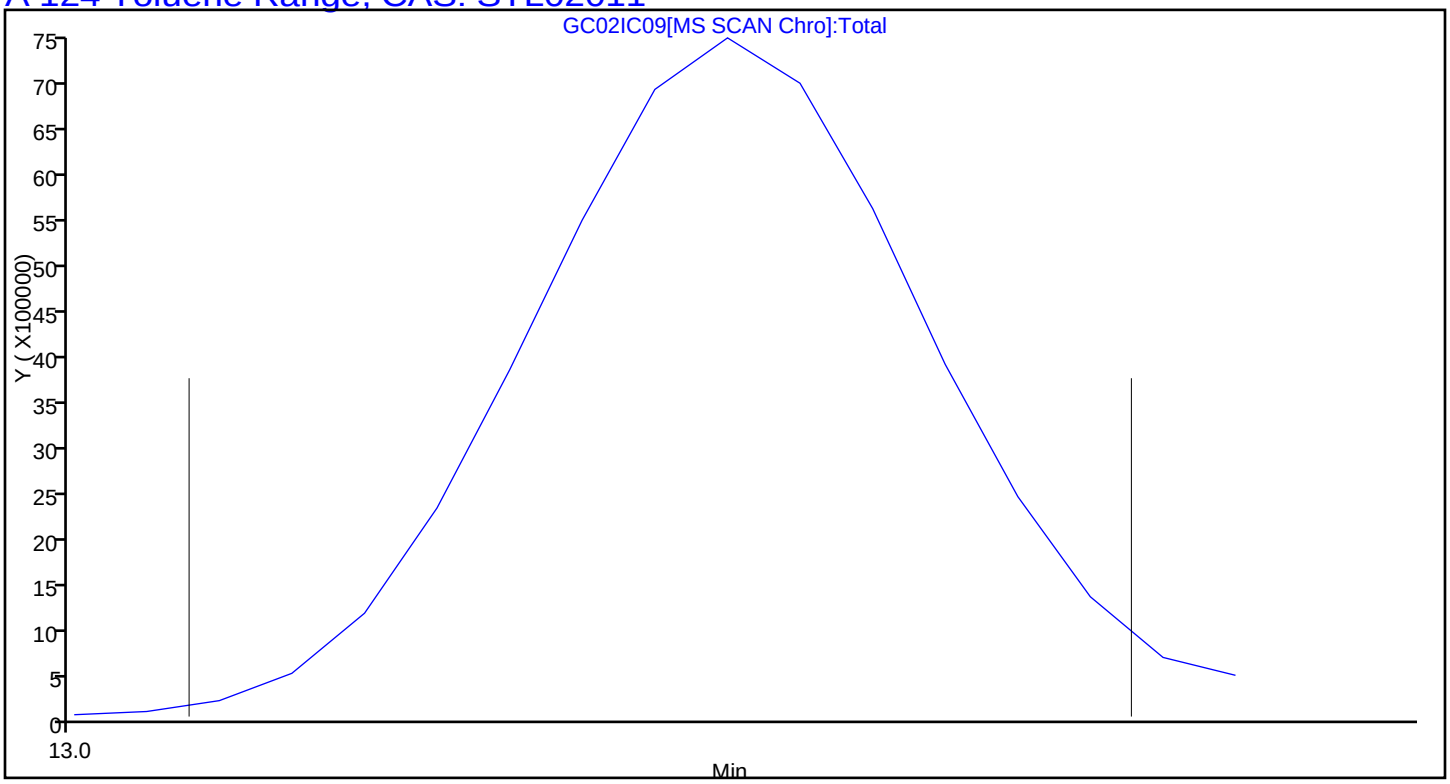


Report Date: 03-Mar-2017 15:04:24 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC09.D				
Injection Date:	02-Mar-2017 19:08:30	Instrument ID:	MG		
Lims ID:	IC L9				
Client ID:					
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

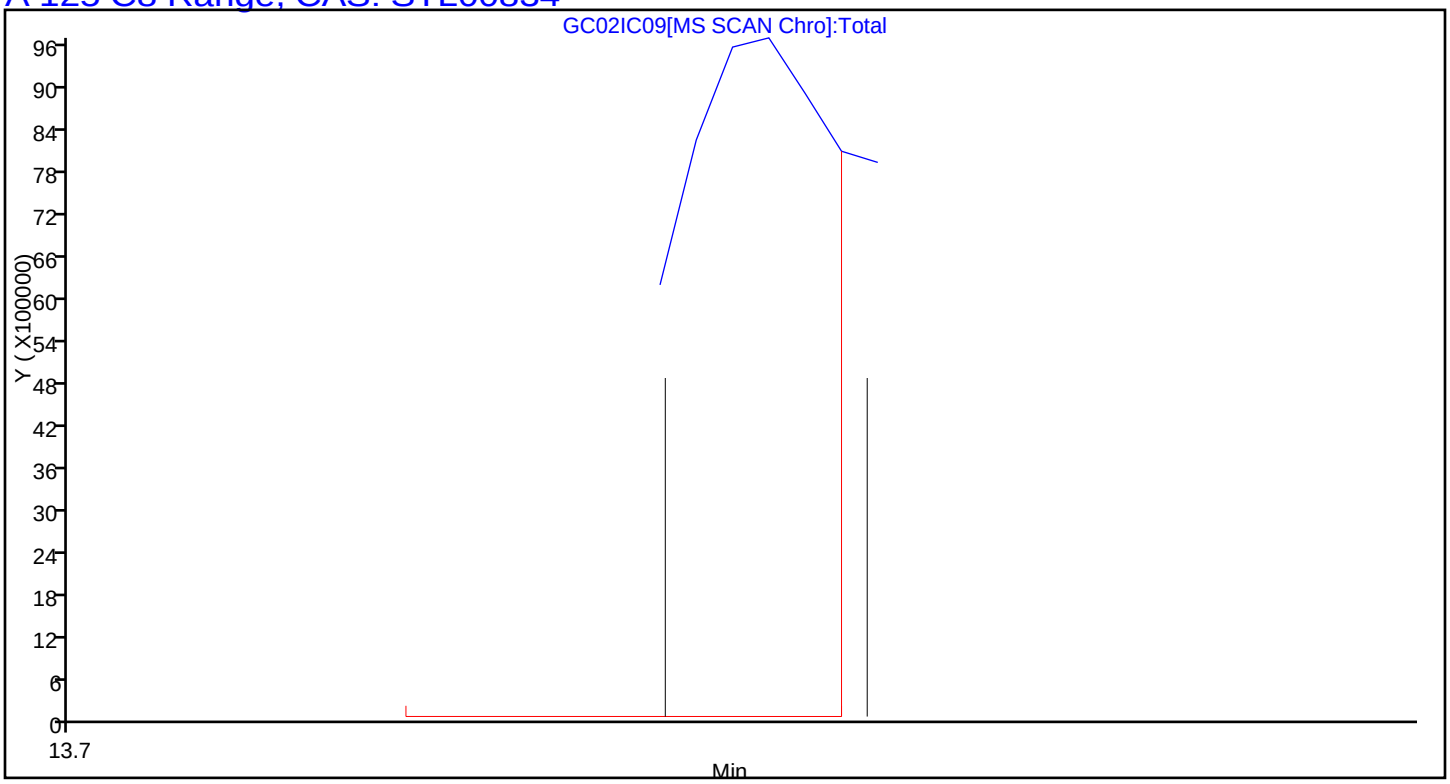


Report Date: 03-Mar-2017 15:04:24 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC09.D				
Injection Date:	02-Mar-2017 19:08:30	Instrument ID:	MG		
Lims ID:	IC L9				
Client ID:					
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 02-Mar-2017 20:31:30 ALS Bottle#: 2 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004202-004
Misc. Info.: 073145
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Mar-2017 15:10:20 Calib Date: 02-Mar-2017 20:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa Date: 03-Mar-2017 14:52:03

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.007	8.012	-0.005	83	429826	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.174	10.179	-0.005	94	2178997	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.044	15.046	-0.002	86	2139458	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.710	16.717	-0.007	94	1595251	4.00	4.00	
6 Chlorodifluoromethane	67	3.472	3.463	0.009	97	4117	0.0793	0.0979	
7 Propene	41	3.477	3.471	0.006	97	8474	0.0793	0.0846	
8 Dichlorodifluoromethane	85	3.520	3.514	0.006	100	30346	0.0793	0.0796	
9 Chloromethane	52	3.677	3.665	0.012	52	3546	0.0793	0.1152	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.682	3.675	0.007	91	19214	0.0793	0.0825	
11 Acetaldehyde	44	3.801	3.793	0.008	88	60200	0.3967	1.31	
12 Vinyl chloride	62	3.811	3.809	0.002	98	9681	0.0793	0.0822	
13 Butadiene	54	3.887	3.883	0.004	67	6941	0.0793	0.0816	
14 Butane	43	3.892	3.885	0.007	88	15104	0.0793	0.0846	
15 Bromomethane	94	4.151	4.149	0.002	98	9906	0.0793	0.0828	
16 Chloroethane	64	4.275	4.267	0.008	90	5028	0.0793	0.0797	
17 Ethanol	31	4.378	4.372	0.006	96	19813	0.3967	0.4194	
18 Vinyl bromide	106	4.523	4.522	0.001	95	9517	0.0793	0.0836	
19 2-Methylbutane	43	4.577	4.569	0.008	92	11336	0.0793	0.0833	
21 Trichlorofluoromethane	101	4.755	4.753	0.002	99	32586	0.0793	0.0834	
22 Acetonitrile	40	4.820	4.808	0.012	95	3813	0.0793	0.0883	
23 Acetone	58	4.868	4.849	0.019	98	19302	0.2380	0.4203	
24 Pentane	72	4.955	4.949	0.006	95	2030	0.0793	0.0935	
25 Isopropyl alcohol	45	4.971	4.963	0.008	93	33653	0.2380	0.2470	
26 Ethyl ether	31	5.111	5.090	0.021	91	9749	0.0793	0.0773	
27 1,1-Dichloroethene	96	5.370	5.367	0.003	98	8850	0.0793	0.0795	
28 Acrylonitrile	53	5.462	5.450	0.012	91	4181	0.0793	0.0777	
29 2-Methyl-2-propanol	59	5.515	5.494	0.021	97	9859	0.0793	0.0601	
30 1,1,2-Trichloro-1,2,2-trif	101	5.542	5.536	0.006	95	18876	0.0793	0.0801	
31 Methylene Chloride	84	5.672	5.669	0.003	92	15333	0.0793	0.1481	
32 3-Chloro-1-propene	39	5.688	5.684	0.004	87	8422	0.0793	0.0780	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.812	5.810	0.002	99	24622	0.0793	0.0830	
34 trans-1,2-Dichloroethene	96	6.411	6.406	0.005	98	9484	0.0793	0.0838	
35 2-Methylpentane	43	6.448	6.439	0.009	93	18650	0.0793	0.0828	
36 Methyl tert-butyl ether	73	6.556	6.533	0.023	95	22357	0.0793	0.0757	
37 1,1-Dichloroethane	63	6.793	6.787	0.006	99	17433	0.0793	0.0828	
38 Vinyl acetate	43	6.907	6.898	0.009	99	15155	0.0793	0.0671	
39 2-Butanone (MEK)	72	7.322	7.305	0.017	92	3759	0.0793	0.0790	
40 Hexane	56	7.360	7.350	0.010	87	7735	0.0793	0.0894	
41 Isopropyl ether	45	7.516	7.502	0.014	94	21051	0.0793	0.0694	
42 cis-1,2-Dichloroethene	96	7.710	7.707	0.003	93	9880	0.0793	0.0834	
43 Ethyl acetate	43	7.920	7.901	0.019	98	12453	0.0793	0.0677	
44 Chloroform	83	8.028	8.035	-0.007	94	23035	0.0793	0.0809	
45 Tert-butyl ethyl ether	59	8.163	8.144	0.019	95	20425	0.0793	0.0723	
46 Tetrahydrofuran	42	8.433	8.410	0.023	88	8146	0.0793	0.0784	
47 1,1,1-Trichloroethane	97	9.010	9.013	-0.003	95	24836	0.0793	0.0793	
48 1,2-Dichloroethane	62	9.101	9.106	-0.005	99	14813	0.0793	0.0766	
49 Benzene	78	9.598	9.599	-0.001	96	27690	0.0793	0.0811	
50 Cyclohexane	69	9.603	9.604	-0.001	83	5499	0.0793	0.0915	
52 Carbon tetrachloride	117	9.630	9.629	0.001	97	23989	0.0793	0.0754	
51 n-Butanol	31	9.695	9.647	0.048	43	2718	0.0793	0.0681	
53 2,3-Dimethylpentane	71	9.759	9.754	0.005	90	7119	0.0793	0.0845	
54 Thiophene	84	9.873	9.873	-0.001	96	15596	0.0793	0.0797	
55 Tert-amyl methyl ether	73	10.153	10.121	0.032	97	16350	0.0793	0.0572	M
56 Isooctane	57	10.433	10.430	0.003	97	43551	0.0793	0.0810	
57 n-Heptane	71	10.832	10.831	0.001	91	10809	0.0793	0.0825	
58 1,2-Dichloropropane	63	10.859	10.862	-0.003	86	9757	0.0793	0.0777	
59 Trichloroethene	130	10.908	10.913	-0.005	96	16324	0.0793	0.0834	
60 Dibromomethane	93	10.973	10.978	-0.005	95	13104	0.0793	0.0818	
61 Dichlorobromomethane	83	11.140	11.143	-0.003	96	19956	0.0793	0.0711	
62 1,4-Dioxane	88	11.188	11.173	0.015	89	3457	0.0793	0.0758	
63 Methyl methacrylate	41	11.280	11.278	0.002	94	8746	0.0793	0.0714	
64 Methylcyclohexane	83	11.717	11.718	-0.001	96	22792	0.0793	0.0820	
65 4-Methyl-2-pentanone (MIBK	43	12.164	12.153	0.011	96	12134	0.0793	0.0592	
66 cis-1,3-Dichloropropene	75	12.186	12.190	-0.004	97	16607	0.0793	0.0756	
67 trans-1,3-Dichloropropene	75	12.908	12.911	-0.003	97	16151	0.0793	0.0771	
68 Toluene	91	13.032	13.035	-0.003	94	30391	0.0793	0.0783	
69 1,1,2-Trichloroethane	83	13.103	13.106	-0.003	97	9194	0.0793	0.0776	
70 2-Methylthiophene	97	13.183	13.186	-0.003	97	26831	0.0793	0.0792	
71 3-Methylthiophene	97	13.394	13.394	0.000	98	26092	0.0793	0.0778	
72 2-Hexanone	58	13.545	13.535	0.010	94	6053	0.0793	0.0614	
73 n-Octane	85	13.793	13.792	0.001	90	11680	0.0793	0.0819	
74 Chlorodibromomethane	129	13.814	13.816	-0.002	97	17043	0.0793	0.0650	
75 Ethylene Dibromide	107	14.100	14.106	-0.006	96	17865	0.0793	0.0755	
76 Tetrachloroethene	129	14.203	14.207	-0.004	94	13873	0.0793	0.0810	
77 Chlorobenzene	112	15.092	15.095	-0.003	97	27763	0.0793	0.0815	
78 2,3-Dimethylheptane	43	15.162	15.165	-0.003	91	27702	0.0793	0.0798	
79 Ethylbenzene	91	15.400	15.402	-0.002	99	39230	0.0793	0.0769	
80 2-Ethylthiophene	97	15.497	15.502	-0.005	98	30884	0.0793	0.0749	
81 m-Xylene & p-Xylene	91	15.567	15.572	-0.005	99	58678	0.1587	0.1467	
82 Bromoform	173	15.987	15.991	-0.004	95	13758	0.0793	0.0539	
84 Styrene	104	16.031	16.037	-0.006	95	19295	0.0793	0.0681	
83 n-Nonane	57	16.036	16.038	-0.002	88	22773	0.0793	0.0888	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	16.095	16.099	-0.004	98	30347	0.0793	0.0740	
86 1,1,2,2-Tetrachloroethane	83	16.419	16.422	-0.003	98	19669	0.0793	0.0731	
87 1,2,3-Trichloropropane	110	16.575	16.577	-0.002	97	7086	0.0793	0.0771	
88 Isopropylbenzene	105	16.699	16.703	-0.004	97	46007	0.0793	0.0772	
89 N-Propylbenzene	120	17.255	17.257	-0.002	99	11555	0.0793	0.0727	
90 2-Chlorotoluene	126	17.282	17.288	-0.006	94	11716	0.0793	0.0764	
91 4-Ethyltoluene	105	17.411	17.418	-0.007	98	41911	0.0793	0.0745	
92 1,3,5-Trimethylbenzene	120	17.497	17.502	-0.005	92	19678	0.0793	0.0748	
93 Alpha Methyl Styrene	118	17.740	17.744	-0.004	86	13981	0.0793	0.0636	
94 n-Decane	57	17.842	17.846	-0.004	93	26206	0.0793	0.0839	
95 tert-Butylbenzene	119	17.945	17.949	-0.004	93	39057	0.0793	0.0731	
96 1,2,4-Trimethylbenzene	105	17.956	17.963	-0.007	95	36071	0.0793	0.0739	
97 1,3-Dichlorobenzene	146	18.231	18.232	-0.001	96	31625	0.0793	0.0792	
98 sec-Butylbenzene	105	18.231	18.235	-0.004	97	51871	0.0793	0.0740	
99 Benzyl chloride	91	18.306	18.311	-0.005	98	32413	0.0793	0.0730	
100 1,4-Dichlorobenzene	146	18.322	18.324	-0.002	94	32098	0.0793	0.0812	
101 4-Isopropyltoluene	119	18.403	18.410	-0.007	97	45117	0.0793	0.0743	
102 1,2,3-Trimethylbenzene	105	18.452	18.454	-0.002	98	27110	0.0793	0.0746	
103 Butylcyclohexane	83	18.522	18.527	-0.005	94	37084	0.0793	0.0877	
104 1,2-Dichlorobenzene	146	18.694	18.698	-0.004	91	28881	0.0793	0.0777	
105 2,3-Dihydroindene	117	18.700	18.702	-0.002	92	33742	0.0793	0.0737	
106 Indene	116	18.829	18.833	-0.004	93	24860	0.0793	0.0743	
107 n-Butylbenzene	91	18.862	18.862	0.000	98	44394	0.0793	0.0789	
108 Undecane	57	19.212	19.217	-0.005	94	28830	0.0793	0.0860	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.244	19.247	-0.003	97	34842	0.0793	0.0783	
110 1,2-Dibromo-3-Chloropropan	157	19.315	19.317	-0.002	91	9943	0.0793	0.0674	
111 1,2,4,5-Tetramethylbenzene	119	19.638	19.642	-0.004	97	42923	0.0793	0.0792	
112 1,2,3,5-Tetramethylbenzene	119	19.692	19.696	-0.004	95	26835	0.0793	0.0829	
113 1,2,3,4-Tetramethylbenzene	119	20.091	20.092	-0.001	97	39160	0.0793	0.0879	
114 Dodecane	57	20.285	20.286	-0.001	95	28951	0.0793	0.0937	
115 1,2,4-Trichlorobenzene	180	20.425	20.427	-0.002	94	33274	0.0793	0.1028	
116 Naphthalene	128	20.555	20.555	0.000	99	76660	0.0793	0.1136	
117 Benzo(b)thiophene	134	20.652	20.653	-0.001	99	48504	0.0793	0.1296	
118 Hexachlorobutadiene	225	20.781	20.783	-0.002	94	26871	0.0793	0.0851	
119 1,2,3-Trichlorobenzene	180	20.830	20.831	-0.001	94	43065	0.0793	0.1466	
120 2-Methylnaphthalene	142	21.628	21.628	0.000	100	85009	0.2479	0.6180	
121 1-Methylnaphthalene	142	21.806	21.808	-0.002	100	80091	0.2479	0.7229	
A 124 Toluene Range	1	13.027	(12.992-13.062)		0	72089	0.0793	0.0741	
A 125 C8 Range	1	13.798	(13.783-13.813)		0	165967	0.0793	0.0971	
S 126 Xylenes, Total	100				0		0.2380	0.2208	
S 127 1,2-Dichloroethene, Total	1				0		0.1587	0.1672	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L3DNP_00010	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

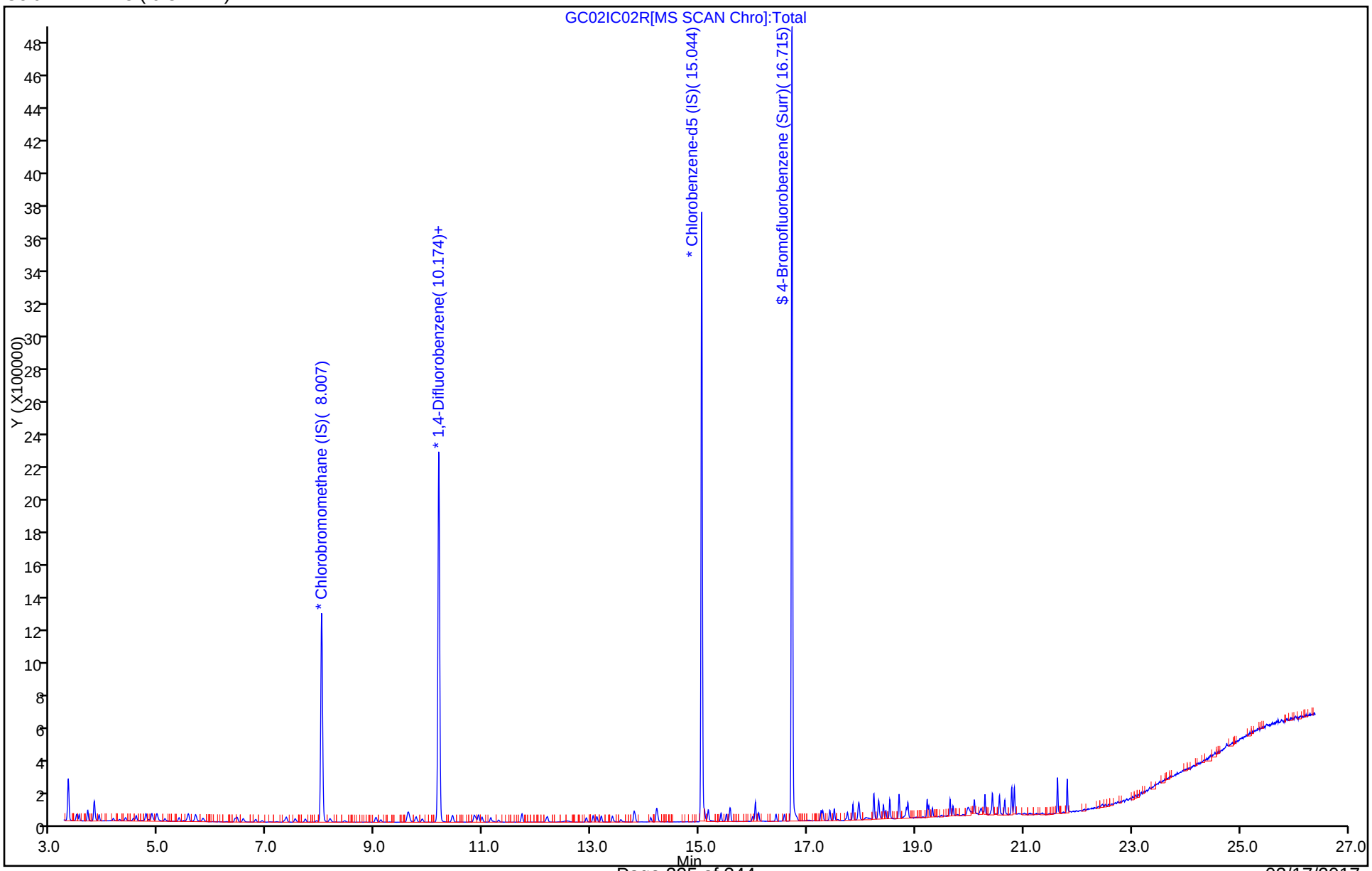
Report Date: 03-Mar-2017 15:10:21 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D

Injection Date:	02-Mar-2017 20:31:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	IC L2			Worklist Smp#:	20
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

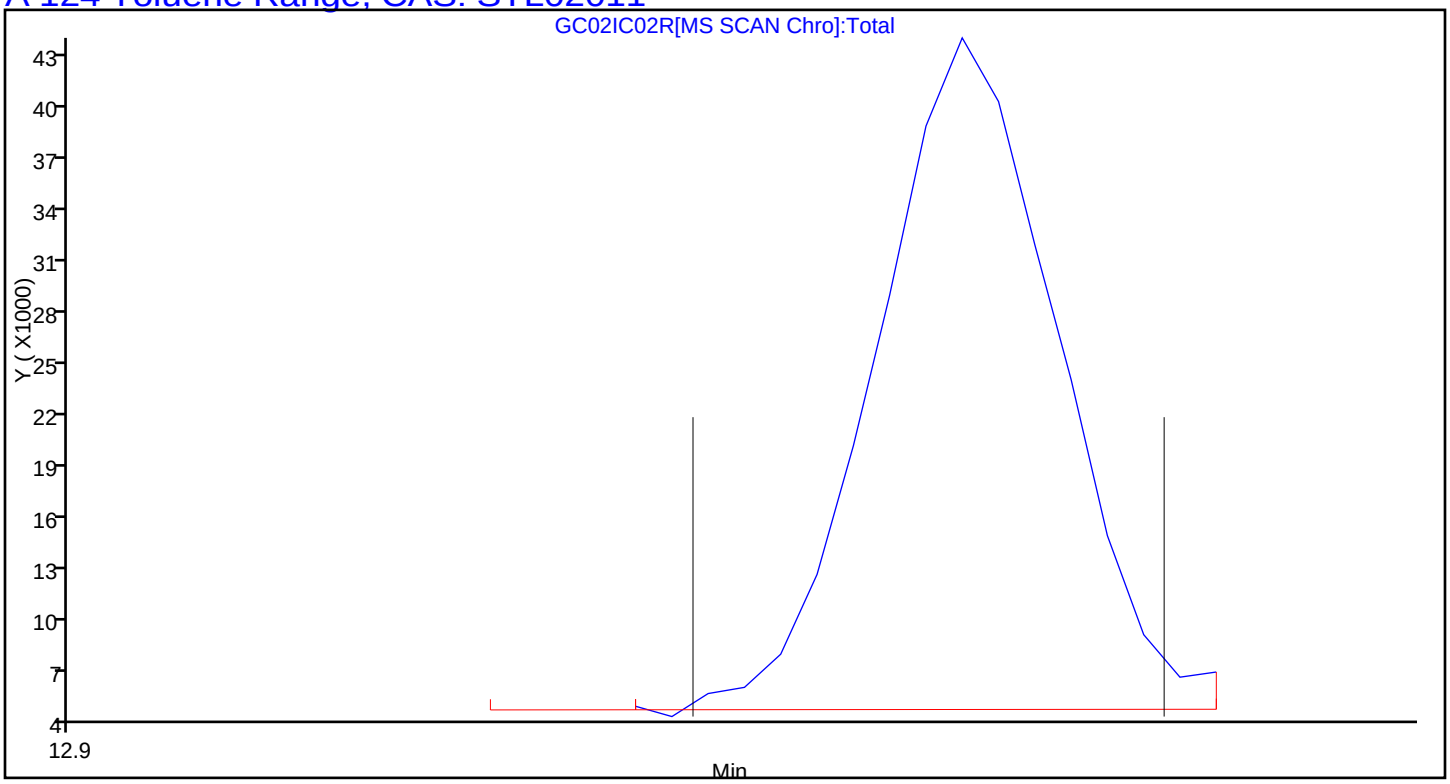


Report Date: 03-Mar-2017 15:10:21 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D				
Injection Date:	02-Mar-2017 20:31:30	Instrument ID:	MG		
Lims ID:	IC L2				
Client ID:					
Operator ID:	7126	ALS Bottle#:	2	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

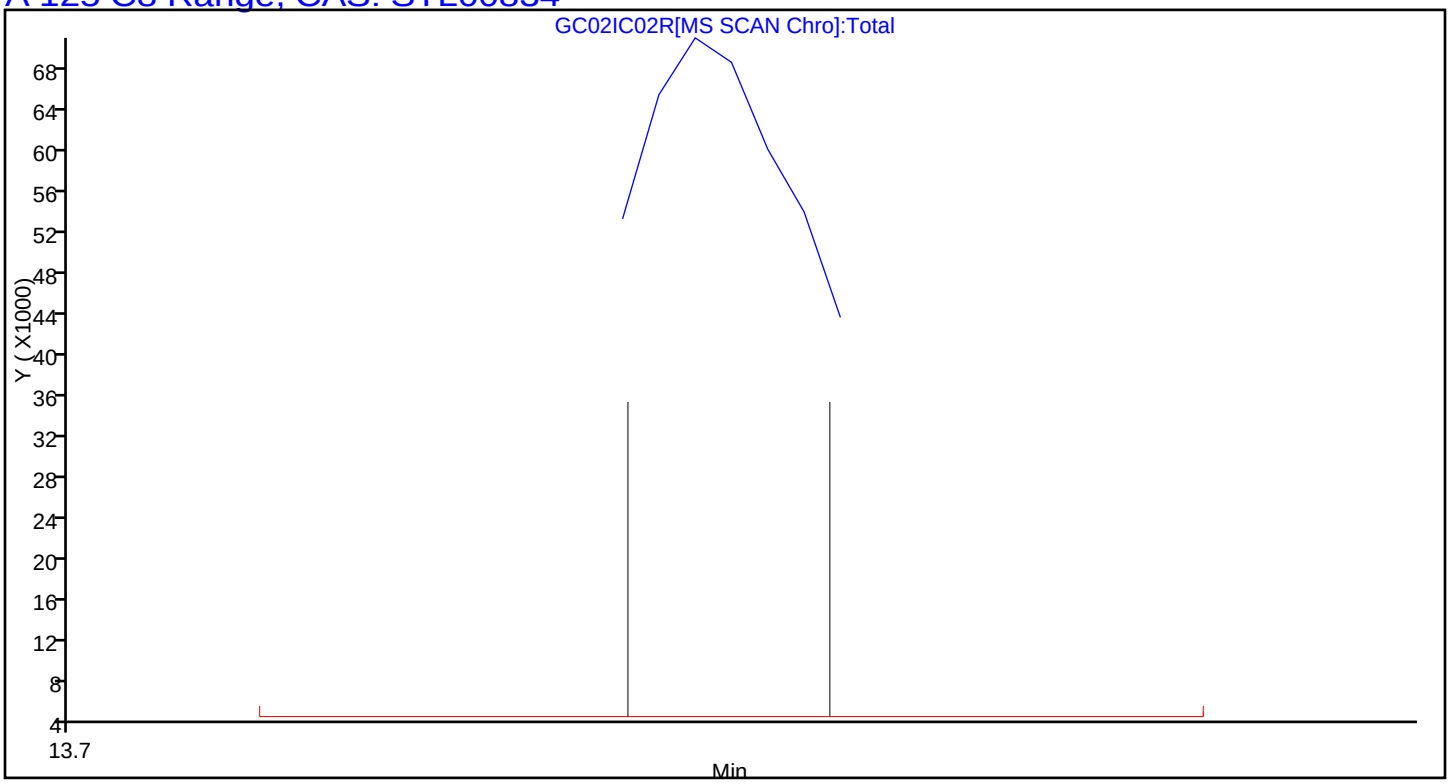


Report Date: 03-Mar-2017 15:10:21 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D				
Injection Date:	02-Mar-2017 20:31:30	Instrument ID:	MG		
Lims ID:	IC L2				
Client ID:					
Operator ID:	7126	ALS Bottle#:	2	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

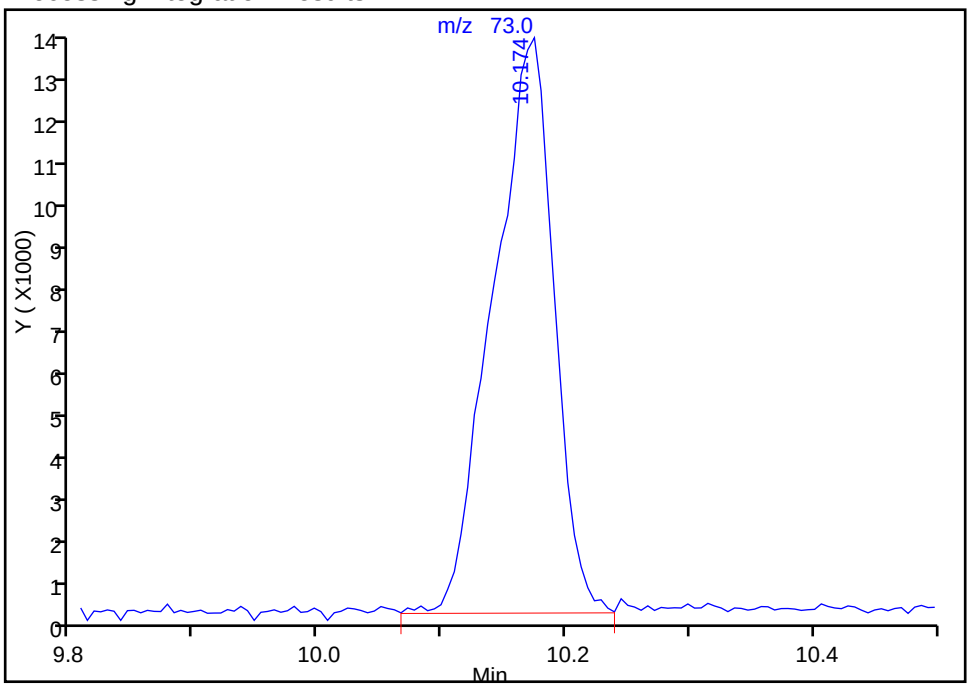
Data File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D				
Injection Date:	02-Mar-2017 20:31:30	Instrument ID:	MG		
Lims ID:	IC L2				
Client ID:					
Operator ID:	7126	ALS Bottle#:	2	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

55 Tert-amyl methyl ether, CAS: 994-05-8

Signal: 1

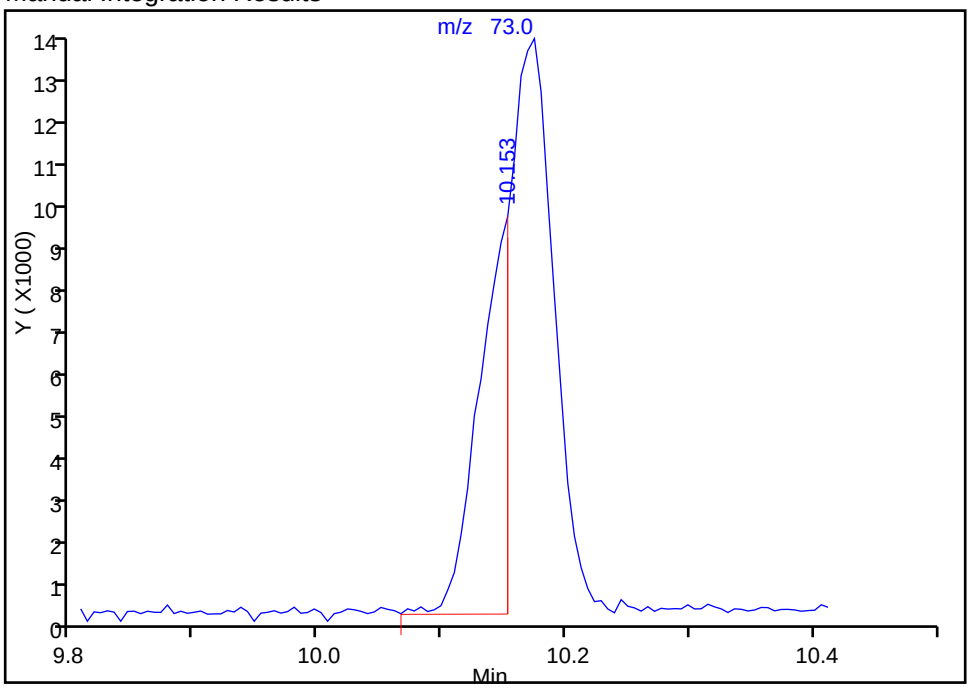
Processing Integration Results

RT: 10.17
Area: 46494
Amount: 0.122635
Amount Units: ppb v/v



Manual Integration Results

RT: 10.15
Area: 16350
Amount: 0.057151
Amount Units: ppb v/v



Reviewer: barlozhetskayaa, 03-Mar-2017 15:08:00

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1

SDG No.:

Lab Sample ID: ICV 140-9079/15 Calibration Date: 03/02/2017 23:17

Instrument ID: MG Calib Start Date: 03/02/2017 13:34

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/02/2017 20:31

Lab File ID: GLCSC02.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3912	0.4085		2.09	2.00	4.4	35.0
Propene	Ave	0.9322	0.9844		2.11	2.00	5.6	35.0
Dichlorodifluoromethane	Ave	3.549	3.925		2.21	2.00	10.6	35.0
Chloromethane	Ave	0.2864	0.3012		2.10	2.00	5.2	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.167	2.464		2.28	2.00	13.7	35.0
Acetaldehyde	Ave	0.4269	0.3600		8.44	10.0	-15.7	35.0
Vinyl chloride	Ave	1.096	1.243		2.27	2.00	13.4	35.0
1,3-Butadiene	Ave	0.7918	0.8621		2.18	2.00	8.9	35.0
Butane	Ave	1.661	1.840		2.22	2.00	10.8	35.0
Bromomethane	Ave	1.113	1.202		2.16	2.00	8.0	35.0
Chloroethane	Ave	0.5869	0.6319		2.15	2.00	7.7	35.0
Ethanol	Ave	0.4396	0.4185		9.52	10.0	-4.8	35.0
Vinyl bromide	Ave	1.059	1.252		2.37	2.00	18.3	35.0
2-Methylbutane	Ave	1.266	1.467		2.32	2.00	15.9	35.0
Acrolein	Ave	0.1640	0.1980		2.42	2.00	20.8	35.0
Trichlorofluoromethane	Ave	3.637	3.982		2.19	2.00	9.5	35.0
Acetonitrile	Ave	0.4020	0.3696		1.84	2.00	-8.0	35.0
Acetone	Ave	0.4274	0.3649		5.13	6.00	-14.6	35.0
Isopropyl alcohol	Ave	1.268	1.298		6.15	6.00	2.4	35.0
Pentane	Ave	0.2020	0.2391		2.37	2.00	18.3	35.0
Ethyl ether	Ave	1.173	1.190		2.03	2.00	1.4	35.0
1,1-Dichloroethene	Ave	1.036	1.163		2.25	2.00	12.3	35.0
Acrylonitrile	Ave	0.5008	0.5166		2.06	2.00	3.2	35.0
tert-Butyl alcohol	Ave	1.526	1.513		1.99	2.00	-0.8	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.193	2.399		2.19	2.00	9.4	35.0
Methylene Chloride	Ave	0.9637	0.9476		1.97	2.00	-1.7	35.0
3-Chloropropene	Ave	1.004	1.117		2.23	2.00	11.2	35.0
Carbon disulfide	Ave	2.760	2.900		2.10	2.00	5.1	35.0
trans-1,2-Dichloroethene	Ave	1.053	1.120		2.13	2.00	6.4	35.0
2-Methylpentane	Ave	2.095	2.396		2.29	2.00	14.3	35.0
Methyl tert-butyl ether	Ave	2.749	2.628		1.91	2.00	-4.4	35.0
1,1-Dichloroethane	Ave	1.959	2.032		2.08	2.00	3.7	35.0
Vinyl acetate	Ave	2.100	1.950		1.86	2.00	-7.2	35.0
2-Butanone (MEK)	Ave	0.4429	0.3715		1.68	2.00	-16.1	35.0
Hexane	Ave	0.8049	0.8279		2.06	2.00	2.9	35.0
Isopropyl ether	Ave	2.823	2.551		1.81	2.00	-9.6	35.0
cis-1,2-Dichloroethene	Ave	1.102	1.158		2.10	2.00	5.1	35.0
Ethyl acetate	Ave	1.713	1.484		1.73	2.00	-13.4	35.0
Chloroform	Ave	2.650	2.742		2.07	2.00	3.5	35.0
Tert-butyl ethyl ether	Ave	2.628	2.657		2.02	2.00	1.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1

SDG No.:

Lab Sample ID: ICV 140-9079/15 Calibration Date: 03/02/2017 23:17

Instrument ID: MG Calib Start Date: 03/02/2017 13:34

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/02/2017 20:31

Lab File ID: GLCSC02.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.9674	0.8954		1.85	2.00	-7.4	35.0
1,1,1-Trichloroethane	Ave	2.916	3.025		2.08	2.00	3.7	35.0
1,2-Dichloroethane	Ave	0.3548	0.3715		2.10	2.00	4.7	35.0
Benzene	Ave	0.6265	0.6744		2.15	2.00	7.6	35.0
Cyclohexane	Ave	0.1103	0.1184		2.15	2.00	7.3	35.0
1-Butanol	Ave	0.0732	0.0729		1.99	2.00	-0.5	35.0
Carbon tetrachloride	Ave	0.5843	0.6507		2.23	2.00	11.4	35.0
2,3-Dimethylpentane	Ave	0.1547	0.1474		1.91	2.00	-4.8	35.0
Thiophene	Ave	0.3593	0.3956		2.20	2.00	10.1	35.0
Tert-amyl methyl ether	Ave	0.5252	0.5227		1.99	2.00	-0.5	35.0
2,2,4-Trimethylpentane	Ave	0.9875	1.041		2.11	2.00	5.4	35.0
Heptane	Ave	0.2404	0.2529		2.10	2.00	5.2	35.0
1,2-Dichloropropane	Ave	0.2304	0.2437		2.12	2.00	5.8	35.0
Trichloroethene	Ave	0.3594	0.4189		2.33	2.00	16.6	35.0
Dibromomethane	Ave	0.2939	0.3147		2.14	2.00	7.1	35.0
Bromodichloromethane	Ave	0.5150	0.5673		2.20	2.00	10.2	35.0
1,4-Dioxane	Ave	0.0837	0.0738		1.76	2.00	-11.9	35.0
Methyl methacrylate	Ave	0.2247	0.1974		1.76	2.00	-12.1	35.0
Methylcyclohexane	Ave	0.5102	0.4317		1.69	2.00	-15.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3765	0.2959		1.57	2.00	-21.4	35.0
cis-1,3-Dichloropropene	Ave	0.4030	0.4394		2.18	2.00	9.0	35.0
trans-1,3-Dichloropropene	Ave	0.3916	0.4165		2.13	2.00	6.4	35.0
Toluene	Ave	0.7260	0.7493		2.07	2.00	3.2	35.0
1,1,2-Trichloroethane	Ave	0.2214	0.2223		2.01	2.00	0.4	35.0
2-Methylthiophene	Ave	0.6335	0.6980		2.20	2.00	10.2	35.0
3-Methylthiophene	Ave	0.6274	0.7104		2.27	2.00	13.2	35.0
2-Hexanone	Ave	0.1842	0.1477		1.61	2.00	-19.8	35.0
Octane	Ave	0.2666	0.2840		2.13	2.00	6.5	35.0
Dibromochloromethane	Ave	0.4903	0.5559		2.27	2.00	13.4	35.0
1,2-Dibromoethane (EDB)	Ave	0.4426	0.4726		2.14	2.00	6.8	35.0
Tetrachloroethene	Ave	0.3201	0.3375		2.11	2.00	5.4	35.0
Chlorobenzene	Ave	0.6369	0.6800		2.14	2.00	6.8	35.0
2,3-Dimethylheptane	Ave	0.6487	0.6843		2.11	2.00	5.5	35.0
Ethylbenzene	Ave	0.9537	0.9274		1.95	2.00	-2.8	35.0
2-Ethylthiophene	Ave	0.7711	0.7614		1.98	2.00	-1.3	35.0
m-Xylene & p-Xylene	Ave	0.7477	0.7385		3.95	4.00	-1.2	35.0
Bromoform	Ave	0.4775	0.5088		2.13	2.00	6.6	35.0
Nonane	Ave	0.4796	0.5078		2.12	2.00	5.9	35.0
Styrene	Ave	0.5300	0.5600		2.11	2.00	5.7	35.0
o-Xylene	Ave	0.7664	0.7253		1.89	2.00	-5.4	35.0
1,1,2,2-Tetrachloroethane	Ave	0.5029	0.4759		1.89	2.00	-5.4	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1

SDG No.:

Lab Sample ID: ICV 140-9079/15 Calibration Date: 03/02/2017 23:17

Instrument ID: MG Calib Start Date: 03/02/2017 13:34

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/02/2017 20:31

Lab File ID: GLCSC02.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1718	0.1610		1.88	2.00	-6.3	35.0
Isopropylbenzene	Ave	1.115	1.075		1.93	2.00	-3.6	35.0
Propylbenzene	Ave	0.2970	0.2921		1.97	2.00	-1.6	35.0
2-Chlorotoluene	Ave	0.2868	0.2973		2.07	2.00	3.6	35.0
4-Ethyltoluene	Ave	1.052	0.9380		1.78	2.00	-10.9	35.0
1,3,5-Trimethylbenzene	Ave	0.4920	0.4760		1.94	2.00	-3.3	35.0
Alpha Methyl Styrene	Ave	0.4107	0.4168		2.03	2.00	1.5	35.0
Decane	Ave	0.5838	0.6191		2.12	2.00	6.1	35.0
tert-Butylbenzene	Ave	0.998	0.9616		1.93	2.00	-3.7	35.0
1,2,4-Trimethylbenzene	Ave	0.9131	0.8698		1.91	2.00	-4.7	35.0
1,3-Dichlorobenzene	Ave	0.7466	0.7760		2.08	2.00	3.9	35.0
sec-Butylbenzene	Ave	1.311	1.300		1.99	2.00	-0.8	35.0
Benzyl chloride	Ave	0.8300	0.8314		2.00	2.00	0.2	35.0
1,4-Dichlorobenzene	Ave	0.7389	0.7398		2.00	2.00	0.1	35.0
4-Isopropyltoluene	Ave	1.136	1.073		1.89	2.00	-5.5	35.0
1,2,3-Trimethylbenzene	Ave	0.6790	0.6841		2.02	2.00	0.8	35.0
Butylcyclohexane	Ave	0.7906	0.8190		2.07	2.00	3.6	35.0
1,2-Dichlorobenzene	Ave	0.6947	0.6861		1.98	2.00	-1.2	35.0
Indane	Ave	0.8561	0.7776		1.82	2.00	-9.2	35.0
Indene	Ave	0.6255	0.7645		2.45	2.00	22.2	35.0
Butylbenzene	Ave	1.052	0.997		1.90	2.00	-5.2	35.0
Undecane	Ave	0.6269	0.6264		2.00	2.00	-0.0	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.8323	0.9747		2.34	2.00	17.1	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.2760	0.2279		1.65	2.00	-17.4	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.013	1.016		2.01	2.00	0.3	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.6049	0.6266		2.07	2.00	3.6	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.8328	0.8103		1.95	2.00	-2.7	35.0
Dodecane	Ave	0.5776	0.5728		1.98	2.00	-0.8	35.0
1,2,4-Trichlorobenzene	Ave	0.6049	0.6054		2.00	2.00	0.0	35.0
Naphthalene	Ave	1.261	1.176		1.87	2.00	-6.8	35.0
Benzo(b)thiophene	Ave	0.6995	0.7347		2.10	2.00	5.0	35.0
Hexachlorobutadiene	Ave	0.5903	0.5990		2.03	2.00	1.5	35.0
1,2,3-Trichlorobenzene	Ave	0.5493	0.5821		2.12	2.00	6.0	35.0
2-Methylnaphthalene	Ave	0.2572	0.2921		7.10	6.25	13.6	50.0
1-Methylnaphthalene	Ave	0.2071	0.2859		8.63	6.25	38.0	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7447	0.7480		4.02	4.00	0.4	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GLCSC02.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 02-Mar-2017 23:17:30 ALS Bottle#: 15 Worklist Smp#: 15
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004202-015
Misc. Info.: 073135
Operator ID: 7126 Instrument ID: MG
Sublist:

Method: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 03-Mar-2017 15:17:50 Calib Date: 02-Mar-2017 20:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa Date: 03-Mar-2017 15:17:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.007	8.012	-0.005	84	386596	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.175	10.179	-0.004	94	1963711	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.044	15.046	-0.002	86	2019239	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.715	16.714	-0.002	96	1510451	4.00	4.02	
6 Chlorodifluoromethane	67	3.456	3.461	-0.007	96	79002	2.00	2.09	
7 Propene	41	3.466	3.469	-0.005	97	190374	2.00	2.11	
8 Dichlorodifluoromethane	85	3.510	3.512	-0.004	100	759167	2.00	2.21	
9 Chloromethane	52	3.661	3.663	-0.004	98	58255	2.00	2.10	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.671	3.673	-0.004	92	476482	2.00	2.28	
11 Acetaldehyde	44	3.785	3.791	-0.008	92	348128	10.0	8.44	
12 Vinyl chloride	62	3.806	3.806	-0.003	99	240439	2.00	2.27	
13 Butadiene	54	3.876	3.881	-0.007	93	166728	2.00	2.18	
14 Butane	43	3.882	3.882	-0.003	95	355823	2.00	2.22	
15 Bromomethane	94	4.140	4.146	-0.009	98	232476	2.00	2.16	
16 Chloroethane	64	4.259	4.265	-0.008	92	122204	2.00	2.15	
17 Ethanol	31	4.356	4.370	-0.016	97	404719	10.0	9.52	
18 Vinyl bromide	106	4.513	4.519	-0.009	97	242194	2.00	2.37	
19 2-Methylbutane	43	4.561	4.567	-0.008	91	283732	2.00	2.32	
20 Acrolein	56	4.744	4.730	0.012	94	38302	2.00	2.42	
21 Trichlorofluoromethane	101	4.750	4.750	-0.003	99	770152	2.00	2.19	
22 Acetonitrile	40	4.793	4.805	-0.015	95	71486	2.00	1.84	
23 Acetone	58	4.836	4.846	-0.013	99	211720	6.00	5.13	
24 Pentane	72	4.944	4.946	-0.005	96	46241	2.00	2.37	
25 Isopropyl alcohol	45	4.933	4.960	-0.030	93	753308	6.00	6.15	
26 Ethyl ether	31	5.073	5.086	-0.017	90	230081	2.00	2.03	
27 1,1-Dichloroethene	96	5.359	5.364	-0.008	97	224917	2.00	2.25	
28 Acrylonitrile	53	5.440	5.447	-0.010	95	99914	2.00	2.06	
29 2-Methyl-2-propanol	59	5.462	5.491	-0.032	95	292694	2.00	1.99	
30 1,1,2-Trichloro-1,2,2-trif	101	5.526	5.533	-0.010	96	464020	2.00	2.19	
31 Methylene Chloride	84	5.661	5.666	-0.008	93	183272	2.00	1.97	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.677	5.681	-0.007	97	216036	2.00	2.23	
33 Carbon disulfide	76	5.801	5.807	-0.009	100	560811	2.00	2.10	
34 trans-1,2-Dichloroethene	96	6.400	6.403	-0.006	98	216678	2.00	2.13	
35 2-Methylpentane	43	6.432	6.436	-0.007	93	463389	2.00	2.29	
36 Methyl tert-butyl ether	73	6.519	6.529	-0.015	95	508324	2.00	1.91	
37 1,1-Dichloroethane	63	6.783	6.783	-0.004	100	393066	2.00	2.08	
38 Vinyl acetate	43	6.885	6.894	-0.013	100	377143	2.00	1.86	
39 2-Butanone (MEK)	72	7.284	7.300	-0.021	98	71843	2.00	1.68	
40 Hexane	56	7.344	7.346	-0.006	87	160112	2.00	2.06	
41 Isopropyl ether	45	7.489	7.498	-0.013	94	493370	2.00	1.81	
42 cis-1,2-Dichloroethene	96	7.699	7.703	-0.008	95	223980	2.00	2.10	
43 Ethyl acetate	43	7.888	7.897	-0.013	98	287015	2.00	1.73	
44 Chloroform	83	8.028	8.030	-0.007	96	530340	2.00	2.07	
45 Tert-butyl ethyl ether	59	8.131	8.139	-0.013	95	513860	2.00	2.02	
46 Tetrahydrofuran	42	8.390	8.405	-0.020	91	173164	2.00	1.85	
47 1,1,1-Trichloroethane	97	9.004	9.008	-0.009	94	585058	2.00	2.08	
48 1,2-Dichloroethane	62	9.096	9.101	-0.010	99	364940	2.00	2.10	
49 Benzene	78	9.592	9.595	-0.007	96	662489	2.00	2.15	
50 Cyclohexane	69	9.598	9.599	-0.006	93	116303	2.00	2.15	
52 Carbon tetrachloride	117	9.625	9.624	-0.005	99	639223	2.00	2.23	
51 n-Butanol	31	9.603	9.643	-0.044	69	71586	2.00	1.99	
53 2,3-Dimethylpentane	71	9.749	9.749	-0.005	90	144769	2.00	1.91	
54 Thiophene	84	9.867	9.868	-0.006	95	388659	2.00	2.20	
55 Tert-amyl methyl ether	73	10.104	10.116	-0.017	98	513507	2.00	1.99	
56 Isooctane	57	10.423	10.425	-0.007	98	1022172	2.00	2.11	
57 n-Heptane	71	10.827	10.825	-0.004	89	248413	2.00	2.10	
58 1,2-Dichloropropane	63	10.859	10.857	-0.003	86	239419	2.00	2.12	
59 Trichloroethene	130	10.908	10.908	-0.005	97	411549	2.00	2.33	
60 Dibromomethane	93	10.973	10.973	-0.005	93	309127	2.00	2.14	
61 Dichlorobromomethane	83	11.140	11.138	-0.003	98	557263	2.00	2.20	
62 1,4-Dioxane	88	11.151	11.167	-0.022	90	72469	2.00	1.76	
63 Methyl methacrylate	41	11.269	11.272	-0.009	95	193930	2.00	1.76	
64 Methylcyclohexane	83	11.711	11.712	-0.007	95	424041	2.00	1.69	
65 4-Methyl-2-pentanone (MIBK	43	12.137	12.147	-0.016	97	290640	2.00	1.57	
66 cis-1,3-Dichloropropene	75	12.186	12.184	-0.004	95	431667	2.00	2.18	
67 trans-1,3-Dichloropropene	75	12.903	12.909	-0.008	97	420676	2.00	2.13	
68 Toluene	91	13.032	13.033	-0.003	94	756882	2.00	2.07	
69 1,1,2-Trichloroethane	83	13.103	13.098	-0.003	98	224553	2.00	2.01	
70 2-Methylthiophene	97	13.183	13.184	-0.003	97	705115	2.00	2.20	
71 3-Methylthiophene	97	13.388	13.392	-0.006	98	717654	2.00	2.27	
72 2-Hexanone	58	13.523	13.532	-0.012	94	149224	2.00	1.61	
73 n-Octane	85	13.787	13.789	-0.005	90	286912	2.00	2.13	
74 Chlorodibromomethane	129	13.809	13.813	-0.007	97	561526	2.00	2.27	
75 Ethylene Dibromide	107	14.100	14.103	-0.006	98	477427	2.00	2.14	
76 Tetrachloroethene	129	14.203	14.205	-0.004	95	340878	2.00	2.11	
77 Chlorobenzene	112	15.092	15.092	-0.003	94	686908	2.00	2.14	
78 2,3-Dimethylheptane	43	15.162	15.162	-0.003	91	691277	2.00	2.11	
79 Ethylbenzene	91	15.400	15.400	-0.002	98	936784	2.00	1.95	
80 2-Ethylthiophene	97	15.497	15.500	-0.005	98	769145	2.00	1.98	
81 m-Xylene & p-Xylene	91	15.567	15.569	-0.005	99	1491976	4.00	3.95	
82 Bromoform	173	15.988	15.989	-0.003	96	514011	2.00	2.13	
84 Styrene	104	16.036	16.035	-0.001	97	565722	2.00	2.11	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
83 n-Nonane	57	16.036	16.036	-0.002	87	512951	2.00	2.12	
85 o-Xylene	91	16.095	16.096	-0.004	98	732627	2.00	1.89	
86 1,1,2,2-Tetrachloroethane	83	16.419	16.419	-0.003	99	480716	2.00	1.89	
87 1,2,3-Trichloropropane	110	16.575	16.574	-0.002	97	162652	2.00	1.88	
88 Isopropylbenzene	105	16.699	16.700	-0.004	98	1085858	2.00	1.93	
89 N-Propylbenzene	120	17.255	17.254	-0.002	99	295039	2.00	1.97	
90 2-Chlorotoluene	126	17.287	17.285	-0.001	96	300265	2.00	2.07	
91 4-Ethyltoluene	105	17.416	17.415	-0.002	98	947503	2.00	1.78	
92 1,3,5-Trimethylbenzene	120	17.497	17.499	-0.005	93	480802	2.00	1.94	
93 Alpha Methyl Styrene	118	17.740	17.741	-0.004	89	420994	2.00	2.03	
94 n-Decane	57	17.842	17.843	-0.004	93	625417	2.00	2.12	
95 tert-Butylbenzene	119	17.945	17.946	-0.004	91	971341	2.00	1.93	
96 1,2,4-Trimethylbenzene	105	17.961	17.960	-0.002	95	878608	2.00	1.91	
97 1,3-Dichlorobenzene	146	18.231	18.229	-0.001	98	783835	2.00	2.08	
98 sec-Butylbenzene	105	18.231	18.232	-0.004	98	1313447	2.00	1.99	
99 Benzyl chloride	91	18.312	18.308	0.001	98	839876	2.00	2.00	
100 1,4-Dichlorobenzene	146	18.322	18.321	-0.002	95	747277	2.00	2.00	
101 4-Isopropyltoluene	119	18.409	18.407	-0.001	97	1084150	2.00	1.89	
102 1,2,3-Trimethylbenzene	105	18.452	18.451	-0.002	97	691077	2.00	2.02	
103 Butylcyclohexane	83	18.527	18.524	0.000	96	827296	2.00	2.07	
104 1,2-Dichlorobenzene	146	18.694	18.695	-0.004	95	693112	2.00	1.98	
105 2,3-Dihydroindene	117	18.700	18.699	-0.002	93	785463	2.00	1.82	
106 Indene	116	18.835	18.830	0.002	92	772251	2.00	2.45	
107 n-Butylbenzene	91	18.862	18.859	0.000	97	1006839	2.00	1.90	
108 Undecane	57	19.218	19.214	0.001	93	632789	2.00	2.00	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.244	19.244	-0.003	97	984597	2.00	2.34	
110 1,2-Dibromo-3-Chloropropan	157	19.315	19.314	-0.002	99	230202	2.00	1.65	
111 1,2,4,5-Tetramethylbenzene	119	19.638	19.639	-0.004	96	1026501	2.00	2.01	
112 1,2,3,5-Tetramethylbenzene	119	19.697	19.693	0.001	95	632967	2.00	2.07	
113 1,2,3,4-Tetramethylbenzene	119	20.091	20.088	-0.001	97	818553	2.00	1.95	
114 Dodecane	57	20.285	20.283	-0.001	94	578663	2.00	1.98	
115 1,2,4-Trichlorobenzene	180	20.425	20.423	-0.002	94	611563	2.00	2.00	
116 Naphthalene	128	20.555	20.552	0.000	99	1187650	2.00	1.87	
117 Benzo(b)thiophene	134	20.652	20.650	-0.001	99	742169	2.00	2.10	
118 Hexachlorobutadiene	225	20.781	20.779	-0.002	95	605032	2.00	2.03	
119 1,2,3-Trichlorobenzene	180	20.830	20.828	-0.001	95	588012	2.00	2.12	
120 2-Methylnaphthalene	142	21.628	21.624	0.000	100	922169	6.25	7.10	
121 1-Methylnaphthalene	142	21.806	21.804	-0.002	100	902671	6.25	8.63	
A 124 Toluene Range	1	13.033	(12.998-13.068)		0	1878205	2.00	2.14	
A 125 C8 Range	1	13.798	(13.783-13.813)		0	4313868	2.00	2.80	
S 126 Xylenes, Total	100				0		6.00	5.85	
S 127 1,2-Dichloroethene, Total	1				0		4.00	4.23	

Reagents:

40CV101S_00031	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

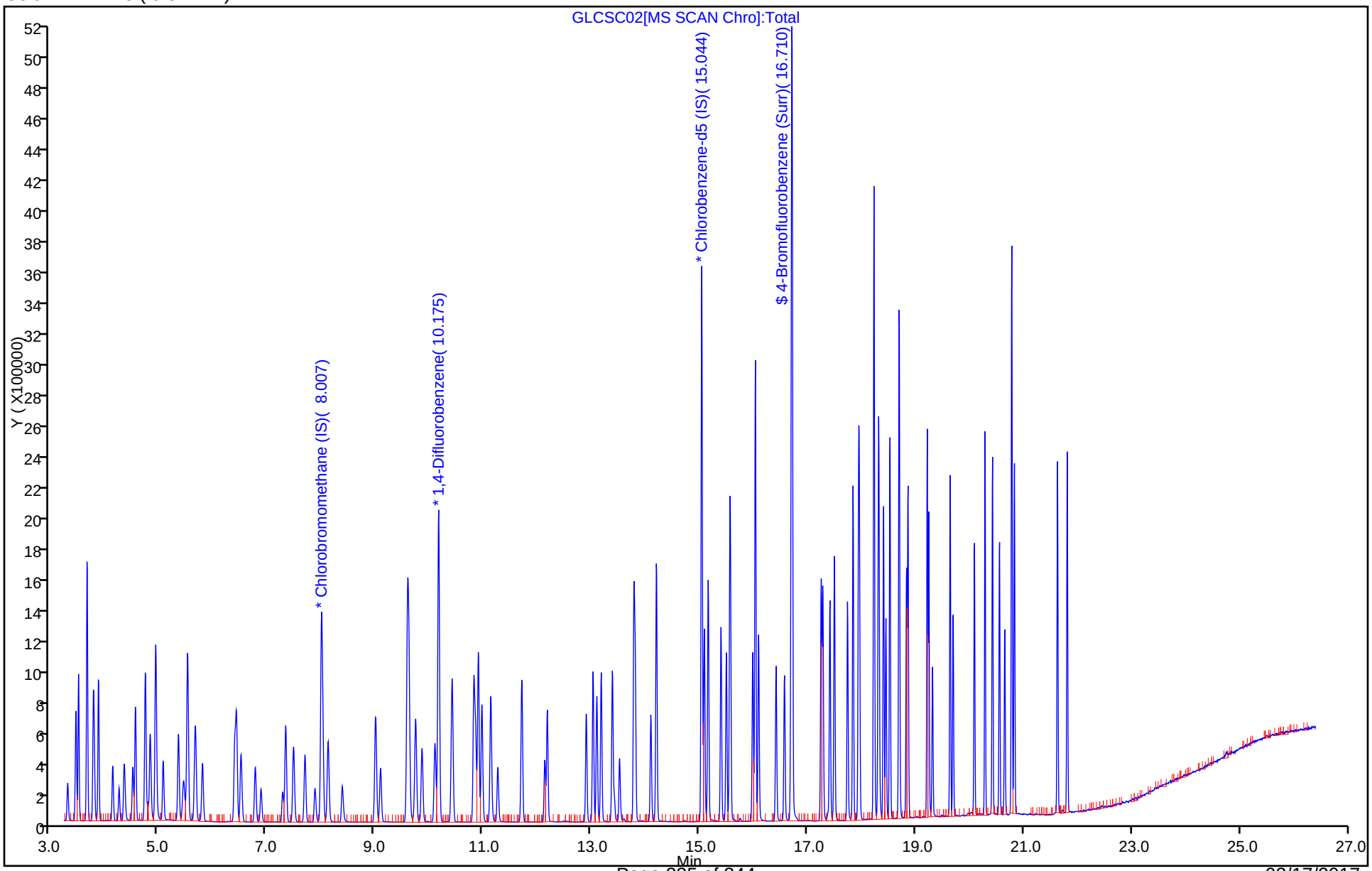
Report Date: 03-Mar-2017 15:17:51 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GLCSC02.D

Injection Date:	02-Mar-2017 23:17:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	ICV			Worklist Smp#:	15
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1

SDG No.:

Lab Sample ID: CCVIS 140-9158/2 Calibration Date: 03/10/2017 08:21

Instrument ID: MG Calib Start Date: 03/02/2017 13:34

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/02/2017 20:31

Lab File ID: GCCVC10.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3912	0.4834		2.47	2.00	23.6	30.0
Propene	Ave	0.9322	1.070		2.30	2.00	14.8	30.0
Dichlorodifluoromethane	Ave	3.549	4.613		2.60	2.00	30.0	30.0
Chloromethane	Ave	0.2864	0.3430		2.40	2.00	19.8	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.167	2.589		2.39	2.00	19.5	30.0
Acetaldehyde	Ave	0.4269	0.3797		8.90	10.0	-11.1	30.0
Vinyl chloride	Ave	1.096	1.342		2.45	2.00	22.4	30.0
1,3-Butadiene	Ave	0.7918	0.9018		2.28	2.00	13.9	30.0
Butane	Ave	1.661	1.986		2.39	2.00	19.6	30.0
Bromomethane	Ave	1.113	1.192		2.14	2.00	7.1	30.0
Chloroethane	Ave	0.5869	0.6286		2.14	2.00	7.1	30.0
Ethanol	Ave	0.4396	0.4617		10.5	10.0	5.0	30.0
Vinyl bromide	Ave	1.059	1.207		2.28	2.00	14.0	30.0
2-Methylbutane	Ave	1.266	1.313		2.08	2.00	3.7	30.0
Acrolein	Ave	0.1640	0.2080		2.54	2.00	26.9	30.0
Trichlorofluoromethane	Ave	3.637	4.334		2.38	2.00	19.2	30.0
Acetonitrile	Ave	0.4020	0.3886		1.93	2.00	-3.3	30.0
Acetone	Ave	0.4274	0.3856		5.42	6.00	-9.8	30.0
Isopropyl alcohol	Ave	1.268	1.278		6.05	6.00	0.8	30.0
Pentane	Ave	0.2020	0.2323		2.30	2.00	15.0	30.0
Ethyl ether	Ave	1.173	1.114		1.90	2.00	-5.0	30.0
1,1-Dichloroethene	Ave	1.036	1.165		2.25	2.00	12.5	30.0
Acrylonitrile	Ave	0.5008	0.5323		2.13	2.00	6.3	30.0
tert-Butyl alcohol	Ave	1.526	1.612		2.11	2.00	5.6	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.193	2.569		2.34	2.00	17.1	30.0
Methylene Chloride	Ave	0.9637	0.9466		1.97	2.00	-1.8	30.0
3-Chloropropene	Ave	1.004	1.110		2.21	2.00	10.5	30.0
Carbon disulfide	Ave	2.760	2.873		2.08	2.00	4.1	30.0
trans-1,2-Dichloroethene	Ave	1.053	1.101		2.09	2.00	4.6	30.0
2-Methylpentane	Ave	2.095	2.660		2.54	2.00	26.9	30.0
Methyl tert-butyl ether	Ave	2.749	3.275		2.38	2.00	19.2	30.0
1,1-Dichloroethane	Ave	1.959	2.243		2.29	2.00	14.5	30.0
Vinyl acetate	Ave	2.100	2.742		2.61	2.00	30.6*	30.0
2-Butanone (MEK)	Ave	0.4429	0.4697		2.12	2.00	6.0	30.0
Hexane	Ave	0.8049	0.9094		2.26	2.00	13.0	30.0
Isopropyl ether	Ave	2.823	3.254		2.31	2.00	15.3	30.0
cis-1,2-Dichloroethene	Ave	1.102	1.188		2.16	2.00	7.8	30.0
Ethyl acetate	Ave	1.713	2.092		2.44	2.00	22.1	30.0
Chloroform	Ave	2.650	2.987		2.26	2.00	12.7	30.0
Tert-butyl ethyl ether	Ave	2.628	3.397		2.59	2.00	29.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1

SDG No.:

Lab Sample ID: CCVIS 140-9158/2 Calibration Date: 03/10/2017 08:21

Instrument ID: MG Calib Start Date: 03/02/2017 13:34

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/02/2017 20:31

Lab File ID: GCCVC10.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.9674	1.174		2.43	2.00	21.4	30.0
1,1,1-Trichloroethane	Ave	2.916	3.357		2.30	2.00	15.1	30.0
1,2-Dichloroethane	Ave	0.3548	0.4277		2.41	2.00	20.5	30.0
Benzene	Ave	0.6265	0.6938		2.22	2.00	10.7	30.0
Cyclohexane	Ave	0.1103	0.1206		2.19	2.00	9.3	30.0
1-Butanol	Ave	0.0732	0.0886		2.42	2.00	21.0	30.0
Carbon tetrachloride	Ave	0.5843	0.7101		2.43	2.00	21.5	30.0
2,3-Dimethylpentane	Ave	0.1547	0.1543		2.00	2.00	-0.3	30.0
Thiophene	Ave	0.3593	0.4146		2.31	2.00	15.4	30.0
Tert-amyl methyl ether	Ave	0.5252	0.6489		2.47	2.00	23.6	30.0
2,2,4-Trimethylpentane	Ave	0.9875	1.104		2.24	2.00	11.8	30.0
Heptane	Ave	0.2404	0.2580		2.15	2.00	7.3	30.0
1,2-Dichloropropane	Ave	0.2304	0.2527		2.19	2.00	9.7	30.0
Trichloroethene	Ave	0.3594	0.3689		2.05	2.00	2.7	30.0
Dibromomethane	Ave	0.2939	0.3207		2.18	2.00	9.1	30.0
Bromodichloromethane	Ave	0.5150	0.6079		2.36	2.00	18.0	30.0
1,4-Dioxane	Ave	0.0837	0.0865		2.07	2.00	3.3	30.0
Methyl methacrylate	Ave	0.2247	0.2770		2.47	2.00	23.3	30.0
Methylcyclohexane	Ave	0.5102	0.4388		1.72	2.00	-14.0	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3765	0.3906		2.08	2.00	3.7	30.0
cis-1,3-Dichloropropene	Ave	0.4030	0.4709		2.34	2.00	16.8	30.0
trans-1,3-Dichloropropene	Ave	0.3916	0.4662		2.38	2.00	19.0	30.0
Toluene	Ave	0.7260	0.8214		2.26	2.00	13.1	30.0
1,1,2-Trichloroethane	Ave	0.2214	0.2354		2.13	2.00	6.3	30.0
2-Methylthiophene	Ave	0.6335	0.7329		2.32	2.00	15.7	30.0
3-Methylthiophene	Ave	0.6274	0.7512		2.40	2.00	19.7	30.0
2-Hexanone	Ave	0.1842	0.1876		2.04	2.00	1.8	30.0
Octane	Ave	0.2666	0.2948		2.21	2.00	10.6	30.0
Dibromochloromethane	Ave	0.4903	0.5928		2.42	2.00	20.9	30.0
1,2-Dibromoethane (EDB)	Ave	0.4426	0.4926		2.23	2.00	11.3	30.0
Tetrachloroethene	Ave	0.3201	0.3564		2.23	2.00	11.3	30.0
Chlorobenzene	Ave	0.6369	0.7060		2.22	2.00	10.8	30.0
2,3-Dimethylheptane	Ave	0.6487	0.7690		2.37	2.00	18.5	30.0
Ethylbenzene	Ave	0.9537	1.104		2.32	2.00	15.8	30.0
2-Ethylthiophene	Ave	0.7711	0.8813		2.29	2.00	14.3	30.0
m-Xylene & p-Xylene	Ave	0.7477	0.8983		4.81	4.00	20.1	30.0
Bromoform	Ave	0.4775	0.5624		2.36	2.00	17.8	30.0
Styrene	Ave	0.5300	0.6356		2.40	2.00	19.9	30.0
Nonane	Ave	0.4796	0.5439		2.27	2.00	13.4	30.0
o-Xylene	Ave	0.7664	0.8972		2.34	2.00	17.1	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5029	0.6014		2.39	2.00	19.6	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1

SDG No.:

Lab Sample ID: CCVIS 140-9158/2 Calibration Date: 03/10/2017 08:21

Instrument ID: MG Calib Start Date: 03/02/2017 13:34

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 03/02/2017 20:31

Lab File ID: GCCVC10.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1718	0.2058		2.40	2.00	19.8	30.0
Isopropylbenzene	Ave	1.115	1.315		2.36	2.00	18.0	30.0
Propylbenzene	Ave	0.2970	0.3506		2.36	2.00	18.1	30.0
2-Chlorotoluene	Ave	0.2868	0.3308		2.31	2.00	15.3	30.0
4-Ethyltoluene	Ave	1.052	1.188		2.26	2.00	12.9	30.0
1,3,5-Trimethylbenzene	Ave	0.4920	0.5915		2.41	2.00	20.2	30.0
Alpha Methyl Styrene	Ave	0.4107	0.4913		2.39	2.00	19.6	30.0
Decane	Ave	0.5838	0.7153		2.45	2.00	22.5	30.0
tert-Butylbenzene	Ave	0.998	1.222		2.45	2.00	22.4	30.0
1,2,4-Trimethylbenzene	Ave	0.9131	1.116		2.45	2.00	22.3	30.0
1,3-Dichlorobenzene	Ave	0.7466	0.8429		2.26	2.00	12.9	30.0
sec-Butylbenzene	Ave	1.311	1.603		2.45	2.00	22.3	30.0
Benzyl chloride	Ave	0.8300	1.089		2.63	2.00	31.2*	30.0
1,4-Dichlorobenzene	Ave	0.7389	0.8183		2.22	2.00	10.7	30.0
4-Isopropyltoluene	Ave	1.136	1.387		2.44	2.00	22.1	30.0
1,2,3-Trimethylbenzene	Ave	0.6790	0.8992		2.65	2.00	32.4*	30.0
Butylcyclohexane	Ave	0.7906	0.9009		2.28	2.00	13.9	30.0
1,2-Dichlorobenzene	Ave	0.6947	0.7891		2.27	2.00	13.6	30.0
Indane	Ave	0.8561	0.9574		2.24	2.00	11.8	30.0
Indene	Ave	0.6255	0.9342		2.99	2.00	49.4*	30.0
Butylbenzene	Ave	1.052	1.323		2.52	2.00	25.7	30.0
Undecane	Ave	0.6269	0.7954		2.54	2.00	26.9	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.8323	1.282		3.08	2.00	54.0*	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2760	0.2893		2.10	2.00	4.8	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.013	1.363		2.69	2.00	34.6*	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.6049	0.8331		2.76	2.00	37.7*	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.8328	1.074		2.58	2.00	29.0	30.0
Dodecane	Ave	0.5776	0.7686		2.66	2.00	33.1*	30.0
1,2,4-Trichlorobenzene	Ave	0.6049	0.7004		2.32	2.00	15.8	30.0
Naphthalene	Ave	1.261	1.433		2.27	2.00	13.6	30.0
Benzo(b)thiophene	Ave	0.6995	0.8743		2.50	2.00	25.0	30.0
Hexachlorobutadiene	Ave	0.5903	0.7289		2.47	2.00	23.5	30.0
1,2,3-Trichlorobenzene	Ave	0.5493	0.6729		2.45	2.00	22.5	30.0
2-Methylnaphthalene	Ave	0.2572	0.3425		8.33	6.25	33.2	50.0
1-Methylnaphthalene	Ave	0.2071	0.3298		9.96	6.25	59.2*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7447	0.7955		4.27	4.00	6.8	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GCCVC10.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 10-Mar-2017 08:21:30 ALS Bottle#: 15 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004228-002
Misc. Info.: S31
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 10-Mar-2017 11:36:23 Calib Date: 02-Mar-2017 20:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: tajh Date: 10-Mar-2017 11:36:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.001	8.001	0.000	86	284389	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.169	10.169	0.000	95	1474377	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.038	15.038	0.000	88	1473079	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.710	16.710	0.000	95	1171759	4.00	4.27	
6 Chlorodifluoromethane	67	3.461	3.461	0.000	97	68770	2.00	2.47	
7 Propene	41	3.472	3.472	0.000	97	152258	2.00	2.30	
8 Dichlorodifluoromethane	85	3.515	3.515	0.000	100	656352	2.00	2.60	
9 Chloromethane	52	3.666	3.666	0.000	98	48792	2.00	2.40	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.677	3.677	0.000	92	368344	2.00	2.39	
11 Acetaldehyde	44	3.790	3.790	0.000	90	270105	10.0	8.90	
12 Vinyl chloride	62	3.806	3.806	0.000	99	190922	2.00	2.45	
13 Butadiene	54	3.882	3.882	0.000	84	128301	2.00	2.28	
14 Butane	43	3.882	3.882	0.000	95	282548	2.00	2.39	
15 Bromomethane	94	4.146	4.146	0.000	97	169544	2.00	2.14	
16 Chloroethane	64	4.264	4.264	0.000	90	89437	2.00	2.14	
17 Ethanol	31	4.361	4.361	0.000	97	328424	10.0	10.5	
18 Vinyl bromide	106	4.518	4.518	0.000	95	171764	2.00	2.28	
19 2-Methylbutane	43	4.566	4.566	0.000	90	186807	2.00	2.08	
20 Acrolein	56	4.744	4.744	0.000	97	29598	2.00	2.54	
21 Trichlorofluoromethane	101	4.750	4.750	0.000	99	616541	2.00	2.38	
22 Acetonitrile	40	4.798	4.798	0.000	98	55283	2.00	1.93	
23 Acetone	58	4.836	4.836	0.000	99	164609	6.00	5.42	
25 Isopropyl alcohol	45	4.938	4.938	0.000	94	545409	6.00	6.05	
24 Pentane	72	4.944	4.944	0.000	96	33044	2.00	2.30	
26 Ethyl ether	31	5.079	5.079	0.000	92	158533	2.00	1.90	
27 1,1-Dichloroethene	96	5.359	5.359	0.000	97	165768	2.00	2.25	
28 Acrylonitrile	53	5.440	5.440	0.000	96	75734	2.00	2.13	
29 2-Methyl-2-propanol	59	5.461	5.461	0.000	95	229289	2.00	2.11	
30 1,1,2-Trichloro-1,2,2-trif	101	5.532	5.532	0.000	94	365502	2.00	2.34	
31 Methylene Chloride	84	5.666	5.666	0.000	90	134673	2.00	1.97	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.683	5.683	0.000	94	157875	2.00	2.21	
33 Carbon disulfide	76	5.801	5.801	0.000	100	408738	2.00	2.08	
34 trans-1,2-Dichloroethene	96	6.400	6.400	0.000	96	156647	2.00	2.09	
35 2-Methylpentane	43	6.432	6.432	0.000	93	378422	2.00	2.54	
36 Methyl tert-butyl ether	73	6.518	6.518	0.000	96	465949	2.00	2.38	
37 1,1-Dichloroethane	63	6.783	6.783	0.000	100	319153	2.00	2.29	
38 Vinyl acetate	43	6.885	6.885	0.000	100	390124	2.00	2.61	
39 2-Butanone (MEK)	72	7.284	7.284	0.000	99	66822	2.00	2.12	
40 Hexane	56	7.343	7.343	0.000	88	129385	2.00	2.26	
41 Isopropyl ether	45	7.484	7.484	0.000	95	462987	2.00	2.31	
42 cis-1,2-Dichloroethene	96	7.699	7.699	0.000	98	169047	2.00	2.16	
43 Ethyl acetate	43	7.883	7.883	0.000	98	297666	2.00	2.44	
44 Chloroform	83	8.028	8.028	0.000	96	424980	2.00	2.26	
45 Tert-butyl ethyl ether	59	8.125	8.125	0.000	96	483346	2.00	2.59	
46 Tetrahydrofuran	42	8.390	8.390	0.000	91	167033	2.00	2.43	
47 1,1,1-Trichloroethane	97	9.004	9.004	0.000	95	477578	2.00	2.30	
48 1,2-Dichloroethane	62	9.096	9.096	0.000	99	315424	2.00	2.41	
49 Benzene	78	9.592	9.592	0.000	96	511711	2.00	2.22	
50 Cyclohexane	69	9.597	9.597	0.000	87	88928	2.00	2.19	
51 n-Butanol	31	9.608	9.608	0.000	70	65370	2.00	2.42	
52 Carbon tetrachloride	117	9.619	9.619	0.000	97	523745	2.00	2.43	
53 2,3-Dimethylpentane	71	9.748	9.748	0.000	90	113785	2.00	2.00	
54 Thiophene	84	9.867	9.867	0.000	96	305806	2.00	2.31	
55 Tert-amyl methyl ether	73	10.104	10.104	0.000	98	478660	2.00	2.47	
56 Isooctane	57	10.422	10.422	0.000	97	814011	2.00	2.24	
57 n-Heptane	71	10.821	10.821	0.000	91	190314	2.00	2.15	
58 1,2-Dichloropropane	63	10.854	10.854	0.000	88	186373	2.00	2.19	
59 Trichloroethene	130	10.908	10.908	0.000	95	272118	2.00	2.05	
60 Dibromomethane	93	10.967	10.967	0.000	95	236523	2.00	2.18	
61 Dichlorobromomethane	83	11.134	11.134	0.000	98	448339	2.00	2.36	
62 1,4-Dioxane	88	11.150	11.150	0.000	95	63777	2.00	2.07	
63 Methyl methacrylate	41	11.264	11.264	0.000	92	204332	2.00	2.47	
64 Methylcyclohexane	83	11.711	11.711	0.000	95	323619	2.00	1.72	
65 4-Methyl-2-pentanone (MIBK	43	12.137	12.137	0.000	96	288080	2.00	2.08	
66 cis-1,3-Dichloropropene	75	12.180	12.180	0.000	96	347340	2.00	2.34	
67 trans-1,3-Dichloropropene	75	12.903	12.903	0.000	97	343528	2.00	2.38	
68 Toluene	91	13.027	13.027	0.000	93	605300	2.00	2.26	
69 1,1,2-Trichloroethane	83	13.097	13.097	0.000	98	173494	2.00	2.13	
70 2-Methylthiophene	97	13.178	13.178	0.000	98	540109	2.00	2.32	
71 3-Methylthiophene	97	13.388	13.388	0.000	99	553596	2.00	2.40	
72 2-Hexanone	58	13.518	13.518	0.000	93	138228	2.00	2.04	
73 n-Octane	85	13.787	13.787	0.000	90	217215	2.00	2.21	
74 Chlorodibromomethane	129	13.809	13.809	0.000	97	436836	2.00	2.42	
75 Ethylene Dibromide	107	14.100	14.100	0.000	97	363011	2.00	2.23	
76 Tetrachloroethene	129	14.203	14.203	0.000	94	262625	2.00	2.23	
77 Chlorobenzene	112	15.087	15.087	0.000	92	520253	2.00	2.22	
78 2,3-Dimethylheptane	43	15.157	15.157	0.000	93	566689	2.00	2.37	
79 Ethylbenzene	91	15.394	15.394	0.000	99	813912	2.00	2.32	
80 2-Ethylthiophene	97	15.497	15.497	0.000	98	649445	2.00	2.29	
81 m-Xylene & p-Xylene	91	15.567	15.567	0.000	99	1324027	4.00	4.81	
82 Bromoform	173	15.982	15.982	0.000	95	414448	2.00	2.36	
84 Styrene	104	16.031	16.031	0.000	97	468394	2.00	2.40	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
83 n-Nonane	57	16.036	16.036	0.000	87	400835	2.00	2.27	
85 o-Xylene	91	16.090	16.090	0.000	98	661156	2.00	2.34	
86 1,1,2,2-Tetrachloroethane	83	16.413	16.413	0.000	98	443220	2.00	2.39	
87 1,2,3-Trichloropropane	110	16.570	16.570	0.000	97	151664	2.00	2.40	
88 Isopropylbenzene	105	16.694	16.694	0.000	97	969348	2.00	2.36	
89 N-Propylbenzene	120	17.249	17.249	0.000	99	258398	2.00	2.36	
90 2-Chlorotoluene	126	17.282	17.282	0.000	97	243807	2.00	2.31	
91 4-Ethyltoluene	105	17.411	17.411	0.000	98	875761	2.00	2.26	
92 1,3,5-Trimethylbenzene	120	17.497	17.497	0.000	92	435900	2.00	2.41	
93 Alpha Methyl Styrene	118	17.740	17.740	0.000	87	362059	2.00	2.39	
94 n-Decane	57	17.842	17.842	0.000	93	527128	2.00	2.45	
95 tert-Butylbenzene	119	17.945	17.945	0.000	92	900836	2.00	2.45	
96 1,2,4-Trimethylbenzene	105	17.956	17.956	0.000	96	822756	2.00	2.45	
97 1,3-Dichlorobenzene	146	18.225	18.225	0.000	98	621147	2.00	2.26	
98 sec-Butylbenzene	105	18.231	18.231	0.000	98	1181468	2.00	2.45	
99 Benzyl chloride	91	18.306	18.306	0.000	98	802616	2.00	2.63	
100 1,4-Dichlorobenzene	146	18.317	18.317	0.000	95	603053	2.00	2.22	
101 4-Isopropyltoluene	119	18.403	18.403	0.000	97	1021977	2.00	2.44	
102 1,2,3-Trimethylbenzene	105	18.446	18.446	0.000	98	662638	2.00	2.65	
103 Butylcyclohexane	83	18.522	18.522	0.000	94	663866	2.00	2.28	
104 1,2-Dichlorobenzene	146	18.694	18.694	0.000	94	581531	2.00	2.27	
105 2,3-Dihydroindene	117	18.700	18.700	0.000	93	705526	2.00	2.24	
106 Indene	116	18.829	18.829	0.000	91	688445	2.00	2.99	
107 n-Butylbenzene	91	18.856	18.856	0.000	98	974727	2.00	2.52	
108 Undecane	57	19.212	19.212	0.000	93	586142	2.00	2.54	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.244	19.244	0.000	97	944707	2.00	3.08	
110 1,2-Dibromo-3-Chloropropan	157	19.314	19.314	0.000	96	213219	2.00	2.10	
111 1,2,4,5-Tetramethylbenzene	119	19.638	19.638	0.000	96	1004245	2.00	2.69	
112 1,2,3,5-Tetramethylbenzene	119	19.692	19.692	0.000	94	613908	2.00	2.76	
113 1,2,3,4-Tetramethylbenzene	119	20.086	20.086	0.000	96	791749	2.00	2.58	
114 Dodecane	57	20.285	20.285	0.000	93	566404	2.00	2.66	
115 1,2,4-Trichlorobenzene	180	20.420	20.420	0.000	94	516115	2.00	2.32	
116 Naphthalene	128	20.549	20.549	0.000	99	1055986	2.00	2.27	
117 Benzo(b)thiophene	134	20.646	20.646	0.000	99	644261	2.00	2.50	
118 Hexachlorobutadiene	225	20.781	20.781	0.000	95	537171	2.00	2.47	
119 1,2,3-Trichlorobenzene	180	20.830	20.830	0.000	95	495900	2.00	2.45	
120 2-Methylnaphthalene	142	21.622	21.622	0.000	100	788822	6.25	8.33	
121 1-Methylnaphthalene	142	21.806	21.806	0.000	100	759671	6.25	9.96	
A 124 Toluene Range	1	13.022	(12.987-13.057)		0	1518574	2.00	2.31	
A 125 C8 Range	1	13.792	(13.777-13.807)		0	3428644	2.00	2.96	
S 126 Xylenes, Total	100				0		6.00	7.15	
S 127 1,2-Dichloroethene, Total	1				0		4.00	4.25	

Reagents:

40CV101S_00031	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

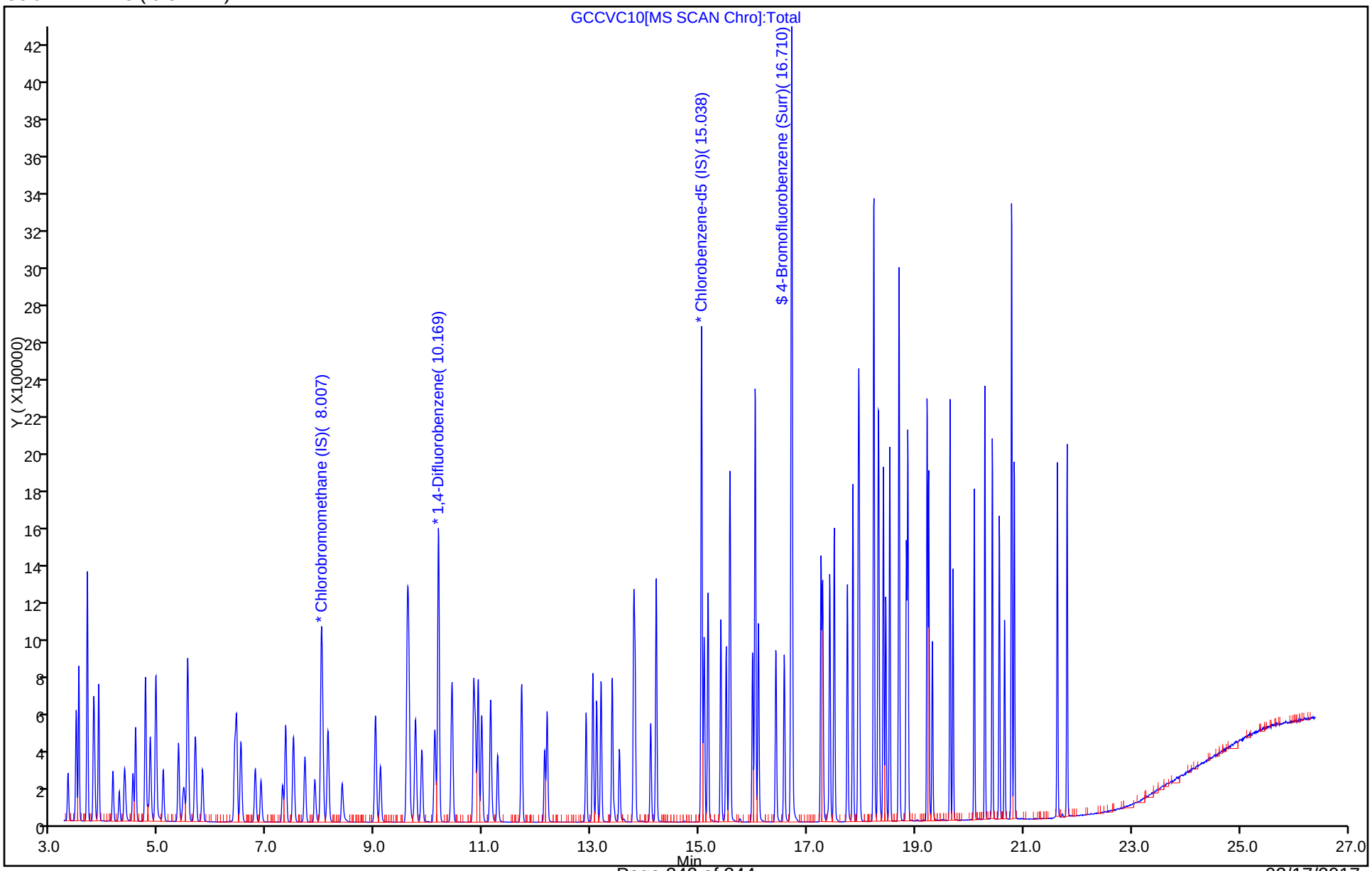
Report Date: 10-Mar-2017 11:36:24 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GCCVC10.D

Injection Date:	10-Mar-2017 08:21:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GBFBC02.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	02-Mar-2017 12:22:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004202-001				
Misc. Info.:	BFB				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	03-Mar-2017 13:22:09	Calib Date:	02-Mar-2017 20:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				
First Level Reviewer: barlozhetskayaa		Date:	02-Mar-2017 13:20:37		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.782	4.782	0.000	0	1291262	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

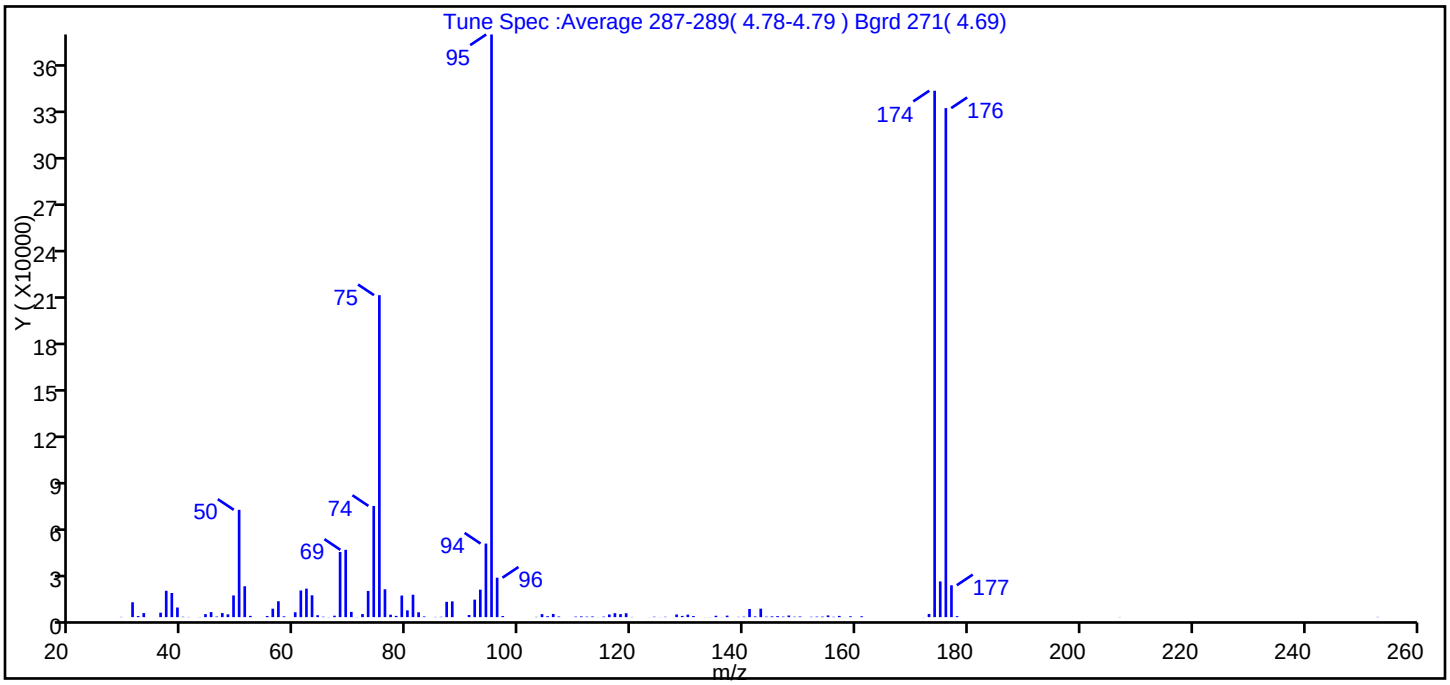
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GBFBC02.D
Injection Date: 02-Mar-2017 12:22:30 Instrument ID: MG
Lims ID: BFB
Client ID:
Operator ID: 7126 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.4
75	30 to 60% of m/z 95	55.3
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.5 (0.6)
174	50 to 120% of m/z 95	90.3
175	5 to 9% of m/z 174	6.1 (6.8)
176	Greater than 95% but less than 101% of m/z 174	87.4 (96.7)
177	5 to 9% of m/z 176	5.5 (6.3)

Data File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GBFBC02.D\MG_TO15.rslt\spectra.d
Injection Date: 02-Mar-2017 12:22:30
Spectrum: Tune Spec :Average 287-289(4.78-4.79) Bgrd 271(4.69)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 120

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	145	64.00	1215	97.00	701	139.00	175
31.00	9485	65.00	268	103.00	184	140.00	319
32.00	675	66.00	109	104.00	1911	141.00	5217
33.00	2581	67.00	912	105.00	606	142.00	483
36.00	2843	68.00	41496	106.00	2034	143.00	5399
37.00	16800	69.00	42888	107.00	409	144.00	320
38.00	15378	70.00	3367	110.00	347	145.00	500
39.00	6137	71.00	86	111.00	492	146.00	649
40.00	241	72.00	1968	112.00	312	147.00	342
41.00	117	73.00	16696	113.00	436	148.00	1047
43.00	84	74.00	70864	114.00	58	149.00	278
44.00	1920	75.00	205120	115.00	339	150.00	420
45.00	3209	76.00	17768	116.00	1701	152.00	245
46.00	378	77.00	1549	117.00	2530	153.00	355
47.00	2608	78.00	820	118.00	1929	154.00	347
48.00	1803	79.00	13761	119.00	2493	155.00	1112
49.00	13838	80.00	4338	120.00	131	156.00	231
50.00	68360	81.00	14285	123.00	56	157.00	792
51.00	19688	82.00	3090	124.00	267	158.00	58
52.00	825	83.00	446	125.00	65	159.00	551
53.00	31	85.00	137	126.00	220	161.00	566
54.00	26	86.00	231	128.00	1693	172.00	57
55.00	737	87.00	9767	129.00	780	173.00	2038
56.00	5387	88.00	10052	130.00	1599	174.00	335360
57.00	10128	91.00	1365	131.00	693	175.00	22752
58.00	513	92.00	11158	133.00	64	176.00	324288
60.00	3109	93.00	17528	134.00	58	177.00	20320
61.00	16984	94.00	46864	135.00	890	178.00	636
62.00	18152	95.00	371200	136.00	50	207.00	99
63.00	13931	96.00	25136	137.00	957	253.00	148

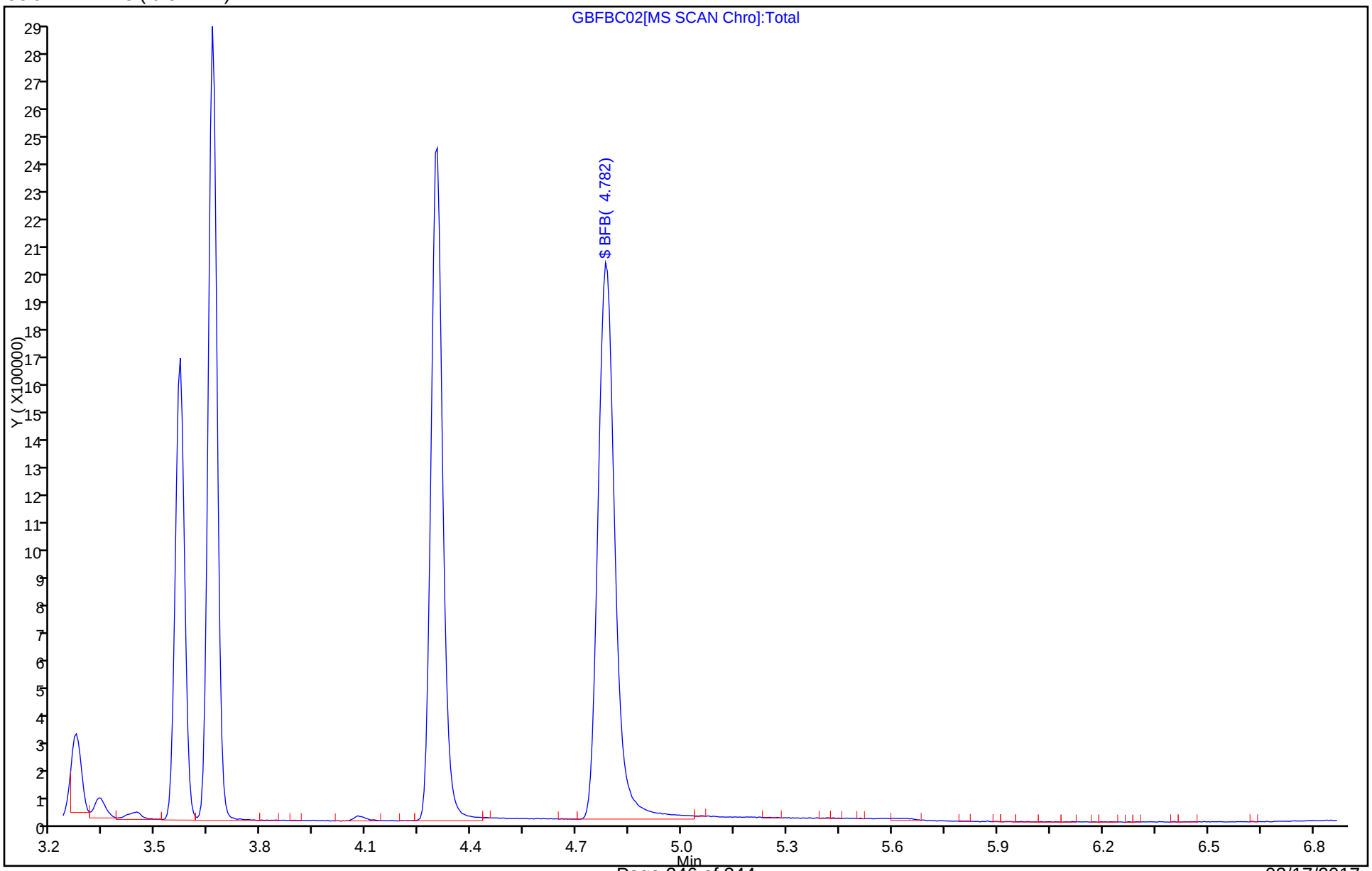
Report Date: 03-Mar-2017 13:22:10 Chrom Revision: 2.2 27-Feb-2017 12:17:18

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GBFBC02.D

Injection Date:	02-Mar-2017 12:22:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GBFBC10.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	10-Mar-2017 07:50:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004228-001				
Misc. Info.:	BFB				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	10-Mar-2017 11:34:44	Calib Date:	02-Mar-2017 20:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK028				
First Level Reviewer: tajh		Date:	10-Mar-2017 11:34:44		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.717	4.717	0.000	0	1186457	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

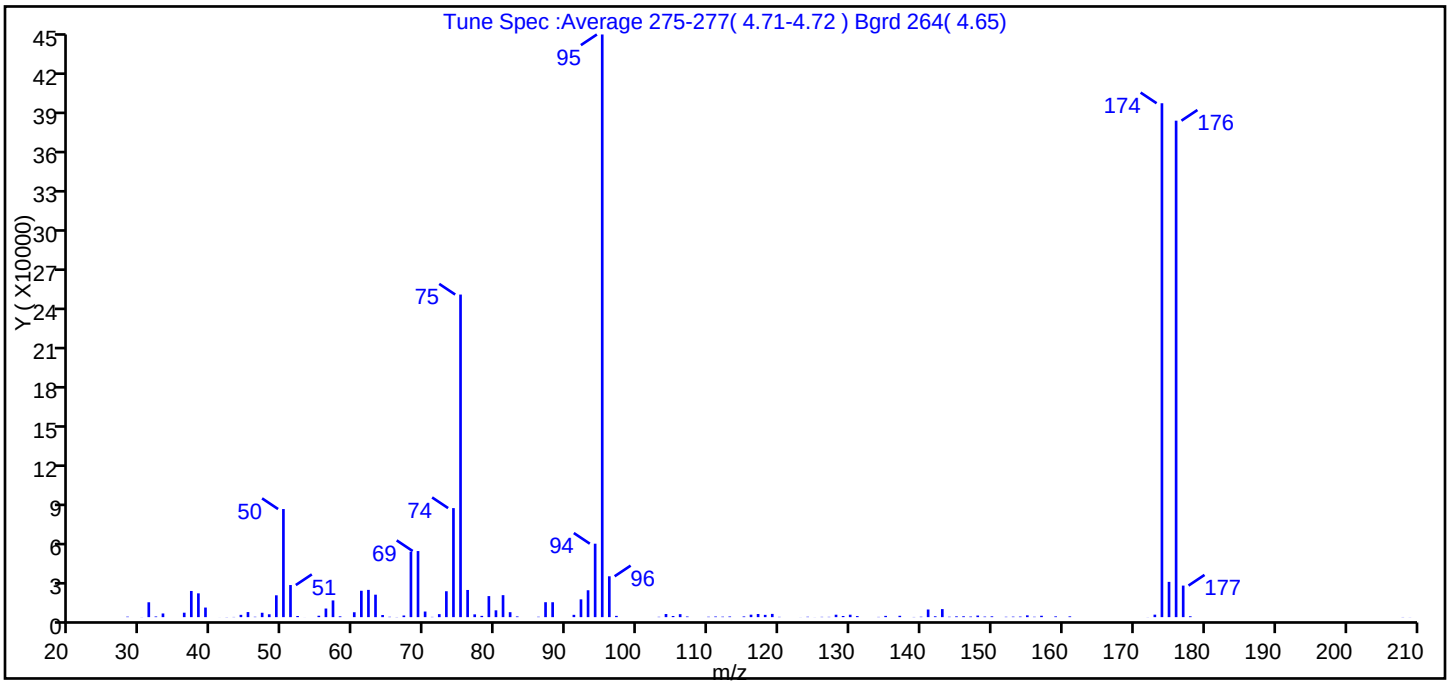
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GBFBC10.D
Injection Date: 10-Mar-2017 07:50:30 Instrument ID: MG
Lims ID: BFB
Client ID:
Operator ID: 7126 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.6
75	30 to 60% of m/z 95	55.4
96	5 to 9% of m/z 95	7.0
173	Less than 2% of m/z 174	0.4 (0.5)
174	50 to 120% of m/z 95	88.2
175	5 to 9% of m/z 174	6.1 (6.9)
176	Greater than 95% but less than 101% of m/z 174	85.2 (96.6)
177	5 to 9% of m/z 176	5.4 (6.4)

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GBFBC10.D\MG_TO15.rslt\spectra.d
Injection Date: 10-Mar-2017 07:50:30
Spectrum: Tune Spec :Average 275-277(4.71-4.72) Bgrd 264(4.65)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 116

m/z	Y	m/z	Y	m/z	Y	m/z	Y
28.00	365	63.00	17248	96.00	31368	139.00	140
30.00	68	64.00	1627	97.00	984	140.00	334
31.00	11423	65.00	273	103.00	251	141.00	5863
32.00	524	66.00	116	104.00	2396	142.00	669
33.00	2824	67.00	1259	105.00	887	143.00	6176
36.00	3409	68.00	50224	106.00	2290	144.00	314
37.00	20104	69.00	50736	107.00	492	145.00	604
38.00	18272	70.00	4308	110.00	305	146.00	657
39.00	7366	71.00	191	111.00	488	147.00	452
41.00	31	72.00	2297	112.00	364	148.00	1213
42.00	107	73.00	19896	113.00	503	149.00	429
43.00	155	74.00	83720	115.00	544	150.00	632
44.00	1763	75.00	247680	116.00	1894	152.00	287
45.00	3890	76.00	20864	117.00	2410	153.00	387
46.00	287	77.00	2135	118.00	1750	154.00	426
47.00	3371	78.00	978	119.00	2490	155.00	1372
48.00	2197	79.00	16158	120.00	213	156.00	298
49.00	16768	80.00	5241	123.00	52	157.00	1067
50.00	83000	81.00	16880	124.00	291	159.00	599
51.00	24648	82.00	3808	125.00	52	161.00	602
52.00	871	83.00	550	126.00	228	172.00	69
53.00	31	86.00	295	127.00	220	173.00	1908
55.00	1070	87.00	11463	128.00	1866	174.00	394560
56.00	6615	88.00	11446	129.00	890	175.00	27080
57.00	12838	91.00	1778	130.00	1867	176.00	381184
58.00	599	92.00	13657	131.00	819	177.00	24232
60.00	3753	93.00	20640	134.00	183	178.00	640
61.00	20264	94.00	56392	135.00	969	208.00	120
62.00	20936	95.00	447360	137.00	1043	209.00	69

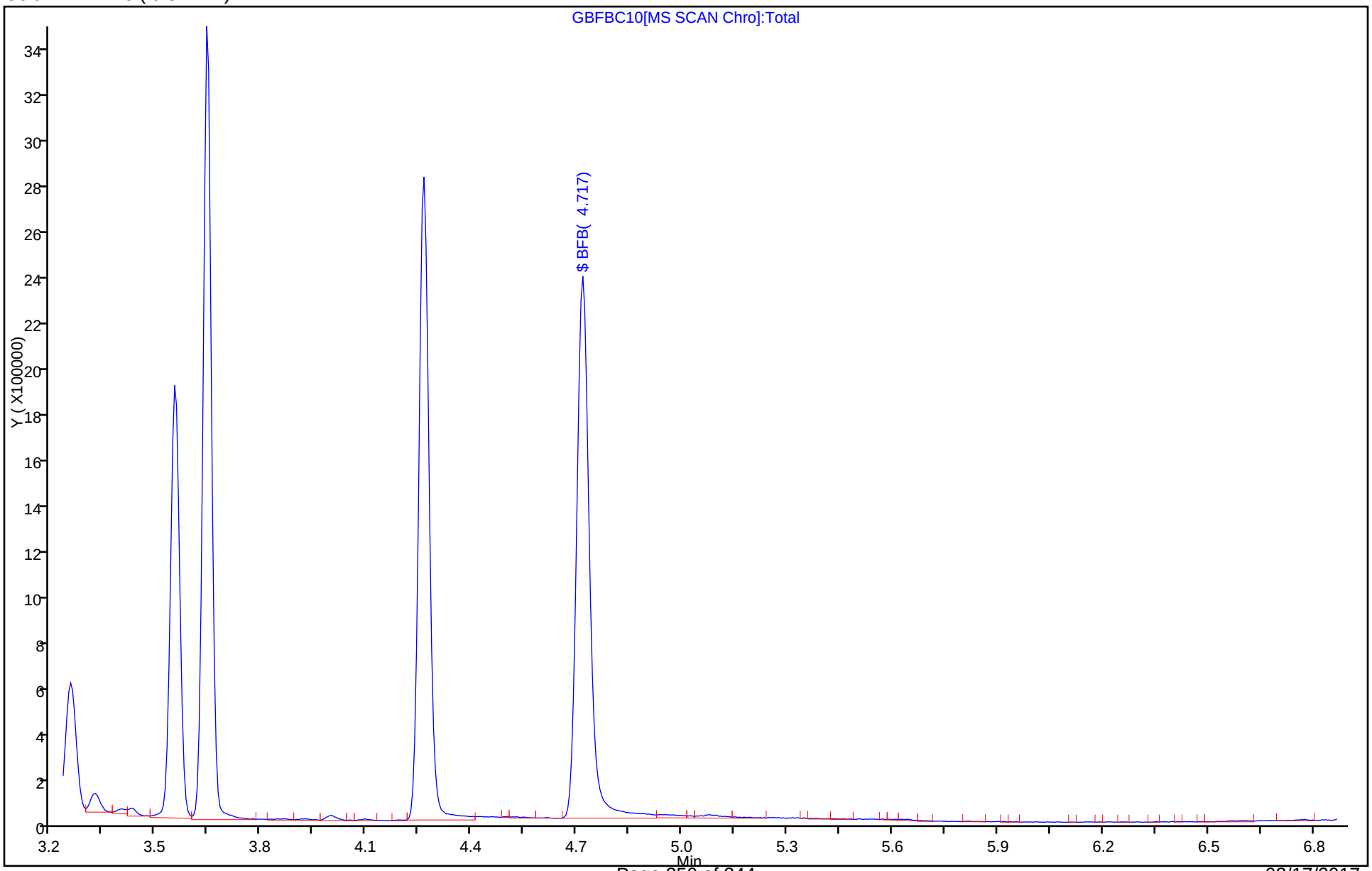
Report Date: 10-Mar-2017 11:34:44 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GBFBC10.D

Injection Date:	10-Mar-2017 07:50:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-9158/4

Matrix: Air Lab File ID: GMB500C10.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/10/2017 10:04

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9158 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-9158/4

Matrix: Air Lab File ID: GMB500C10.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/10/2017 10:04

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9158 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GMB500C10.D				
Lims ID:	mb				
Client ID:					
Sample Type:	MB				
Inject. Date:	10-Mar-2017 10:04:30	ALS Bottle#:	16	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004228-004				
Misc. Info.:	500ML BLK				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	10-Mar-2017 11:36:23	Calib Date:	02-Mar-2017 20:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK028				
First Level Reviewer: tajh		Date:	10-Mar-2017 10:49:50		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.991	8.001	-0.010	86	280896	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.164	10.169	-0.005	95	1418032	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.033	15.038	-0.005	88	1398041	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.705	16.710	-0.005	94	1073193	4.00	4.12	
31 Methylene Chloride	84	5.656	5.666	-0.010	90	5958		0.0880	
51 n-Butanol	31	9.651	9.608	0.043	77	1998		0.0770	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

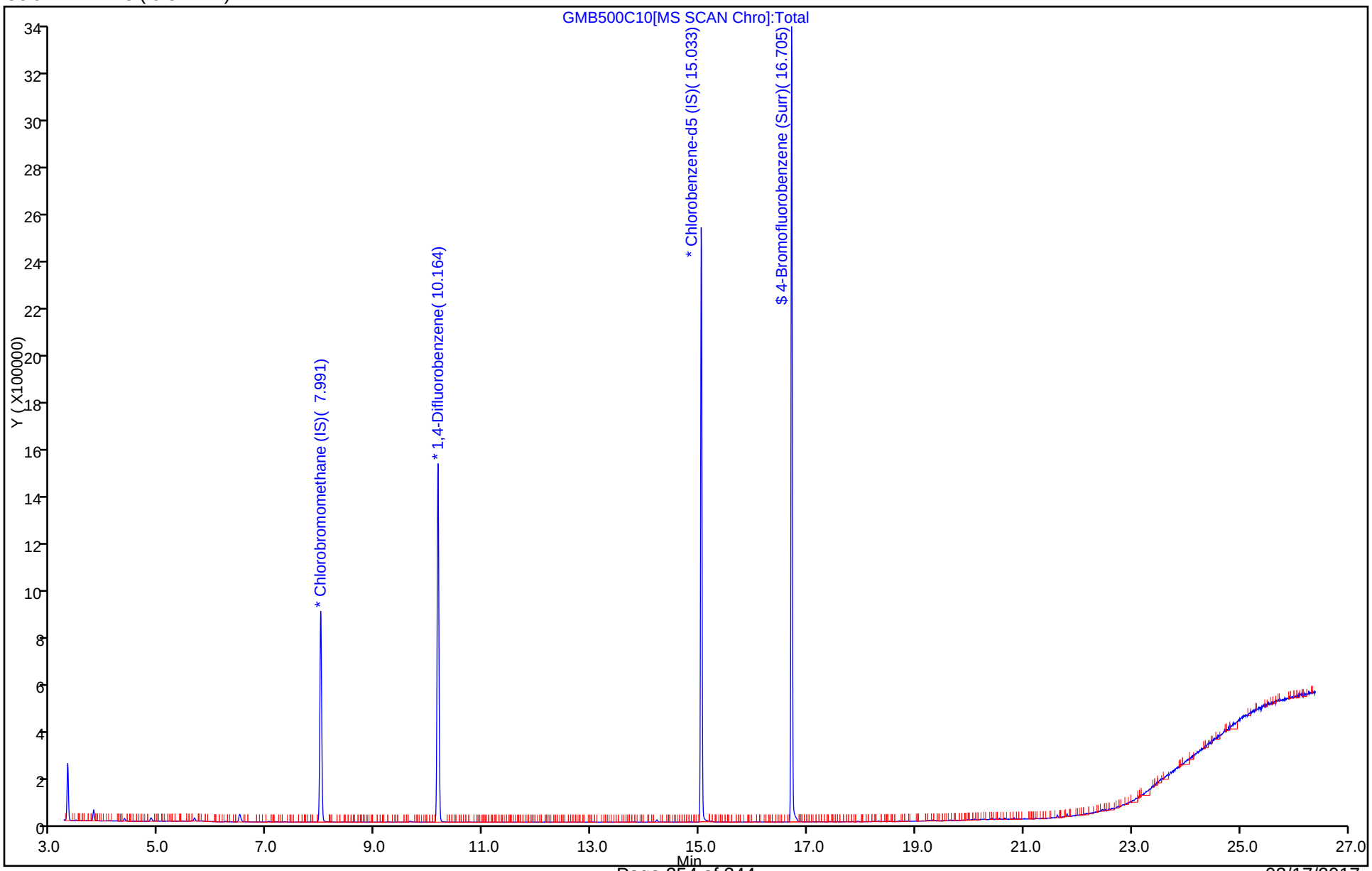
Report Date: 10-Mar-2017 11:36:48 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GMB500C10.D

Injection Date:	10-Mar-2017 10:04:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	mb			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GMB500C10.D				
Lims ID:	mb				
Client ID:					
Sample Type:	MB				
Inject. Date:	10-Mar-2017 10:04:30	ALS Bottle#:	16	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004228-004				
Misc. Info.:	500ML BLK				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	10-Mar-2017 11:36:23	Calib Date:	02-Mar-2017 20:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK028				

First Level Reviewer: tajh Date: 10-Mar-2017 10:49:50

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.12	103.08

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 140-9158/1002

Matrix: Air Lab File ID: GCCVC10-LCS.d

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 03/10/2017 08:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 9158 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.22		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.43		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.47		0.080	0.015
67-66-3	Chloroform	119.38	2.26		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.16		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.60		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.29		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.41		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.25		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.32		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.97		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	2.38		0.40	0.068
91-20-3	Naphthalene	128.17	2.27		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.23		0.080	0.016
108-88-3	Toluene	92.14	2.26		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.09		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	2.32		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.30		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.13		0.080	0.021
79-01-6	Trichloroethene	131.39	2.05		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.65		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.45		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	2.41		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.45		0.040	0.029
1330-20-7	Xylenes, Total	106.17	7.15		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GCCVC10-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 10-Mar-2017 08:21:30 ALS Bottle#: 15 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004228-002
Misc. Info.: S31
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 10-Mar-2017 11:36:23 Calib Date: 02-Mar-2017 20:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: tajh Date: 10-Mar-2017 11:36:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.001	8.001	0.000	86	284389	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.169	10.169	0.000	95	1474377	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.038	15.038	0.000	88	1473079	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.710	16.710	0.000	95	1171759	4.00	4.27	
6 Chlorodifluoromethane	67	3.461	3.461	0.000	97	68770	2.00	2.47	
7 Propene	41	3.472	3.472	0.000	97	152258	2.00	2.30	
8 Dichlorodifluoromethane	85	3.515	3.515	0.000	100	656352	2.00	2.60	
9 Chloromethane	52	3.666	3.666	0.000	98	48792	2.00	2.40	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.677	3.677	0.000	92	368344	2.00	2.39	
11 Acetaldehyde	44	3.790	3.790	0.000	90	270105	10.0	8.90	
12 Vinyl chloride	62	3.806	3.806	0.000	99	190922	2.00	2.45	
13 Butadiene	54	3.882	3.882	0.000	84	128301	2.00	2.28	
14 Butane	43	3.882	3.882	0.000	95	282548	2.00	2.39	
15 Bromomethane	94	4.146	4.146	0.000	97	169544	2.00	2.14	
16 Chloroethane	64	4.264	4.264	0.000	90	89437	2.00	2.14	
17 Ethanol	31	4.361	4.361	0.000	97	328424	10.0	10.5	
18 Vinyl bromide	106	4.518	4.518	0.000	95	171764	2.00	2.28	
19 2-Methylbutane	43	4.566	4.566	0.000	90	186807	2.00	2.08	
20 Acrolein	56	4.744	4.744	0.000	97	29598	2.00	2.54	
21 Trichlorofluoromethane	101	4.750	4.750	0.000	99	616541	2.00	2.38	
22 Acetonitrile	40	4.798	4.798	0.000	98	55283	2.00	1.93	
23 Acetone	58	4.836	4.836	0.000	99	164609	6.00	5.42	
25 Isopropyl alcohol	45	4.938	4.938	0.000	94	545409	6.00	6.05	
24 Pentane	72	4.944	4.944	0.000	96	33044	2.00	2.30	
26 Ethyl ether	31	5.079	5.079	0.000	92	158533	2.00	1.90	
27 1,1-Dichloroethene	96	5.359	5.359	0.000	97	165768	2.00	2.25	
28 Acrylonitrile	53	5.440	5.440	0.000	96	75734	2.00	2.13	
29 2-Methyl-2-propanol	59	5.461	5.461	0.000	95	229289	2.00	2.11	
30 1,1,2-Trichloro-1,2,2-trif	101	5.532	5.532	0.000	94	365502	2.00	2.34	
31 Methylene Chloride	84	5.666	5.666	0.000	90	134673	2.00	1.97	
32 3-Chloro-1-propene	39	5.683	5.683	0.000	94	157875	2.00	2.21	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.801	5.801	0.000	100	408738	2.00	2.08	
34 trans-1,2-Dichloroethene	96	6.400	6.400	0.000	96	156647	2.00	2.09	
35 2-Methylpentane	43	6.432	6.432	0.000	93	378422	2.00	2.54	
36 Methyl tert-butyl ether	73	6.518	6.518	0.000	96	465949	2.00	2.38	
37 1,1-Dichloroethane	63	6.783	6.783	0.000	100	319153	2.00	2.29	
38 Vinyl acetate	43	6.885	6.885	0.000	100	390124	2.00	2.61	
39 2-Butanone (MEK)	72	7.284	7.284	0.000	99	66822	2.00	2.12	
40 Hexane	56	7.343	7.343	0.000	88	129385	2.00	2.26	
41 Isopropyl ether	45	7.484	7.484	0.000	95	462987	2.00	2.31	
42 cis-1,2-Dichloroethene	96	7.699	7.699	0.000	98	169047	2.00	2.16	
43 Ethyl acetate	43	7.883	7.883	0.000	98	297666	2.00	2.44	
44 Chloroform	83	8.028	8.028	0.000	96	424980	2.00	2.26	
45 Tert-butyl ethyl ether	59	8.125	8.125	0.000	96	483346	2.00	2.59	
46 Tetrahydrofuran	42	8.390	8.390	0.000	91	167033	2.00	2.43	
47 1,1,1-Trichloroethane	97	9.004	9.004	0.000	95	477578	2.00	2.30	
48 1,2-Dichloroethane	62	9.096	9.096	0.000	99	315424	2.00	2.41	
49 Benzene	78	9.592	9.592	0.000	96	511711	2.00	2.22	
50 Cyclohexane	69	9.597	9.597	0.000	87	88928	2.00	2.19	
51 n-Butanol	31	9.608	9.608	0.000	70	65370	2.00	2.42	
52 Carbon tetrachloride	117	9.619	9.619	0.000	97	523745	2.00	2.43	
53 2,3-Dimethylpentane	71	9.748	9.748	0.000	90	113785	2.00	2.00	
54 Thiophene	84	9.867	9.867	0.000	96	305806	2.00	2.31	
55 Tert-amyl methyl ether	73	10.104	10.104	0.000	98	478660	2.00	2.47	
56 Isooctane	57	10.422	10.422	0.000	97	814011	2.00	2.24	
57 n-Heptane	71	10.821	10.821	0.000	91	190314	2.00	2.15	
58 1,2-Dichloropropane	63	10.854	10.854	0.000	88	186373	2.00	2.19	
59 Trichloroethene	130	10.908	10.908	0.000	95	272118	2.00	2.05	
60 Dibromomethane	93	10.967	10.967	0.000	95	236523	2.00	2.18	
61 Dichlorobromomethane	83	11.134	11.134	0.000	98	448339	2.00	2.36	
62 1,4-Dioxane	88	11.150	11.150	0.000	95	63777	2.00	2.07	
63 Methyl methacrylate	41	11.264	11.264	0.000	92	204332	2.00	2.47	
64 Methylcyclohexane	83	11.711	11.711	0.000	95	323619	2.00	1.72	
65 4-Methyl-2-pentanone (MIBK	43	12.137	12.137	0.000	96	288080	2.00	2.08	
66 cis-1,3-Dichloropropene	75	12.180	12.180	0.000	96	347340	2.00	2.34	
67 trans-1,3-Dichloropropene	75	12.903	12.903	0.000	97	343528	2.00	2.38	
68 Toluene	91	13.027	13.027	0.000	93	605300	2.00	2.26	
69 1,1,2-Trichloroethane	83	13.097	13.097	0.000	98	173494	2.00	2.13	
70 2-Methylthiophene	97	13.178	13.178	0.000	98	540109	2.00	2.32	
71 3-Methylthiophene	97	13.388	13.388	0.000	99	553596	2.00	2.40	
72 2-Hexanone	58	13.518	13.518	0.000	93	138228	2.00	2.04	
73 n-Octane	85	13.787	13.787	0.000	90	217215	2.00	2.21	
74 Chlorodibromomethane	129	13.809	13.809	0.000	97	436836	2.00	2.42	
75 Ethylene Dibromide	107	14.100	14.100	0.000	97	363011	2.00	2.23	
76 Tetrachloroethene	129	14.203	14.203	0.000	94	262625	2.00	2.23	
77 Chlorobenzene	112	15.087	15.087	0.000	92	520253	2.00	2.22	
78 2,3-Dimethylheptane	43	15.157	15.157	0.000	93	566689	2.00	2.37	
79 Ethylbenzene	91	15.394	15.394	0.000	99	813912	2.00	2.32	
80 2-Ethylthiophene	97	15.497	15.497	0.000	98	649445	2.00	2.29	
81 m-Xylene & p-Xylene	91	15.567	15.567	0.000	99	1324027	4.00	4.81	
82 Bromoform	173	15.982	15.982	0.000	95	414448	2.00	2.36	
84 Styrene	104	16.031	16.031	0.000	97	468394	2.00	2.40	
83 n-Nonane	57	16.036	16.036	0.000	87	400835	2.00	2.27	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	16.090	16.090	0.000	98	661156	2.00	2.34	
86 1,1,2,2-Tetrachloroethane	83	16.413	16.413	0.000	98	443220	2.00	2.39	
87 1,2,3-Trichloropropane	110	16.570	16.570	0.000	97	151664	2.00	2.40	
88 Isopropylbenzene	105	16.694	16.694	0.000	97	969348	2.00	2.36	
89 N-Propylbenzene	120	17.249	17.249	0.000	99	258398	2.00	2.36	
90 2-Chlorotoluene	126	17.282	17.282	0.000	97	243807	2.00	2.31	
91 4-Ethyltoluene	105	17.411	17.411	0.000	98	875761	2.00	2.26	
92 1,3,5-Trimethylbenzene	120	17.497	17.497	0.000	92	435900	2.00	2.41	
93 Alpha Methyl Styrene	118	17.740	17.740	0.000	87	362059	2.00	2.39	
94 n-Decane	57	17.842	17.842	0.000	93	527128	2.00	2.45	
95 tert-Butylbenzene	119	17.945	17.945	0.000	92	900836	2.00	2.45	
96 1,2,4-Trimethylbenzene	105	17.956	17.956	0.000	96	822756	2.00	2.45	
97 1,3-Dichlorobenzene	146	18.225	18.225	0.000	98	621147	2.00	2.26	
98 sec-Butylbenzene	105	18.231	18.231	0.000	98	1181468	2.00	2.45	
99 Benzyl chloride	91	18.306	18.306	0.000	98	802616	2.00	2.63	
100 1,4-Dichlorobenzene	146	18.317	18.317	0.000	95	603053	2.00	2.22	
101 4-Isopropyltoluene	119	18.403	18.403	0.000	97	1021977	2.00	2.44	
102 1,2,3-Trimethylbenzene	105	18.446	18.446	0.000	98	662638	2.00	2.65	
103 Butylcyclohexane	83	18.522	18.522	0.000	94	663866	2.00	2.28	
104 1,2-Dichlorobenzene	146	18.694	18.694	0.000	94	581531	2.00	2.27	
105 2,3-Dihydroindene	117	18.700	18.700	0.000	93	705526	2.00	2.24	
106 Indene	116	18.829	18.829	0.000	91	688445	2.00	2.99	
107 n-Butylbenzene	91	18.856	18.856	0.000	98	974727	2.00	2.52	
108 Undecane	57	19.212	19.212	0.000	93	586142	2.00	2.54	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.244	19.244	0.000	97	944707	2.00	3.08	
110 1,2-Dibromo-3-Chloropropan	157	19.314	19.314	0.000	96	213219	2.00	2.10	
111 1,2,4,5-Tetramethylbenzene	119	19.638	19.638	0.000	96	1004245	2.00	2.69	
112 1,2,3,5-Tetramethylbenzene	119	19.692	19.692	0.000	94	613908	2.00	2.76	
113 1,2,3,4-Tetramethylbenzene	119	20.086	20.086	0.000	96	791749	2.00	2.58	
114 Dodecane	57	20.285	20.285	0.000	93	566404	2.00	2.66	
115 1,2,4-Trichlorobenzene	180	20.420	20.420	0.000	94	516115	2.00	2.32	
116 Naphthalene	128	20.549	20.549	0.000	99	1055986	2.00	2.27	
117 Benzo(b)thiophene	134	20.646	20.646	0.000	99	644261	2.00	2.50	
118 Hexachlorobutadiene	225	20.781	20.781	0.000	95	537171	2.00	2.47	
119 1,2,3-Trichlorobenzene	180	20.830	20.830	0.000	95	495900	2.00	2.45	
120 2-Methylnaphthalene	142	21.622	21.622	0.000	100	788822	6.25	8.33	
121 1-Methylnaphthalene	142	21.806	21.806	0.000	100	759671	6.25	9.96	
A 124 Toluene Range	1	13.022	(12.987-13.057)		0	1518574	2.00	2.31	
A 125 C8 Range	1	13.792	(13.777-13.807)		0	3428644	2.00	2.96	
S 126 Xylenes, Total	100				0		6.00	7.15	
S 127 1,2-Dichloroethene, Total	1				0		4.00	4.25	

Reagents:

40CV101S_00031	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

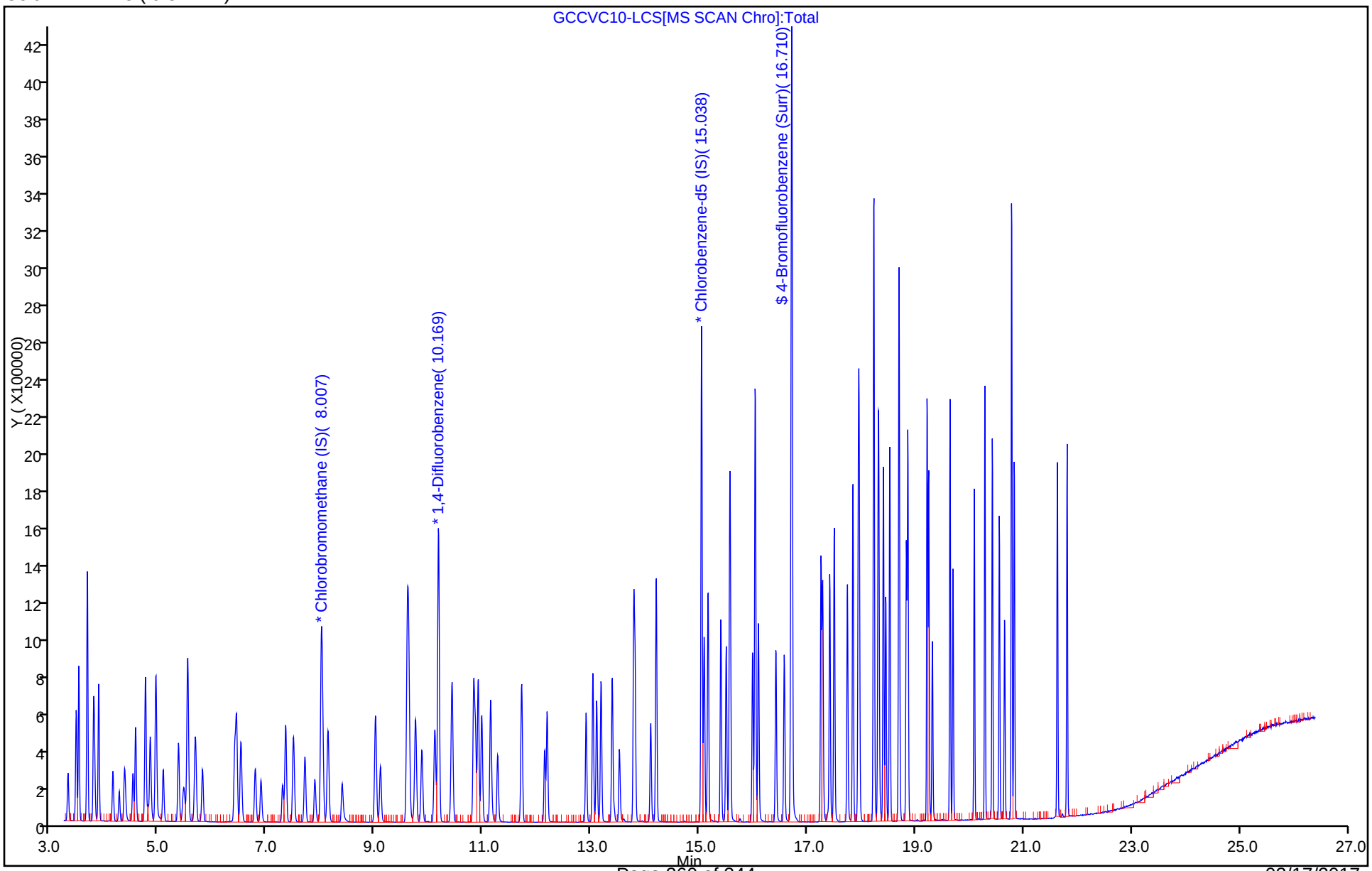
Report Date: 10-Mar-2017 11:36:26 Chrom Revision: 2.2 05-Mar-2017 11:38:00

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GCCVC10-LCS.d

Injection Date:	10-Mar-2017 08:21:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	LCS			Worklist Smp#:	1002
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\GCCVC10-LCS.d				
Lims ID:	LCS				
Client ID:					
Sample Type:	LCS				
Inject. Date:	10-Mar-2017 08:21:30	ALS Bottle#:	15	Worklist Smp#:	1002
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004228-002				
Misc. Info.:	S31				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170306-4228.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	10-Mar-2017 11:36:23	Calib Date:	02-Mar-2017 20:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20170302-4202.b\GC02IC02R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK028				

First Level Reviewer: tajh Date: 10-Mar-2017 11:36:23

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.27	106.81

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1

SDG No.:

Instrument ID: MG Start Date: 03/02/2017 12:22

Analysis Batch Number: 9079 End Date: 03/03/2017 00:46

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-9079/1		03/02/2017 12:22	1	GBFBC02.D	RTX-5 0.32(mm)
IC 140-9079/3		03/02/2017 13:34	1	GC02IC01.D	RTX-5 0.32(mm)
140-7243-A-1 MDLV		03/02/2017 13:34	1		RTX-5 0.32(mm)
IC 140-9079/5		03/02/2017 14:57	1	GC02IC03.D	RTX-5 0.32(mm)
140-7243-A-3 MDLV		03/02/2017 14:57	1		RTX-5 0.32(mm)
IC 140-9079/6		03/02/2017 15:39	1	GC02IC04.D	RTX-5 0.32(mm)
140-7243-A-4 MDLV		03/02/2017 15:39	1		RTX-5 0.32(mm)
IC 140-9079/7		03/02/2017 16:20	1	GC02IC05.D	RTX-5 0.32(mm)
140-7243-A-5 MDLV		03/02/2017 16:20	1		RTX-5 0.32(mm)
ICIS 140-9079/8		03/02/2017 17:02	1	GC02IC06.D	RTX-5 0.32(mm)
IC 140-9079/9		03/02/2017 17:44	1	GC02IC07.D	RTX-5 0.32(mm)
IC 140-9079/10		03/02/2017 18:26	1	GC02IC08.D	RTX-5 0.32(mm)
IC 140-9079/11		03/02/2017 19:08	1	GC02IC09.D	RTX-5 0.32(mm)
IC 140-9079/20		03/02/2017 20:31	1	GC02IC02R.D	RTX-5 0.32(mm)
140-7243-A-2 MDLV		03/02/2017 20:31	1		RTX-5 0.32(mm)
ICV 140-9079/15		03/02/2017 23:17	1	GLCSC02.D	RTX-5 0.32(mm)
ZZZZZ		03/03/2017 00:46	1		RTX-5 0.32(mm)

170302.ZZZ

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 102 mL	27.4	3/2/2017	12:22:20 PM
CLEAN	16 - 101 mL	26.8	3/2/2017	12:53:15 PM
ICAL01	1 - 101 mL	26.2	3/2/2017	1:34:29 PM
ICAL02	1 - 200 mL	25.7	3/2/2017	2:15:53 PM
ICAL03	2 - 202 mL	26.5	3/2/2017	2:57:23 PM
ICAL04	3 - 201 mL	28.9	3/2/2017	3:39:48 PM
ICAL05	5 - 101 mL	27.4	3/2/2017	4:20:36 PM
ICAL06	5 - 200 mL	26.5	3/2/2017	5:02:40 PM
ICAL07	6 - 201 mL	27.8	3/2/2017	5:44:26 PM
ICAL08	7 - 201 mL	26.8	3/2/2017	6:26:01 PM
ICAL09	8 - 202 mL	29.3	3/2/2017	7:08:01 PM
CLEAN	16 - 101 mL	26	3/2/2017	7:49:00 PM
ICAL02	2 - 101 mL	26	3/2/2017	8:31:06 PM
PRIME	9 - 51 mL	29.8	3/2/2017	9:12:08 PM
ICV	9 - 101 mL	29.1	3/2/2017	9:53:53 PM
PRIME	15 - 51 mL	27.8	3/2/2017	10:35:18 PM
LCS	15 - 101 mL	27.5	3/2/2017	11:17:13 PM
MB	16 - 501 mL	23.6	3/3/2017	12:01:32 AM
MB	16 - 501 mL	22	3/3/2017	12:46:09 AM
MDL	1 - 51 mL	25.6	3/3/2017	1:27:43 AM

MG WL ICAL 4202

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Analysis Date: 3/2/17	Instrument: MG	Chrom WL #: 4202	TALS Batch & Event #	TO14/15: 9079 934	AFCEE: 9082 937
				DOD: 9081 / 936	OHIO: 9080 / 935

Chrom/Worklist Review	1st	Comments	2nd
1. Re-read each Limit Group [method editor-limit groups]	✓		
2. Verify LODV in Chrom [method editor -> edit -> MDL]	✓		
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]	✓		✓
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]	✓		✓
5. Did BFB meet tune criteria? [F8]	✓		✓
6. Were all standards injected within 24 hr of BFB? [F7]	✓		✓
7. High point checked for saturation and point removed if so? [Chrom]	✓		✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]	✓	#55 WL	✓
9. RT for each IS ±20 sec avg. RT? [F6 IstdRec]	✓		✓
10. Area for each IS ± 40% avg. area? [F6 IstdRec]	✓		✓
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]	✓		✓
12. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4- and 1,2,3-trichlorobenzenes	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓	(M) for C8. DNU C8 Integrated ICC	✓

MLG Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50% [F6 ∑]	✓	✓	✓	✓	acceptable 36, ✓	✓	✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]	✓	✓	✓	✓		✓	✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]	✓	✓	✓	✓		✓	✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? Note: Ohio does not allow quad [F6]	✓	✓	✓	✓	acceptable	NA			
18. If curves were used, is correlation coefficient ≥0.990? [F6]	✓	✓	✓	✓	Quad ↑	NA			
19. Is the intercept less than the RL for each curve? [F6]	✓	✓	✓	✓		NA			
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]	✓	✓	✓			NA			
21. Is the second source analysis within limits? [F8 - icv]	✓	✓	✓	✓		✓	✓	✓	✓
22. Analyst/Date: 3/3/17	2nd Level Reviewer/Date: 3/3/17								
Comments:									

TALS Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
23. Upload ICAL	✓								
24. Graphics uploaded? [Sample List Tab]	✓	✓	✓	✓		✓	✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events -'Fix ICAL linkage' if needed]	✓	✓	✓	✓		✓	✓	✓	✓
26. Runs linked to BFB? [QC Links]	✓	✓	✓	✓		✓	✓	✓	✓
27. If criteria not met, was a NCM generated?	✓	✓	✓	✓		NA			
28. After review in TALS, approve the method in TALS.						✓	✓	✓	✓
29. After verifying TALS is correct, lock method in Chrom <resolve any error issues>						✓			
30. Checklist & Entech report scanned, attached & assigned properly?						✓	✓	✓	✓
Analyst: Date: 3/3/17	2nd Level Reviewer : Date: 3/3/17								
Comments:	Comments:								

DNU C8 due to (M) for ICV.

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-7358-1

SDG No.:

Instrument ID: MG Start Date: 03/10/2017 07:50

Analysis Batch Number: 9158 End Date: 03/10/2017 23:33

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-9158/1		03/10/2017 07:50	1	GBFBC10.D	RTX-5 0.32(mm)
CCVIS 140-9158/2		03/10/2017 08:21	1	GCCVC10.D	RTX-5 0.32(mm)
LCS 140-9158/1002		03/10/2017 08:21	1	GCCVC10-LCS.d	RTX-5 0.32(mm)
MB 140-9158/4		03/10/2017 10:04	1	GMB500C10.D	RTX-5 0.32(mm)
ZZZZZ		03/10/2017 10:46	5059.06		RTX-5 0.32(mm)
ZZZZZ		03/10/2017 12:46	4.9		RTX-5 0.32(mm)
ZZZZZ		03/10/2017 13:28	1.2		RTX-5 0.32(mm)
ZZZZZ		03/10/2017 14:09	1		RTX-5 0.32(mm)
ZZZZZ		03/10/2017 14:51	1		RTX-5 0.32(mm)
140-7358-1		03/10/2017 15:34	1	GC10P106.D	RTX-5 0.32(mm)
140-7358-2		03/10/2017 16:15	1	GC10P107.D	RTX-5 0.32(mm)
140-7358-3		03/10/2017 16:58	1	GC10P108.D	RTX-5 0.32(mm)
140-7358-4		03/10/2017 17:41	1	GC10P109.D	RTX-5 0.32(mm)
140-7358-5		03/10/2017 18:24	1	GC10P110.D	RTX-5 0.32(mm)
140-7358-6		03/10/2017 19:07	1	GC10P111.D	RTX-5 0.32(mm)
ZZZZZ		03/10/2017 19:52	1		RTX-5 0.32(mm)
ZZZZZ		03/10/2017 20:38	1		RTX-5 0.32(mm)
ZZZZZ		03/10/2017 22:07	1		RTX-5 0.32(mm)
ZZZZZ		03/10/2017 22:48	1		RTX-5 0.32(mm)
ZZZZZ		03/10/2017 23:33	1		RTX-5 0.32(mm)

170310.zzz

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 101 mL	22.2	3/10/2017	7:50:19 AM
CCV	15 - 101 mL	25.5	3/10/2017	8:21:07 AM
DNULEAK	16 - 21 mL	22.2	3/10/2017	9:28:09 AM
BLANK	16 - 501 mL	21.3	3/10/2017	10:04:45 AM
124689-01	1 - 31 mL	14.2	3/10/2017	10:46:23 AM
DNULEAK	16 - 21 mL	21.9	3/10/2017	12:14:17 PM
124689-02	2 - 246 mL	5.3	3/10/2017	12:46:45 PM
7320-09	3 - 101 mL	11	3/10/2017	1:28:04 PM
7345-02	4 - 26 mL	10.7	3/10/2017	2:09:19 PM
7345-03	5 - 26 mL	11.6	3/10/2017	2:51:55 PM
7358-01	6 - 100 mL	10.2	3/10/2017	3:34:13 PM
7358-02	7 - 101 mL	11	3/10/2017	4:15:45 PM
7358-03	8 - 100 mL	10.3	3/10/2017	4:58:14 PM
7358-04	9 - 100 mL	10.3	3/10/2017	5:41:36 PM
7358-05	10 - 101 mL	10.4	3/10/2017	6:24:40 PM
7358-06	11 - 26 mL	12.7	3/10/2017	7:07:21 PM
7339-01	12 - 500 mL	9.4	3/10/2017	7:52:53 PM
7339-01	12 - 500 mL	7.9	3/10/2017	8:38:57 PM
7339-02	13 - 500 mL	7.7	3/10/2017	9:24:30 PM
7339-03DU	14 - 51 mL	11.3	3/10/2017	10:07:08 PM
7339-03	14 - 51 mL	11.1	3/10/2017	10:48:43 PM
7341BK09	15 - 501 mL	22.4	3/10/2017	11:33:33 PM

MG WL 4228

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Instrument/Date	MG 3/10/17		Routine	AFCEE	DOD	OHIO
CCAL Chrom WL #	4228	CCAL Batch #	9158	NA	NA	NA
ICAL Chrom WL #	4202	ICAL Batch # / Event #	9079, 934			

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		✓
2. Did BFB meet tune criteria? [F8]	✓	□ [Failed TO-14A, but passes TO-15] (NCM#)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
4. Is the %D ≤ 30% for all target analytes? benzechloride 173 TMBE(NT) [≤ 40% for AFCEE non-table analytes] [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	✓	□ CCV - %D - LCS criteria met (NCM# 6725) □ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#)	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓		NA
7. Has the RT been updated to the method?			
Analyst: Date: 3/10/17		2nd Level Reviewer: Date: 3/11/17	
Comments:		Comments:	
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓		-
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#) □ Method Blank – Report, 10X (NCM#)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample / Reason / Sample / Reason	✓	□ (1) Surrogate – Matrix (NCM#) □ (2) Surrogate – High, ND (NCM#) □ (3) ISTD – RA/RA Concurs (NCM#) □ (4) Surrogate –RX concur, Report both (NCM#) □ (5) ISTD – Matrix, DL required (NCM#)	✓
15. Samples outside calibration range scheduled for dilution? *Samples:*	NA	□ ICAL – Range Exceeded; Minimum Dilution	NA

Chrom Review	1st	If No, why is data reportable?	2nd
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample / Reason / Sample / Reason: 124689-1 / elev	✓	□ (1) Reporting Limit – Dilution, Matrix (NCM# 6699) □ (2) Reporting Limit – Dilution, Non-Target (NCM#) □ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	NA		NA
18. Obvious non-TPH peaks excluded?	NA		✓

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

19. Individual TPH peak area < octane high point area?	NA		
TALS Review	**1st**	**If No, why is data reportable?**	**2nd**
20. Graphics uploaded? [Sample List Tab]	✓		
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	✓		
22. Sample special instructions verified?			✓
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	✓	☑ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) ☐ LCS/LCSD - %R High (NCM#_____) Benzyl chloride (NT) on 123 TMBZ WL 4227 Nem# 6726	✓
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]	NA		
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	✓		✓
26. Analytes over calibration range set to secondary [Conditions Review Tab]	NA		
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	✓		✓
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*	✓		✓
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	✓	**500 mL blank ID:** 4 **200 mL blank ID:**	✓
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	✓		✓
31. Correct ICV linked to each MB? [QC Links]	✓		✓
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	✓		✓
33. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
34. QC checker run and items addressed?			✓
35. Checklist & Entech report scanned, attached & assigned properly?			✓

Analyst:	**Date:** 3/13/17	**2nd Level Reviewer :**	**Date:** 03/15/17
Comments:		**Comments:**	

Example Calculation: 104689-1 hem

On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF

1.0767 x 30mL x 5059.06: 90784.73 x 3.19 = 289603 UL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09666 | Lab Sample ID: 140-7069-1

Matrix: Air | Lab File ID: RB13BK7069-1.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/13/2017 21:11

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8477 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09666 | Lab Sample ID: 140-7069-1

Matrix: Air | Lab File ID: RB13BK7069-1.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/13/2017 21:11

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8477 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09666 Lab Sample ID: 140-7069-1

Matrix: Air Lab File ID: RB13BK7069-1.D

Analysis Method: TO-15 Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) Date Analyzed: 02/13/2017 21:11

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8477 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09666 Lab Sample ID: 140-7069-1

Matrix: Air Lab File ID: RB13BK7069-1.D

Analysis Method: TO-15 Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) Date Analyzed: 02/13/2017 21:11

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8477 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13BK7069-1.D				
Lims ID:	140-7069-A-1				
Client ID:	09666				
Sample Type:	Client				
Inject. Date:	13-Feb-2017 21:11:30	ALS Bottle#:	5	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004028-022				
Misc. Info.:	09666				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	14-Feb-2017 13:20:26	Calib Date:	17-Jan-2017 10:29:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK008				
First Level Reviewer: tajh		Date:	14-Feb-2017 12:57:25		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.215	8.231	-0.016	89	287755	4.00	
* 2 1,4-Difluorobenzene	114	10.383	10.393	-0.010	93	1432453	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.279	15.284	-0.005	85	1148871	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.972	16.972	0.000	94	675256	3.76	
31 Methylene Chloride	84	5.918	5.923	-0.005	90	5827	0.0782	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

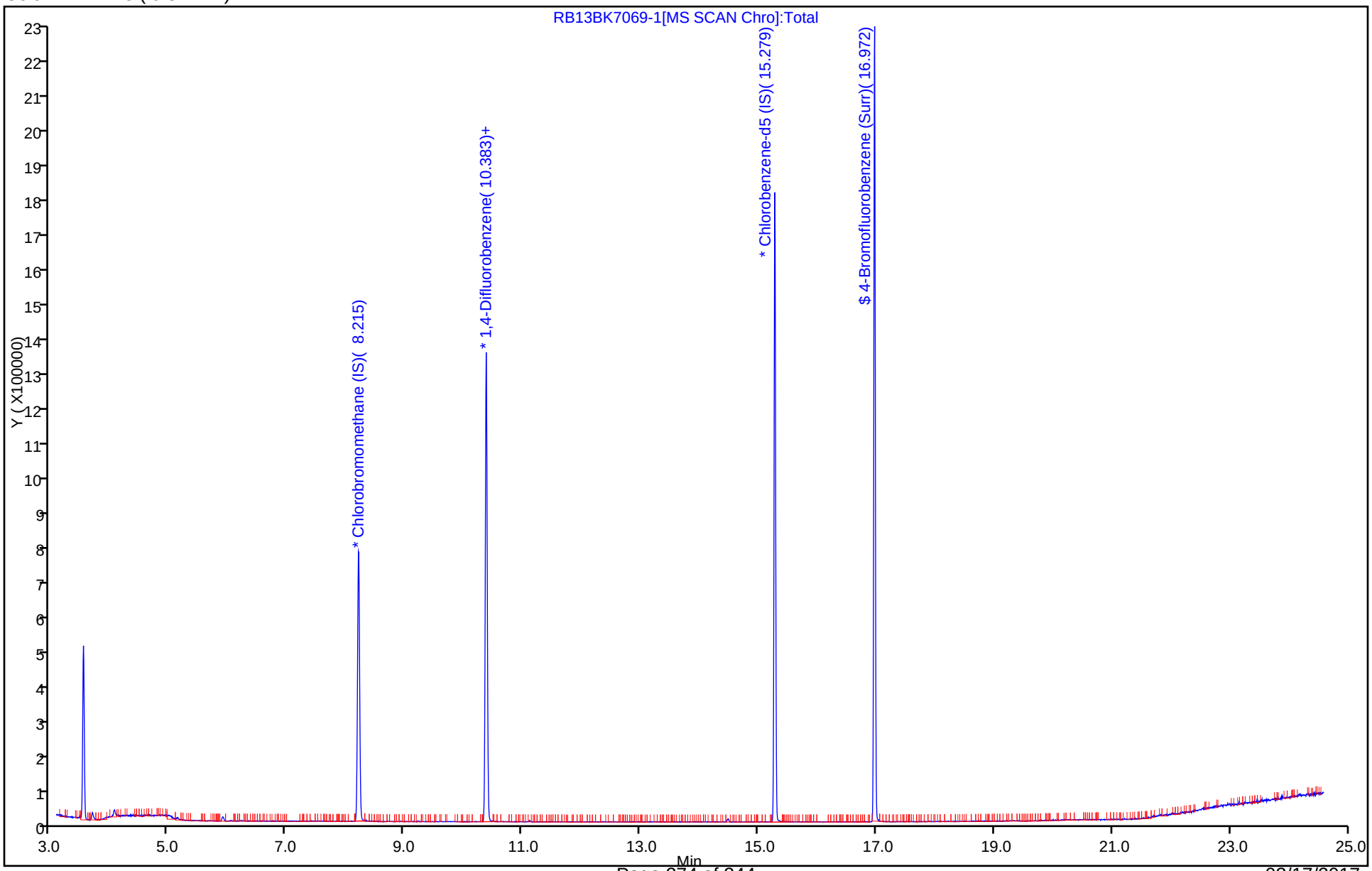
Report Date: 14-Feb-2017 13:20:44 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13BK7069-1.D

Injection Date:	13-Feb-2017 21:11:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-7069-A-1	Lab Sample ID:	140-7069-1	Worklist Smp#:	22
Client ID:	09666				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09632 | Lab Sample ID: 140-7069-2

Matrix: Air | Lab File ID: RB13BK7069-2.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/13/2017 21:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8477 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09632 | Lab Sample ID: 140-7069-2

Matrix: Air | Lab File ID: RB13BK7069-2.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/13/2017 21:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8477 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09632 | Lab Sample ID: 140-7069-2

Matrix: Air | Lab File ID: RB13BK7069-2.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/13/2017 21:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8477 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09632 Lab Sample ID: 140-7069-2

Matrix: Air Lab File ID: RB13BK7069-2.D

Analysis Method: TO-15 Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) Date Analyzed: 02/13/2017 21:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8477 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13BK7069-2.D				
Lims ID:	140-7069-A-2				
Client ID:	09632				
Sample Type:	Client				
Inject. Date:	13-Feb-2017 21:59:30	ALS Bottle#:	6	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004028-023				
Misc. Info.:	09632				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	14-Feb-2017 13:20:26	Calib Date:	17-Jan-2017 10:29:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK008				
First Level Reviewer: tajh		Date:	14-Feb-2017 12:57:47		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.215	8.231	-0.016	89	284743	4.00	
* 2 1,4-Difluorobenzene	114	10.383	10.393	-0.010	93	1438632	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.279	15.284	-0.005	85	1160252	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.967	16.972	-0.005	94	679657	3.74	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

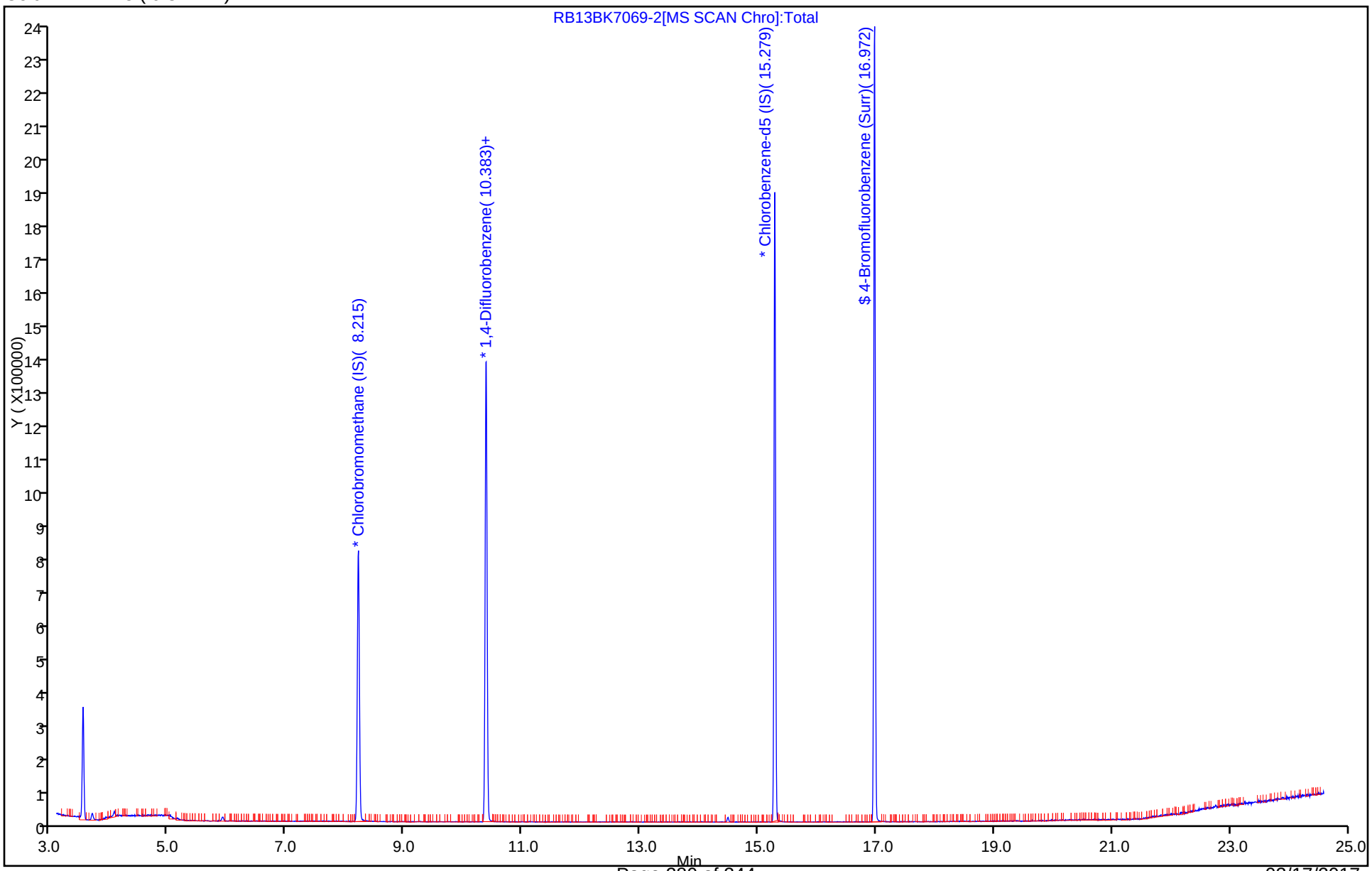
Report Date: 14-Feb-2017 13:20:45 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13BK7069-2.D

Injection Date:	13-Feb-2017 21:59:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-7069-A-2	Lab Sample ID:	140-7069-2	Worklist Smp#:	23
Client ID:	09632				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09746 | Lab Sample ID: 140-7069-3

Matrix: Air | Lab File ID: RB13BK7069-3.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/13/2017 22:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8477 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09746 Lab Sample ID: 140-7069-3

Matrix: Air Lab File ID: RB13BK7069-3.D

Analysis Method: TO-15 Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) Date Analyzed: 02/13/2017 22:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8477 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09746 | Lab Sample ID: 140-7069-3

Matrix: Air | Lab File ID: RB13BK7069-3.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/13/2017 22:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8477 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09746 Lab Sample ID: 140-7069-3

Matrix: Air Lab File ID: RB13BK7069-3.D

Analysis Method: TO-15 Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) Date Analyzed: 02/13/2017 22:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8477 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13BK7069-3.D				
Lims ID:	140-7069-A-3				
Client ID:	09746				
Sample Type:	Client				
Inject. Date:	13-Feb-2017 22:47:30	ALS Bottle#:	7	Worklist Smp#:	24
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004028-024				
Misc. Info.:	09746				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	14-Feb-2017 13:20:26	Calib Date:	17-Jan-2017 10:29:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK008				
First Level Reviewer: tajh		Date:	14-Feb-2017 12:58:09		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.220	8.231	-0.011	89	296188	4.00	
* 2 1,4-Difluorobenzene	114	10.388	10.393	-0.005	93	1460992	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.279	15.284	-0.005	85	1171202	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.972	16.972	0.000	94	693966	3.79	
31 Methylene Chloride	84	5.918	5.923	-0.005	96	5668	0.0739	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

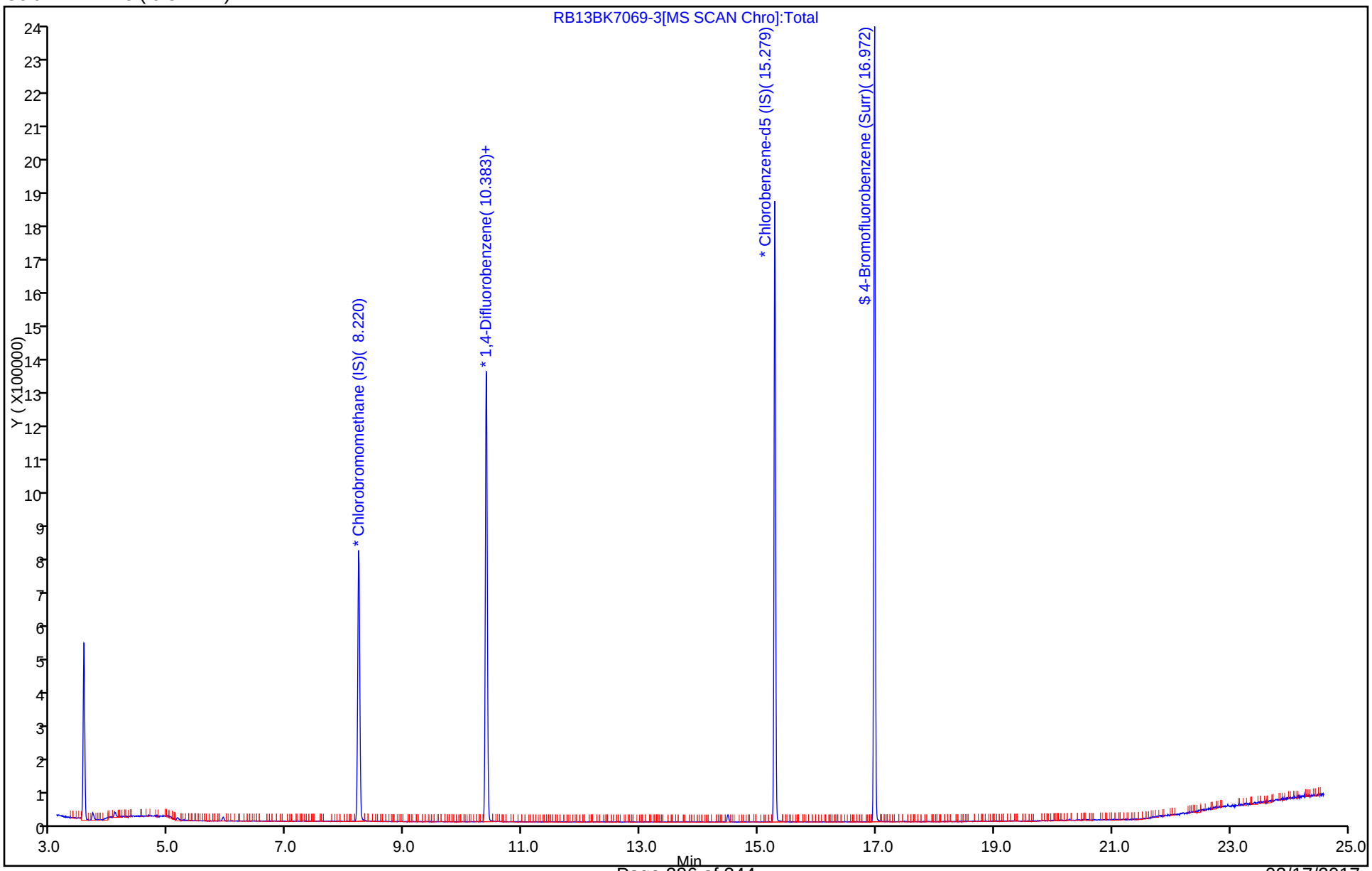
Report Date: 14-Feb-2017 13:20:47 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13BK7069-3.D

Injection Date:	13-Feb-2017 22:47:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-7069-A-3	Lab Sample ID:	140-7069-3	Worklist Smp#:	24
Client ID:	09746				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09887 | Lab Sample ID: 140-7069-5

Matrix: Air | Lab File ID: RB13BK7069-5.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/13/2017 19:36

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8477 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09887 | Lab Sample ID: 140-7069-5

Matrix: Air | Lab File ID: RB13BK7069-5.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/13/2017 19:36

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8477 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09887 | Lab Sample ID: 140-7069-5

Matrix: Air | Lab File ID: RB13BK7069-5.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/13/2017 19:36

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8477 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09887 Lab Sample ID: 140-7069-5

Matrix: Air Lab File ID: RB13BK7069-5.D

Analysis Method: TO-15 Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) Date Analyzed: 02/13/2017 19:36

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8477 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13BK7069-5.D
Lims ID: 140-7069-A-5
Client ID: 09887
Sample Type: Client
Inject. Date: 13-Feb-2017 19:36:30 ALS Bottle#: 5 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004028-011
Misc. Info.: 09887
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 14-Feb-2017 13:20:26 Calib Date: 17-Jan-2017 10:29:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK008

First Level Reviewer: barlozhetskayaa Date: 14-Feb-2017 09:35:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.220	8.231	-0.011	88	292583	4.00	
* 2 1,4-Difluorobenzene	114	10.388	10.393	-0.005	93	1456558	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.279	15.284	-0.005	85	1181803	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.972	16.972	0.000	94	685680	3.71	
59 Trichloroethene	130	11.116	11.132	-0.016	89	4840	0.0423	
65 4-Methyl-2-pentanone (MIBK	43	12.362	12.340	0.022	98	5622	0.0329	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

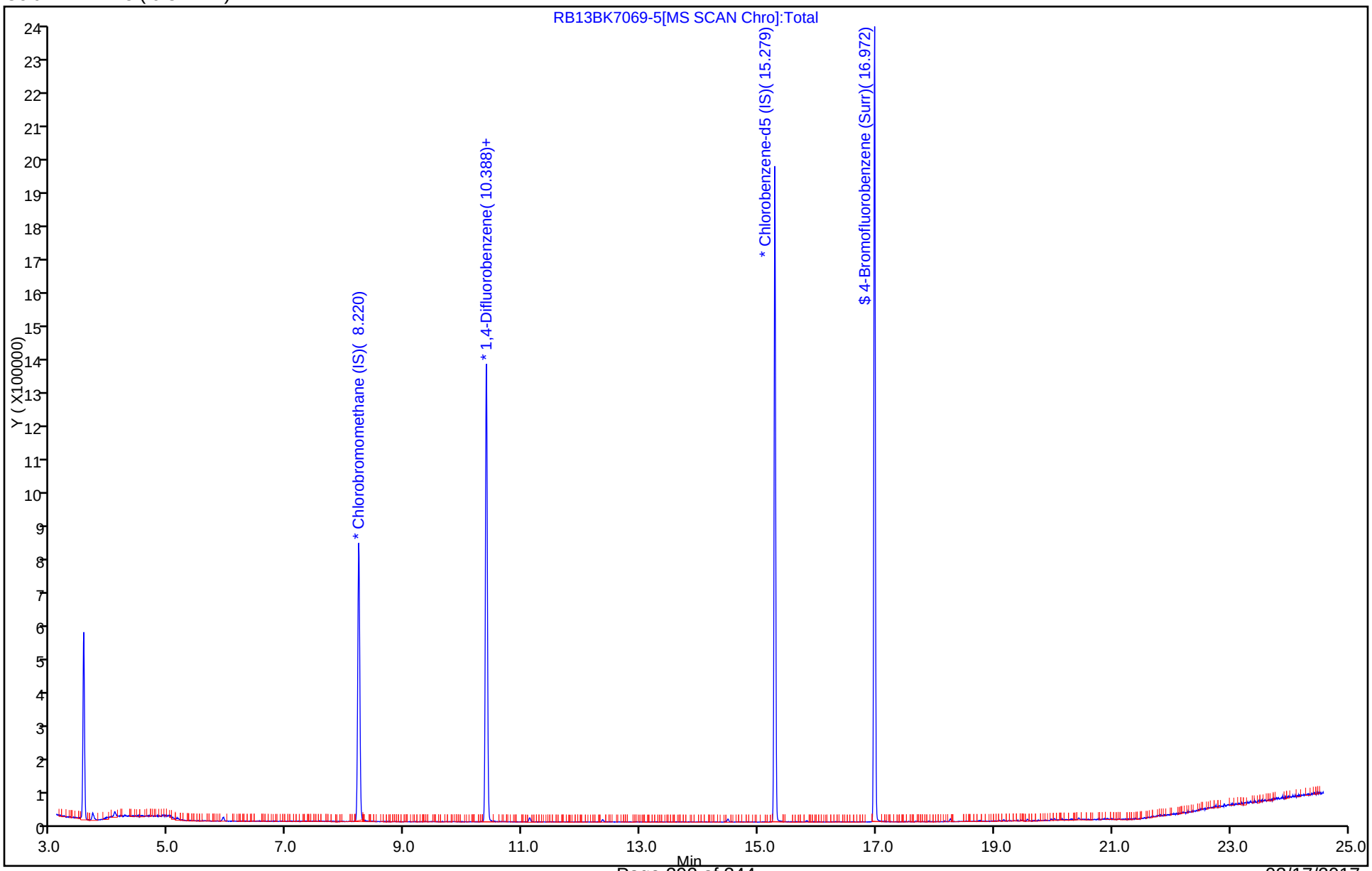
Report Date: 14-Feb-2017 13:20:41 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13BK7069-5.D

Injection Date:	13-Feb-2017 19:36:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-7069-A-5	Lab Sample ID:	140-7069-5	Worklist Smp#:	11
Client ID:	09887				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 11033 | Lab Sample ID: 140-7069-6

Matrix: Air | Lab File ID: RB13BK7069-6.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/13/2017 20:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8477 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 11033 | Lab Sample ID: 140-7069-6

Matrix: Air | Lab File ID: RB13BK7069-6.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/13/2017 20:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8477 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 11033 | Lab Sample ID: 140-7069-6

Matrix: Air | Lab File ID: RB13BK7069-6.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/13/2017 20:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8477 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7069-1

SDG No.:

Client Sample ID: 11033 Lab Sample ID: 140-7069-6

Matrix: Air Lab File ID: RB13BK7069-6.D

Analysis Method: TO-15 Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) Date Analyzed: 02/13/2017 20:24

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8477 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13BK7069-6.D				
Lims ID:	140-7069-A-6				
Client ID:	11033				
Sample Type:	Client				
Inject. Date:	13-Feb-2017 20:24:30	ALS Bottle#:	6	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004028-012				
Misc. Info.:	11033				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	14-Feb-2017 13:20:26	Calib Date:	17-Jan-2017 10:29:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20170116-3844.b\RA16IC01R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK008				
First Level Reviewer: tajh		Date:	14-Feb-2017 12:57:01		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.220	8.231	-0.011	89	298327	4.00	
* 2 1,4-Difluorobenzene	114	10.383	10.393	-0.010	93	1499303	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.279	15.284	-0.005	85	1193536	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.972	16.972	0.000	94	708959	3.80	
31 Methylene Chloride	84	5.918	5.923	-0.005	93	5828	0.0754	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

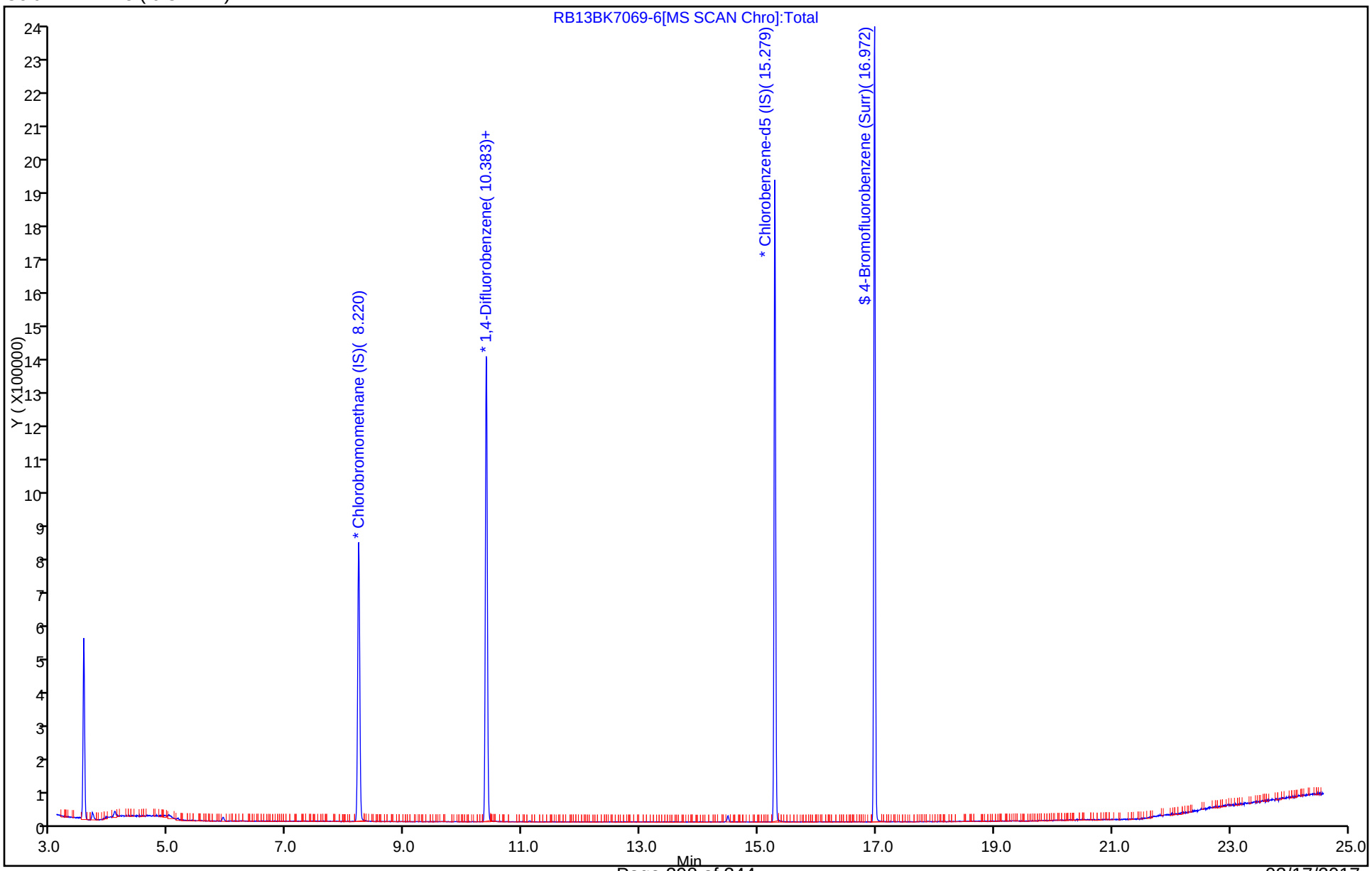
Report Date: 14-Feb-2017 13:20:42 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20170210-4028.b\RB13BK7069-6.D

Injection Date:	13-Feb-2017 20:24:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-7069-A-6	Lab Sample ID:	140-7069-6	Worklist Smp#:	12
Client ID:	11033				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 11161 | Lab Sample ID: 140-7069-7

Matrix: Air | Lab File ID: 7069BK07.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/14/2017 17:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8438 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 11161 | Lab Sample ID: 140-7069-7

Matrix: Air | Lab File ID: 7069BK07.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/14/2017 17:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8438 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 11161 | Lab Sample ID: 140-7069-7

Matrix: Air | Lab File ID: 7069BK07.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/14/2017 17:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8438 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7069-1

SDG No.:

Client Sample ID: 11161 Lab Sample ID: 140-7069-7

Matrix: Air Lab File ID: 7069BK07.D

Analysis Method: TO-15 Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) Date Analyzed: 02/14/2017 17:30

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8438 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170209-4015.b\7069BK07.D				
Lims ID:	140-7069-A-7				
Client ID:	11161				
Sample Type:	Client				
Inject. Date:	14-Feb-2017 17:30:30	ALS Bottle#:	4	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004015-013				
Misc. Info.:	11161				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170209-4015.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	15-Feb-2017 10:01:32	Calib Date:	09-Dec-2016 12:54:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK006				
First Level Reviewer: tajh		Date:	15-Feb-2017 09:54:06		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.012	8.023	-0.011	94	379294	4.00	
* 2 1,4-Difluorobenzene	114	10.180	10.191	-0.011	95	1399189	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.049	15.049	0.000	87	1452750	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.715	16.721	-0.006	95	944249	3.93	
31 Methylene Chloride	84	5.683	5.688	-0.005	96	6671	0.0827	
33 Carbon disulfide	76	5.817	5.828	-0.011	98	10052	0.0332	
65 4-Methyl-2-pentanone (MIBK	43	12.159	12.148	0.011	99	19878	0.1161	
76 Tetrachloroethene	129	14.208	14.214	-0.006	95	5714	0.0448	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

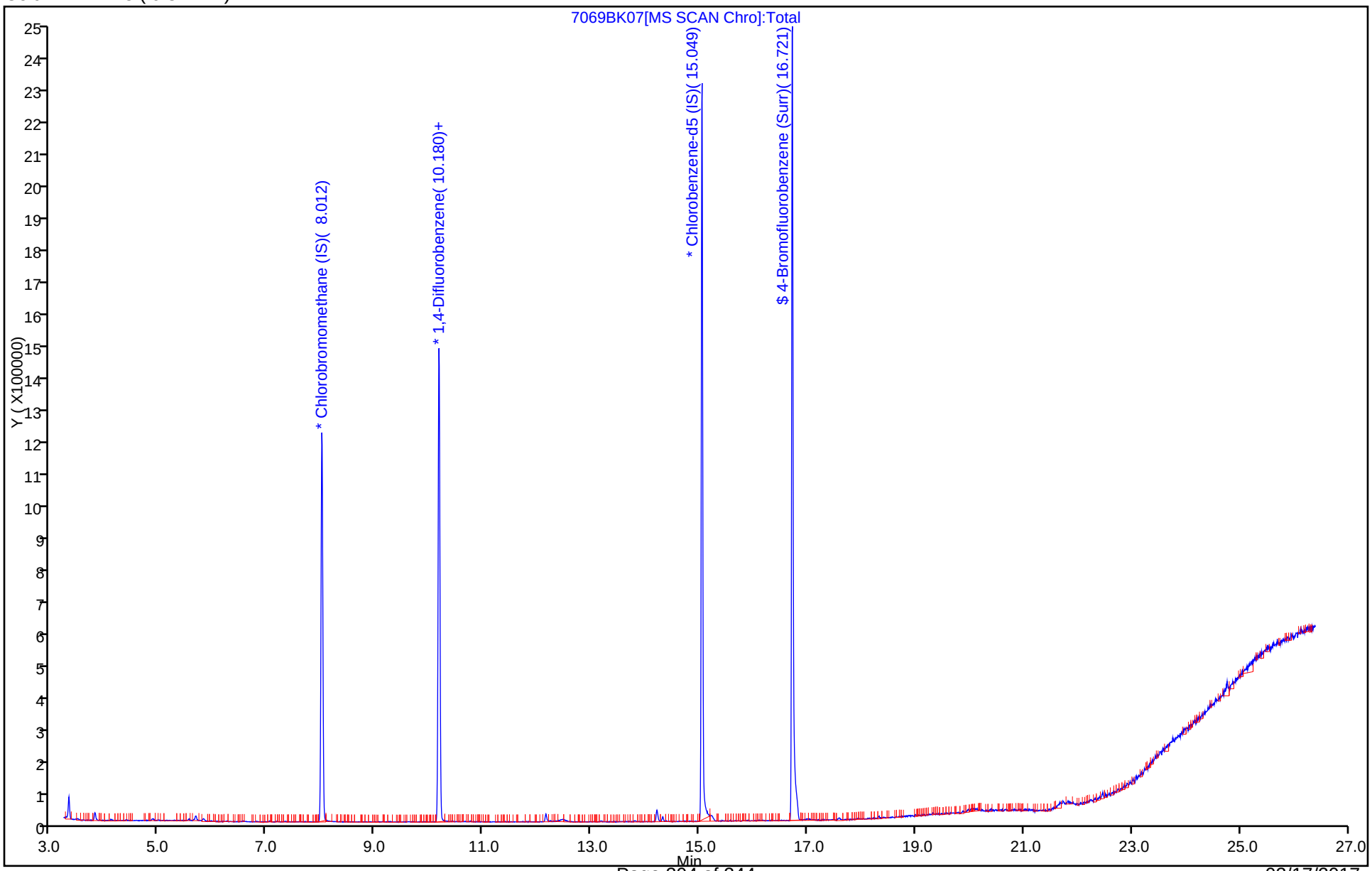
Report Date: 15-Feb-2017 10:01:49 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170209-4015.b\7069BK07.D

Injection Date:	14-Feb-2017 17:30:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-7069-A-7	Lab Sample ID:	140-7069-7	Worklist Smp#:	13
Client ID:	11161				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 10752 | Lab Sample ID: 140-7069-8

Matrix: Air | Lab File ID: 7069BK08.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/14/2017 18:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8438 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 10752 | Lab Sample ID: 140-7069-8

Matrix: Air | Lab File ID: 7069BK08.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/14/2017 18:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8438 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 10752 | Lab Sample ID: 140-7069-8

Matrix: Air | Lab File ID: 7069BK08.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/14/2017 18:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8438 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7069-1

SDG No.:

Client Sample ID: 10752 Lab Sample ID: 140-7069-8

Matrix: Air Lab File ID: 7069BK08.D

Analysis Method: TO-15 Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) Date Analyzed: 02/14/2017 18:13

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8438 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170209-4015.b\7069BK08.D				
Lims ID:	140-7069-A-8				
Client ID:	10752				
Sample Type:	Client				
Inject. Date:	14-Feb-2017 18:13:30	ALS Bottle#:	5	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004015-014				
Misc. Info.:	10752				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170209-4015.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	15-Feb-2017 10:01:32	Calib Date:	09-Dec-2016 12:54:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK006				
First Level Reviewer: tajh		Date:	15-Feb-2017 09:54:28		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.012	8.023	-0.011	95	384373	4.00	
* 2 1,4-Difluorobenzene	114	10.180	10.191	-0.011	95	1466239	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.049	15.049	0.000	87	1555137	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.716	16.721	-0.005	95	1029077	4.00	
31 Methylene Chloride	84	5.683	5.688	-0.005	96	6778	0.0829	
47 1,1,1-Trichloroethane	97	9.015	9.026	-0.011	95	3792	0.0144	
59 Trichloroethene	130	10.908	10.924	-0.016	91	2616	0.0170	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

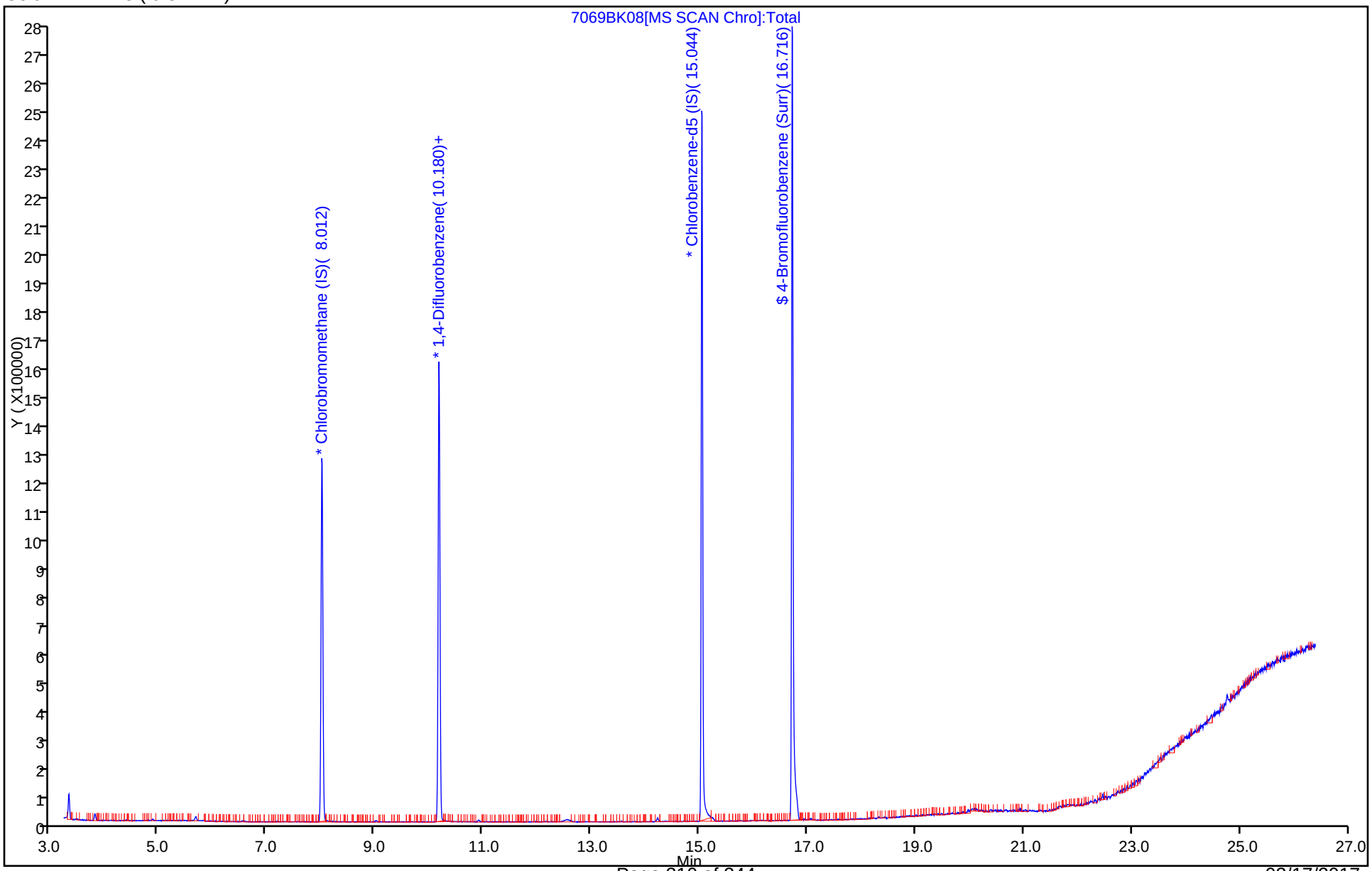
Report Date: 15-Feb-2017 10:01:52 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170209-4015.b\7069BK08.D

Injection Date:	14-Feb-2017 18:13:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-7069-A-8	Lab Sample ID:	140-7069-8	Worklist Smp#:	14
Client ID:	10752				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 10520 | Lab Sample ID: 140-7069-10

Matrix: Air | Lab File ID: 7069BK10.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/14/2017 19:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8438 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 10520 | Lab Sample ID: 140-7069-10

Matrix: Air | Lab File ID: 7069BK10.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/14/2017 19:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8438 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 10520 | Lab Sample ID: 140-7069-10

Matrix: Air | Lab File ID: 7069BK10.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/14/2017 19:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8438 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7069-1

SDG No.:

Client Sample ID: 10520 Lab Sample ID: 140-7069-10

Matrix: Air Lab File ID: 7069BK10.D

Analysis Method: TO-15 Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) Date Analyzed: 02/14/2017 19:38

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8438 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170209-4015.b\7069BK10.D				
Lims ID:	140-7069-A-10				
Client ID:	10520				
Sample Type:	Client				
Inject. Date:	14-Feb-2017 19:38:30	ALS Bottle#:	7	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004015-016				
Misc. Info.:	10520				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170209-4015.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	15-Feb-2017 10:01:32	Calib Date:	09-Dec-2016 12:54:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK006				
First Level Reviewer: tajh		Date:	15-Feb-2017 09:55:18		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.012	8.023	-0.011	95	302039	4.00	
* 2 1,4-Difluorobenzene	114	10.180	10.191	-0.011	95	1134912	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.049	15.049	0.000	87	1428587	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.716	16.721	-0.005	95	927723	3.93	
31 Methylene Chloride	84	5.672	5.688	-0.016	95	4786	0.0745	
65 4-Methyl-2-pentanone (MIBK	43	12.186	12.148	0.038	94	2551	0.0184	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

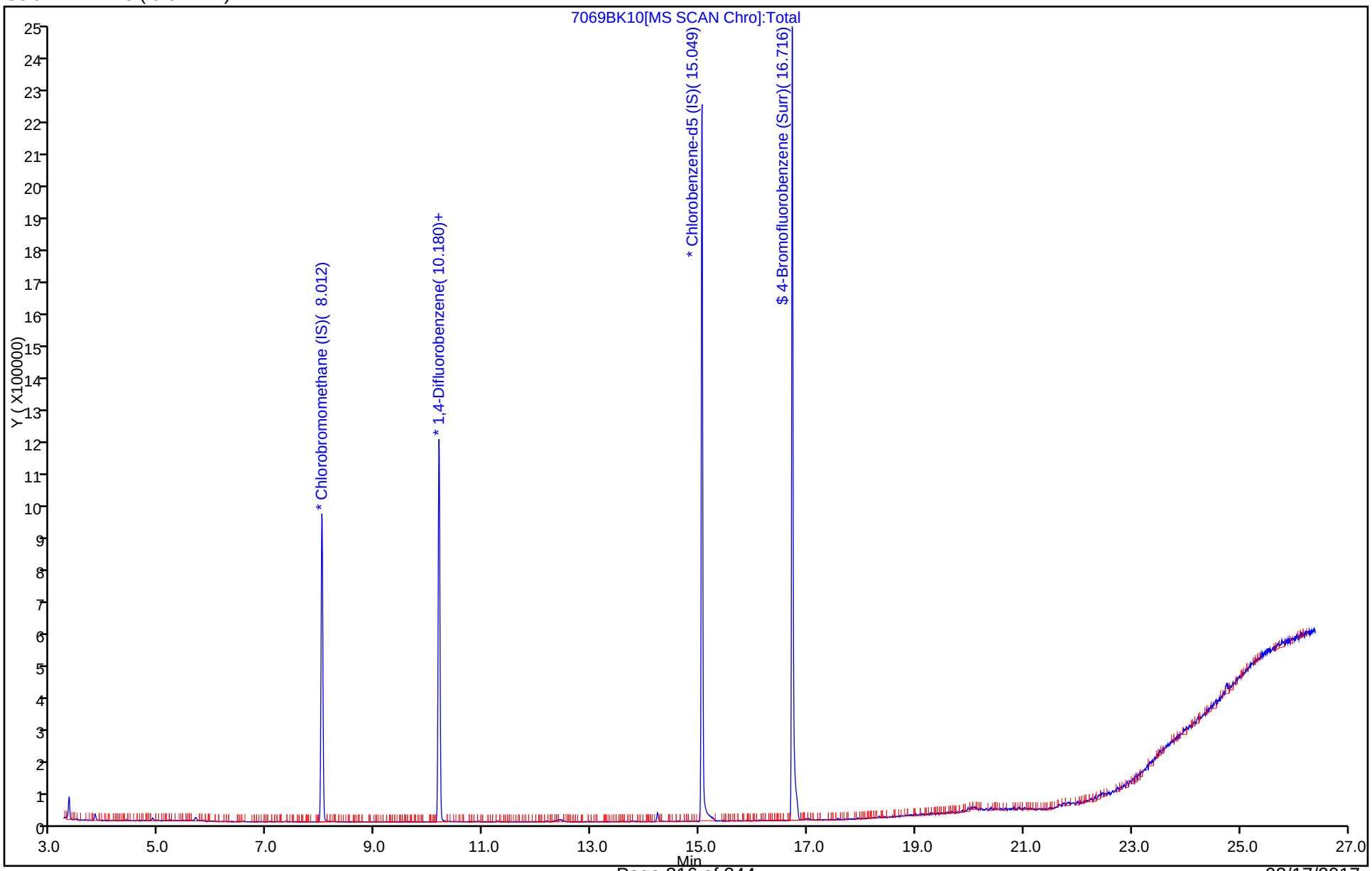
Report Date: 15-Feb-2017 10:01:56 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170209-4015.b\7069BK10.D

Injection Date:	14-Feb-2017 19:38:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-7069-A-10	Lab Sample ID:	140-7069-10	Worklist Smp#:	16
Client ID:	10520				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09582 | Lab Sample ID: 140-7069-11

Matrix: Air | Lab File ID: 7069BK11.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/14/2017 20:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8438 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09582 Lab Sample ID: 140-7069-11

Matrix: Air Lab File ID: 7069BK11.D

Analysis Method: TO-15 Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) Date Analyzed: 02/14/2017 20:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8438 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09582 | Lab Sample ID: 140-7069-11

Matrix: Air | Lab File ID: 7069BK11.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/14/2017 20:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8438 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09582 Lab Sample ID: 140-7069-11

Matrix: Air Lab File ID: 7069BK11.D

Analysis Method: TO-15 Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) Date Analyzed: 02/14/2017 20:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8438 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170209-4015.b\7069BK11.D				
Lims ID:	140-7069-A-11				
Client ID:	09582				
Sample Type:	Client				
Inject. Date:	14-Feb-2017 20:21:30	ALS Bottle#:	8	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004015-017				
Misc. Info.:	09582				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170209-4015.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	15-Feb-2017 10:01:32	Calib Date:	09-Dec-2016 12:54:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK006				
First Level Reviewer: tajh		Date:	15-Feb-2017 09:55:57		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.018	8.023	-0.005	94	416346	4.00	
* 2 1,4-Difluorobenzene	114	10.185	10.191	-0.006	95	1828480	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.049	15.049	0.000	87	1884093	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.721	16.721	0.000	96	1188370	3.81	
29 2-Methyl-2-propanol	59	5.521	5.478	0.043	74	3717	0.0238	
31 Methylene Chloride	84	5.688	5.688	0.000	97	7524	0.0850	
65 4-Methyl-2-pentanone (MIBK	43	12.170	12.148	0.022	92	4137	0.0185	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

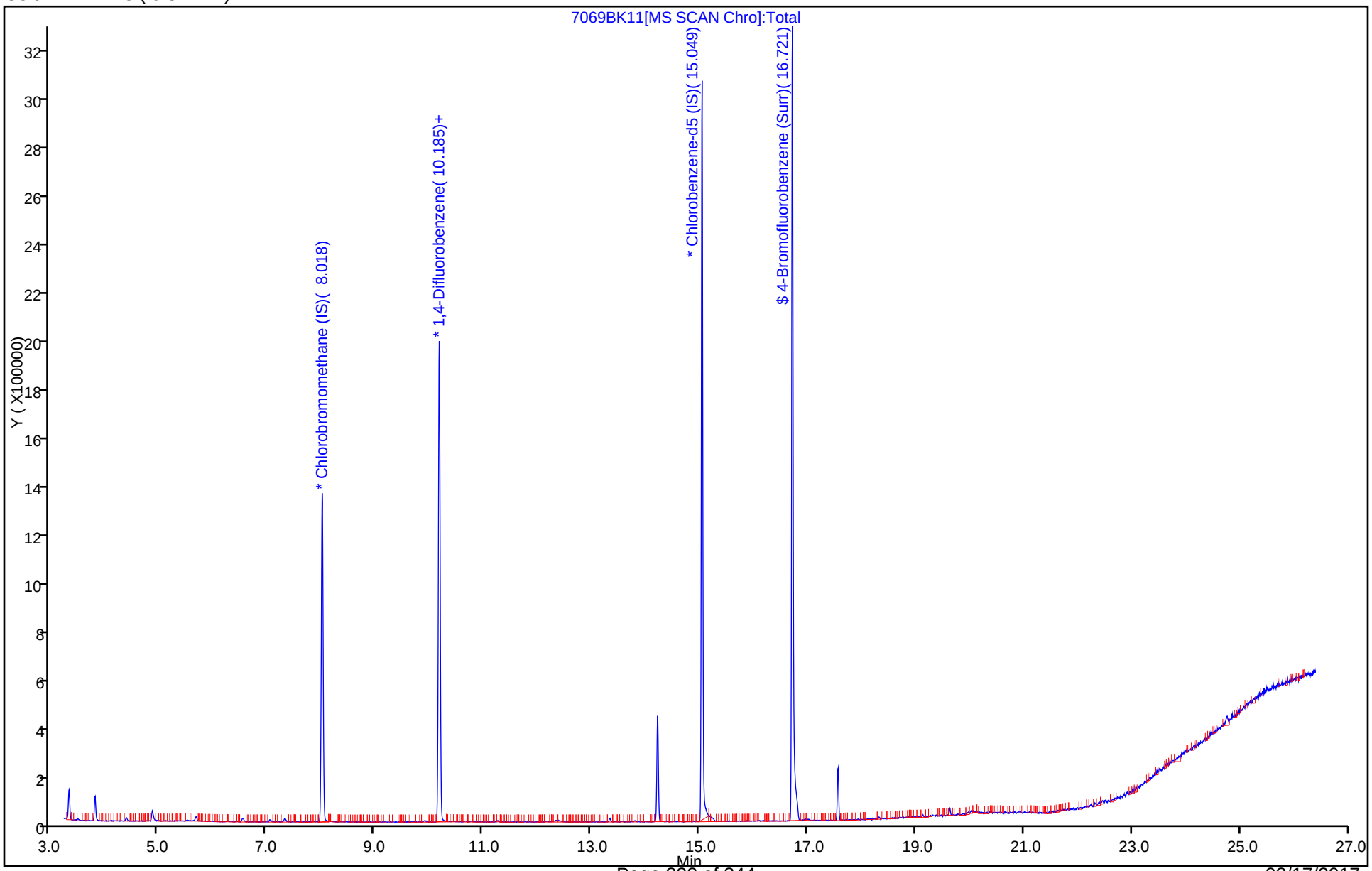
Report Date: 15-Feb-2017 10:01:58 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170209-4015.b\7069BK11.D

Injection Date:	14-Feb-2017 20:21:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-7069-A-11	Lab Sample ID:	140-7069-11	Worklist Smp#:	17
Client ID:	09582				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09886 | Lab Sample ID: 140-7069-12

Matrix: Air | Lab File ID: 7069BK12.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/14/2017 21:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8438 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09886 | Lab Sample ID: 140-7069-12

Matrix: Air | Lab File ID: 7069BK12.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/14/2017 21:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8438 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09886 | Lab Sample ID: 140-7069-12

Matrix: Air | Lab File ID: 7069BK12.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/14/2017 21:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8438 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09886 Lab Sample ID: 140-7069-12

Matrix: Air Lab File ID: 7069BK12.D

Analysis Method: TO-15 Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) Date Analyzed: 02/14/2017 21:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8438 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20170209-4015.b\7069BK12.D
Lims ID: 140-7069-A-12
Client ID: 09886
Sample Type: Client
Inject. Date: 14-Feb-2017 21:03:30 ALS Bottle#: 9 Worklist Smp#: 18
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0004015-018
Misc. Info.: 09886
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20170209-4015.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 15-Feb-2017 10:01:32 Calib Date: 09-Dec-2016 12:54:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK006

First Level Reviewer: tajh Date: 15-Feb-2017 09:57:21

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.012	8.023	-0.011	95	286468	4.00	
* 2 1,4-Difluorobenzene	114	10.180	10.191	-0.011	95	1298985	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.049	15.049	0.000	87	1845420	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.721	16.721	0.000	95	1256690	4.12	
31 Methylene Chloride	84	5.677	5.688	-0.011	95	4454	0.0731	
33 Carbon disulfide	76	5.823	5.828	-0.005	99	29619	0.1294	
59 Trichloroethene	130	10.913	10.924	-0.011	95	9248	0.0680	
65 4-Methyl-2-pentanone (MIBK	43	12.164	12.148	0.016	97	8727	0.0549	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

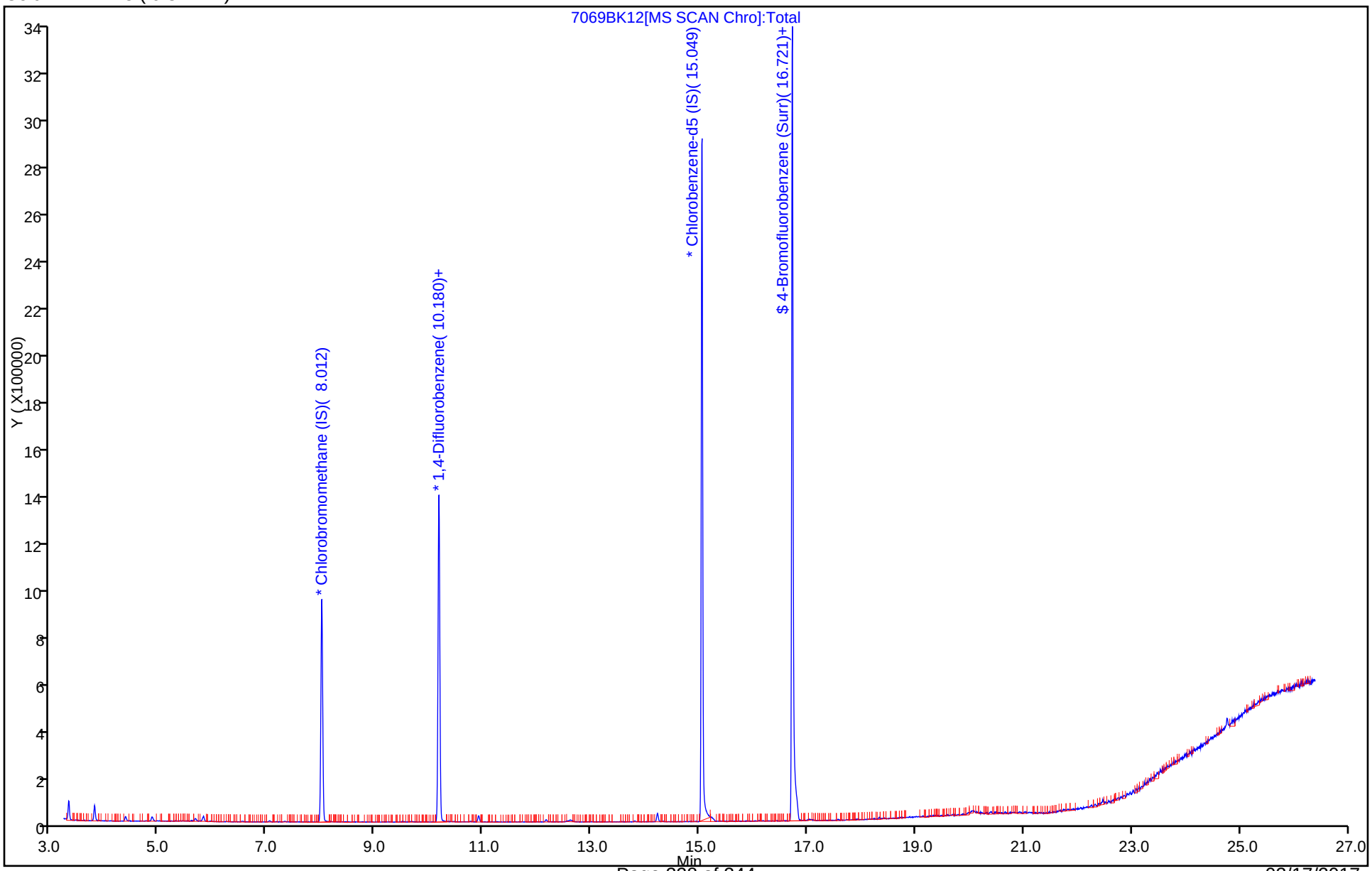
Report Date: 15-Feb-2017 10:02:00 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170209-4015.b\7069BK12.D

Injection Date:	14-Feb-2017 21:03:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-7069-A-12	Lab Sample ID:	140-7069-12	Worklist Smp#:	18
Client ID:	09886				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09639 | Lab Sample ID: 140-7069-13

Matrix: Air | Lab File ID: 7069BK13.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/14/2017 21:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8438 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09639 | Lab Sample ID: 140-7069-13

Matrix: Air | Lab File ID: 7069BK13.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/14/2017 21:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8438 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09639 | Lab Sample ID: 140-7069-13

Matrix: Air | Lab File ID: 7069BK13.D

Analysis Method: TO-15 | Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) | Date Analyzed: 02/14/2017 21:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8438 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7069-1

SDG No.:

Client Sample ID: 09639 Lab Sample ID: 140-7069-13

Matrix: Air Lab File ID: 7069BK13.D

Analysis Method: TO-15 Date Collected: 02/10/2017 09:40

Sample wt/vol: 200(mL) Date Analyzed: 02/14/2017 21:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8438 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170209-4015.b\7069BK13.D				
Lims ID:	140-7069-A-13				
Client ID:	09639				
Sample Type:	Client				
Inject. Date:	14-Feb-2017 21:47:30	ALS Bottle#:	10	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004015-019				
Misc. Info.:	09639				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170209-4015.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	15-Feb-2017 10:01:32	Calib Date:	09-Dec-2016 12:54:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK006				
First Level Reviewer: tajh		Date:	15-Feb-2017 10:01:32		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.017	8.023	-0.006	94	390261	4.00	
* 2 1,4-Difluorobenzene	114	10.185	10.191	-0.006	95	1640977	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.049	15.049	0.000	87	1779529	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.721	16.721	0.000	95	1197028	4.07	
31 Methylene Chloride	84	5.677	5.688	-0.011	96	6700	0.0807	
33 Carbon disulfide	76	5.823	5.828	-0.005	100	23368	0.0749	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

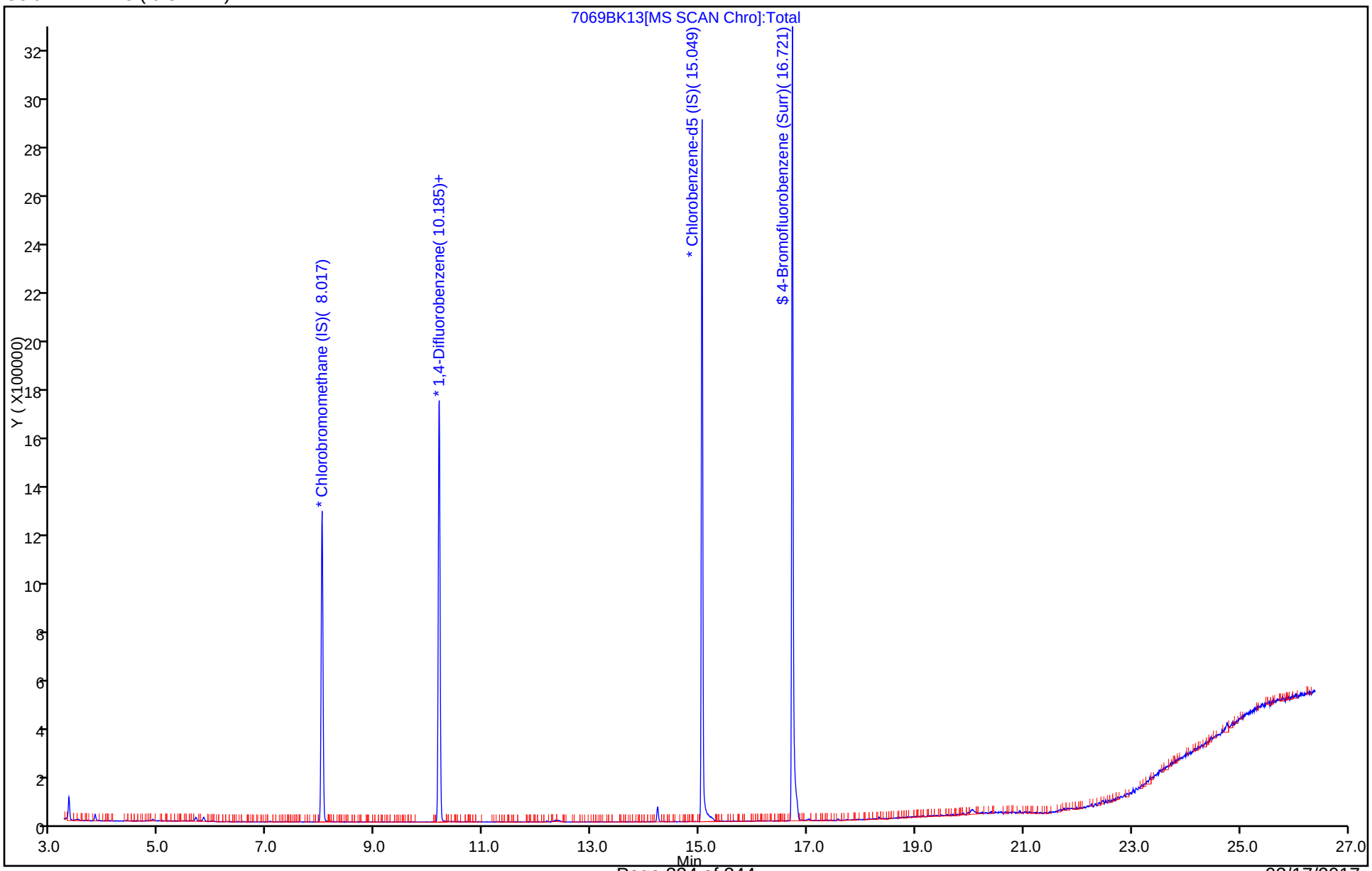
Report Date: 15-Feb-2017 10:02:04 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170209-4015.b\7069BK13.D

Injection Date:	14-Feb-2017 21:47:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-7069-A-13	Lab Sample ID:	140-7069-13	Worklist Smp#:	19
Client ID:	09639				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7089-1

SDG No.:

Client Sample ID: 11543 | Lab Sample ID: 140-7089-4

Matrix: Air | Lab File ID: LOT7089.D

Analysis Method: TO-15 | Date Collected: 02/13/2017 10:55

Sample wt/vol: 200(mL) | Date Analyzed: 02/14/2017 15:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8438 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7089-1

SDG No.:

Client Sample ID: 11543 | Lab Sample ID: 140-7089-4

Matrix: Air | Lab File ID: LOT7089.D

Analysis Method: TO-15 | Date Collected: 02/13/2017 10:55

Sample wt/vol: 200(mL) | Date Analyzed: 02/14/2017 15:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8438 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-7089-1

SDG No.:

Client Sample ID: 11543 | Lab Sample ID: 140-7089-4

Matrix: Air | Lab File ID: LOT7089.D

Analysis Method: TO-15 | Date Collected: 02/13/2017 10:55

Sample wt/vol: 200(mL) | Date Analyzed: 02/14/2017 15:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 8438 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-7089-1

SDG No.:

Client Sample ID: 11543 Lab Sample ID: 140-7089-4

Matrix: Air Lab File ID: LOT7089.D

Analysis Method: TO-15 Date Collected: 02/13/2017 10:55

Sample wt/vol: 200(mL) Date Analyzed: 02/14/2017 15:18

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 8438 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20170209-4015.b\LOT7089.D				
Lims ID:	140-7089-A-4				
Client ID:	11543				
Sample Type:	Client				
Inject. Date:	14-Feb-2017 15:18:30	ALS Bottle#:	1	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0004015-010				
Misc. Info.:	11543				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20170209-4015.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	14-Feb-2017 16:03:22	Calib Date:	09-Dec-2016 12:54:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20161205-3696.b\GxL08EthOxICL05.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK004				
First Level Reviewer: barlozhetskayaa		Date:	14-Feb-2017 16:03:22		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.018	8.023	-0.005	94	371311	4.00	
* 2 1,4-Difluorobenzene	114	10.185	10.191	-0.006	95	1487586	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.049	15.049	0.000	87	1634075	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.721	16.721	0.000	95	1080714	4.00	
29 2-Methyl-2-propanol	59	5.521	5.478	0.043	41	2217	0.0159	
31 Methylene Chloride	84	5.683	5.688	-0.005	94	6663	0.0844	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

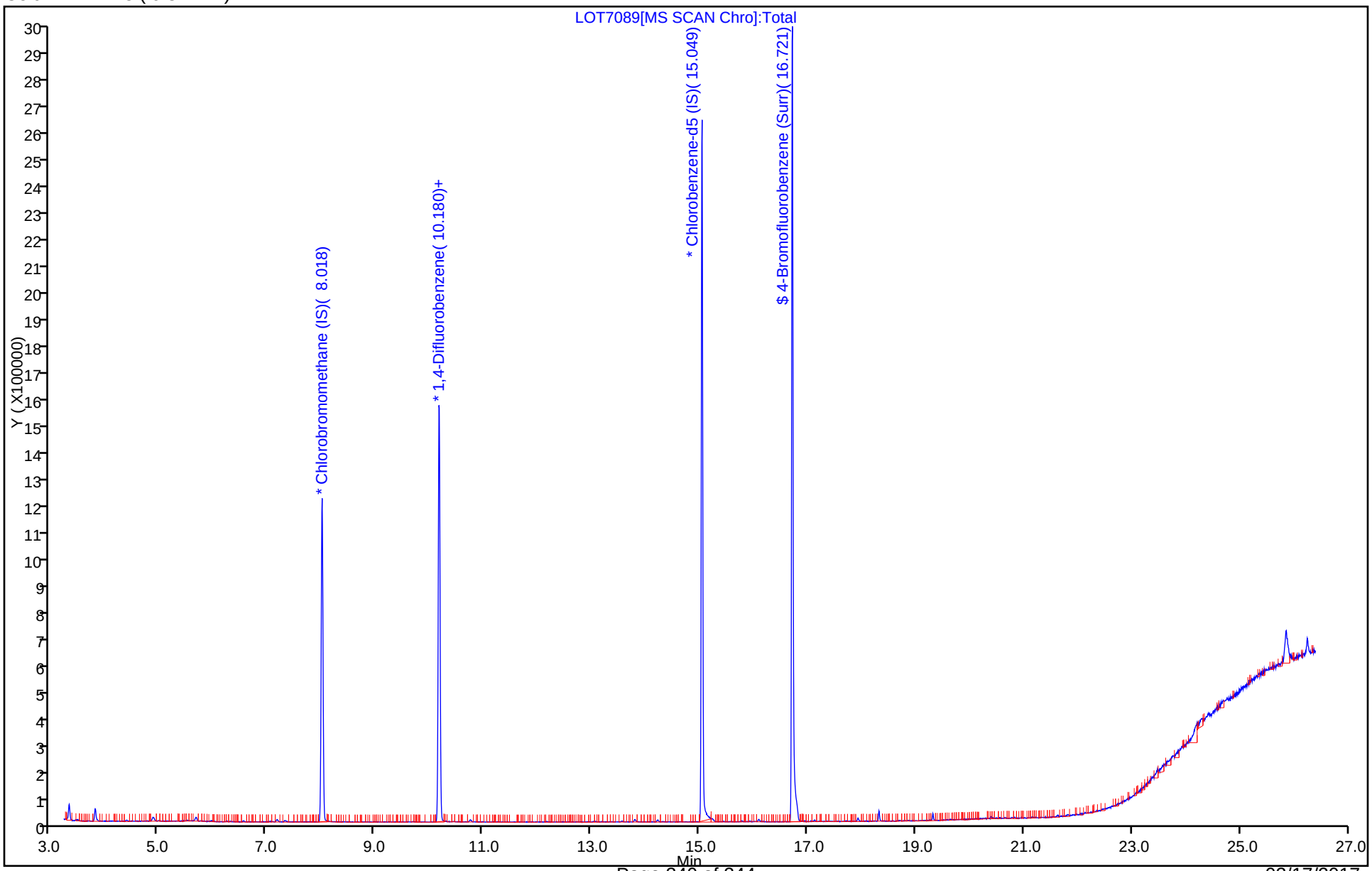
Report Date: 14-Feb-2017 16:12:57 Chrom Revision: 2.2 03-Feb-2017 15:35:04

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20170209-4015.b\LOT7089.D

Injection Date:	14-Feb-2017 15:18:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-7089-A-4	Lab Sample ID:	140-7089-4	Worklist Smp#:	10
Client ID:	11543				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



Shipping and Receiving Documents

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

180325

BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Manager: Peter Rich	Sampled By: J. Michael Wilks	1 of 1 COCs
Company: Tetra Tech	Phone: 410-990-4607		
Address: 51 Franklin St	Site Contact:		
City/State/Zip Annapolis / MD / 21401	TAL Contact:		
Phone: 410-990-4607			
FAX:			
Project Name: Lockheed Martin MRC	Analysis Turnaround Time		
Site/location: B. MRC / Building C	Standard (Specify)		
PO # 117-0512124	Rush (Specify)		

140-7358 Chain of Custody

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
BLDG-C EFFLUENT	3-8-17	1340	1342	29	0	10930	09639	✓											
BLDG-C MIDGAC	3-8-17	1345	1348	29	0	10104	11061	✓											
BLDG-C INFLUENT	3-8-17	1350	1352	29	0	10911	10752	✓											
BLDG-A EFFLUENT	3-8-17	1420	1423	28.5	0	09569	09582	✓											
BLDG-A MIDGAC	3-8-17	1426	1428	28	0	10901	11543	✓											
BLDG-A INFLUENT	3-8-17	1431	1433	31	0	09958	10520	✓											

Sampled by :

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Received @ ambient, 1 box
Fedex SO, trk# 7786 0615 1347
Custody seal intact, KW 3/9/17

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by: J M Wilks	Date/Time: 3-8-17 / 15 40	Received by:
Relinquished by:	Date/Time: 3-8-2017 / 1610	Received by: 3/9/17 1000

6 cans
6KR

03/17/2017

Loc: 140
7358

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number: _____

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	/			☐ **Containers, Broken**
2. Were ambient air containers received intact?			/	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?	/			☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			/	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	/			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	/			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	/			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	/			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	/			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	/			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	/			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	/			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	/			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	/			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	/			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			/	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			/	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			/	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			/	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			/	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: 1400 2921 PM Instructions: _____

Sample Receiving Associate: _____ Date: 3/9/17

QA026R30.doc, 080916

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 3/9/2017

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
HMT	140-7358-a-1	09639	7069	B	1	0.0	13:34	
HMT	140-7358-a-2	11161	7069	B	1	0.9	13:35	
HMT	140-7358-a-3	10752	7069	B	1	0.0	13:36	
HMT	140-7358-a-4	09582	7069	B	1	0.0	13:37	
HMT	140-7358-a-5	11543	7089	B	1	0.0	13:38	
HMT	140-7358-a-6	10520	7069	B	1	0.9	13:39	